



Retirement Board Agenda November 16, 2023

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Meeting ID: 965 4917 5579

Password: 12345

To join by phone, dial: (301) 715-8592 and enter the Meeting ID: **965 4917 5579** and Password: **12345** when prompted.

PLEDGE OF ALLEGIANCE

1. Roll Call
2. Approval of Out-of-State Board Travel (R)

CONSENT AGENDA (R)

3. Approval of Minutes of the **October 19, 2023**, Retirement Board Meeting
4. Summary of Investment Transactions - **September 1, 2023, to September 30, 2023**
5. Retirement Report
 - Superannuations, Transfers and Survivor Benefits
 - Special Cases
6. Disability Report
 - Approval of Disability Benefits
 - Termination of Disability Benefits – Any Occupation

EXECUTIVE DIRECTOR'S REPORT *(Placed here to allow the actuaries to present first)*

7. Pension and Health Care Annual Actuarial Valuations – Cavanaugh Macdonald
8. Allocation of Employer Contributions (R)
9. Amended Solicitation to Employees Policy (R)
10. Ethics Policy Review

INVESTMENT REPORT

11. Annual Portfolio Review – Fixed Income
12. Wilshire Quarterly Performance Report as of September 30, 2023
13. Quarterly Investment Report as of September 30, 2023

EXECUTIVE DIRECTOR'S REPORT (cont.)

14. Executive Director's Update
15. Executive session pursuant to R.C. 121.22 (G)(5) to discuss a matter required to be kept confidential by law (R)
 - Personal Appearance 10:30 a.m.
 - Personal Appearance 11:00 a.m.
16. Executive Session pursuant to R.C. 121.22 (G)(2) to discuss the sale of property (R)
17. Review of First Quarter Budget to Actual Administrative Expenses for SERS and OSERS Broad Street, LLC
18. Definition of Compensation Discussion

BOARD COMMUNICATION AND POLICY ISSUES

19. Calendar Dates for Future Board Meetings
20. Continued or New Business
 - Board Information Requests and Follow-up Items

ADJOURNMENT

FY2024 SERS Board Roll Call

Frank Weglarz	_____
Matthew King	_____
Jeffrey DeLeone	_____
James Haller	_____
Catherine Moss	_____
Barbra Phillips	_____
James Rossler	_____
Aimee Russell	_____
Daniel Wilson	_____

APPROVAL OF OUT-OF-STATE BOARD TRAVEL

_____ moved and _____ seconded the motion that the travel request by a Board Member to travel and receive reimbursement for the following out-of-state conference and meeting expenses be approved.

Conference	Attendee	Conference Date(s)	Conference Location	Estimate of Expenses
IFEBP Health Care Management Conference	James Rossler	March 3 – March 5, 2024	Rancho Mirage, CA	\$3488.73
IFEBP Investments Institute	James Rossler	March 6 – March 7, 2024	Rancho Mirage, CA	\$2511.27

Upon roll call, the vote was as follows:

<u>ROLL CALL:</u>	<u>YEA</u>	<u>NAY</u>	<u>ABSTAIN</u>
Matthew King	_____	_____	_____
Jeffrey DeLeone	_____	_____	_____
James Haller	_____	_____	_____
Catherine Moss	_____	_____	_____
Barbra Phillips	_____	_____	_____
James Rossler	_____	_____	_____
Aimee Russell	_____	_____	_____
Daniel Wilson	_____	_____	_____
Frank Weglarz	_____	_____	_____

BOARD: Travel
R.C. 3309.04

NOVEMBER 2023 CONSENT AGENDA

1. Minutes of the
 - a. **October 19, 2023**, Retirement Board meeting
2. Summary of Investment Transactions – **September 1, 2023 to September 30, 2023**
3. Retirement Report
 - a. Superannuations and Survivor Benefits and Transfers
 - b. Special Cases
4. Disability Report
 - a. Approval of Disability Benefits
 - b. Termination of Disability Benefits – Any Occupation

APPROVAL OF CONSENT AGENDA

_____ moved and _____ seconded the motion to approve the Consent Agenda, which includes the following items:

1. Minutes of the
 - a. **October 19, 2023**, Retirement Board meeting
2. Summary of Investment Transactions – **September 1, 2023 to September 30, 2023**
3. Retirement Report
 - a. Superannuations and Survivor Benefits and Transfers
 - b. Special Cases
4. Disability Report
 - a. Approval of Disability Benefits
 - b. Termination of Disability Benefits – Any Occupation

Upon roll call, the vote was as follows:

<u>ROLL CALL:</u>	<u>YEA</u>	<u>NAY</u>	<u>ABSTAIN</u>
Matthew King	_____	_____	_____
Jeffrey DeLeone	_____	_____	_____
James Haller	_____	_____	_____
Catherine Moss	_____	_____	_____
Barbra Phillips	_____	_____	_____
James Rossler	_____	_____	_____
Aimee Russell	_____	_____	_____
Daniel Wilson	_____	_____	_____
Frank Weglarz	_____	_____	_____

SERS Retirement Board Meeting Minutes

October 19, 2023

The nine hundredth and sixty-third meeting of the Retirement Board of the School Employees Retirement System was held in the boardroom at 300 E. Broad Street, Columbus, Ohio, and streamed via Zoom videoconferencing on Thursday, October 19, 2023.

Pledge of Allegiance

The SERS Retirement Board meeting convened at 8:30 a.m. with the Pledge of Allegiance.

Roll Call

Following the Pledge of Allegiance, the roll call was as follows: Frank Weglarz, Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, Barbra Phillips, James Rossler, Aimee Russell, and Daniel Wilson. Also attending in person was Lisa Reid, representative of the Ohio Attorney General's Office and various members of the SERS staff. Several SERS staff members and members of the public attended virtually.

Consent Agenda

The consent agenda for **October 19, 2023**, included:

- Minutes of the September 21, 2023, Retirement Board meeting
- Summary of Investment Transactions for the period of August 1, 2023, to August 31, 2023
- Retirement Report – Superannuations, Survivor Benefits, and Transfers
- Disability Report – Approval of Disability Benefits, Disapproval of Disability Benefits, Disapproval of Appeal of Termination – Any Occupation

James Haller moved and Catherine Moss seconded the motion to approve the Consent Agenda of the Retirement Board meeting held on Thursday, October 19, 2023. Upon roll call, the vote was as follows: Yea: Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, James Rossler, Aimee Russell, Daniel Wilson, and Frank Weglarz. Abstain: Barbra Phillips. The motion carried.

Investment Report

Annual Portfolio Review – Private Equity

SERS Investment staff Steve Price and Phil Sisson provided an update on the Private Equity portfolio. Mr. Price reported the Private Equity portfolio has a market value of \$2.3 billion with 28 general partners, 63 funds, and 10 co-investments. SERS maintains a diverse private equity portfolio to provide returns that can be adjusted based on risk. The private equity portfolio is currently 13% of the SERS total fund, which is below the 14% target.

Mr. Price stated the goal for FY2024 is to expand the co-investment strategy. Co-investments are attractive because they limit the partner's fund exposure, provide an opportunity for fund investors to participate in specific investments that provide diversification and additional return potential, and do not incur additional management fees. SERS staff will review the entire portfolio strategy and structure and develop a plan to improve the risk and return characteristics of the portfolio, achieve fee reductions, and optimize manager count. In addition, staff will be looking to identify new and innovative investment opportunities and evaluate their return and diversification potential for possible inclusion in the portfolio.

With no questions, the board thanked Mr. Price and Mr. Sisson for the report.

SERS Retirement Board Meeting Minutes

October 19, 2023

Monthly Investment Report – Period Ending: August 31, 2023

Chief Investment Officer, Farouki Majeed, provided an update on the investment fund status for the month ending August 31, 2023. Mr. Majeed stated US growth slowed but remained resilient. Mr. Majeed expects that an economic slowdown will stabilize by the end of the year. The US labor market remained resilient, adding 187,000 jobs in August. Consumers are still spending and payroll continues to grow at a healthy rate. After answering several questions and having a robust discussion, the board thanked Mr. Majeed for his report.

Interim Asset Allocation Targets – Global Equities and Private Equity

Mr. Majeed stated that the board approved revised asset allocation targets and ranges for the SERS Total Fund at the April 20, 2023 meeting increasing the Private Equity target from 12% to 14%, effective July 1, 2023. Since time is needed to implement the new Private Equity target, Staff recommends the Board approve interim targets for Private Equity and Global Equities over the period October 1, 2023 through December 31, 2024. To compensate for the reduction in Private Equity by 1%, Global Equities interim target will be increased by 1% to 41%. The policy targets for Global Equities and Private Equity will revert to 40% and 14% respectively effective January 1, 2025.

As discussed during the October 19, Board meeting, Jeffrey DeLeone moved and Barbra Phillips seconded the motion to approve interim Global Equities and Private Equity Asset Allocation targets over the period October 1, 2023, through December 31, 2024.

ASSET CLASS	Policy Targets	Policy Range	Interim Targets
Equity	54%	44% – 64%	54%
Global Equities	40%	35% - 45%	41%
Global Private Equities	14%	11% - 17%	13%
Income	46%	41% - 51%	46%
Global Fixed Income	18%	13% - 23%	18%
Global Private Credit	5%	3% - 7%	5%
Global Real Assets	20%	17% - 22%	20%
Cash	3%	1% - 5%	3%
Strategy			
Opportunistic & Tactical	0%	0% - 5%	0%
Total Assets			
Leverage	100%		100%
Total Notional Exposure (Including Leverage)	0%	0% - 10%	0%

Upon roll call, the vote was as follows: Yea: Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, Barbra Phillips, James Rossler, Aimee Russell, Daniel Wilson, and Frank Weglarz. The motion carried.

Recess for Membership Appeal

The board took a recess at 10:00 a.m. to discuss the membership appeal.

The board returned to open session at 10:35 a.m.

Catherine Moss moved and Barbra Phillips seconded to affirm the August 14, 2023, Revised Final Staff Determination that individuals providing IEP-required nursing services under Maxim contracts with West Clermont Local Schools and Ridgedale Local Schools were providing a service common to the normal daily operation of the schools and should therefore contribute to SERS. Upon roll call, the vote was as follows: Yea: Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, Barbra Phillips, James Rossler, Aimee Russell, Daniel Wilson, and Frank Weglarz. The motion carried.

SERS Retirement Board Meeting Minutes

October 19, 2023

The board took a break at 10:37 a.m.

The board reconvened at 10:52 a.m.

Executive Director's Report

Ohio Retirement Study Council (ORSC)

Mr. Stensrud opened his report stating the October ORSC meeting was cancelled. The next meeting is scheduled for November 9, 2023, or at the call of the ORSC Chair.

Mr. Stensrud continued, alerting the board that Senator Schuring will no longer be serving on the ORSC and has been replaced by Senator Mark Romanchuk. Representative Plummer will serve as Chair in the interim until a final selection has been made. Senator Schuring has been a longtime advocate of the public pension systems and he will be missed on the ORSC but will continue to serve in the Senate. Board member Jeffrey DeLeone added that Senator Romanchuk's addition to the ORSC will be beneficial.

State Legislative Activity

Mr. Stensrud reported that sponsor testimony was heard in the House Government Oversight committee on HB 257 which would provide the authority for certain public bodies to meet virtually. The bill includes provisions, similar to what STRS was granted in the last General Assembly, to allow the other retirement systems to create a policy for Board Members to participate in meetings remotely under certain conditions. Similar authority was provided to all the systems on a short-term basis during the pandemic but has since lapsed. The goal of the bill is to extend the authority to the other retirement systems. Mr. Stensrud reported SERS is in support of HB257 and will provide proponent testimony.

Mr. Stensrud continued, stating that the OPERS Board has directed its staff to pursue legislation to increase the general member employer contribution rate from 14% to 18% and to have the law enforcement employer rate tied to the rate at OP&F, which is also seeking an increase in its employer contribution rate. Mr. Stensrud reported that OPERS offered several reasons for increasing the employer contribution rates, including that rates haven't increased in over 50 years, benefit expenditures have increased, and funding will become more dependent on investment returns at a time when returns are projected to be lower.

Mr. Stensrud noted that the SERS Board regularly assesses the long-term sustainability of the pension fund and that SERS' actuary, Cavanaugh Macdonald, reports that SERS continues to be sustainable with current contribution rates. Accordingly, Mr. Stensrud noted that at this time SERS does not need and does not intend to seek an increase in the contribution rates. That view was endorsed by all Board Members, who further encouraged Mr. Stensrud to take steps to make sure that was understood by policy makers and stakeholders.

Mr. Stensrud reported that the Ohio Legislative Service Commission (LSC) made a data request regarding SERS retirees. The LSC requested a summary of 2022 retirees who had monthly benefits equal or less than \$3,345 and those receiving payments more than \$3,345. SERS staff promptly provided that information. Mr. Stensrud reported that 93% of SERS' retirees made less 3,345 per month (\$40,140 per year), and further amplified that 67% receive a benefit of \$18,000 or less per year, and 49.5% get a benefit of \$12,000 or less per year. Mr. Stensrud further noted that 91% of those benefit dollars are paid to retirees living in Ohio, meaning that those funds are being spent in local communities supporting local economies.

Waiver of Recourse

In response to a Board inquiry, Mr. Stensrud explained what Waiver of Recourse insurance coverage was and why it was not necessary or required for Board Members in Ohio.

SERS Retirement Board Meeting Minutes

October 19, 2023

Federal Legislative Activity

Mr. Stensrud reported that WEP/GPO repeal legislation in the House of Representatives (HR 82) has exceeded 290 cosponsors and that Senator Vance has become a cosponsor of Senator Brown's WEP/GPO repeal bill (S 597) in the Senate. Mr. Stensrud also noted that WEP/GPO reform legislation has been introduced in the House. Mr. Stensrud reported that despite broad support, it was unlikely that any action will be taken until there is bi-partisan interest and support for broader Social Security reform.

Administrative Expenses

Marni Hall, SERS Chief Financial Officer, provided an update on the administrative expenses. Following a brief discussion, the Board thanked Ms. Hall for her report.

Contribution Based Benefit Cap (CBBC)

Mr. Stensrud initiated continuation of the Board's discussion regarding the factor that will be used in determination of the CBBC. The purpose of the CBBC analysis is to assure that the lifetime pension benefit received by the member is sufficiently supported by the contributions made over the course of the member's working career. The factor is the multiplier for an annuity based on the member's contributions that will be compared to the standard formula benefit. If the standard formula benefit exceeds the multiplied annuity, the retirement allowance will be based on the multiplied annuity. If the standard formula benefit is less than the multiplied annuity, then the retirement allowance will be based on the standard formula benefit.

Mr. Stensrud noted the multiplier/factor will reflect the Board's determination of the outer limit of the acceptable gap between the standard formula benefit and the contribution-funded benefit. Assuring that the contributed funding is sufficient to support the benefit is important for the long term sustainability of the pension fund and is also important for maintaining fairness for all SERS members because any shortfall in funding an individual benefit is subsidized by all the members.

Mr. Stensrud noted that through back-testing the Board had been provided with extensive data showing how different possible CBBC factor levels would have impacted actual retirements in 2020/2021 and 2022/2023. Mr. Stensrud noted that last month, after assessing that data, the Board had determined that the factor would be no lower than 5.5. Mr. Stensrud reported that for the current discussion the Board had also been provided with information regarding the career profile of the people who would have been impacted at a factor of 5.5 or above to help identify the elements that would have triggered application the CBBC.

Mr. Stensrud noted that the data showed that in the vast majority of cases, the standard formula benefit will continue to be the basis of the retirement allowance. For example, of the nearly 3,000 retirements in 2022/2023, only 22 people would have been impacted by the CBBC if the factor was set at 5.5 and only 10 people would have been impacted if the factor was set at 6. A similar number, and percentage of retirees, would have been impacted by a factor of 5.5 or above in the more than 3,400 retirements in 2020/2021. And in all of the impacted cases, there was a substantial difference between the three years used to determine the standard formula benefit and the rest of the career such that the contributions over the course of the career fell short of the levels necessary to support the standard formula benefit.

Robust discussion by the Board followed, including consideration of what the CBBC is intended to address and whether it would impact people with an earned promotion at the end of their career. With respect to the former topic, it was noted that whether a retirement will be impacted by the CBBC will be strictly data-based, and is intended to fix a flaw in the plan that in a small number of cases has allowed for a lifetime retirement allowance that is not sufficiently supported by the contribution funding provided over the member's whole career. With respect to the latter topic, the Board was provided with data showing that an increase in salary of 15% in the last part of a member's career would not, in itself, trigger application of the CBBC.

SERS Retirement Board Meeting Minutes

October 19, 2023

It was moved by James Rossler and seconded by Daniel Wilson that based on the advice of SERS' actuary, Cavanaugh Macdonald, and in accordance with R.C. 3309.363(B), the SERS Board selects 5.5 as the CBBC factor. Upon roll call the vote was as follows: Yea: Jeffrey DeLeone, James Rossler, and Daniel Wilson. Nay: Matthew King, James Haller, Catherine Moss, Aimee Russell, and Frank Weglarz. Abstain: Barbra Phillips. The motion was rejected.

Following further discussion, it was moved by Frank Weglarz and seconded by Daniel Wilson that based on the advice of SERS' actuary, Cavanaugh Macdonald, and in accordance with R.C. 3309.363(B), the SERS Board selects 6.25 as the CBBC factor. Upon roll call the vote was as follows: Yea: Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, Barbra Phillips, Aimee Russell, Daniel Wilson and Frank Weglarz. Nay: James Rossler. The motion carried.

Mr. Stensrud noted that the effective date for implementation of the CBBC would be August 1, 2024, but that substantial efforts would be made before that date to communicate with members about how the CBBC could potentially affect the member's retirement benefits. Mr. Stensrud noted that those efforts would include an online calculator, information in requested benefit estimates, annual member statements, newsletters, social media, and retirement planning seminars and other public presentations.

The Board took a lunch break at 12:43 p.m.

The Board reconvened after lunch at 1:35 p.m.

Definition of Compensation Discussion

Mr. Stensrud outlined some information to assist in the Board's ongoing discussions regarding what should qualify as pensionable compensation. The information was intended to pull together key elements of the past discussions, suggest proposed objectives/premises in developing a definition of what constitutes pensionable compensation, and elements the Board may want to consider in assessing how a more expansive definition of pensionable compensation might impact the financial condition of the pension fund.

Mr. Stensrud noted that the current pensionable compensation parameters are set in statute and by administrative rule. The parameters can be confusing for employers and members and can be challenging for Staff to administer. Compensation practices have evolved over time with employers now offering different pay elements beyond straight salary. Some are pensionable under current parameters, and some are not. Because compensation reporting does not feature specific pay codes, it is difficult to determine if employers are reporting compensation elements correctly.

With that in mind, Mr. Stensrud suggested the Board may want to consider the following proposed objectives:

(1) Simplify the definition of what counts as pensionable compensation so that it is easier for members and employers to understand and easier to administer; (2) Treat similar pay elements the same across all positions; (3) Broaden the definition of what counts as pensionable compensation to cover more elements that are paid for 'doing your job;' and (4) Understand how expanding what counts as pensionable compensation will impact the financial condition of the pension fund.

Robust discussion followed across all the proposed objectives. To help advance the discussion, the Board requested that Staff obtain information from other comparable retirement systems regarding how they define pensionable compensation. Board discussion will continue at the November meeting.

Compensation Committee Report

Catherine Moss moved and Aimee Russell seconded the motion that the Board convene in Executive Session pursuant to R.C. 121.22 (G)(1) to discuss the employment and compensation of a public employee. Upon roll call, the vote was as follows: Yea: Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, Barbra Phillips, James Rossler, Aimee Russell, Daniel Wilson, and Frank Weglarz. The motion carried.

SERS Retirement Board Meeting Minutes

October 19, 2023

The board convened in executive session at 2:20 p.m.

The board reconvened in open session at 2:29 p.m.

On behalf of the Board, Compensation Committee Chair Daniel Wilson made the following statement and motion:

It is SERS' compensation policy that to fulfill the system's mission and provide the best service to its members, retirees, and employers, SERS must attract, retain, and motivate employees. It is SERS' objective to have a compensation program that supports a high-performance culture, the organization's values, and strategic goals, and pays competitively and equitably. Accordingly, recognizing Executive Director Richard Stensrud's years of excellent service to SERS, his importance to the organization, and the Board's desire to retain Mr. Stensrud in his position so that he will continue to serve SERS and its stakeholders, Daniel Wilson moved, and Barbra Phillips seconded that Mr. Stensrud's employment letter and addendum be amended as follows:

- In calendar year 2024, provided Mr. Stensrud is still employed in good standing at SERS on the last pay date of the calendar year, an additional 56 hours of vacation leave will be granted to Mr. Stensrud. In calendar year 2025, provided Mr. Stensrud is still employed in good standing on the last pay date of the calendar year, an additional 72 hours of vacation leave will be granted to Mr. Stensrud.
- Paragraphs pertaining to notice of voluntary termination of employment will be amended accordingly to address the 56 and 72 hours of additional vacation leave referenced above.

Upon roll call, the vote was as follows: Yea: Matthew King, Jeffrey DeLeone, James Haller, Catherine Moss, Barbra Phillips, James Rossler, Aimee Russell, Daniel Wilson, and Frank Weglarz. The motion carried.

Technology Committee Report

Technology Committee Chair, Matthew King, provided a brief update on the work being done in the Technology Committee. Mr. King stated that SERS staff continue to work on the SMART system upgrades and remains focused on IT infrastructure and security measures. The committee is also discussing Artificial Intelligence (AI) and enhancement to SERS IT security for the organization. With no further questions, the board thanked Mr. King for his report.

Retirement Report

There was no executive session for the retirement report.

Board Communication and Policy Issues

Board Information Request & Follow Up Items

The board requested that a calculator be created to allow SERS members to determine how the new CBBC factor would affect their retirement benefits. The board also requested additional compensation information from pension systems in other states to help determine the definition of pensionable compensation.

Calendar Dates for Future Board Meetings

The board reviewed the meeting dates for 2023 and 2024.

CALENDAR DATES FOR SERS BOARD AND COMMITTEE MEETINGS FOR 2023

AUDIT COMMITTEE MEETINGS

December 20, 2023 – 2:30 p.m. (Weds.)

SERS Retirement Board Meeting Minutes

October 19, 2023

COMPENSATION COMMITTEE MEETINGS

December 21, 2023 – 7:30 a.m. (Thurs.)

TECHNOLOGY COMMITTEE MEETINGS

December 21, 2023 – 12:30 p.m. (Thurs.)

BOARD MEETINGS

November 16 – 17, 2023 - 8:30 a.m. (Thurs. and Fri.)

December 21 – 22, 2023 - 8:30 a.m. (Thurs. and Fri.)

CALENDAR DATES FOR SERS BOARD AND COMMITTEE MEETINGS FOR 2024 **

AUDIT COMMITTEE MEETINGS

March 20, 2024 – 2:30 p.m. (Weds.)

June 19, 2024 – 2:30 p.m. (Weds.)

September 18, 2024 - 2:30 p.m. (Weds.)

December 18, 2024 – 2:30 p.m. (Weds.)

COMPENSATION COMMITTEE MEETINGS

March 21, 2024 – 7:30 a.m. (Thurs.)

June 20, 2024 – 7:30 a.m. (Thurs.)

July 18, 2024 – 7:30 a.m. (Thurs.) * ***Special Meeting ****

September 19, 2024 – 7:30 a.m. (Thurs.)

December 19, 2024 – 7:30 a.m. (Thurs.)

TECHNOLOGY COMMITTEE MEETINGS

March 21, 2024 – 12:30 p.m. (Thurs.)

June 20, 2024 – 12:30 p.m. (Thurs.)

September 19, 2024 – 12:30 p.m. (Thurs.)

December 19, 2024 – 12:30 p.m. (Thurs.)

BOARD MEETINGS

February 15 - 16, 2024 - 8:30 a.m. (Thurs. and Fri.)

March 21 - 22, 2024 – 8:30 a.m. (Thurs. and Fri.)

April 18 – 19, 2024 - 8:30 a.m. (Thurs. and Fri.)

May 16 – 17, 2024 – 8:30 a.m. (Thurs. and Fri.)

June 20 - 21, 2024 - 8:30 a.m. (Thurs. and Fri.)

July 18 – 19, 2024 – 8:30 a.m. (Thurs. and Fri.)

September 19 – 20, 2024 – 8:30 a.m. (Thurs. and Fri.)

October 17 – 18, 2024 – 8:30 a.m. (Thurs. and Fri.)

November 21 – 22, 2024 – 8:30 a.m. (Thurs. and Fri.)

December 19 – 20, 2024 – 8:30 a.m. (Thurs. and Fri.)

**** Please note that these dates and times are tentative.**

SERS Retirement Board Meeting Minutes

October 19, 2023

Adjournment

Board Chair, Frank Weglarz, moved to adjourn to meet on Thursday, November 16, 2023, at 8:30 a.m. for the next SERS regularly scheduled Retirement Board meeting.

The SERS board meeting adjourned at 2:45 p.m.

Frank Weglarz, Board Chair

Richard Stensrud, Secretary

SCHOOL EMPLOYEES RETIREMENT BOARD OF OHIO

Summary of Investment Transactions to be
Reported to the Retirement Board for
Ratification in November

The following is a summary of the investment transactions made during the period of September 1, 2023 through September 30, 2023. A detailed list of these transactions can be found in the Board Agenda mailed prior to the Retirement Board Meeting.

A. PURCHASES

Asset Class	Approximate Cost (in millions)
Global Equities	\$169.0
Fixed Income	346.4
Private Equity Capital Calls	14.2
Real Asset Capital Calls	12.7
Opportunistic & Tactical	7.2
Global Private Credit	46.9
Cash Equivalents	235.6

B. SALES

Asset Class	Approximate Net Proceeds (in millions)	Approximate Gain/(Loss) (in millions)
Global Equities	\$204.6	53.5
Fixed Income	336.1	(7.3)
Private Equity distributions	25.3	n/a
Real Asset distributions	15.3	n/a
Opportunistic & Tactical	3.0	1.1
Global Private Credit	n/a	n/a
Cash Equivalents	197.4	n/a

Memo

To: SERS Retirement Board

From: Richard Stensrud, Executive Director

cc: Karen Roggenkamp, Deputy Executive Director
Marni Hall, Chief Financial Officer

Date: November 3, 2023

Re: Presentation of Pension and Health Care Actuarial Valuations
as of June 30, 2023

The basic financial objective of SERS is to establish and receive contributions which, when expressed in terms of percentages of active member payroll, remain approximately level from generation to generation, and which, when combined with present assets and future investment returns, will be sufficient to meet the present and future financial obligations of SERS. An actuarial valuation is performed annually to measure progress toward this objective and to establish the allocation of the employer contribution to the Pension, Death Benefit and Medicare B Funds. To that end, the pension fund actuarial valuation as of June 30, 2023 is attached for your review and consideration.

As you will see, the June 30, 2023 valuation reports that the funded ratio of the Basic Benefits increased to 76.61% from the 75.48% funded ratio reported in 2022 and the amortization period of the unfunded actuarial accrued liability decreased to 21 years. The current year investment earnings were just below the assumed rate of return of 7.0%, however, the actuarial value of assets increased due to the investment smoothing methodology described below.

Pension Fund Valuation Report

The following discussion addresses some key information in the Pension Fund Valuation.

Actuarial Funded Ratio vs. Market Value Funded Ratio

The most commonly referenced funded ratio in the Pension Valuation is based on the actuarial value of assets. The actuarial value of assets utilizes the value of the assets as determined under a four year asset smoothing process whereby each year the investment experience over or under the investment return assumption is divided into four equal parts, with one fourth of that experience recognized in the current year and the remaining three fourths recognized in the three subsequent years. This rolling recognition of deferred gains and losses means that the actuarial value of assets may be higher or lower than the market value of assets, which is the current non-smoothed value of the assets.

While the investment performance in FY 22-23 was slightly below the investment return assumption, due to the continued phase-in of the strong investment performance in FY 20-21, the actuarial value of assets is greater than the market value of assets by \$126.9 million as of June 30, 2023. As a result, the funded ratio based on the actuarial value of assets is 76.61%, which is higher than the 76.06% funded ratio based on the market value of assets. Put another way, if all the deferred gains and losses currently in the smoothing process were recognized immediately, the pension fund would be 76.06% funded. See pages 3-5 and 12 of the Pension Fund Valuation.

Under the asset smoothing process described above, the remaining portion of each year's gain or loss is deferred and recognized over the rest of the smoothing period. Accordingly, because of the strong investment performance in FY 20-21, \$743,716,320 will be recognized annually as investment income in FY 22-24. This will be offset by the weak performance in FY 21-22 with deferred losses of (\$411,136,059) recognized annually in FY 23-24 and FY 24-25. In addition, the FY 22-23 deferred loss of (\$16,098,304) will be recognized annually over FY 23-24, FY 24-25 and FY 25-26. The recognition of these deferred losses after the full recognition of the deferred gains will result in downward pressure on the funded status in FY 24-25 and FY 25-26. Downward pressure will increase if the investment performance falls short of the 7% actuarial investment return assumption in the next few years. See page 26 of the Pension Fund Valuation.

Unfunded Actuarial Accrued Liability

The unfunded actuarial accrued liability (UAAL) is the difference between the actuarial value of assets and the actuarial accrued liability. Changes in the UAAL occur for various reasons, including changes in actuarial assumptions, investment experience or liability experience that is above or below actuarial assumptions, and changes in the methodology used to perform the actuarial valuation. Over the past twenty years, periods of investment experience below the investment return assumption along with changes in the investment return assumption itself have applied upward pressure on the UAAL. Over the same period, investment experience above the investment return assumption and positive experience relative to demographic actuarial assumptions have pushed downward on the UAAL. In addition, the UAAL has been positively impacted by various pension sustainability measures implemented by the SERS Board, such as changes in retirement eligibility and the retiree COLA.

In FY 22-23, SERS experienced a slight decrease of \$85.8 million in the UAAL largely due to these latter factors – i.e., net positive investment performance, demographic experience, and the impact of sustainability measures, particularly the change in the retiree COLA. These factors have also led to improvement in the funded status of the pension fund since 2012. See pages 4, 5, 14 and 16 of the Pension Valuation. See page 48 of the Pension Fund Valuation for a breakdown of the annual actuarial gains and losses since 2014.

Active Members

The number of active members in the Pension Valuation was approximately 4,800 higher as of June 30, 2023, as compared to June 30, 2022 as schools recovered from reduced staffing during the pandemic. It is unclear at this point if the return to the pre-pandemic level of active members is permanent or only a short-term result of employers having higher levels of pandemic-related funding. See pages 8 and 10 of the Pension Fund Valuation.

ASOP 4 Requirements:

The Actuarial Standards Board adopted revisions to ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, effective for valuation reports issued after February 15, 2023. Two of the main required disclosure changes include:

- Low-Default-Risk Obligation Measure (LDROM) – Comparing the actuarial accrued liabilities (AAL) using LDROM versus the assumed rate of return of 7%, highlights the savings SERS expects by investing in a well-diversified investment portfolio. LDROM is used for disclosure purposes only, and it does not impact the funded ratio of the plan. The AAL using LDROM approximates the termination liability if the SERS plan ended on the valuation date of June 30, 2023, which is unlikely with government plans. See page 23 of the Pension Fund Valuation.
- Reasonable Actuarial Determined Contribution (ADC) – Requires an annual determination on whether the significant assumptions selected by the actuary are reasonable. SERS ADC is 10.57% as compared to the current employer rate of 14% and the actuary has confirmed that the current statutory funding rate is expected to fully fund the plan and reduce the UAAL each year. SERS had already been including ADC in its actuarial valuations. See page 7 of the Pension Fund Valuation.

Information regarding the revisions to ASOP 4, including how LDROM should be understood, is being added to the SERS website.

Other Pension Fund Valuation Information of Note:

- After declining during FYs 19-20 and FY 20-21, the total number of retirees increased to 81,151 in FY 22 and to 81,833 in FY23. Retirement allowances increased by 3.49% in FY 22-23, from \$1.295 million to \$1.341 million. See page 36 of the Pension Fund Valuation.
- 48.2% of current service retirees receive an annual benefit of \$12,000 or less. 65.6% of current service retirees receive an annual benefit of \$18,000 or less. See page 38 of the Pension Fund Valuation.

- 91.5% of current service retirees are age 65 or older. 29.2% of current service retirees are age 80 or older. 15.2% of current service retirees are age 85 or older. 4,221 (5.9%) of current service retirees are age 90 or older. Six current benefit recipients are 105 or older. See pages 39 and 41 of the Pension Fund Valuation.
- 74.0% of current benefit recipients are female, 26.0% are male. See page 41 of the Pension Fund Valuation.
- 73.3% of current active members have less than 10 years of service. 55.7% have less than 4 years of service. The percentage of active members declines as service increases and drops to 5.7% when you get to 25 or more years of service. See page 43 of the Pension Valuation. This shows that while many people are in SERS for a few years, the active members who stay and ultimately draw a benefit are longer, career employees. See page 51 of the Pension Fund Valuation.
- 28.1% of current active members make less than \$10,000 annually. 47.9% of current active members make less than \$20,000 annually. 79.8% make less than \$40,000 annually. 20.2% make more than \$40,000 annually. See page 46 of the Pension Fund Valuation.
- 73.2% of service retirees in 2023 had 20 years or more of service. 51.9% of service retirees in 2023 had 25 or more years of service. 28.7% had 30 or more years of service. Again, this reflects that a high percentage of SERS' retirees are career employees. See page 51 of the Pension Fund Valuation.
- 57.1% of service retirees in 2023 were age 65 or older at retirement. See page 51 of the Pension Fund Valuation.

Health Care Fund Valuation Report

Although health care is not funded on an actuarial basis, an annual valuation of the Health Care Fund ('Health Care Fund Valuation') is performed to fulfill the requirements of GASB Statement 74 - Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans and Statement 75 - Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions.

The Health Care Fund Valuation Information of Note:

- The balance of the Health Care Fund as of June 30, 2023 is \$706,785,561, up from \$611,574,409 as of June 30, 2022. This represents a new high in the balance in the Health Care Fund. See page 1, 7 and 13 of the Health Care Valuation.
- The funded ratio of the Health Care Fund as of June 30, 2023 is 46.14%, up slightly from 45.36% as of June 30, 2022. As a point of reference, the funded ratio in 2012 and 2013 was approximately 13%. See page 1 and 13 of the Health Care Valuation.

- The solvency period of the Health Care Fund as of June 30, 2023 is 39 years, up from 38 years as of June 30, 2022. The FY 23 solvency increase was attributed to higher-than-expected salary growth coupled with lower-than-expected claims. This is the longest solvency period for the Health Care Fund to date. As a point of reference, during the 2017 to 2019 period, the solvency period was approximately 15-17 years, which itself was a marked improvement from previous periods. See page 16 of the Health Care Valuation.

John Garrett, Todd Green and Alisa Bennett from Cavanaugh Macdonald Consulting, LLC will present the results of the FY2023 Pension and Health Care Actuarial Valuations to your Board on Thursday.

Regarding these valuations, there is one resolution for your vote: (1) The actuary's recommended allocation of employer contributions to the Pension, Death Benefit, Medicare B and Health Care Funds for fiscal year 2023.

I am happy to answer any questions.



Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

School Employees Retirement System of Ohio

November 16, 2023

2023 Valuation Results

Todd B. Green, ASA, EA, FCA, MAAA
Alisa Bennett, FSA, EA, FCA, MAAA
John Garrett, ASA, FCA, MAAA



Why does my Plan need an Actuary?



Develop

- Develop a strategy to systematically fund the promised benefits of the system

Measure

- Measure assets and liabilities (future benefit payments)

Determine

- Determine actuarial contribution rates

Analyze

- Analyze experience (actual vs. expected)

Report

- Report on trends, risks, accounting, etc.



Basic Retirement Funding Formula



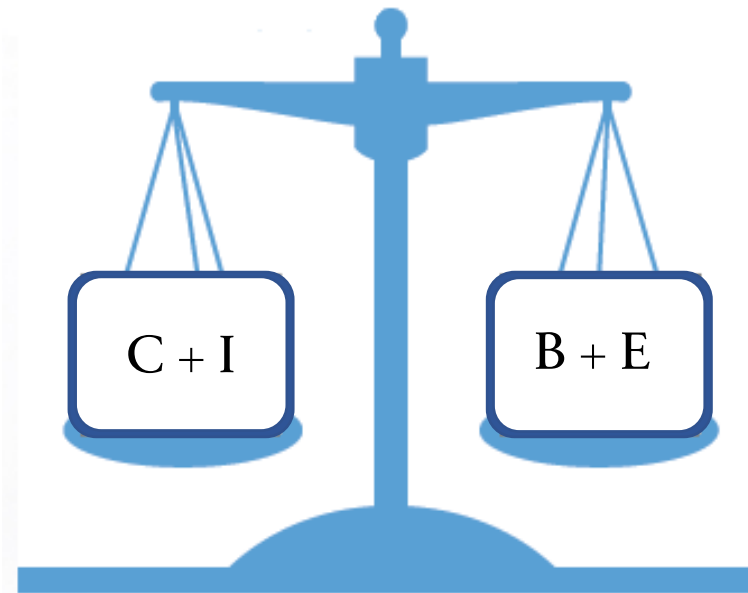
$$\text{C} + \text{I} = \text{B} + \text{E}$$

C = Contributions

I = Investment Income

B = Benefits Paid

E = Expenses



“Money In = Money Out”

$$C + I = B + E$$

B depends on

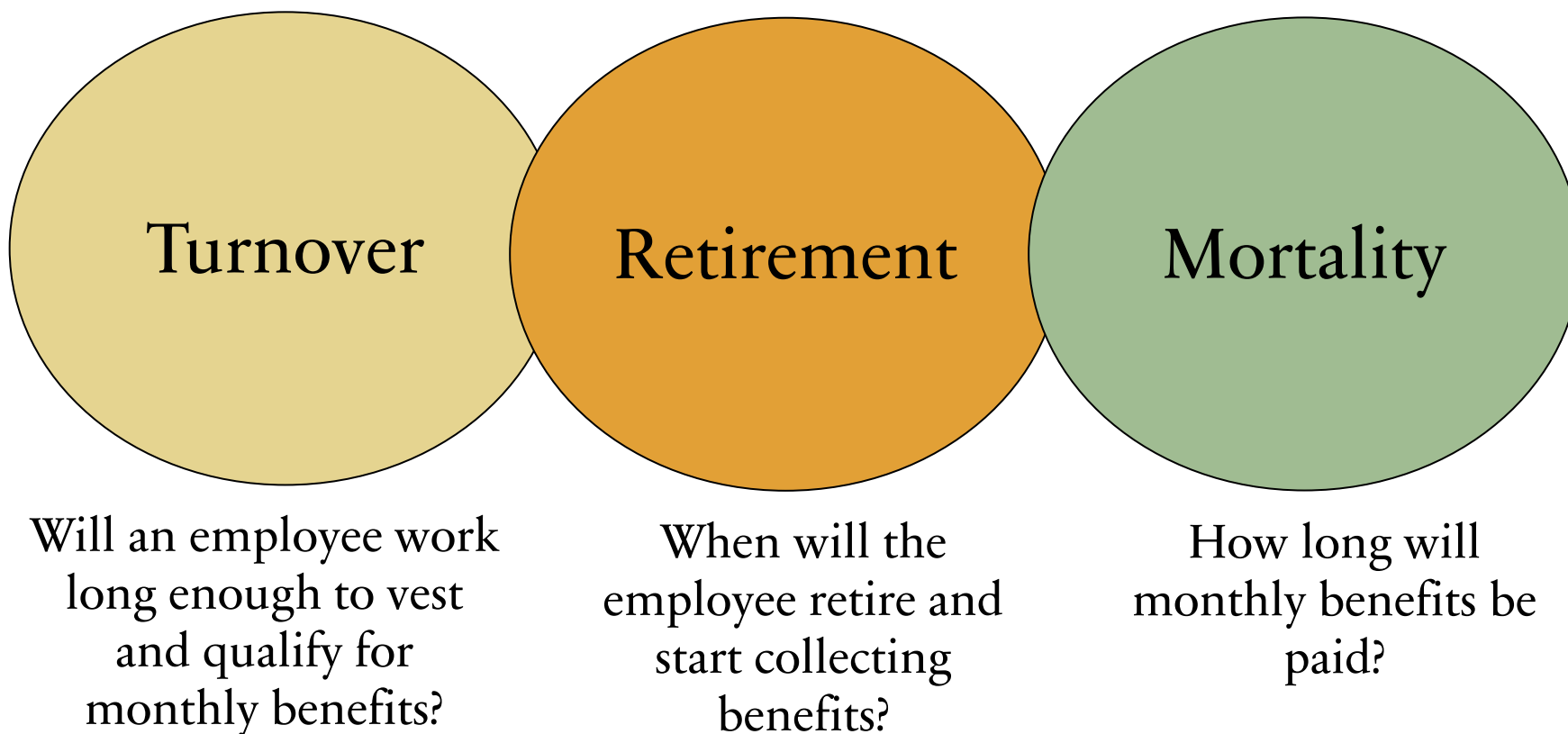
- Plan Provisions
- Experience


C depends on

- Short Term: Actuarial Assumptions
Actuarial Cost Method
- Long Term: I, B, E



- For a defined benefit pension plan, the ultimate value of future cash flows cannot be predicted with certainty
 - To estimate the probability and the likely cost of a future event such as disability, retirement, or death, **actuaries need to make assumptions**



A light green oval containing the text 'Salary Increases'.

Salary Increases

How will salaries grow in future years for each employee?

A light yellow oval containing the text 'Discount Rate'.

Discount Rate

What is the present value of all of those future benefits in terms of today's dollars?

If we put money aside today, what rate of return can we expect to earn on it?

Actuarial Assumptions



➤ General cost impact of each change **in isolation**

Assumption	Change in Assumption	Typical Effect On Liabilities/Costs
Turnover	Increase	Decrease
Retirement	Retire Later	Decrease
Mortality	Decrease (longer life expectancy)	Increase
Disability	Lower Disability	Decrease
Salary Growth	Increase (higher pay)	Increase
Discount Rate	Lower Return	Increase

Actuarial Valuation

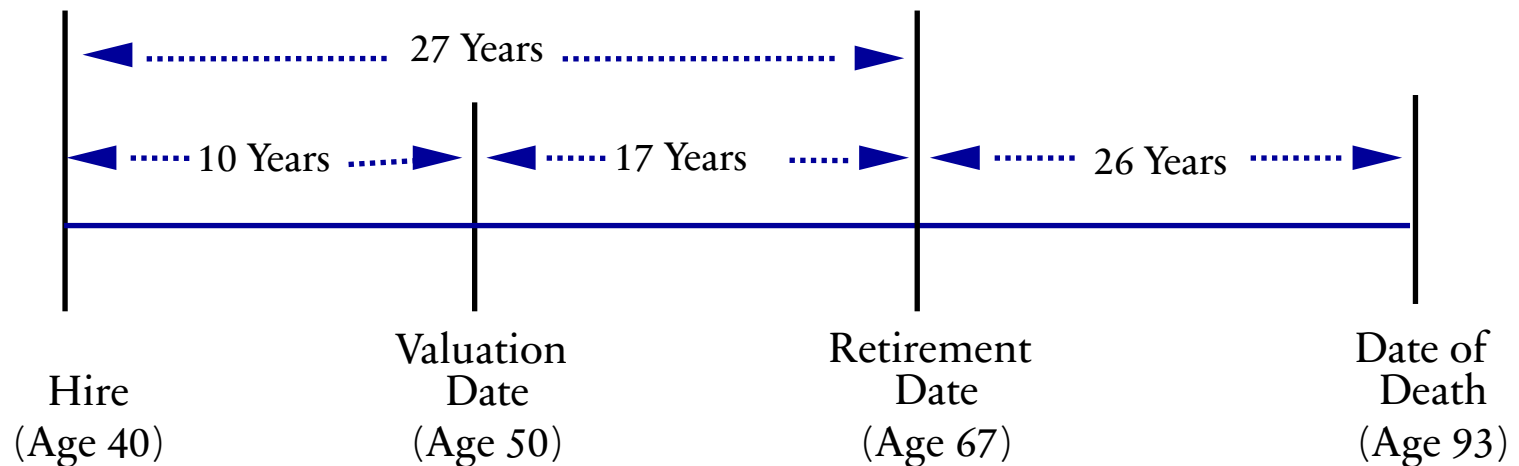


KNOWN at valuation date:

1. age
2. salary
3. gender
4. service to date
5. membership group

ASSUMED at valuation date:

1. future salary increases
2. retirement date(s)
3. death rates before and after
4. disability rates
5. other termination rates



Key Findings



- Funded status for Basic Benefits increased from 75.48% to 76.61%.
- Actuarially determined contribution rate decreased from 11.22% to 10.57% for Basic Benefits.
- Board-adopted funding policy requires at least a 13.50% employer contribution rate for funding of Basic Benefits since funded ratio is greater than 70%, but less than 80%.
- Based on Board Resolution dated September 21, 2023, the entire employer contribution of 14% will be allocated to Basic Benefits.
- Based on Board Resolution, 2.50% COLA has been adopted for calendar year 2024
- Health Care Fund will receive the 1.50% employer surcharge, with no additional contribution from employer.



Funded Status



Benefit	June 30, 2023	June 30, 2022
Pension Benefits	76.7%	75.7%
Medicare Part B	69.9%	63.2%
Post-Retirement Death Benefits	74.4%	71.7%
Health Care	46.1%	45.4%



Pension Results



Comments on Pension Valuation



- Total market value investment return was 6.63%.
 - Market value investment return for Health Care Fund was 5.53%
 - Market value investment return for Basic Benefits Fund was 6.69%
- Total blended smoothed actuarial value return for entire fund is 7.83%.
 - Return for funds that support Health Care was 5.53%
 - Smoothed return for funds that support Basic Benefits was 7.94%
- Funded ratio increased from 75.48% to 76.61%.



Comments on Pension Valuation



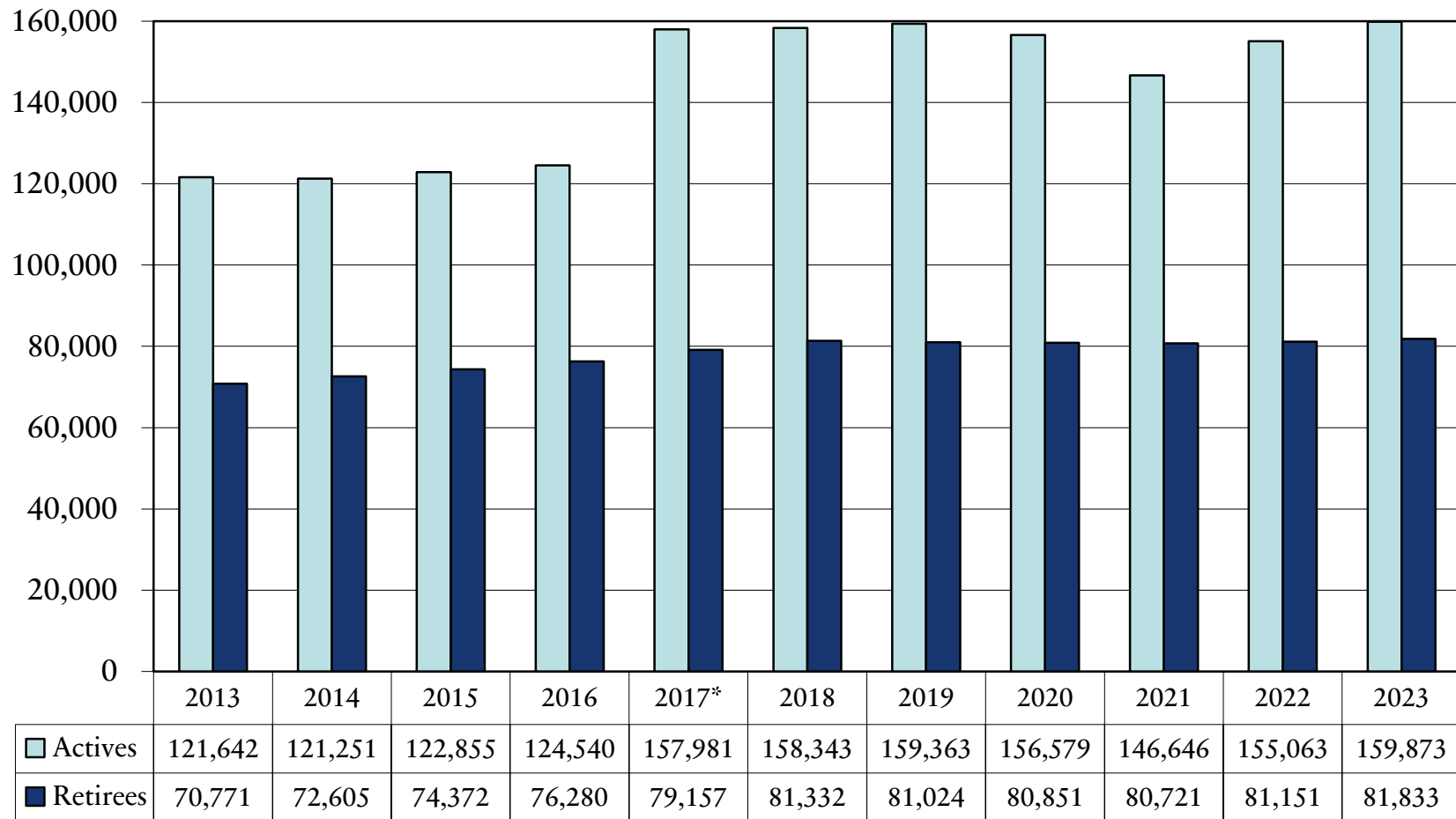
- Actuarially determined contribution rate decreased from 11.22% to 10.57% on current 21-year amortization schedule.
- \$126.9 million of unrecognized investment losses, which will be recognized as investment gains/(losses) over the next three years.
 - 2023/2024 - \$316.5 Million
 - 2024/2025 - \$(427.2) Million
 - 2025/2026 - \$(16.1) Million
- Board approved COLAs of 2.5% for calendar years 2023 and 2024 have been reflected in the results.
- Funded ratio on a market value of assets basis is 76.06%
- “Extra” contribution of \$147 million due to employer contributions in excess of the Actuarially Determined Contribution (ADEC).





- New ASOP 4 Disclosures have been added to the reports
 - Low-Default-Risk Obligation Measure (LDROM) Disclosure
 - Reasonable Actuarially Determined Contribution
 - No impact on the results of the valuation
- Implemented suggestions from actuarial audit
 - Reduced actuarial accrued liability by \$25 million (0.10% of Actuarial Accrued Liability)

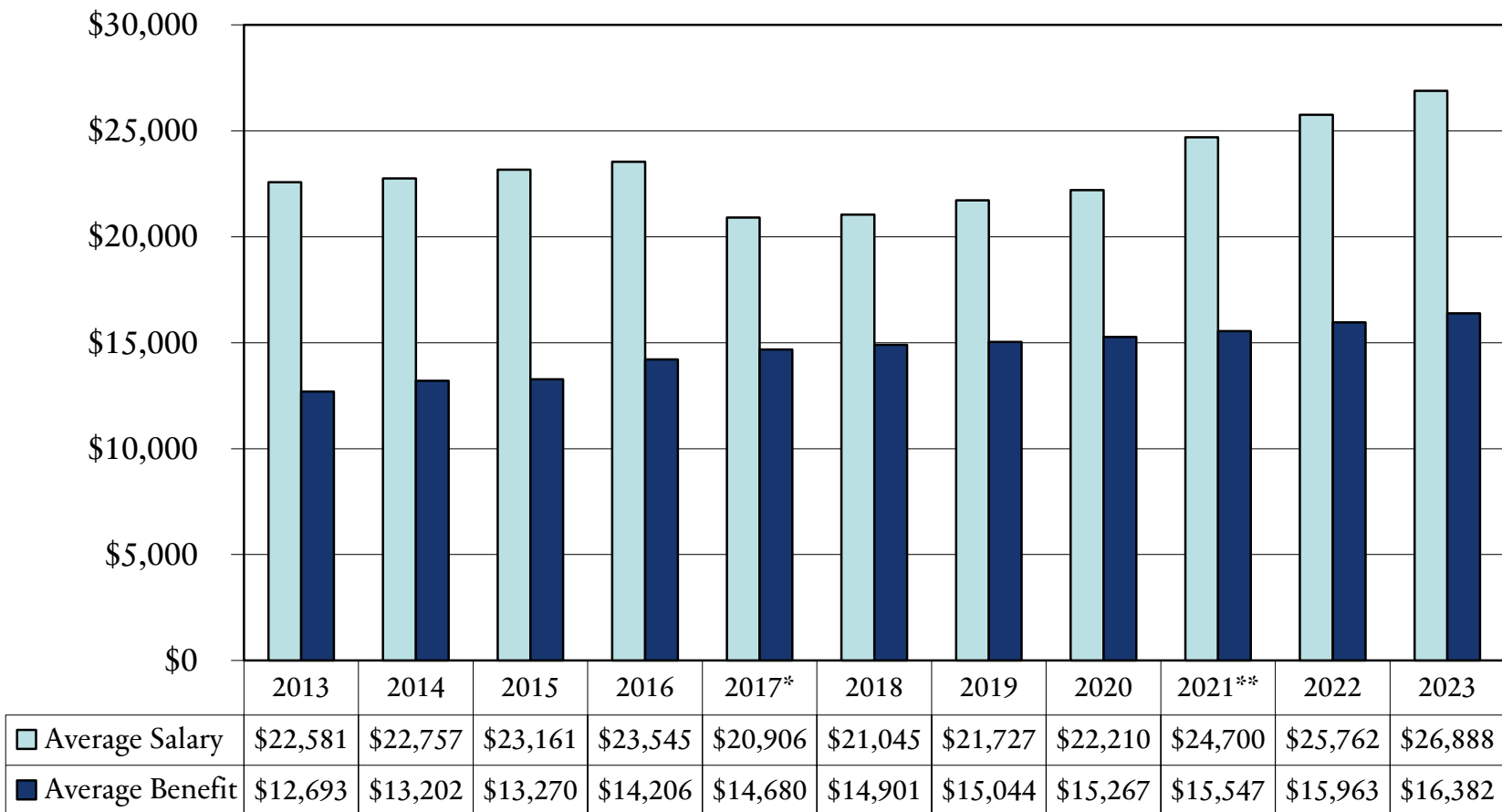
Active and Retired Membership



* 2017 active membership reflects an increase of 32,641 members with 0.25 or less years of service who have been re-categorized from inactive to active status.



Average Salary and Benefits

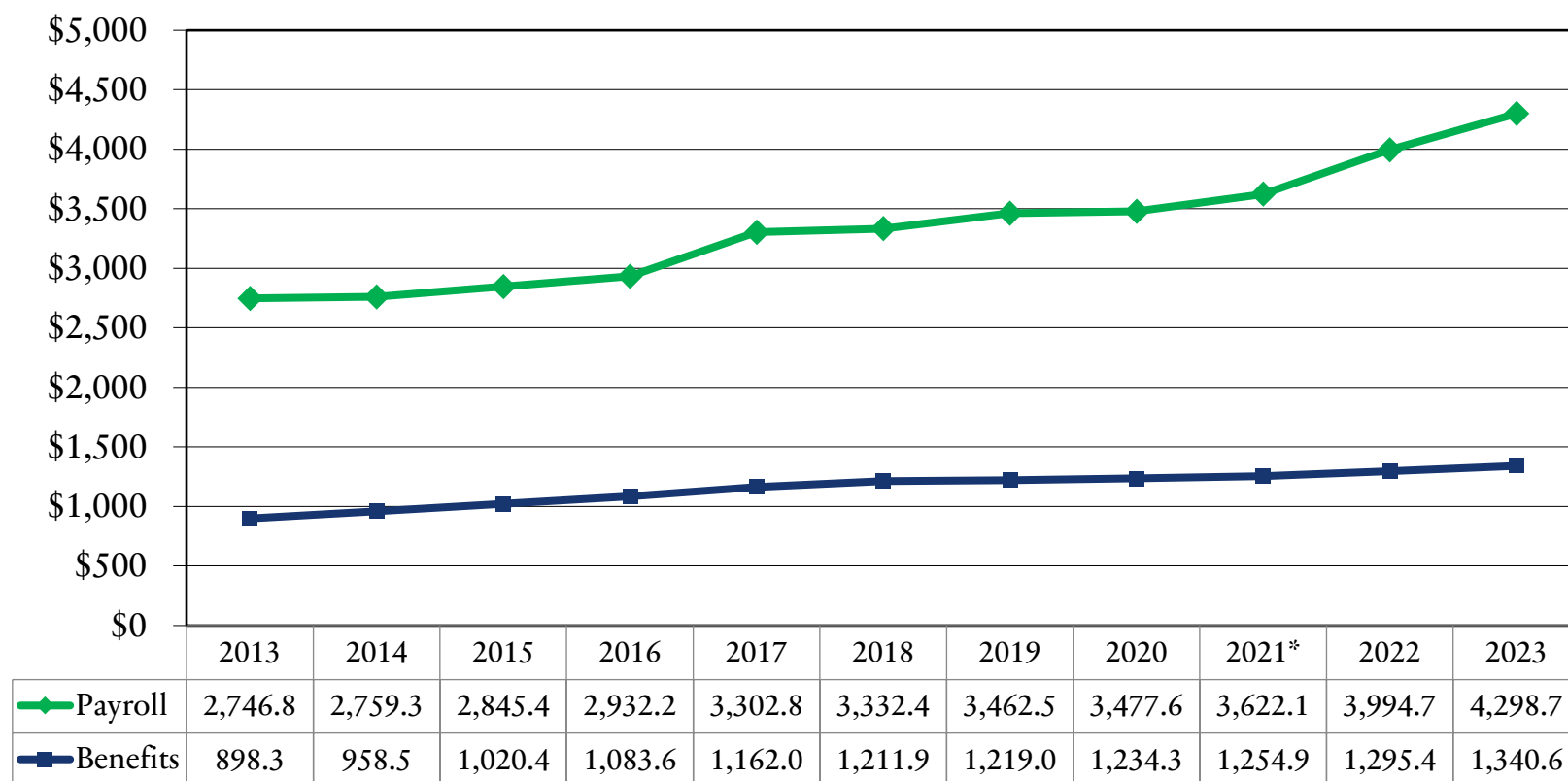


* Average annual salary in 2017 reflects the re-categorization of 32,641 members. The average annual salary for this group was \$7,518.

** Average annual salary in 2021 reflects average salaries for valuation purposes



Payroll and Benefits (\$ Millions)



* 2021 payroll is projected with expected salary increases to align with the valuation year.



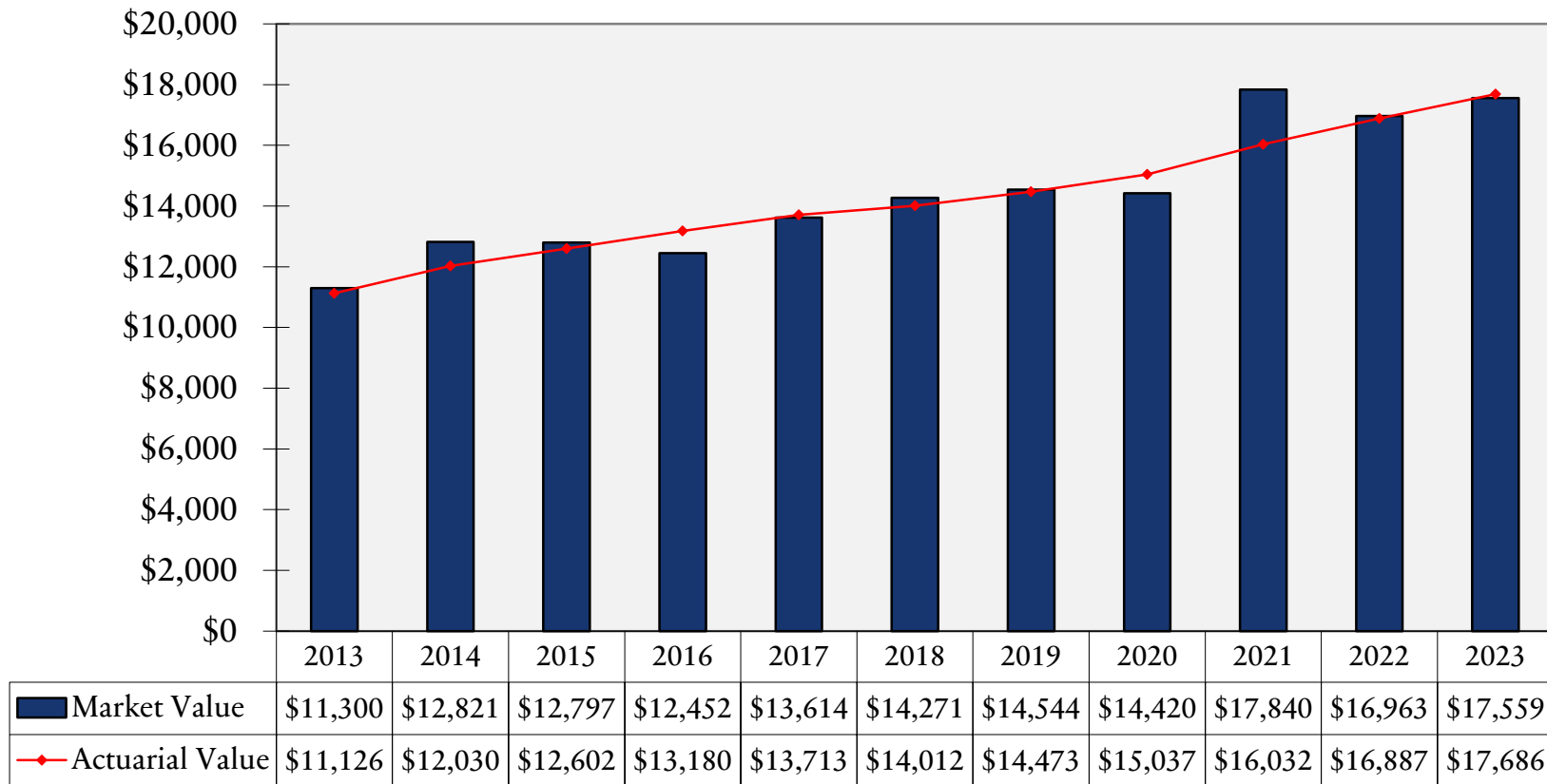
Average Age and Service



	June 30, 2023	June 30, 2022
Active Average Age	46.9	47.2
Active Average Service	7.3	7.6
Average Age Retirees and Beneficiaries	75.4	75.2
Average Age Disabilities	68.4	67.0
Average Age Survivors	72.7	72.5



Assets (\$ Millions)



■ Market Value ◆ Actuarial Value

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Market Return	12.4%	16.7%	3.2%	0.6%	12.9%	9.0%	5.7%	2.7%	28.0%	(2.04)%	6.63%
Actuarial Return	10.1%	11.5%	8.3%	7.9%	7.5%	6.3%	7.1%	7.6%	10.4%	8.31%	7.83%



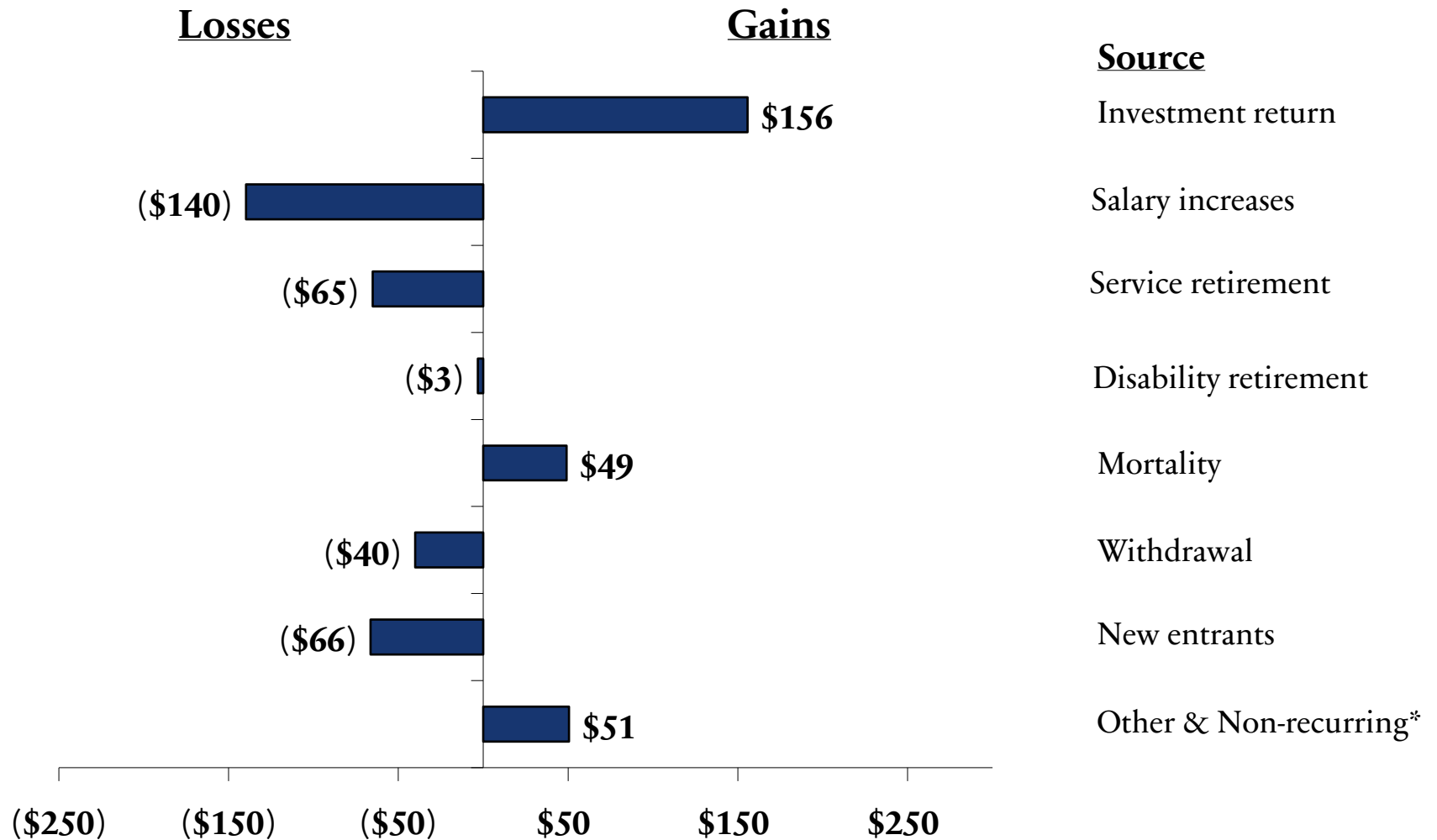
Pension Funding Results



	June 30, 2023 Valuation			
	Pension	Death Benefits	Medicare Part B	Total
Total Normal Cost Rate	10.51%	0.02%	0.26%	10.79%
Less Member Rate	<u>10.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>10.00%</u>
Employer Normal Cost Rate	0.51%	0.02%	0.26%	0.79%
Rate to Amortize UAL	<u>9.55%</u>	<u>0.02%</u>	<u>0.21%</u>	<u>9.78%</u>
Actuarially Determined Contribution Rate	10.06%	0.04%	0.47%	10.57%
Funded Policy Contribution Rate				14.00%
Unfunded Accrued Liability (\$ millions)	\$5,272	\$11	\$116	\$5,399
Amortization Period	21	21	21	21
	June 30, 2022 Valuation			
Actuarially Determined Contribution Rate	10.64%	0.04%	0.54%	11.22%
Unfunded Accrued Liability (\$ millions)	\$5,330	\$11	\$143	\$5,484
Amortization Period	22	22	22	22



2023 Pension Gain/Loss (\$ Millions)



2023 Pension Gain/Loss



- Demographic Gains are (0.01%) of the Actuarial Accrued Liability (AAL)
- Salary Losses are 0.61% of the AAL
- New Entrant liability is 0.29% of the AAL
- Suggested audit changes are (0.11%) of the AAL
- 2.5% COLA for 2024 is 0.16% of the AAL





Health Care Fund Results





Covid-19 and Inflation Reduction Act

- The impact of the COVID-19 pandemic and the Inflation Reduction Act were considered in this valuation.
- No specific adjustments other than healthcare trend assumption.
- We will continue to monitor the impact going forward.

Updated Morbidity Assumption

- Morbidity assumption recognizes that healthcare costs, on average, increase with age.
- Updated this assumption to a newer study with sex-distinct rates.
- New Morbidity factors were updated based on the Society of Actuaries' research report and the American Academy of Actuaries ASOP 6 practice note.



Disability Retiree Subsidization

- Effective January 1, 2024, the non-Medicare disability health care subsidy amounts will change to reflect amounts equal to that of service retirees by years of service.

Participation Assumption Changes

- We have increased the % assumed to elect the SERS Wraparound HRA from 10% to 20%.
- We have added an assumption that 15% of pre-65 retirees who waive will elect coverage upon Medicare eligibility.



Inflation Reduction Act – Health Care Items

- The bill's health reforms primarily impact those with Medicare coverage.
 - It allows the Secretary of Health and Human Services to negotiate the prices of certain Medicare drugs each year. The negotiations will take effect in 2026 for 10 drugs covered by Medicare, increasing to 20 drugs in 2029.
 - Beginning in 2023, the cost of insulin will be capped at \$35 per month for people with diabetes enrolled in Medicare.
 - Anticipated changes to cost of insulin for active and pre-Medicare retiree commercial market.



Inflation Reduction Act – Health Care Items

- Beginning in 2025, out-of-pocket prescription drug costs will be capped at \$2,000 per year for Medicare beneficiaries.
- The bill also implements a three-year extension on increased health insurance subsidies for coverage purchased through Marketplace Exchange. These enhanced subsidies were originally provided as part of the American Rescue Plan Act, a COVID-19 relief bill, and were set to expire at the end of 2022.



Funded Ratio

- Market value of assets used for valuation purposes. Investment return was 5.53% versus assumed rate of 7.00%.
- Funded ratio was 45.36% as of June 30, 2022, and funded ratio is 46.14% as of June 30, 2023.
- Increase due to demographic, asset and claims experience and change to disability subsidization and assumed Wraparound Plan participation.
- Partially offset by other assumption changes.



ADEC

- For funding valuation purposes, UAL amortization period remains 30 years.
- Actuarially Determined Employer Contribution (ADEC) was 2.51% as of June 30, 2022. ADEC is 2.65% as of June 30, 2023.

Funding Policy

- Funding policy requires at least 13.50% of 14.00% employer contribution rate to be allocated to Pension.
- Based on Board Resolution dated September 21, 2023, the Health Care Fund will not receive any employer contribution other than 1.50% surcharge.



Health Care Fund Projections

- If the Health Care Fund receives only the 1.50% in future years, and **all other actuarial assumptions are met**, the Health Care Fund is projected to remain solvent through 2062; 39 years of solvency.

Projection Assumptions

- The projections are based on a 7.00% future asset rate of return assumption, on a payroll growth assumption of 1.75% per year, and on the assumption that the health care contribution rate will be 0.00%, plus a health care surcharge of 1.50%, for a total 1.50% health care contribution rate.
- These projections assume there will be no health care cost changes due to such things as ACA law changes, the Inflation Reduction Act or COVID-19 impact other than anticipated health care trend.





SERS Wraparound HRA

- Valuation reflects the SERS Wraparound HRA. SERS offers a Health Reimbursement Arrangement (HRA) option as an alternative to SERS' non-Medicare group plans.
- Members first select a health care plan from the Health Insurance Marketplace with the assistance of HealthSCOPE Benefits.
- The SERS Wraparound HRA will then provide reimbursement for eligible expenses such as deductibles, co-pays, and other costs. Reimbursement is capped at \$2,100 per participating family per calendar year, indexed for inflation for plan years beginning after December 31, 2023, in accordance with federal limits.
- We have increased our assumption regarding Wraparound Plan participation from 10% to 20% which is a cost savings.



Retirees Healthcare Subsidy

- Effective January 1, 2024, the non-Medicare disability health care subsidy amounts will change to reflect amounts equal to that of service retirees by years of service

Years of Service	Retirement Date on or before 7/1/1989	Retirement Date 8/1/1989 through 7/1/2008	Retirement Date on or after 8/1/2008
	Recipient Premium Contribution Percentage		
5 – 9	50.0%	100.0%	100.0%
10 – 14	17.5	100.0	100.0
15 – 19	17.5	50.0	100.0
20 – 24	17.5	25.0	50.0
25 – 29	17.5	17.5	30.0
30 – 34	17.5	17.5	20.0
35 and Over	17.5	17.5	15.0*

*Additional 1% reduction for each year over 35

Health Care Fund Results

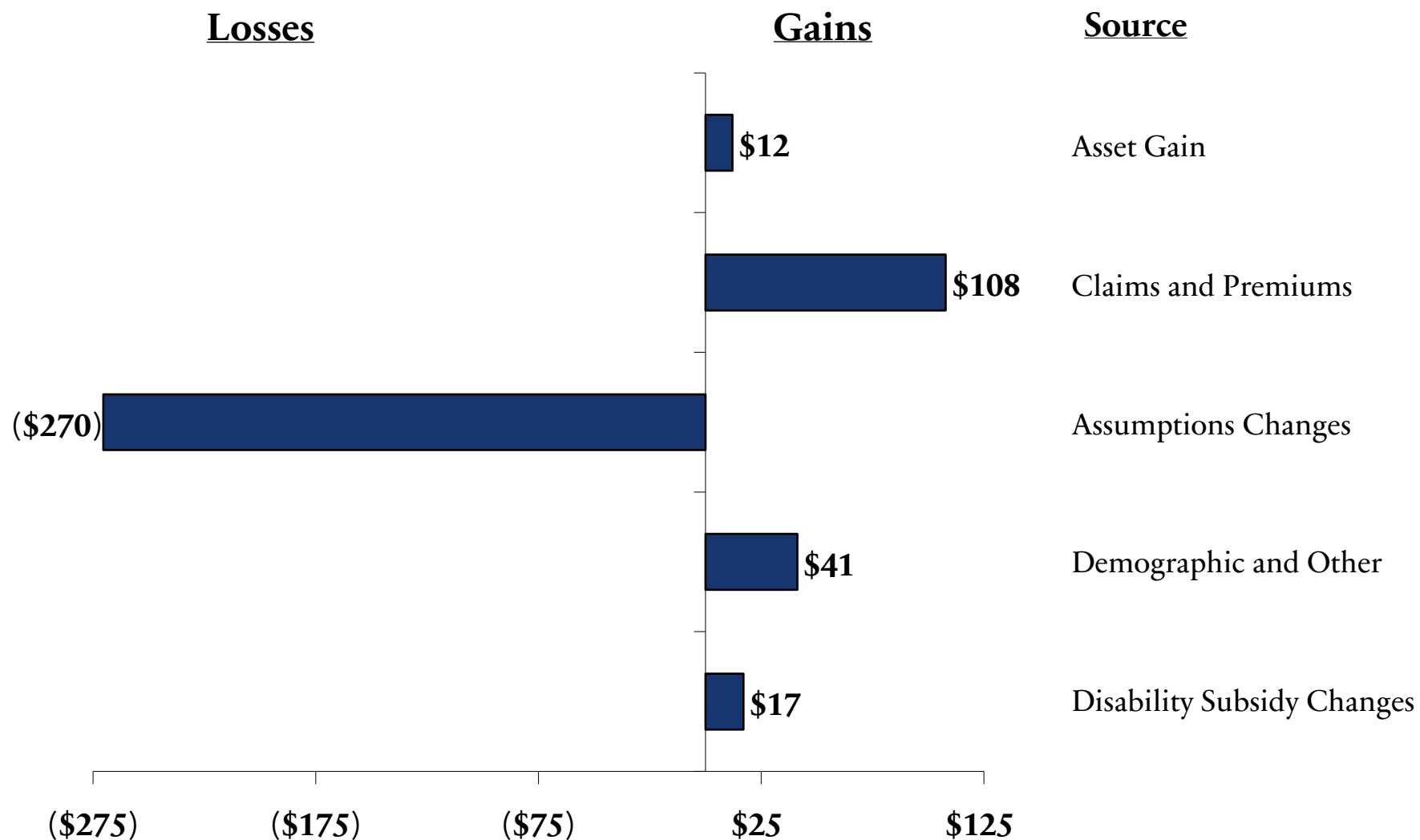


	June 30, 2023	June 30, 2022
Total Normal Cost Rate	1.40%	1.31%
Less Member Rate	<u>0.00%</u>	<u>0.00%</u>
Employer Normal Cost Rate	1.40%	1.31%
Rate to Amortize UAL	<u>1.25%</u>	<u>1.20%</u>
Total Recommended Employer Contribution Rate	2.65%	2.51%
Actuarial Accrued Liability	\$1,532	\$1,348
Market Value of Assets	\$ 707	\$ 612
Unfunded Accrued Liability*	\$ 825	\$ 737
Funded Ratio	46.14%	45.36%
Employer Contribution Toward Health Care	1.50%	1.50%
Amortization Period	30	30



* \$ Millions

2023 Health Care Gain/Loss Analysis (\$ Millions)



Surcharge Level



- The modified current surcharge level is \$30,000 for the 2023-2024 fiscal year. The surcharge level was modified to help ensure the 20-year solvency period goal after consideration for the uncertainty of future school employee membership level, wages increases, and days worked due to ramp up from the COVID-19 pandemic.
- For the 2024-2025 fiscal year, we recommend retaining \$30,000 as the required level.
- The surcharge level is limited to 2.00% of each individual employer's payroll and 1.50% of total System payroll





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**Report on the Annual Basic Benefits Valuation of the
School Employees Retirement System of Ohio**

Prepared as of June 30, 2023





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 30, 2023

Board of Trustees
School Employees Retirement System of Ohio
300 East Broad Street, Suite 100
Columbus, OH 43215-3746

Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the basic benefits provided under the School Employees Retirement System of Ohio (SERS) as of June 30, 2023. The purpose of the valuation was to measure the System's funding progress and to calculate the actuarially determined employer contribution rates for the fiscal year beginning July 1, 2023.

The valuation is based upon data, furnished by the SERS staff, concerning active, inactive and retiree members along with pertinent financial information. The complete cooperation of the SERS staff in furnishing materials requested is hereby acknowledged with appreciation.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

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Offices in Kennesaw, GA • Bellevue, NE



The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Todd B. Green' followed by a horizontal flourish.

Todd B. Green, ASA, EA, FCA, MAAA
President

A handwritten signature in blue ink that reads 'John J. Garrett' followed by a horizontal flourish.

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

TBG/JJG:bvb



TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page</u>
	Executive Summary	1
I	Summary of Principal Results	8
II	Membership Data	10
III	Assets	12
IV	Comments on Valuation	13
V	Derivation of Experience Gains and Losses	14
VI	Actuarially Determined Contribution Rates	17
VII	Schedule of Funding Progress	18
VIII	Risk Considerations	19
 <u>Schedule</u>		
A	Valuation Balance Sheet and Solvency Test	24
B	Development of Actuarial Value of Assets	26
C	Statement of Actuarial Assumptions and Methods	27
D	Summary of Benefit and Contribution Provisions	30
E	Detailed Tabulations of the Data	36
F	Gain/Loss Analysis Details	47
G	Glossary	57
 <u>Appendix</u>		
A	Actuarial Accrued Liabilities	58
B	Breakdown of Total and Accrued Liabilities	59
C	Comparative Schedule	60



**REPORT ON THE ANNUAL VALUATION OF THE
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO**

PREPARED AS OF JUNE 30, 2023

EXECUTIVE SUMMARY

The School Employees Retirement System of Ohio (SERS or System) is a defined benefit public pension fund that provides pensions and access to health care coverage for retired school employees who are covered in nonteaching positions. This includes bus drivers, custodians, treasurers, business officials, administrative assistants, food service providers, and educational aides. This report presents the results of the June 30, 2023, actuarial funding valuation of the System. The primary purposes of performing the actuarial funding valuation are to:

- determine the sufficiency of the Statutory Contribution Rate as set forth in the Ohio statutes;
- determine the experience of the System since the last valuation date;
- disclose asset and liability measures as of the valuation date; and
- analyze and report on trends in System contributions, assets, and liabilities over the past several years.

The actuarial valuation results provide a “snapshot” view of the System’s financial condition on June 30, 2023. Actuarial gains and losses result when the actual experience of the plan (such as asset return, pay increases, turnover, deaths, etc.) is different from that expected by the actuarial assumptions. The System’s unfunded actuarial accrued liability (UAAL) was expected to be \$5,339.7 million as of June 30, 2023, taking into account contributions from the employers and members of \$955.5 million. The actual UAAL is \$5,398.7 million. The net increase of \$59.0 million is attributable to liability and investment gains and losses which are detailed in Section V. The remaining amortization period of the UAAL is 21 years as of June 30, 2023.

The valuation is based on a set of actuarial assumptions which were adopted by the Board based on the five-year experience study for the period ending June 30, 2020. These assumptions are presented in Schedule C.



A summary of the key results from the June 30, 2023 actuarial valuation is shown below. Further detail on the valuation results can be found in the following sections of this Executive Summary.

	June 30, 2023 Valuation Results	June 30, 2022 Valuation Results
Actuarially Determined Contribution Rate	10.57%	11.22%
Employer Contribution Rate	14.00%	14.00%
Sufficiency/(Deficiency)	3.43%	2.78%
Remaining Amortization Period	21	22
Unfunded Actuarial Accrued Liability (\$M)	\$5,398.7	\$5,484.5
Basic Benefit Funded Ratio (Actuarial Assets)	76.61%	75.48%

The funded ratio of the basic benefits is 76.61%. Since this is greater than 70%, per the Board-adopted funding policy, the basic benefits may receive an employer contribution between 13.50% and 14.00% of compensation for FY2024. The Health Care Fund may receive an employer contribution of up to 0.50%. Based on a Board Resolution dated September 21, 2023, the valuation allocates the entire 14.00% to the basic benefits and 0.00% allocated to health care consistent with SERS' funding policy. The funding policy requires at least 13.50% of the employers' contributions be allocated to SERS' basic benefits when the funded ratio is 70% but less than 80%, with the remainder (if any) allocated to health care.

Under Ohio Revised Code 3309.374(B), on September 21, 2023, the Board granted an annual cost-of-living-adjustment of 2.5% for eligible SERS members for the 2024 calendar year. This has been included in the valuation for funding purposes.

EXPERIENCE FOR THE LAST PLAN YEAR

Numerous factors contributed to the change in the System's assets, liabilities, and actuarial contribution rate between June 30, 2022 and June 30, 2023. The components are examined in the following discussion. Since the most recent experience study was completed, we note that inflation has been significantly higher than assumed. Inflation is a component of several assumptions so the effects of higher inflation as a component of one assumption may be partially offset by the effect of higher inflation in another. We do not want to give too much credibility to recent experience, but we cannot ignore that current rates of inflation are the highest in the past 40 years. We will continue to monitor inflation in subsequent valuations to assess the reasonableness of the assumed inflation used in the valuation.

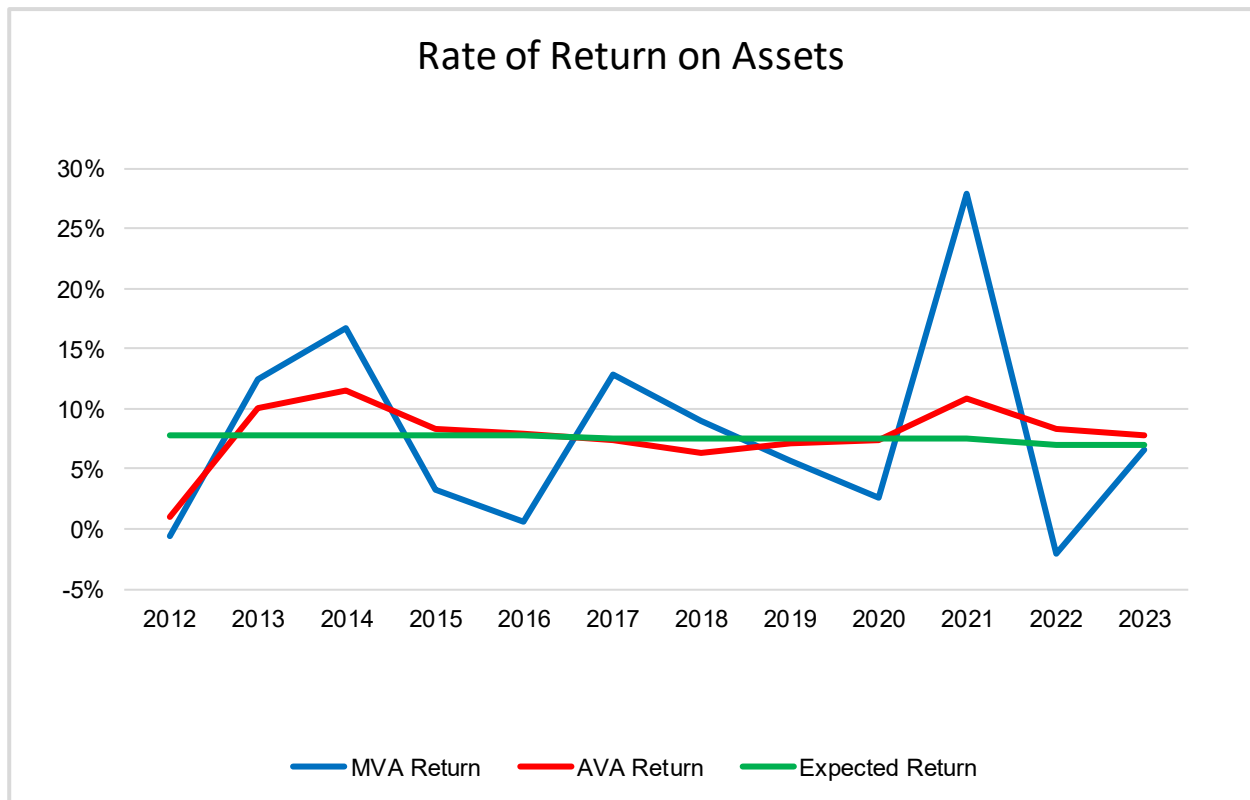
ASSETS

As of June 30, 2023, SERS' basic benefits had net assets of \$17,558,801,466, when measured on a market value basis. This was an increase of \$596,110,461 from the previous year. The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability and the actuarially determined contribution. The asset valuation smoothing method, which recognizes the annual unexpected portion of market value investment returns over a four-year period, attempts to reduce the effect of market volatility. The resulting amount is called the "actuarial value of assets" and is utilized to determine the actuarial valuation results. In this year's valuation, the actuarial value of assets as of June 30, 2023, was \$17,685,652,177, an increase of \$798,679,618 from the value in the prior year. The components of change in the asset values are shown in the following table.



	Actuarial Value	Market Value
Net Assets, June 30, 2022	\$ 16,886,972,559	\$ 16,962,691,005
- Employer and Member Contributions	+ 955,568,535	+ 955,568,535
- Benefit Payments	- 1,476,425,983	- 1,476,425,983
- Investment Gains	+ 1,319,537,066	+ 1,116,967,909
Net Assets, June 30, 2023	17,685,652,177	17,558,801,466

The estimated investment return on the market value of assets for FY2023 was 6.63%. Due to the investment experience gain for FY 2021, the resulting return on the smoothed actuarial value of assets was 7.83%. The return on the funds supporting Basic Benefits was 7.94%. As this rate of return was greater than the assumed rate of 7.00%, there was an actuarial investment experience gain of \$155.7 million. The return on the Health Care Fund is 5.53%. Please see Section III, Schedule B, and Schedule F of this report for more detailed information on the market and actuarial value of assets.



Market value returns have been very volatile. As can be seen in this graph, the return on actuarial assets is much smoother than the return on market value. The asset smoothing method impacts only the timing of when the actual market experience is recognized in the valuation process. The remaining deferred investment experience net loss of \$127 million will be absorbed in future years.



LIABILITIES

The actuarial accrued liability is the portion of the present value of future benefits allocated to service performed up to the valuation date. The difference between this liability and the actuarial value of assets is called the unfunded actuarial accrued liability (UAAL). The dollar amount of unfunded actuarial accrued liability is reduced if the contributions to the System exceed the normal cost for the year, plus interest on the prior year's UAAL.

The unfunded actuarial accrued liability is shown as of June 30, 2023 in the following table:

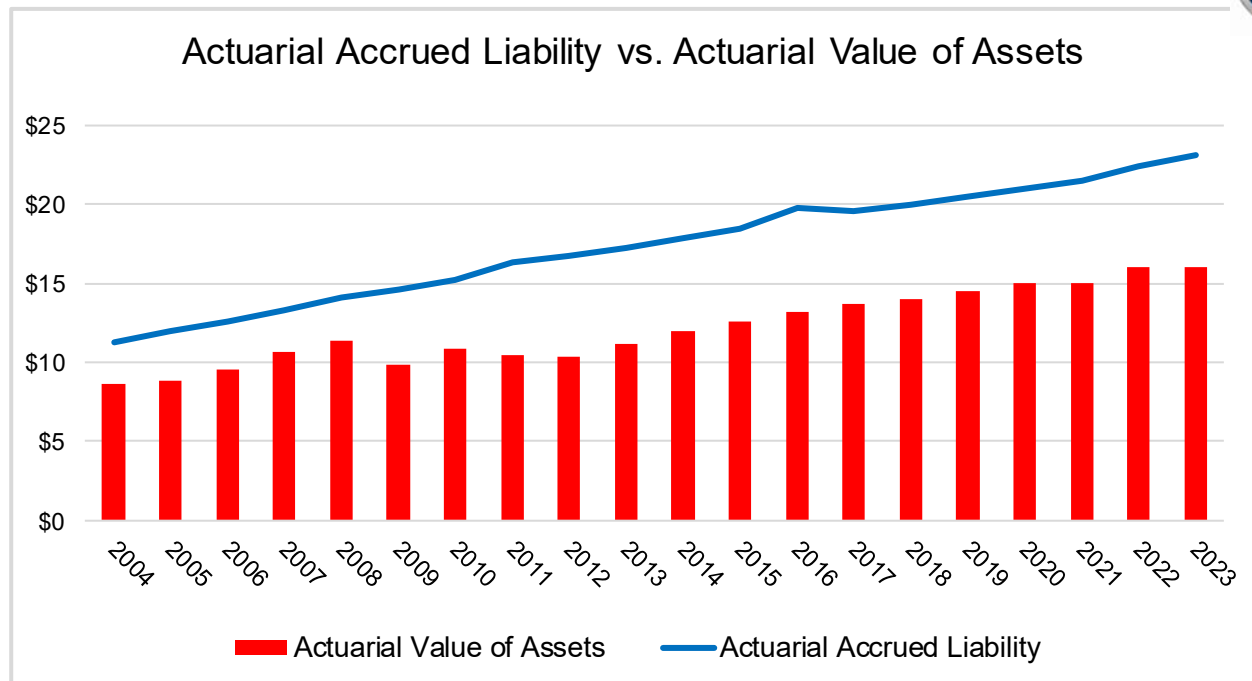
	Actuarial Value of Assets	Market Value of Assets
Actuarial Accrued Liability	\$23,084,316,697	\$23,084,316,697
Value of Assets	\$17,685,652,177	\$17,558,801,466
Unfunded Actuarial Accrued Liability*	\$5,398,664,520	\$5,525,515,231
Funded Ratio	76.61%	76.06%

* See Appendix B of the report for the detailed development of the unfunded actuarial accrued liability.

Changes in the UAAL occur for various reasons. The net decrease in the UAAL from June 30, 2022, to June 30, 2023, was \$85.8 million. The components of this net change are shown in the table below:

Unfunded Actuarial Accrued Liability, June 30, 2022		
(\$ Millions)		\$5,484.5
Expected increase due to amortization method	(\$144.8)	
Investment experience	(\$155.7)	
Liability experience	\$177.6	
Assumption Change to 2024 COLA Rate	\$37.1	
Total		(\$85.8)
Unfunded Actuarial Accrued Liability, June 30, 2023		\$5,398.7

As shown above, various components impacted the UAAL. Actuarial gains (losses) result from actual experience that is more (less) favorable than anticipated based on the actuarial assumptions. The amounts are measured as the difference between the expected unfunded actuarial accrued liability and the actual unfunded actuarial accrued liability net of any impact due to changes in actuarial assumptions and methods or benefit provisions. Overall, the System experienced a net decrease to the UAAL of \$85.8 million. The net UAAL decrease is comprised primarily of experience and investment gains; the largest sources of liability gains were due to mortality and various data and method changes, which were offset by losses due to retirement, termination, and salary experience. Finally, there was an additional increase in the UAAL due to recognition of the 2.50% cost-of-living adjustment granted by the Board for all eligible SERS members for calendar year 2024.

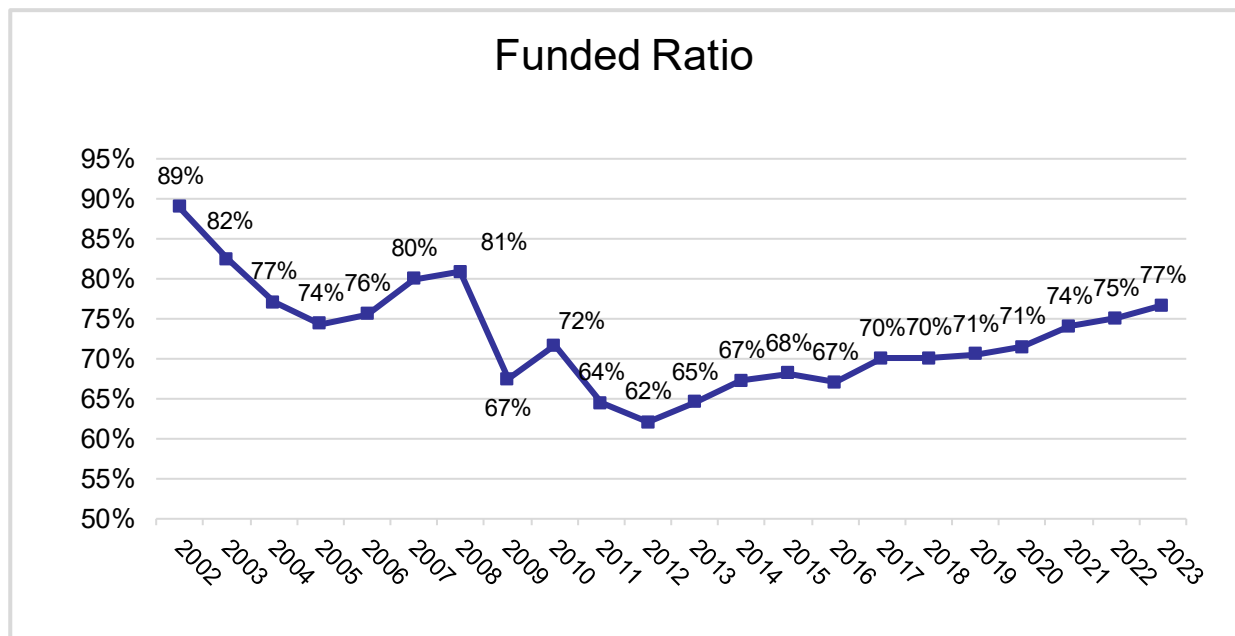


Since June 30, 2004, the actuarial accrued liability has been higher than the actuarial value of assets. Investment experience below the assumed rate of return was the primary source of the increased difference between the actuarial accrued liability and actuarial assets. SERS implemented pension reform to improve the System's funding progress. The Board's funding policy allocates a higher portion of the employer contribution toward the basic benefits until the fund achieves a funded status of 90%. An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial accrued liability and the progress made in its funding is to track the funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability.

	6/30/19	6/30/20	6/30/21	6/30/22	6/30/23
Funded Ratio	70.51%	71.49%	74.46%	75.48%	76.61%
Unfunded Actuarial Accrued Liability (\$M)	\$ 6,054.2	\$ 5,997.1	\$ 5,498.1	\$ 5,484.5	\$5,398.7



The longer-term historical funded ratio information is shown in the chart below.



Investment returns are the primary source of decreases in the funded ratio as can be seen during the 2002-2003 “tech bubble” recession and the “great” recession of 2008-2009. Board actions which led to legislation to modify the Plan in combination with improved experience of the System are attributable to the improved funded ratio since 2016.

CONTRIBUTION RATE

Under the Entry Age Normal cost method, the actuarial contribution rate consists of two components:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date which is funded by both member and employer contributions, and
- an "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service-to-date over the actuarial value of assets.



See Section VI of the report for the detailed development of these contribution rates which are summarized in the following table:

Contribution Rates	June 30, 2023	June 30, 2022
1. Employer Portion of Normal Cost Rate	0.79%	0.81%
2. UAAL Contribution Rate	9.78%	10.41%
3. Total Actuarial Determined Contribution Rate (1) + (2)	10.57%	11.22%
4. Funded Ratio	76.61%	75.48%
5. Total Employer Contribution Rate	14.00%	14.00%
6. Amount Allocated to Basic Benefits	14.00%	14.00%

Contributions are developed with the intent of being level as a percentage of covered payroll, assuming the number of active members remains stable. Furthermore, the funding policy is expected to accumulate sufficient assets to make all future benefit payments as they become due, if all assumptions are met. Actuarial Standard of Practice Number 4 (ASOP 4) requires the disclosure of a reasonable actuarial determined contribution rate. The current statutory funding rate is expected to fully fund the plan and reduce the unfunded actuarial accrued liability each year. While there are potentially other reasonable actuarial determined contribution rates, in our professional judgement, the current funding policy meets the guidelines of ASOP 4.

As discussed earlier, SERS' basic benefits includes retirement, disability, and survivor benefits, along with Medicare Part B reimbursements and lump sum retiree death benefits. SERS also provides access to health care coverage for retiree members. The Health Care Fund is partially supported by employer contributions that are not required for actuarially funding basic benefits. The funding policy is expected to accelerate the pace at which SERS' basic benefits will achieve a funded ratio equal to 90%. The Board has allocated the entire employer contribution toward basic benefits.



**REPORT ON THE ANNUAL VALUATION OF THE
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO**

PREPARED AS OF JUNE 30, 2023

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2023, presents the results of the annual actuarial valuation of the basic benefits provided under the System, including pension, Medicare Part B reimbursement, and post-retirement death benefits. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized in the following table.

SUMMARY OF PRINCIPAL RESULTS

	June 30, 2023	June 30, 2022
Active members included in valuation		
Number	159,873	155,063
Annual Compensation*	\$4,298,689,195	\$3,994,657,693
Retirees		
Number	81,833	81,151
Annual allowances	\$1,340,607,264	\$1,295,438,626
Deferred Vesteds		
Number	6,413	6,118
Annual deferred allowances	\$45,681,879	\$41,365,993
Assets (net of Health Care Assets)		
Market related actuarial value	\$17,685,652,177	\$16,886,972,559
Market value	\$17,558,801,466	\$16,962,691,005
Unfunded Accrued Liability	\$5,398,664,520	\$5,484,496,253
Funded Ratio (AVA/AAL)		
All Basic Benefits	76.61%	75.48%
Pension Benefits	76.73%	75.71%
Medicare Part B	69.92%	63.21%
Post-retirement Death Benefits	74.44%	71.68%
Actuarially Determined Contribution Rate		
Normal	0.79%	0.81%
Accrued liability	9.78%	10.41%
Total	10.57%	11.22%
Funding Policy Contribution Rate	14.00%	14.00%
Accrued liability amortization period (years)	21	22

* The annual compensation reflects imputed salaries.



2. The statute sets a contribution cap of 24% of payroll: 14% from employers and 10% from employees. Employer contributions in excess of those required to support the basic benefits may be allocated to retiree health care funding. If the funded ratio is less than 70%, the entire 14% employers' contribution shall be allocated to SERS' basic benefits. If the funded ratio is 70% but less than 80%, at least 13.50% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund SERS' basic benefits.
3. The valuation balance sheet showing the results of the valuation is given in Schedule A.
4. Comments on the valuation results are given in Section IV, comments on the experience and the sources of actuarial gains and losses during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.



SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation was furnished by the System's staff. The following tables summarize the membership of the system as of June 30, 2023, upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

Active Members

Number	Payroll	Group Averages		
		Salary	Age	Service
159,873	\$4,298,689,195	\$26,888	46.9	7.3

The total number of active members includes 42,715 vested members and 117,158 non-vested members. Those who reached 25 years of service on or before August 1, 2017 were eligible to retire under the previous age and service credit eligibility requirements.

The following table shows a six-year schedule of active member valuation data.

SCHEDULE OF SERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2018	158,343	\$3,332,395,171	\$21,045	0.7%
6/30/2019	159,363	3,462,524,396	21,727	3.2
6/30/2020	156,579	3,477,578,726	22,210	2.2
6/30/2021	146,646	3,622,097,199 *	24,700	11.2
6/30/2022	155,063	3,994,657,693	25,762	4.3
6/30/2023	159,873	4,298,689,195	26,888	4.4

* Effective June 30, 2021, the annual compensation reflects imputed salaries.



The following table shows the number and annual retirement allowances payable to retiree members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

Retiree Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age
Retirees and Beneficiaries	71,932	\$1,199,587,403	\$16,677	75.4
Disability	5,774	99,885,330	17,299	68.4
Survivors	4,127	41,134,531	9,967	72.7
Total in SERS	81,833	\$1,340,607,264	\$16,382	74.8

This valuation also includes 274,280 inactive members eligible for a contribution refund only (including 252,422 members reported separately who had completed one or more years of service before terminating). Their contributions totaled \$257,845,563 as of June 30, 2023. There were also 6,413 terminated vested members with annual deferred pension benefits of \$45,681,879. Included in the “Retiree” numbers in the above table are 12,910 reemployed retirees with account balances of \$138,549,932 (including employer contributions and interest), 904 reemployed retirees receiving only an annuity from their contributions and their employers’ matching contributions, and 1,100 reemployed retirees receiving such annuities in addition to their regular pension benefits. The sum of the annuity payments attributable to these reemployed retirees is \$9,031,221. Included in the “Disability” numbers in the above table are 1,303 retirees converted to a service retirement. The sum of the annuity payments attributable to these converted disabled retirees is \$15,522,101.



SECTION III – ASSETS

1. As of June 30, 2023, the total market value of assets amounted to \$18,265,587,027. All figures include the combined Pension Trust Fund, Medicare B Fund, Death Benefit Fund, and Health Care Fund, but exclude the QEBA Fund. The return on the combined funds including the Health Care Fund is 6.63%. The return on the funds supporting Basic Benefits is 6.69%. The return on the Health Care Fund is 5.53%.

Asset Summary Based on Market Value			
(1)	Assets at June 30, 2022	\$	17,574,265,414
(2)	Contributions and Misc. Revenue		1,225,459,692
(3)	Investment Gain (Loss)		1,149,760,020
(4)	Benefit Payments		(1,683,898,099)
(5)	Assets at June 30, 2023 (1) + (2) + (3) + (4)	\$	18,265,587,027
(6)	Annualized Rate of Return*		6.63 %

2. The four-year smoothed market related actuarial value of assets used for the current valuation was \$18,392,437,738. Schedule B shows the development of the actuarial value of assets as of June 30, 2023. Again all figures include the combined Pension Trust Fund, Medicare B Fund, Death Benefit Fund, and Health Care Fund, but exclude the QEBA Fund. The return on the combined funds including the Health Care Fund is 7.83%. The return on the funds supporting Basic Benefits is 7.94%. The return on the Health Care Fund is 5.53%.

Asset Summary Based on Actuarial Value			
(1)	Assets at June 30, 2022	\$	17,498,546,968
(2)	Contributions and Misc. Revenue		1,225,459,692
(3)	Investment Gain (Loss)		1,352,329,177
(4)	Benefit Payments		(1,683,898,099)
(5)	Assets at June 30, 2023 Before Application of Corridor (1) + (2) + (3) + (4)	\$	18,392,437,738
(6)	Annualized Rate of Return*		7.83 %

*Based on the approximation formula: $I / [0.5 \times (A + B - I)]$, where

- I = Investment Gain (Loss)
- A = Beginning of year asset value
- B = End of year asset value



SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of June 30, 2023.

1. The total retirement benefit valuation balance sheet shows that the System has total future retirement benefit liabilities of \$27,070,598,690, of which \$13,563,986,248 is for the future benefits payable for present retiree members and beneficiaries of deceased members; \$829,057,745 is for the future benefits payable for present inactive members; and \$12,677,554,697 is for the future benefits payable for present active members. Against these retirement benefit liabilities, the System has a total present actuarial value of assets of \$17,685,652,177 as of June 30, 2023. The difference of \$9,384,946,513 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future for retirement benefits. Of this amount, \$3,754,463,724 is the present value of future contributions expected to be made by members, and the balance of \$5,630,482,789 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 0.51% of payroll for basic pension benefits, 0.02% of payroll for post-retirement death benefits, and 0.26% of payroll for Medicare Part B benefits are required to provide the benefits of the System for the average member of SERS. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$231,818,269.
3. For pension benefits, it is recommended that the unfunded accrued liability contribution rate payable by the employers on account of retirement benefits be set at 9.55% of payroll. For post-retirement death benefits, it is recommended that the unfunded accrued liability contribution rate payable by the employers on account of retirement benefits be set at 0.02% of payroll. Finally, for Medicare Part B benefits, it is recommended that the unfunded accrued liability contribution rate payable by the employers on account of retirement benefits be set at 0.21% of payroll. These rates are sufficient to amortize the unfunded accrued liability of \$5,398,664,520 over 21 years based on the assumption that the aggregate payroll for SERS members will increase by 1.75% each year.
4. The present value of the total future contributions to be made by the employers for basic benefits is the sum of the future employer normal contributions and the unfunded accrued liability contributions and equals \$5,630,482,789.



SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES

Actual experience will never (except by coincidence) match exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2023, is shown below in \$ millions.

Experience (Gain/Loss)

Total Basic Benefits June 30:		2023	2022	2021	2020	2019	2018
(1)	UAAL from last valuation	\$ 5,484.5	5,498.1	5,997.1	6,054.2	5,985.5	5,875.3
(2)	Normal cost from last valuation	430.1	406.2	347.6	344.1	330.6	342.4
(3)	Contributions	955.5	900.1	830.6	843.9	809.9	759.9
(4)	Interest accrual: [(1) + (2) - (3)*.5] x .007	380.6	381.8	444.8	448.3	443.3	437.8
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 5,339.7	5,386.0	5,958.9	6,002.7	5,949.5	5,895.6
(6)	Change due to plan amendments	0.0	0.0	0.0	0.0	0.0	357.6
(7)	Change due to new actuarial assumption or methods	(37.1)	(37.0)	(126.5)	0.0	0.0	0.0
(8)	Expected UAAL after changes: (5) - (6) - (7)	\$ 5,376.8	5,423.0	6,085.4	6,002.7	5,949.5	5,538.0
(9)	Actual UAAL from this valuation	\$ 5,398.7	5,484.5	5,498.1	5,997.1	6,054.2	5,985.5
(10)	Total Gain/(Loss): (8) - (9)	\$ (21.9)	(61.5)	587.3	5.6	(104.7)	(447.4)
(11)	Investment Gain/(Loss):	\$ 155.7	268.6	431.3	7.1	(44.1)	(161.1)
(12)	Non-Investment Gain/(Loss)	\$ (177.6)	(330.1)	155.8	(1.5)	(60.6)	(286.3)

Pension June 30:		2023	2022	2021	2020	2019	2018
(1)	UAAL from last valuation	\$ 5,329.7	5,316.4	5,789.8	5,822.7	5,735.1	5,611.3
(2)	Normal cost from last valuation	418.8	395.0	338.8	335.4	322.1	334.1
(3)	Contributions	926.9	871.7	803.0	814.0	780.6	731.8
(4)	Interest accrual: [(1) + (2) - (3)*.5] x .007	370.0	369.3	429.6	431.4	425.0	418.5
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 5,191.6	5,209.0	5,755.2	5,775.5	5,701.6	5,632.1
(6)	Change due to plan amendments	0.0	0.0	0.0	0.0	0.0	357.6
(7)	Change due to new actuarial assumption or methods	(37.1)	(37.0)	(120.9)	0.0	0.0	0.0
(8)	Expected UAAL after changes: (5) - (6) - (7)	\$ 5,228.7	5,246.0	5,876.1	5,775.5	5,701.6	5,274.5
(9)	Actual UAAL from this valuation	\$ 5,271.8	5,329.7	5,316.4	5,789.8	5,822.7	5,735.1
(10)	Total Gain/(Loss): (8) - (9)	\$ (43.1)	(83.7)	559.7	(14.3)	(121.1)	(460.6)
(11)	Investment Gain/(Loss):	\$ 153.3	264.7	425.4	6.4	(44.1)	(159.0)
(12)	Non-Investment Gain/(Loss)	\$ (196.4)	(348.4)	134.3	(20.7)	(77.0)	(301.6)



SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES
(\$ Millions)

Medicare Part B June 30:		2023	2022	2021	2020	2019	2018
(1)	UAAL from last valuation	\$ 143.1	168.5	194.0	217.4	235.4	249.1
(2)	Normal cost from last valuation	10.6	10.5	8.3	8.2	8.0	7.8
(3)	Contributions	26.6	26.2	26.3	28.3	27.3	26.3
(4)	Interest accrual: [(1) + (2) - (3)*.5] x .007	9.8	11.6	14.1	15.8	17.2	18.3
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 136.9	164.4	190.1	213.1	233.3	248.9
(6)	Change due to plan amendments	0.0	0.0	0.0	0.0	0.0	0.0
(7)	Change due to new actuarial assumption or methods	0.0	0.0	(4.5)	0.0	0.0	0.0
(8)	Expected UAAL after changes: (5) - (6) - (7)	\$ 136.9	164.4	194.6	213.1	233.3	248.9
(9)	Actual UAAL from this valuation	\$ 116.1	143.1	168.5	194.0	217.4	235.4
(10)	Total Gain/(Loss): (8) - (9)	\$ 20.8	21.3	26.1	19.1	15.9	13.5
(11)	Investment Gain/(Loss):	\$ 2.1	3.5	5.2	0.7	0.1	(1.9)
(12)	Non-Investment Gain/(Loss)	\$ 18.7	17.8	20.9	18.4	15.8	15.4

Post-Retirement Death Benefits June 30:		2023	2022	2021	2020	2019	2018
(1)	UAAL from last valuation	\$ 11.7	13.2	13.3	14.1	15.0	14.9
(2)	Normal cost from last valuation	0.7	0.7	0.5	0.5	0.5	0.5
(3)	Contributions	2.0	2.2	1.4	1.5	2.0	1.8
(4)	Interest accrual: [(1) + (2) - (3)*.5] x .007	0.8	0.9	1.0	1.0	1.1	1.1
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 11.2	12.6	13.4	14.1	14.6	14.7
(6)	Change due to plan amendments	0.0	0.0	0.0	0.0	0.0	0.0
(7)	Change due to new actuarial assumption or methods	0.0	0.0	(1.1)	0.0	0.0	0.0
(8)	Expected UAAL after changes: (5) - (6) - (7)	\$ 11.2	12.6	14.5	14.1	14.6	14.7
(9)	Actual UAAL from this valuation	\$ 10.8	11.7	13.2	13.3	14.1	15.0
(10)	Total Gain/(Loss): (8) - (9)	\$ 0.4	0.9	1.3	0.8	0.5	(0.3)
(11)	Investment Gain/(Loss):	\$ 0.3	0.4	0.7	0.0	(0.1)	(0.2)
(12)	Non-Investment Gain/(Loss)	\$ 0.1	0.5	0.6	0.8	0.6	(0.1)



ANALYSIS OF FINANCIAL EXPERIENCE

Gains and (Losses) in Accrued Liabilities Resulting from Difference Between Assumed Experience and Actual Experience (\$ Millions)

Type of Activity	Pension	Medicare Part B	Post-Retirement Death Benefit	Total Basic Benefits
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (69.1)	\$ 3.3	\$ 0.7	\$ (65.1)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(1.9)	(1.3)	0.0	(3.2)
Pre-Retirement Death Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(5.1)	(0.3)	0.0	(5.4)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(43.9)	3.6	0.2	(40.1)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(139.7)	0.0	0.0	(139.7)
New Members. Additional accrued liability attributable to members who entered the plan since the last valuation.	(64.3)	(1.9)	(0.1)	(66.3)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	153.3	2.1	0.3	155.7
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	41.4	13.6	(0.5)	54.5
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.*	86.2	1.7	(0.2)	87.7
Gain (or Loss) During Year From Financial Experience	\$ (43.1)	\$ 20.8	\$ 0.4	\$ (21.9)
Non-Recurring Items. Adjustments for plan amendments, assumption changes and method changes	(37.1)	0.0	0.0	(37.1)
Composite Gain (or Loss) During Year	\$ (80.2)	\$ 20.8	\$ 0.4	\$ (59.0)

*Includes suggested changes from 2022 audit



SECTION VI – ACTUARIALLY DETERMINED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following table shows the rates of contribution payable by employers.

Actuarially Determined Contribution Rates

Contribution for	Pension	Post-Retirement Death Benefit	Medicare Part B	Total Basic Benefits
A. Normal Cost:				
(1) Service retirement benefits	7.29%			
(2) Disability benefits	0.86			
(3) Survivor benefits	0.34			
(4) Refunds	2.02			
(5) Total	10.51%	0.02%	0.26%	10.79%
B. Member Contributions	10.00%	0.00%	0.00%	10.00%
C. Employer Normal Cost: [A(5) - B]	0.51%	0.02%	0.26%	0.79%
D. Unfunded Actuarial Accrued Liability Contributions	9.55%	0.02%	0.21%	9.78%
E. Total Recommended Employer Contribution Rate:[C+D]	10.06%	0.04%	0.47%	10.57%

The statute sets a contribution cap of 24% of payroll: 14% from employers and 10% from employees. Employer contributions in excess of those required to support the basic benefits may be allocated to retiree health care funding. If the funded ratio is less than 70%, all 14% of the employers' contribution shall be allocated to SERS' basic benefits. If the funded ratio is 70% but less than 80%, at least 13.50% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund SERS' basic benefits. Based on a Board Resolution dated September 21, 2023, the entire 14% of the employers' contribution will be allocated to SERS' basic benefits.



SECTION VII – SCHEDULE OF FUNDING PROGRESS
(\$ Millions)

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b - a) / (c)
Pension Benefits						
6/30/2018	\$ 13,824	\$ 19,559	\$ 5,735	70.7%	\$ 3,332	172.1%
6/30/2019	14,267	20,090	5,823	71.0	3,463	168.1
6/30/2020	14,811	20,601	5,790	71.9	3,478	166.5
6/30/2021	15,781	21,097	5,316	74.8	3,622	146.8
6/30/2022	16,611	21,941	5,330	75.7	3,995	133.4
6/30/2023	17,384	22,656	5,272	76.7	4,299	122.6
Medicare Part B						
6/30/2018	\$ 164	\$ 400	\$ 236	41.1%	\$ 3,332	7.1%
6/30/2019	180	397	217	45.3	3,463	6.3
6/30/2020	199	393	194	50.6	3,478	5.6
6/30/2021	223	391	169	57.0	3,622	4.6
6/30/2022	246	389	143	63.2	3,995	3.6
6/30/2023	270	386	116	69.9	4,299	2.7
Post-Retirement Death Benefits						
6/30/2018	\$ 24	\$ 39	\$ 15	61.5%	\$ 3,332	0.5%
6/30/2019	26	40	14	65.0	3,463	0.4
6/30/2020	27	40	13	67.5	3,478	0.4
6/30/2021	28	41	13	68.3	3,622	0.4
6/30/2022	30	41	11	73.2	3,995	0.3
6/30/2023	31	42	11	73.8	4,299	0.3



SECTION VIII – RISK CONSIDERATIONS

A typical retirement plan faces many different risks, but the greatest risk is the inability to make benefit payments when due. If plan assets are depleted, benefits may not be paid which could create legal and litigation risk or the plan could become “pay as you go”. The term “risk” is most commonly associated with an outcome with undesirable results. However, in the actuarial world, risk can be translated as uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the assumptions and that uncertainty, whether favorable or unfavorable, creates risk. ASOP 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that is different than the actuarial assumptions.

The various risk factors for a given plan can have a significant impact – positive or negative – on the actuarial projection of liability and contribution rates.

There are a number of risks inherent in the funding of a defined benefit plan. These include:

- economic risks, such as investment return and price inflation;
- demographic risks such as mortality, payroll growth, aging population including impact of baby boomers, and retirement ages;
- contribution risk, i.e., the potential for contribution rates to be too high for the plan sponsor/employer to pay and
- external risks such as the regulatory and political environment.

There is a direct correlation between healthy, well-funded retirement plans and consistent contributions equal to the full actuarial contribution rate each year. The System is primarily funded by member and employer contributions to the trust fund, together with the earnings on these accumulated contributions. These contributions fund benefit accruals for current active members and administrative expenses. The remainder of the contributions amortizes the unfunded actuarial accrued liability. The contribution rates are set by state statute and are intended to provide the needed amounts to fund the system over time. The purpose of the valuation is to determine if the fixed employer and member contributions remain sufficient to fund the Plan. Due to the fixed nature of the contributions actuarial gains and losses are reflected in the amortization period. Generally, the largest source of actuarial gains and losses are caused by investment volatility. In addition, the unfunded liability is amortized as a level percentage of pay assuming payroll will grow by 1.75% per year. A key risk factor to the System’s funding is that over time, the Statutory Contribution Rates will be insufficient to accumulate enough funds, with investment income, to fund the promised benefits. The funding insufficiency can be caused by amortization periods that are too long or by payroll not growing at the assumed rate.

The other significant risk factor for the System is investment return because of the volatility of returns and the size of plan assets compared to payroll. A perusal of historical returns over 10-20 years reveals that the actual return each year is rarely close to the average return for the same period. This is to be expected, given the underlying capital market assumptions and the System’s asset allocation. To the extent market rates of interest affect the expected return on assets, there is a risk of change to the discount rate which determines the present value of liabilities and actuarial valuation results.



A key demographic risk for the Retirement System is improvements in mortality (longevity) greater than anticipated. Mortality risk arises because there is unexpected mortality improvement, perhaps from a significant medical breakthrough that could quickly increase liabilities. While this is an exposure to risk, it represents a small probability.

The following exhibits summarize some historical information that helps indicate how certain key risk metrics have changed over time. Many are due to the maturing of the retirement system.

Historical Asset Volatility Ratios
(in 1,000s)

As a system matures, the size of the market value of assets increases relative to the covered payroll of active members, on which the System is funded. The size of the plan assets relative to covered payroll, sometimes referred to as the asset volatility ratio, is an important indicator of the contribution risk for the System. The higher this ratio, the more sensitive a plan's contribution rate is to investment return volatility. In other words, it will be harder to recover from investment losses with increased contributions.

Fiscal Year End	Market Value of Assets (\$ Millions)	Covered Payroll (\$ Millions)	Asset Volatility Ratio
6/30/2010	\$9,072	\$2,843	3.19
6/30/2011	10,619	2,852	3.72
6/30/2012	10,332	2,788	3.71
6/30/2013	11,300	2,747	4.11
6/30/2014	12,821	2,759	4.65
6/30/2015	12,797	2,845	4.50
6/30/2016	12,452	2,932	4.25
6/30/2017	13,614	3,303	4.12
6/30/2018	14,271	3,332	4.28
6/30/2019	14,544	3,463	4.20
6/30/2020	14,420	3,478	4.15
6/30/2021	17,840	3,622	4.93
6/30/2022	16,963	3,995	4.25
6/30/2023	17,559	4,299	4.08

The assets at June 30, 2023 are 408% of payroll, so underperforming the investment return assumption by 1.00% (i.e., earn 6.00% for one year) is equivalent to 4.08% of payroll. While the actual impact in the first year is mitigated by the asset smoothing method and amortization of the UAL, this illustrates the risk associated with volatile investment returns.



Historical Cash Flows

Plans with negative cash flows will experience increased sensitivity to investment return volatility. Cash flows, for this purpose, are measured as contributions less benefit payments and administrative expenses. If the System has negative cash flows and then experiences returns below the assumed rate, there are fewer assets to be reinvested to earn the higher returns that typically follow. While any negative cash flow will produce such a result, it is typically a negative cash flow of more than 5% of MVA that may cause significant concerns. The System has negative cash flows which range from 3% to 4% for the prior five years, so there is no immediate concern.

Fiscal Year End	Market Value of Assets (\$ Millions)	Contributions (\$ Millions)	Benefit Payments & Expenses (\$ Millions)	Net Cash Flow (\$ Millions)	Net Cash Flow as % of Market Value
6/30/2010	\$9,072	\$704	\$822	(\$118)	(1.30%)
6/30/2011	10,619	682	880	(197)	(1.86)
6/30/2012	10,332	697	946	(249)	(2.41)
6/30/2013	11,300	695	1,020	(325)	(2.88)
6/30/2014	12,821	701	1,069	(368)	(2.87)
6/30/2015	12,797	702	1,156	(455)	(3.56)
6/30/2016	12,452	751	1,203	(452)	(3.63)
6/30/2017	13,614	804	1,256	(451)	(3.31)
6/30/2018	14,271	760	1,335	(575)	(4.03)
6/30/2019	14,544	810	1,368	(558)	(3.84)
6/30/2020	14,420	844	1,354	(510)	(3.54)
6/30/2021	17,840	831	1,387	(556)	(3.12)
6/30/2022	16,963	900	1,439	(539)	(3.18)
6/30/2023	17,559	956	1,507	(551)	(3.14)



Liability Maturity Measurement

Most public sector retirement systems have been in operation for many years. As a result, they have aging plan populations, and in some cases declining active populations, resulting in an increasing ratio of retirees to active members and a growing percentage of retiree liability. The retirement of the remaining baby boomers over the next decade is expected to further exacerbate the aging of the retirement system population. With more of the total liability residing with retirees, investment volatility has a greater impact on the funding of the system since it is more difficult to restore the system financially after losses occur when there is comparatively less payroll over which to spread costs. Below are two tables which demonstrate the ratio of the System's retiree liability compared to the total accrued liability and the ratio of the number of retirees and beneficiaries to the number of active members.

Fiscal Year End	Retiree Liability (\$ Millions)	Total Actuarial Liability (\$ Millions)	Retiree Percentage
6/30/2010	\$7,942	\$15,222	52%
6/30/2011	8,605	16,325	53%
6/30/2012	9,250	16,755	55%
6/30/2013	9,793	17,247	57%
6/30/2014	10,437	17,882	58%
6/30/2015	11,047	18,503	60%
6/30/2016	11,702	19,771	59%
6/30/2017	11,679	19,588	60%
6/30/2018	12,399	19,998	62%
6/30/2019	12,629	20,527	62%
6/30/2020	12,949	21,034	62%
6/30/2021	13,346	21,530	62%
6/30/2022	13,658	22,371	61%
6/30/2023	13,997	23,084	61%



Historical Member Statistics

Fiscal Year End	Active Count	Retiree Count	Active to Retiree Ratio
6/30/2010	126,015	66,127	1.91
6/30/2011	125,337	67,221	1.86
6/30/2012	121,811	69,038	1.76
6/30/2013	121,642	70,771	1.72
6/30/2014	121,251	72,605	1.67
6/30/2015	122,855	74,372	1.65
6/30/2016	124,540	76,280	1.63
6/30/2017*	157,981	79,157	2.00
6/30/2018	158,343	81,332	1.95
6/30/2019	159,363	81,024	1.97
6/30/2020	156,579	80,851	1.94
6/30/2021	146,646	80,721	1.82
6/30/2022	155,063	81,151	1.91
6/30/2023	159,873	81,833	1.95

*Effective in FY2017, the active member headcount reflects an increase of members who have been re-categorized from inactive to active status.

Liquidation Risk

Under the revised Actuarial Standards of Practice (ASOP) No. 4 effective for valuations after February 15, 2023, we must now include a low-default-risk obligation measure of the System's liability in our funding valuation report. This is an informational disclosure as described below and would not be appropriate for assessing the funding progress or health of the plan.

This measure uses the unit credit cost method and reflects all the assumptions and provisions of the funding valuation except that the discount rate is derived from considering low-default-risk fixed income securities. We considered the FTSE Pension Discount Curve based on market bond rates published by the Society of Actuaries as of June 30, 2023 and with the 30-year spot rate used for all durations beyond 30. Using these assumptions, we calculate a liability of approximately \$25,746 million.

This amount approximates the termination liability if the plan (or all covered employment) ended on the valuation date and all of the accrued benefits had to be paid with cash-flow matched bonds. This assurance of funded status and benefit security is typically more relevant for corporate plans than for governmental plans since governments rarely have the need or option to completely terminate a plan.



SCHEDULE A

Valuation Balance Sheet and Solvency Test

The following valuation balance sheet shows the assets and liabilities of the system as of the current valuation date of June 30, 2023, and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2022. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

VALUATION BALANCE SHEET SHOWING THE ASSETS AND LIABILITIES OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

	June 30, 2023	June 30, 2022
ASSETS		
Current actuarial value of assets	\$ 17,685,652,177	\$ 16,886,972,559
Prospective contributions		
Member contributions	\$ 3,754,463,724	\$ 3,486,942,734
Employer normal contributions	231,818,269	219,543,770
Unfunded accrued liability contributions	<u>5,398,664,520</u>	<u>5,484,496,253</u>
Total prospective contributions	<u>\$ 9,384,946,513</u>	<u>\$ 9,190,982,757</u>
Total assets	<u><u>\$ 27,070,598,690</u></u>	<u><u>\$ 26,077,955,316</u></u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 13,563,986,248	\$ 13,266,785,507
Present value of benefits payable on account of active members	12,677,554,697	12,041,350,129
Present value of benefits payable on account of inactive and deferred vested members	<u>829,057,745</u>	<u>769,819,680</u>
Total liabilities	<u><u>\$ 27,070,598,690</u></u>	<u><u>\$ 26,077,955,316</u></u>



The following table provides the solvency test for SERS members. The table allocates the valuation assets of the System to its liabilities based on an order of precedence. The highest order of precedence is active member contributions. The second highest order of precedence are members in pay status, and vested and non-vested terminated members. The lowest order of precedence is the employer financed portion of active member accrued benefits. The liabilities are determined using the System's assumed rate of return.

Solvency Test
(\$ Millions)

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
Pension Benefits							
6/30/2018	\$ 2,733	\$ 12,427	\$ 4,399	\$ 13,824	100.0%	89.2%	0.0%
6/30/2019	2,842	12,666	4,582	14,268	100.0	90.2	0.0
6/30/2020	2,934	13,009	4,658	14,811	100.0	91.3	0.0
6/30/2021	2,986	13,434	4,677	15,781	100.0	95.2	0.0
6/30/2022	3,040	13,773	5,128	16,611	100.0	98.5	0.0
6/30/2023	3,093	14,132	5,431	17,384	100.0	100.0	2.9
Medicare Part B							
6/30/2018	\$ 0	\$ 251	\$ 149	\$ 164	100.0%	65.3%	0.0%
6/30/2019	0	244	153	180	100.0	73.8	0.0
6/30/2020	0	236	157	199	100.0	84.3	0.0
6/30/2021	0	238	154	223	100.0	93.7	0.0
6/30/2022	0	231	158	246	100.0	100.0	9.5
6/30/2023	0	228	158	270	100.0	100.0	26.5
Post-Retirement Death Benefits							
6/30/2018	\$ 0	\$ 31	\$ 8	\$ 24	100.0%	77.4%	0.0%
6/30/2019	0	31	8	25	100.0	80.6	0.0
6/30/2020	0	31	8	27	100.0	87.1	0.0
6/30/2021	0	33	7	28	100.0	84.8	0.0
6/30/2022	0	33	8	30	100.0	90.9	0.0
6/30/2023	0	33	9	31	100.0	93.9	0.0



SCHEDULE B
Development of Actuarial Value of Assets

Valuation date June 30:		2022	2023	2024	2025	2026
A.	Actuarial Value Beginning of Year	\$ 16,631,942,980	\$ 17,498,546,968			
B.	Market Value End of Year	17,574,265,414	18,265,587,027			
C.	Market Value Beginning of Year	18,440,377,176	17,574,265,414			
D.	Cash Flow					
D1.	Contributions	\$ 953,961,187	\$ 1,013,052,377			
D2.	Other Revenue	97,382,882	212,407,315			
D3.	Benefit Payments	(1,538,412,277)	(1,674,031,898)			
D4.	Net Transfers	(7,998,389)	(9,866,201)			
D5.	Net	\$ (495,066,597)	\$ (458,438,407)			
E.	Investment Income					
E1.	Market Total: B.-C.-D5.	\$ (371,045,165)	\$ 1,149,760,020			
E2.	Assumed Rate (Net of Expenses)	7.00%	7.00%			
E3.	Amount for Immediate Recognition	1,273,499,071	1,214,153,235			
E4.	Amount for Phased-In Recognition	(1,644,544,236)	(64,393,215)			
F.	Phased-In Recognition of Investment Income					
F1.	Current Year: 0.25 * E4.	\$ (411,136,059)	\$ (16,098,304)	\$ 0	\$ 0	\$ 0
F2.	First Prior Year	743,716,320	(411,136,059)	(16,098,304)	0	0
F3.	Second Prior Year	(178,306,015)	743,716,320	(411,136,059)	(16,098,304)	0
F4.	Third Prior Year	(66,102,732)	(178,306,015)	743,716,320	(411,136,059)	(16,098,304)
F5.	Total Recognized Investment Gain/(Loss)	\$ 88,171,514	\$ 138,175,942	\$ 316,481,957	\$ (427,234,363)	\$ (16,098,304)
G.	Preliminary Actuarial Value End of Year:					
A.+D5.+E3.+F5.		\$ 17,498,546,968	\$ 18,392,437,738			
H.	Corridor					
H1.	80% of Market Value	\$ 14,059,412,331	\$ 14,612,469,622			
H2.	120% of Market Value	\$ 21,089,118,497	\$ 21,918,704,432			
I.	Actuarial Value End of Year:					
G. Not Less than H1. or Not Greater than H2.		\$ 17,498,546,968	\$ 18,392,437,738			
J.	Difference Between Market & Actuarial Values	\$ 75,718,446	\$ (126,850,711)	\$ (443,332,667)	\$ (16,098,303)	\$ 0
K.	Health Care Valuation Assets	\$ 611,574,409	\$ 706,785,561			
L.	Basic Benefits Valuation Assets (G. - K.)	\$ 16,886,972,559	\$ 17,685,652,177			

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed four-year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for four consecutive years, actuarial value will become equal to market value.



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were based on the actuarial experience study for the five-year period ending June 30, 2020, adopted by the Board on April 15, 2021.

INTEREST RATE: 7.00% per annum, compounded annually (net after all System expenses).

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

Service	Annual Rates of Withdrawal
0	40.00%
1	19.00
2	11.00
3	9.00
4	8.00
5	6.50
10	3.50
15	2.25

Age	Annual Rates of			
	Death *		Disability	
	Male	Female	Male	Female
20	.041%	.013%	.020%	.010%
25	.041	.012	.039	.010
30	.052	.019	.071	.028
35	.068	.030	.127	.059
40	.096	.047	.214	.106
45	.143	.072	.313	.180
50	.218	.107	.414	.300
55	.320	.157	.530	.450
60	.466	.238	.590	.450
65	.682	.380	.533	.300
70	1.025	.627	.300	.200
74	1.461	.937	.300	.200

* Pre-retirement mortality is based on the PUB-2010 General Amount Weighted Below Median Employee Mortality Table with fully generational projection using the MP-2020 projection scale. The above rates represent the base rates used.



Annual Rates of								
Age	Retirement Eligible prior to 8/1/17				Retirement Eligible after 8/1/17			
	Reduced	Reduced (55/25)	First Eligible Unreduced	Subsequent Unreduced	Reduced	Reduced (60/25)	First Eligible Unreduced	Subsequent Unreduced
50			21%	19%				
55		10%	27%	19%				
57		10%	27%	19%			30%	19%
60	43%	15%	27%	19%		6%	30%	19%
62	43%	15%	27%	19%	5%	6%	30%	19%
65			50%	33%	15%	17%	30%	19%
68			50%	33%			30%	18%
70			50%	33%			30%	18%
75			100%	100%			100%	100%

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Annual Rates of			
Service	Merit & Seniority (A)	Base (Economy) (B)	Increase Next Year $(1+(A))*(1+(B))$
0	10.00%	3.25%	13.58%
1	3.00	3.25	6.35
2	1.75	3.25	5.06
3	1.25	3.25	4.54
4	1.00	3.25	4.28
5-9	0.75	3.25	4.02
10-15	0.50	3.25	3.77
16-17	0.25	3.25	3.51
18 & over	0.00	3.25	3.25

PAYROLL GROWTH: 1.75% per annum, compounded annually.

PRICE INFLATION: 2.40% per annum, compounded annually.

ANNUAL COLA: Increase of 2.00% of initial retirement allowance on anniversary of retirement date. On and after April 1, 2018, COLAs for future retirees will be delayed until the fourth anniversary of benefit commencement.

DEATH AFTER RETIREMENT: These assumptions are used to measure the probabilities of each benefit payment being made after retirement.

SERVICE RETIREMENT: PUB-2010 General Employee Amount Weighted Below Median Healthy Retiree mortality table projected to 2017 with ages set forward 1 year and adjusted 94.20% for males and set forward 2 years and adjusted 81.35% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.



DISABLED RETIREMENT: PUB-2010 General Disabled Retiree mortality table projected to 2017 with ages set forward 5 years and adjusted 103.3% for males and set forward 3 years and adjusted 106.8% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

CONTINGENT SURVIVOR: PUB-2010 General Amount Weighted Below Median Contingent Survivor mortality table projected to 2017 with ages set forward 1 year and adjusted 105.5% for males and adjusted 122.5% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

MARRIAGE ASSUMPTION: 80% married with the husband three years older than his wife.

VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 25% of the difference between market value and expected market value. The actuarial value of assets cannot be less than 80% or more than 120% of market value.

FUNDING POLICY: If the funded ratio is less than 70%, the entire 14% employers' contribution shall be allocated to SERS' basic benefits. If the funded ratio is 70% but less than 80%, at least 13.50% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund SERS' basic benefits.



SCHEDULE D

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Benefit and Contribution Provisions

Contributions for Basic Benefits	Members contribute 10% of pay and employers contribute 14% of pay. Employer contributions not required to finance basic benefits may be allocated to the Health Care Fund.
Final Average Salary	Average annual salary over the member's three highest years of service.
Normal Retirement	
Condition for Retirement	
<i>Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017</i>	Attainment of age 65 with at least 5 years of creditable service, or completion of 30 years of creditable service, regardless of age.
<i>Members attaining 25 years of service after August 1, 2017</i>	Attainment of age 67 with at least 10 years of creditable service, or attainment of age 57 with at least 30 years of creditable service. Buy-up option was available.
Amount of Allowance	<p>The annual retirement allowance payable shall not be greater than 100% of final average salary, and is the greater of:</p> <ol style="list-style-type: none">1. Money Purchase - the greater of: The sum of:<ol style="list-style-type: none">a. An annuity based on the value of the member's accumulated contributions at retirementb. A pension equal to the annuityc. For members who have 10 or more years of service credit prior to 10/1/1956, an annual benefit of \$180.2. Defined Benefit - the greater of: The sum of:<ol style="list-style-type: none">a. 2.2% of final average salary multiplied by the member's years of service up to 30,b. 2.5% of final average salary multiplied by the member's years of service in excess of 30,or:<ol style="list-style-type: none">c. \$86 multiplied by the years of service.



Early Retirement

Condition for Early Retirement

*Retire before August 1, 2017
or have 25 years of service
or more on or before August
1, 2017*

Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with 5 years of service.

*Members attaining 25
years of service after
August 1, 2017*

Attainment of age 62 with at least 10 years of creditable service, or attainment of age 60 with at least 25 years of creditable service.

Amount of Allowance

*Retire before August 1, 2017
or have 25 years of service
or more on or before August
1, 2017*

Normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is adjusted by the following percentages based on attained age or years of service:

<u>Attained Age</u>	<u>Years of Ohio Service Credit</u>	<u>Percentage</u>
58	25	75%
59	26	80
60	27	85
61		88
	28	90
62		91
63		94
	29	95
64		97

*Members attaining 25
years of service after
August 1, 2017*

Actuarial equivalent of the normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is actuarially adjusted for the years before age 65 (age 67 if after August 1, 2017) or 30 years of service, whichever is shorter, but in no event is the adjusted benefit less than the following percentages of the Defined Benefit amount based on years of service:

<u>Years of Ohio Service Credit</u>	<u>Percentage</u>
25	75%
26	80
27	85
28	90
29	95

Disability Retirement

Condition for Retirement

An allowance is paid upon becoming permanently disabled after completion of at least 5 years of total service credit.

Amount of Allowance

1. For those who were active members prior to July 29, 1992 and did not elect the benefit structure outlined below, an allowance based on service to date of disablement, plus, if the age at disablement is less than 60, continuous



service to age 60. The allowance is computed in the same manner as the defined benefit service retirement allowance, subject to a minimum of 30% of FAS and a maximum of 75% of FAS. It is payable for life, unless terminated.

2. For those who became active members after July 28, 1992, and for those who were active members prior to July 29, 1992 who so elected, an allowance equal to the greater of (i) 45% of FAS, or (ii) the lesser of 60% of FAS, or the allowance computed in the same manner as the defined benefit service retirement allowance. The allowance will continue until:
 - a. The date the member is granted a service retirement benefit, or
 - b. The date the allowance is terminated, or
 - c. The later of the date the member attains age 65 or the date the disability allowance has been paid for the minimum duration in accordance with the following schedule:

<u>Age at Disability</u>	<u>Minimum Duration In Months</u>
60 and earlier	60
61	60
62	48
63	48
64	36
65	36
66	24
67	24
68	24
69 and older	12

Death Benefits Prior to Retirement

Death While Eligible to Retire

If a member dies in service after becoming eligible to retire with a service allowance and leaves a surviving spouse or other sole dependent beneficiary, the survivor may elect to receive the same amount that would have been paid had the member retired the last day of the month of death and elected the 100% joint and survivor form of payment.

Survivor (Death-in-Service) Allowances

Condition for Benefit

Upon the death of a member with at least 1.5 years of Ohio service credit and with at least 0.25 year of Ohio contributing service credit within 2.5 years prior to the date of death, the survivor allowances are payable as follows:

1. **Qualified Spouse:** A monthly allowance commencing at age 62, except that the benefit is payable immediately if: (1) the qualified deceased member had 10 or more years of Ohio service credit; or (2) is caring for a surviving child, or (3) is incompetent.
2. **Qualified Child:** For allowances that commenced before January 7, 2013, an allowance is payable to a deceased



member's qualified child who is under age 18 and never been married, under age 22 and in school, or adjudged incompetent prior to the member's death and the child attaining age 18 or age 22 if attending school. For allowances that commence on or after January 7, 2013, an allowance is payable to a deceased member's qualified child who is under age 19 and never been married or adjudged incompetent prior to the member's death and the child attaining age 19.

3. **Qualified Parent's Allowance:** A monthly allowance is payable to a dependent parent age 65 or older.

Amount of Allowances

Except when survived by a qualified child(ren), upon the death of a member prior to retirement, the accumulated contributions of the member without interest is payable. Alternatively, the beneficiary may elect the following amounts, payable monthly while eligible:

<u>Number of Qualified Survivors</u>	<u>Annual Benefit as Percent of Member's FAS</u>	<u>Minimum Monthly Allowance</u>
1	25%	\$96
2	40	186
3	50	236
4	55	236
5 or more	60	236

If the deceased member had attained at least 20 years of service, the total benefits payable to all qualified survivors are not less than:

<u>Years of Service</u>	<u>Annual Benefit as Percent of Member's FAS</u>
20	29%
21	33
22	37
23	41
24	45
25	48
26	51
27	54
28	57
29 or more	60

Termination Benefits

Refund of Members' Accumulated Contributions

In the event a member leaves service before any monthly benefits are payable on his/her behalf, the member's accumulated contributions, without interest, may be refunded.

Deferred Benefits

Members who retire prior to August 1, 2017 must have at least 5 years of service credit and those members who retire on and after August 1, 2017 must have at least 10 years of service credit and are eligible to draw the benefit the first of the month following their 62nd birthday.



Normal Form of Benefit

Single Life Annuity

Optional Forms of Benefit

A member upon retirement may elect to receive an allowance in one of the following forms that are computed to be actuarially equivalent to the applicable retirement allowance:

Upon the death of a retiree, 50%, 100%, or some other percentage of his/her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

A reduced retirement allowance shall be continued throughout the life of the pensioner, but with further payment to the pensioner, his/her beneficiary or estate for a specified number of years certain.

A member can select a partial lump sum option at retirement. Under this option, the partial lump sum shall not be less than 6 times and not more than 36 times the unreduced monthly benefit, and the monthly benefit will be actuarially reduced. In addition, the monthly benefit payable cannot be less than 50% of the unreduced amount.

Post-Retirement Death Benefit

Regardless of the form of benefit selected, a lump sum benefit of \$1,000 is paid at the death of the retiree.

Post-Retirement Increases

Pre 1/1/2018: On each anniversary of the initial date of retirement, the allowances of all retirees and survivors are increased by 3% of the base benefit.

On and after 1/1/2018: On each anniversary of the initial retirement, the allowance of all retirees and survivors may be increased by the annual rate of increase in the CPI-W measured as of the June preceding the beginning of the applicable calendar year. The annual rate of increase shall not be less than 0% nor greater than 2.5%. COLAs shall be suspended for calendar years 2018, 2019, and 2020.

On and after 4/1/2018: COLAs for future retirees will be delayed until the fourth anniversary of benefit commencement.

Medicare Part B

Each recipient of a service retirement benefit, a disability benefit, or a survivor benefit who was credited with at least 10 years of service and has paid Medicare Part B premiums and has chosen the health care option, is reimbursed \$45.50 per month for premiums. The reimbursement will continue to the spouse upon the death of the retiree in cases where the retiree elected a Joint and Survivor payment form.



Reemployed Retirants

Eligibility Effective	July 1, 1991, service retirees of SERS, or service or disability retirees of one of the other four Ohio retirement systems who are employed in a SERS-covered position are required to contribute to a money purchase annuity, a type of defined contribution plan.
Amount of Allowance	Upon termination of employment, a reemployed retirant who has attained age 65 is eligible to receive an annuity based on the amount of his/her accumulated contributions, and an equal amount of employer contributions, plus interest to the effective date of retirement. Effective July 1, 2006 the amount of employer contributions will be determined by the Board. Interest is granted on the reemployed retirant's prior fiscal year account balance, calculated using a rate determined by the SERS Board, compounded annually. The benefit is payable as a lump sum or as an annuity if the amount of such annuity is at least \$25. Upon termination of employment, a reemployed retirant who has not attained age 65 may request a lump sum refund of his/her own contributions; there is no payment of employer contributions or interest.
Benefits Payable Upon Death	<p>If a reemployed retirant dies while employed, a lump sum payment of the monthly annuity, discounted to the present value using the current actuarial assumption rate of interest, will be paid to his/her beneficiary.</p> <p>If a reemployed retirant dies while receiving a monthly annuity, a lump sum payment will be made to a beneficiary in an amount equal to the excess, if any, of the lump sum payment the reemployed retirant would have received at the effective date of retirement over the sum of the annuity payments received by the reemployed retirant to the date of death.</p>
Member Contributions	Each reemployed retirant is required to contribute 10% of his/her pay by payroll deductions.
Employer Contributions	Employer contributions are expressed as percents of member covered payroll. Employers are required to contribute 14% of payroll.
Other Benefits	Reemployed retirants of SERS are not eligible to receive any of the other benefits provided to SERS members.
Member Contributions	10% of salary.



SCHEDULE E

DETAILED TABULATIONS OF THE DATA

**Schedule of Retiree Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30:	2018	2019	2020	2021	2022	2023
<u>Number of Retiree Members</u>						
Beginning of Year	79,157	81,332	81,024	80,851	80,721	81,151
Added	5,339	3,055	2,902	3,928	3,867	3,740
Removed	3,164	3,363	3,075	4,058	3,437	3,058
End of Year	81,332	81,024	80,851	80,721	81,151	81,833
<u>Annual Retirement Allowances</u>						
Beginning of Year	\$ 1,162,015,515	\$ 1,211,935,636	\$ 1,218,955,506	\$ 1,234,342,326	\$ 1,254,934,762	\$ 1,295,438,626
Added	74,311,354	56,557,169	52,895,232	70,415,860	67,062,445	63,623,157
Removed	24,391,233	49,537,299	37,508,412	49,823,424	26,558,581	18,454,519
End of Year	\$ 1,211,935,636	\$ 1,218,955,506	\$ 1,234,342,326	\$ 1,254,934,762	\$ 1,295,438,626	\$ 1,340,607,264
 % Increase (Decrease) In Allowances	 4.30%	 0.58%	 1.26%	 1.67%	 3.23%	 3.49%
 Average Annual Allowance	 \$ 14,901	 \$ 15,044	 \$ 15,267	 \$ 15,547	 \$ 15,963	 \$ 16,382



**Schedule of Retiree Members Receiving a Medicare Part B Reimbursement
Added to and Removed from Rolls
Last Three Fiscal Years**

Year Ending June 30:	2021	2022	2023
<u>Number of Retiree Members</u>			
Beginning of Year	42,464	41,360	40,591
Added	1,996	2,057	1,953
Removed	3,100	2,826	2,754
End of Year	41,360	40,591	39,790
<u>Annual Retirement Allowances</u>			
Beginning of Year	\$ 23,185,344	\$22,582,560	\$22,162,686
Added	1,089,816	1,123,122	1,066,338
Removed	1,692,600	1,542,996	1,503,684
End of Year	\$ 22,582,560	\$22,162,686	\$21,725,340
% Increase (Decrease) In Allowances	(2.60)%	(1.86)%	(1.97)%
Average Annual Allowance	\$ 546	\$ 546	\$ 546



**Annuity and Pension Reserve Fund
Retiree Information as of June 30, 2023
Tabulated by Type of Benefit**

Amount of Monthly Benefit		Total	Service	Disability	Survivor
\$ 1 - \$	250	8,855	8,190	41	624
251 -	500	10,759	9,405	368	986
501 -	750	10,628	9,098	736	794
751 -	1,000	9,572	7,951	1,012	609
1,001 -	1,500	14,645	12,518	1,530	597
1,501 -	2,000	9,406	8,262	919	225
Over	2,000	<u>17,968</u>	<u>16,508</u>	<u>1,168</u>	<u>292</u>
		81,833	71,932	5,774	4,127

Average Monthly Benefit

\$ 1,390

\$ 1,442

\$ 831

Average Age

75.4

68.4

72.7

The 71,932 service retirees shown in the table above are comprised of 66,304 service retirees and 5,628 beneficiaries of deceased retirees. Excluded from the 66,304 service retirees are 904 reemployed retirees who are receiving a pension-only benefit resulting from the annuitization of the contributions accumulated during active membership. Included in the "Disability" numbers in the above table are 1,303 retirees converted to a service retirement.



**Annuity and Pension Reserve Fund
Retiree Information as of June 30, 2023
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Total	
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits
Under 45	41	\$ 264,442	39	\$ 584,603	80	\$ 849,045
45-49	39	\$ 628,623	85	\$ 1,307,578	124	\$ 1,936,201
50-54	179	\$ 5,794,889	266	\$ 4,679,467	445	\$ 10,474,355
55-59	939	\$ 34,214,753	587	\$ 10,242,412	1,526	\$ 44,457,165
60-64	4,900	\$ 119,418,251	1192	\$ 23,473,901	6,092	\$ 142,892,151
65-69	15,128	\$ 265,730,792	1324	\$ 24,187,785	16,452	\$ 289,918,577
70-74	16,518	\$ 278,700,772	921	\$ 16,678,778	17,439	\$ 295,379,550
75-79	13,164	\$ 210,561,351	613	\$ 9,676,530	13,777	\$ 220,237,881
80-84	10,082	\$ 147,505,349	414	\$ 5,620,265	10,496	\$ 153,125,614
85-89	6,721	\$ 88,084,449	231	\$ 2,628,391	6,952	\$ 90,712,841
90 & Over	4,221	\$ 44,430,246	102	\$ 805,621	4,323	\$ 45,235,866
Totals	71,932	\$ 1,195,333,917	5,774	\$ 99,885,330	77,706	\$ 1,295,219,247

The 71,932 service retirees shown in the table above are comprised of 71,028 unique service retirees, and 904 unique reemployed retirees. The reemployed retirees included in the tabulation above are those who are receiving a pension-only benefit resulting from the annuitization of the contributions accumulated during active membership. Included in the "Disability" numbers in the above table are 1,303 retirees converted to a service retirement. The sum of the annuity payments attributable to these converted disabled retirees is \$15,522,101.



**Annuity and Pension Reserve Fund
Survivors of Annuitants Information as of June 30, 2023
Tabulated by Attained Ages**

Attained Age	Life Annuities		Periods Certain		Total	
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits
Under 45	41	\$ 264,442	0	\$ -	41	\$ 264,442
45-49	30	\$ 276,260	0	\$ -	30	\$ 276,260
50-54	44	\$ 360,155	0	\$ -	44	\$ 360,155
55-59	78	\$ 996,785	0	\$ -	78	\$ 996,785
60-64	180	\$ 2,439,563	2	\$ 81,180	182	\$ 2,520,743
65-69	411	\$ 5,930,652	5	\$ 64,208	416	\$ 5,994,860
70-74	754	\$ 9,979,808	9	\$ 86,326	763	\$ 10,066,134
75-79	955	\$ 11,346,662	9	\$ 116,864	964	\$ 11,463,526
80-84	1,174	\$ 12,126,705	2	\$ 28,648	1,176	\$ 12,155,353
85-89	1,074	\$ 9,840,082	0	\$ -	1,074	\$ 9,840,082
90 & Over	860	\$ 6,997,829	0	\$ -	860	\$ 6,997,829
Totals	5,601	\$ 60,558,943	27	\$ 377,226	5,628	\$ 60,936,169



**All Benefit Recipients
Male and Female Demographic Breakdown
June 30, 2023**

Attained Age	Number of		Total Number
	Males	Females	
Under 20	25	34	59
20-24	1	2	3
25-29	1	5	6
30-34	6	12	18
35-39	12	22	34
40-44	25	43	68
45-49	59	103	162
50-54	207	334	541
55-59	629	1,078	1,707
60-64	1,945	4,583	6,528
65-69	4,357	12,821	17,178
70-74	4,869	13,289	18,158
75-79	3,815	10,624	14,439
80-84	2,778	8,271	11,049
85-89	1,699	5,617	7,316
90-94	665	2,727	3,392
95-99	166	865	1,031
100	8	49	57
101	3	36	39
102	1	26	27
103	2	7	9
104	1	5	6
105 & Over	1	5	6
Total	21,275	60,558	81,833



Survivor Benefit Fund
Survivors of Deceased Active Members Information as of June 30, 2023
Tabulated by Attained Ages

Attained Age	Number	Annual Benefits
Under 45	108	\$ 1,170,351
45-49	38	\$ 446,645
50-54	96	\$ 1,424,972
55-59	181	\$ 2,214,747
60-64	436	\$ 5,093,904
65-69	726	\$ 7,598,381
70-74	719	\$ 7,360,230
75-79	662	\$ 6,586,679
80-84	553	\$ 4,784,415
85-89	364	\$ 2,841,934
90 & Over	244	\$ 1,612,272
Totals	4,127	\$ 41,134,530



**Total Active Members as of June 30, 2023
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date							Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
Under 20	3,328							3,328
Avg Pay	\$12,551							\$12,551
20-24	10,448	97						10,545
Avg Pay	\$14,022	\$31,868						\$14,186
25-29	9,992	1,118	35					11,145
Avg Pay	\$17,995	\$34,917	\$51,113					\$19,796
30-34	9,576	2,245	401	35	1			12,258
Avg Pay	\$18,710	\$36,396	\$48,496	\$49,768	\$79,767			\$23,017
35-39	10,258	3,063	834	308	32			14,495
Avg Pay	\$18,802	\$36,183	\$48,083	\$54,683	\$62,296			\$25,018
40-44	10,890	4,310	1,342	768	386	45		17,741
Avg Pay	\$18,269	\$33,764	\$44,528	\$56,075	\$61,040	\$58,035		\$26,688
45-49	9,314	4,368	1,828	1,100	753	268	17	17,648
Avg Pay	\$17,539	\$32,645	\$39,241	\$48,486	\$60,864	\$61,243	\$67,164	\$28,015
50-54	8,052	4,371	2,634	2,044	1,569	709	166	19,545
Avg Pay	\$18,390	\$32,933	\$36,432	\$42,742	\$50,496	\$61,718	\$64,484	\$31,161
55-59	6,405	3,534	2,431	2,714	2,906	1,556	498	20,044
Avg Pay	\$18,830	\$33,600	\$36,644	\$38,971	\$43,086	\$49,903	\$58,590	\$33,238
60-64	4,928	2,699	1,872	2,380	3,437	2,390	937	18,643
Avg Pay	\$17,174	\$31,278	\$36,004	\$38,252	\$41,216	\$44,084	\$52,145	\$33,437
65-69	3,366	1,443	850	808	1,148	1,038	739	9,392
Avg Pay	\$13,313	\$26,909	\$33,518	\$38,872	\$42,161	\$42,398	\$45,880	\$28,733
70 & over	2,451	906	399	304	281	229	519	5,089
Avg Pay	\$10,534	\$20,847	\$27,121	\$30,612	\$34,826	\$41,341	\$41,334	\$20,739
Totals	89,008	28,154	12,626	10,461	10,513	6,235	2,876	159,873
Avg Pay	\$17,149	\$32,948	\$38,380	\$42,049	\$45,253	\$47,998	\$50,501	\$26,888

Averages:

Age: 46.9

Service: 7.3

Annual Pay: \$26,888



Male Active Members as of June 30, 2023
Tabulated by Attained Ages and Years of Service

Attained Age	Years of Service to Valuation Date							Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
Under 20	1,631							1,631
Avg Pay	\$13,128							\$13,128
20-24	4,265	45						4,310
Avg Pay	\$14,619	\$36,088						\$14,062
25-29	4,069	527	26					4,622
Avg Pay	\$18,572	\$40,168	\$54,704					\$21,238
30-34	3,262	828	203	20	1			4,314
Avg Pay	\$19,220	\$41,647	\$55,094	\$57,710	\$79,767			\$25,405
35-39	2,964	870	354	187	25			4,400
Avg Pay	\$19,496	\$46,972	\$56,455	\$58,037	\$66,396			\$29,807
40-44	3,387	962	435	339	201	19		5,343
Avg Pay	\$18,227	\$44,561	\$59,097	\$66,963	\$70,498	\$63,622		\$31,516
45-49	3,342	932	425	284	278	129	10	5,400
Avg Pay	\$16,215	\$41,626	\$52,771	\$67,119	\$76,458	\$70,480	\$67,872	\$30,649
50-54	3,065	1,007	527	382	319	268	81	5,649
Avg Pay	\$16,859	\$40,947	\$49,727	\$60,211	\$73,039	\$75,979	\$70,133	\$33,892
55-59	2,496	1,019	525	437	431	323	193	5,424
Avg Pay	\$19,108	\$39,719	\$48,424	\$58,792	\$62,035	\$70,942	\$67,805	\$37,246
60-64	1,987	924	554	466	498	293	239	4,961
Avg Pay	\$18,660	\$36,905	\$45,401	\$53,960	\$59,468	\$66,799	\$67,528	\$37,654
65-69	1,449	594	353	230	228	130	134	3,118
Avg Pay	\$15,075	\$29,602	\$38,844	\$47,828	\$57,144	\$54,125	\$62,435	\$29,689
70 & over	1,066	472	202	121	72	42	61	2,036
Avg Pay	\$10,995	\$23,919	\$30,075	\$35,670	\$40,930	\$53,377	\$52,594	\$20,530
Totals	32,983	8,180	3,604	2,466	2,053	1,204	718	51,208
Avg Pay	\$17,153	\$39,680	\$49,194	\$57,958	\$64,682	\$68,461	\$65,682	\$28,764

Averages:

Age: 45.4

Service: 5.7

Annual Pay: \$28,764

Female Active Members as of June 30, 2023
Tabulated by Attained Ages and Years of Service



Attained Age	Years of Service to Valuation Date							Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
Under 20	1,697							1,697
Avg Pay	\$11,996							\$11,996
20-24	6,183	52						6,235
Avg Pay	\$13,610	\$26,434						\$13,717
25-29	5,923	591	9					6,523
Avg Pay	\$17,598	\$30,234	\$40,740					\$18,775
30-34	6,314	1,417	198	15				7,944
Avg Pay	\$18,447	\$33,327	\$41,730	\$39,179				\$21,721
35-39	7,294	2,193	480	121	7			10,095
Avg Pay	\$18,520	\$31,903	\$41,909	\$49,501	\$47,653			\$22,931
40-44	7,503	3,348	907	429	185	26		12,398
Avg Pay	\$18,288	\$30,662	\$37,540	\$47,471	\$50,764	\$53,952		\$24,607
45-49	5,972	3,436	1,403	816	475	139	7	12,248
Avg Pay	\$18,279	\$30,209	\$35,143	\$42,001	\$51,738	\$52,671	\$66,153	\$26,853
50-54	4,987	3,364	2,107	1,662	1,250	441	85	13,896
Avg Pay	\$19,331	\$30,533	\$33,107	\$38,727	\$44,743	\$53,051	\$59,100	\$30,051
55-59	3,909	2,515	1,906	2,277	2,475	1,233	305	14,620
Avg Pay	\$18,652	\$31,121	\$33,399	\$35,167	\$39,786	\$44,391	\$52,758	\$31,752
60-64	2,941	1,775	1,318	1,914	2,939	2,097	698	13,682
Avg Pay	\$16,170	\$28,349	\$32,054	\$34,428	\$38,123	\$40,910	\$46,877	\$31,908
65-69	1,917	849	497	578	920	908	605	6,274
Avg Pay	\$11,981	\$25,025	\$29,735	\$35,309	\$38,448	\$40,720	\$42,213	\$28,257
70 & over	1,385	434	197	183	209	187	458	3,053
Avg Pay	\$10,179	\$17,507	\$24,093	\$27,268	\$32,724	\$38,637	\$39,835	\$20,878
Totals	56,025	19,974	9,022	7,995	8,460	5,031	2,158	108,665
Avg Pay	\$17,146	\$30,191	\$34,060	\$37,142	\$40,538	\$43,101	\$45,450	\$26,004

Averages:

Age: 47.6

Service: 8.0

Annual Pay: \$26,004



**Active Members as of June 30, 2023
Tabulated by Annual Pay**

Annual Pay	Number of Active Members			Portion of Total Number	
	Men	Women	Totals	Group	Cumulative
Less than \$1,000	1,619	2,851	4,470	2.8%	2.8%
\$1,000 - 1,999	2,282	2,955	5,237	3.3%	6.1%
2,000 - 2,999	2,930	3,119	6,049	3.8%	9.9%
3,000 - 3,999	3,224	2,965	6,189	3.9%	13.7%
4,000 - 4,999	2,622	2,422	5,044	3.2%	16.9%
5,000 - 5,999	2,034	2,232	4,266	2.7%	19.5%
6,000 - 6,999	1,587	2,264	3,851	2.4%	22.0%
7,000 - 7,999	1,278	2,248	3,526	2.2%	24.2%
8,000 - 8,999	1,095	2,175	3,270	2.0%	26.2%
9,000 - 9,999	916	2,106	3,022	1.9%	28.1%
10,000 - 11,999	1,531	4,208	5,739	3.6%	31.7%
12,000 - 13,999	1,304	4,591	5,895	3.7%	35.4%
14,000 - 15,999	1,323	4,988	6,311	3.9%	39.3%
16,000 - 17,999	1,316	5,372	6,688	4.2%	43.5%
18,000 - 19,999	1,319	5,707	7,026	4.4%	47.9%
20,000 - 24,999	3,269	14,689	17,958	11.2%	59.1%
25,000 - 29,999	2,702	11,400	14,102	8.8%	68.0%
30,000 - 35,999	2,787	9,399	12,186	7.6%	75.6%
36,000 - 39,999	1,974	4,718	6,692	4.2%	79.8%
40,000 - 49,999	4,925	8,410	13,335	8.3%	88.1%
50,000 - 59,999	3,480	4,589	8,069	5.0%	93.2%
60,000 and over	5,691	5,257	10,948	6.8%	100.0%
Totals	51,208	108,665	159,873		



SCHEDULE F

GAIN/LOSS ANALYSIS DETAILS

COMMENTS

Regular actuarial valuations measure the System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and Retiree members and their survivors. However, valuations do not produce information regarding the amount of increases or decreases in unfunded actuarial accrued liabilities (UAAL) -- gain/loss analyses do.

The overall gain/loss to the System is the difference between the actual UAAL and the expected UAAL. A gain/loss analysis shows the breakdown of the overall system gain/loss by economic and non-economic risk areas. The economic risk areas are investment return and pay increases. The non-economic risk areas are service retirement, disability retirement, death in active service, termination (vested and non-vested), retiree mortality, and new members. Gains and losses resulting from data adjustments, timing of financial transactions, etc. are included separately as a miscellaneous item.

It is expected that actual experience will not coincide with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year-to-year fluctuations are common. Changes in actuarial assumptions should be made for risk areas when the differences between actual and expected experience are consistently sizable over a period of years. Differences over a relatively short period of time may or may not be indicative of long-term trends, which are the basis of actuarial assumptions.

The actuarial assumptions used in this analysis were adopted by the Board in April 15, 2021.



School Employees Retirement System of Ohio
Experience Gains and Losses By Risk Area
Comparative Schedule
(\$ Millions)

	Gain (Loss) by Risk Area										
	Economic		Non-Economic								
Year Ending June 30	Pay Increases	Investment	Age & Service Retirement	Disability	Death In Service	Withdrawal	New Members	Retiree Mortality	Other ⁺	\$	% of AAL
2014	103.4	403.3	(122.6)	(56.0)	0.1	48.3	(28.2)	3.1	(2.1)	349.3	2.0
2015	53.3	62.1	(123.0)	(53.1)	0.0	65.1	(47.7)	55.8	(0.2)	12.3	0.1
2016	70.0	50.6	(140.9)	(50.6)	(28.5)	30.4	(44.0)	113.9	(0.6)	0.3	0.0
2017	(69.2)	(12.0)	(211.8)	(37.7)	(0.6)	21.9	(48.1)	97.3	(26.8)	(287.0)	(1.5)
2018	85.2	(161.1)	(209.7)	(14.7)	(6.6)	(124.5)	(35.7)	15.0	4.7	(447.4)	(2.2)
2019	20.3	(44.1)	7.8	(9.5)	(4.0)	(106.3)	(22.4)	(24.9)	78.4	(104.7)	(0.5)
2020	136.2	7.1	(94.0)	(3.1)	(5.4)	(104.2)	(22.2)	28.9	62.3	5.6	0.0
2021	136.7	431.3	(96.2)	(5.0)	(4.7)	(107.5)	(16.6)	59.8	189.3	587.1	2.7
2022	(212.3)	268.6	0.0	(6.4)	(7.0)	(43.5)	(52.6)	82.7	(25.2)	4.3	0.0
2023	(139.7)	155.7	(65.1)	(3.2)	(5.4)	(40.1)	(66.3)	54.5	87.7	(21.9)	(0.1)

⁺ Includes effect of changes in data, timing of financial transactions, etc.



The market related actuarial value of assets is based on a four-year average of adjusted market value returns. The difference between the actual returns at market value for the year and expected returns is determined. Twenty-five percent (25%) of that difference is added to the expected value along with corresponding amounts from each of the prior three years.

The actuarial value of assets for the basic benefits as of June 30, 2023, was \$17,685,652,177. The value for the previous year was \$16,886,972,559.

School Employees Retirement System of Ohio Development of Gain (Loss) for Basic Benefits From Investment Return For the Year Ended June 30, 2023 (\$ Millions)		<u>\$ Millions</u>
1.	Actuarial value of assets as of June 30, 2022	\$ 16,887.0
2.	Actuarial value of assets as of June 30, 2023	
	a. Actual	17,685.7
	b. If 7.00% assumed investment return were achieved for all phased-in years recognized in the asset method	17,530.0
3.	Gain (Loss): 2a minus 2b	<u>\$ 155.7</u>



**Pay Increases During the FY2023 Valuation Year
To Members Active at Beginning and End of Year**

Central Age Group Beginning of Year	Number	Pay Increases	
		Actual	Expected
Under 25	8,125	(12.14)%	11.22%
25	7,484	0.25	7.97
30	8,809	3.60	6.76
35	11,421	4.98	6.17
40	14,142	5.14	5.52
45	14,724	4.97	5.05
50	17,512	4.99	4.61
55	18,180	4.88	4.21
60	15,099	4.46	4.07
65 & Over	9,026	3.81	4.49
Total	124,522	3.95	5.26



**Members Who Became Age and Service Retirees During the FY2023 Valuation Year
(Retirement With Allowance Beginning Immediately)**

Attained Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	
Under 50	0	0	0	0	0	0	6	6
50	0	0	0	0	0	0	1	1
51	0	0	0	0	0	0	4	4
52	0	0	0	0	0	0	7	7
53	0	0	0	0	0	0	12	12
54	0	0	0	0	0	0	7	7
55	0	0	0	0	0	0	11	11
56	0	0	0	0	0	0	14	14
57	0	0	0	0	0	0	45	45
58	0	0	0	0	0	1	36	37
59	0	0	0	0	0	1	34	35
60	0	0	0	0	1	81	37	119
61	0	0	0	0	0	53	49	102
62	0	0	70	69	121	75	46	381
63	0	0	29	22	43	63	43	200
64	0	0	29	33	49	74	64	249
65	0	0	62	77	137	108	116	500
66	0	0	38	36	53	37	55	219
67	0	0	59	36	87	78	43	303
68	0	0	27	17	28	23	32	127
69	0	0	24	15	23	19	25	106
70 & Over	0	1	75	51	68	52	136	383
Totals	0	1	413	356	610	665	823	2,868

	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	
Avg. Monthly Benefit	\$ 0	\$ 313	\$ 529	\$ 770	\$ 1,118	\$ 1,548	\$ 2,762	\$ 1,561
Avg. FAS	\$ 0	\$ 0	\$ 31,447	\$ 31,990	\$ 35,522	\$ 38,292	\$ 48,075	\$ 38,729
Number of Retirees	0	1	413	356	610	665	823	2,868

Average Age: 65.2
Average Service: 24.5



**Members Who Died in the FY2023 Valuation Year
With a Death-in-Service Allowance Payable**

Central Age Group Beginning of Year	Number
Under 25	0
25	0
30	0
35	1
40	1
45	2
50	7
55	12
60	14
65	9
70 & Over	6
Total	52

Average Age: 59.3
Average Service: 16.5



**Members Who Died in the FY2023 Valuation Year
and Received a Refund of Contributions**

Central Age Group Beginning of Year	Number
Under 25	0
25	0
30	0
35	1
40	1
45	1
50	4
55	2
60	4
65	1
70 & Over	1
Total	15

Average Age: 55.3
Average Service: 5



**Members Who Became Disability Retirees
During the FY2023 Valuation Year**

Central Age Group Beginning of Year	Number
Under 25	0
25	0
30	0
35	3
40	4
45	9
50	29
55	62
60	96
65	35
70 & Over	6
Total	244

Average Age: 57.5
Average Service: 18.2
Average FAS: \$34,832



**Members Receiving a Refund of Contributions
or Becoming Inactive Without a Refund in
the FY2023 Valuation Year
(Non-vested Terminations)**

Central Age Group Beginning of Year	Number
Under 25	1,973
25	3,943
30	2,690
35	2,173
40	2,215
45	2,140
50	2,015
55	1,601
60	1,163
65	749
70 & Over	626
Total	21,288

Average Age: 39.1
Average Service: 1.4



**Members Who Became Inactive
in the FY2023 Valuation Year
with a Deferred Allowance
(Vested Terminations)**

Central Age Group Beginning of Year	Number
Under 25	0
25	0
30	2
35	25
40	53
45	90
50	162
55	233
60	298
65	95
70 & Over	24
Total	982

Average Age: 54.9

Average Service: 15.6



SCHEDULE G

GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.



APPENDIX A

ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2023

Present Value of:	Pension Benefits	Medicare Part B	Post-Retirement Death Benefit	Total Basic Benefits
Future benefits to present retirees and survivors	\$13,326,930,088	\$204,804,627	\$32,251,533	\$13,563,986,248
Benefits and refunds to present inactive members	804,883,149	22,960,856	1,213,740	829,057,745
Allowances to present active members				
Service	7,891,775,351	140,994,951	7,824,892	8,040,595,194
Disability	290,934,728	5,276,558	343,083	296,554,369
Survivor benefits	182,005,249	2,976,292	0	184,981,541
Withdrawal	<u>159,747,406</u>	<u>8,973,826</u>	<u>420,368</u>	<u>169,141,600</u>
Total Active AAL	8,524,462,734	158,221,627	8,588,343	8,691,272,704
Total AAL	<u>\$22,656,275,971</u>	<u>\$385,987,110</u>	<u>\$42,053,616</u>	<u>\$23,084,316,697</u>



APPENDIX B

BREAKDOWN OF TOTAL AND ACCRUED LIABILITIES AS OF JUNE 30, 2023

	Total Liability	Accrued Liability
Active Members		
Retirement	\$10,573,813,860	\$7,891,775,351
Death	298,967,097	182,005,249
Disability	624,208,735	290,934,728
Termination	924,870,633	159,747,406
Medicare Part B	242,349,928	158,221,627
Death after Retirement	<u>13,344,444</u>	<u>8,588,343</u>
Total	\$12,677,554,697	\$8,691,272,704
Retirees		
Retirement/Survivor/Disability	\$13,326,930,088	\$13,326,930,088
Medicare Part B	204,804,627	204,804,627
Death after Retirement	<u>32,251,533</u>	<u>32,251,533</u>
Total	\$13,563,986,248	\$13,563,986,248
Deferred Vested Members	432,662,249	432,662,249
Inactive Members	<u>396,395,496</u>	<u>396,395,496</u>
Total Actuarial Values	\$27,070,598,690	\$23,084,316,697
Actuarial Value of Assets		<u>17,685,652,177</u>
Unfunded Actuarial Accrued Liability		\$5,398,664,520



APPENDIX C

COMPARATIVE SCHEDULE AS OF JUNE 30, 2023

Valuation Date June 30	Active Members				Retired Lives				Accrued Liability			Valuation Assets	UAAL
					Number		Annual Benefits						
		Payroll	Average Salary			Active / Retired							
	Number	\$ Millions	\$	% Increase	Retired	Retired	\$ Millions	% of Payroll	\$ Millions				
2014	121,251	2,759	22,757	0.8	72,605	1.7	958.5	34.7	17,882	12,030	5,851		
2015	122,855	2,845	23,161	1.8	74,372	1.7	1,020.4	35.9	18,503	12,602	5,902		
2016	124,540	2,932	23,545	1.7	76,280	1.6	1,083.6	37.0	19,771	13,180	6,591		
2017	157,981	3,303	20,906	(11.2)	79,157	2.0	1,162.0	35.2	19,588	13,713	5,875		
2018	158,343	3,332	21,045	0.7	81,332	1.9	1,211.9	36.4	19,998	14,012	5,986		
2019	159,363	3,463	21,727	3.2	81,024	2.0	1,219.0	35.2	20,527	14,473	6,054		
2020	156,579	3,478	22,210	2.2	80,851	1.9	1,234.3	35.5	21,034	15,037	5,997		
2021	146,646	3,622	24,700	11.2	80,721	1.8	1,254.9	34.6	21,530	16,032	5,498		
2022	155,063	3,995	25,762	4.3	81,151	1.9	1,295.4	32.4	22,371	16,887	5,484		
2023	159,873	4,299	26,888	4.4	81,833	2.0	1,340.6	31.2	23,084	17,686	5,399		



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



**Report on the Retiree Health Care
Valuation of the
School Employees Retirement System of Ohio**

Prepared as of June 30, 2023





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 31, 2023

Board of Trustees
School Employees Retirement System of Ohio
300 East Broad Street, Suite 100
Columbus, OH 43215-3746

Dear Members of the Board:

We have submitted the results of the annual actuarial valuation of the Retiree Health Care Fund of the School Employees Retirement System of Ohio (SERS) prepared as of June 30, 2023. While not verifying the data at the source, the actuary performed tests for consistency and reasonability. The valuation indicates that an actuarially determined contribution of 2.65% of active payroll payable for the fiscal year ending June 30, 2023 is required to fund the benefits.

Separate reports will be prepared to provide accounting information under Governmental Accounting Standards Board Statements No. 74 and 75, when applicable.

The medical and drug benefits of the Plan are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method with the normal cost rate determined as a level percentage of payroll. GASB requires the discount rate used to value a plan be based on the likely return of the assets held in trust to pay benefits. The discount rate used in this valuation is 7.00%. Gains and losses are reflected in the unfunded accrued liability that is amortized by regular annual contributions as a level percentage of payroll within a 30-year period, on the assumption that payroll will increase by 1.75% annually. The assumptions recommended by the actuary are, in the aggregate, reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan.

The impacts of the Affordable Care Act (ACA) and the Inflation Reduction Act (IRA) were addressed in this valuation. Review of the information currently available did not identify any specific provisions of the legislation that are anticipated to directly impact results at this time other than plan design features and fees currently mandated by the ACA and incorporated in the plan designs, which are included in the current baseline claims costs, and the anticipation of potential changes to Medicare due to the IRA, which are included in our trend assumption. Continued monitoring of the impact on the Plan's liability due to this and other legislation, if applicable, will be required.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

The impact of the COVID-19 pandemic was considered in this valuation; however, no changes were incorporated at this time due to the level of uncertainty regarding the impact on both plan costs and contribution levels going forward. Given the uncertainty regarding COVID-19 (e.g., the impact of routine care being deferred, direct COVID-19 treatment and prevention costs, changes in contribution and budget projections), continued monitoring of the impact on the Plan's liability will be required.



October 31, 2023
Board of Trustees
Page 2

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Alisa Bennett'.

Alisa Bennett, FSA, FCA, EA, MAAA
President

A handwritten signature in blue ink, appearing to read 'John J. Garrett'.

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

AB/JJG:jf



TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page</u>
I	Summary of Principal Results	1
II	Membership Data	5
III	Assets	7
IV	Comments on Valuation	8
V	Derivation of Experience Gains and Losses	9
VI	Required Contribution Rates	11
VII	Accounting Information	12
 <u>Schedule</u>		
A	Valuation Balance Sheet	14
B	Statement of Actuarial Assumptions and Methods	17
C	Summary of Plan Provisions	25
D	Detailed Tabulations of the Data	37
E	Glossary	44



**REPORT ON THE ANNUAL VALUATION OF THE
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO**

PREPARED AS OF JUNE 30, 2023

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2023, presents the results of the annual actuarial valuation of retiree health care offered to SERS members. For convenience of reference, the principal results of the valuation and a comparison with the preceding valuation results are summarized in the following table.

	June 30, 2023	June 30, 2022
Active members included in valuation		
Number	159,873	155,063
Annual Compensation	\$4,298,689,195	\$3,994,657,693
Service Retirees*		
Number	29,915	30,569
Disability Retirees*		
Number**	2,735	2,391
Spouses of Retirees		
Number	4,852	4,909
Spouses of Deceased Retirees		
Number	1,390	1,431
Survivor Benefit Recipients		
Number	532	581
Non-Spouse Dependents		
Number	232	250
Deferred Vested		
Number	6,413	6,118
Assets		
Market Value	\$706,785,561	\$611,574,409
Unfunded Accrued Liability	\$824,890,815	\$736,679,661
Actuarial Accrued Liability	\$1,531,676,376	\$1,348,254,070
Funded Ratio (MVA/AAL)	46.14%	45.36%
Employer Contribution Rate		
Normal	1.40%	1.31%
Accrued Liability	<u>1.25%</u>	<u>1.20%</u>
Total	2.65%	2.51%
Employer Contribution Toward Health Care***	1.50%	1.50%
Accrued liability amortization period	30	30

* In addition and not included in the counts above, there are 3,181 pre-Medicare eligible service retirees and 1,443 pre-Medicare eligible disabled retirees who are waiving coverage. It is assumed that 15% will elect coverage upon reaching Medicare eligibility.

** Of the 2,735 Disabled Retirees listed above, 500 converted to a Service Pension Benefit.

*** Includes 1.50% of payroll surcharge



2. The funding policy requires at least 13.50% of the employers' contributions be allocated to SERS' basic benefits when the funded ratio is 70% but less than 80%, with the remainder (if any) allocated to the Health Care Fund. However, based on a Board Resolution in September, the entire 14.00% employer contribution will be allocated to SERS' basic benefits, therefore setting the health contribution rate at 0.00%, plus a health care surcharge of 1.50%. This rate includes the anticipated revenue from the minimum surcharge level for FY2024 of \$30,000.
3. The valuation balance sheet showing the results of the valuation is given in Schedule A.
4. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V, and the rates of contribution payable by the employer are given in Section VI. Since the previous valuation, there were no changes to the plan provisions, however changes were also made to the assumed initial per capital health care costs and future cost increases. See Schedule B for more details on assumptions and methods used.
5. The impact of the COVID-19 pandemic was considered in this valuation; however, no changes were incorporated at this time due to the level of uncertainty regarding the impact on both plan costs and contribution levels going forward. Given the uncertainty regarding COVID-19 (e.g., the impact of routine care being deferred, direct COVID-19 treatment and prevention costs, changes in contribution and budget projections), continued monitoring of the impact on the Plan's liability will be required.
6. Since the most recent experience study was completed, we note that inflation has been significantly higher than assumed. Inflation is a component of several assumptions so the effects of higher inflation as a component of one assumption may be partially offset by the effect of higher inflation in another. We do not want to give too much credibility to recent experience, but we cannot ignore that current rates of inflation are the highest in the past 40 years. We will continue to monitor inflation in subsequent valuations to assess the reasonableness of the assumed inflation used in the valuation.
7. The following changes were reflected in this valuation:

Medicare Eligible

Premiums

Premiums will remain the same in 2024.

Benefits

In-network Specialist Visit co-pay will decrease to \$20 from \$30.

The Aetna Medicare Advantage plan includes a quarterly Over-The-Counter (OTC) benefit of \$60, which covers certain eligible health and wellness products, disclosed in the Aetna product catalog provided to participants, purchased after January 1, 2024. Unused benefit amounts will not carry over to the next quarter. Reimbursements are not allowed for this benefit and purchases outside of the benefit are not covered or reimbursable.



Pharmacy Network

The pharmacy plan will change to Express Scripts National Performance Medicare Network effective January 1, 2024. A new formulary will be available after October 1, 2023. Co-pays will be reduced to \$0 upon reaching the Catastrophic Phase of the benefit. A few prescription drugs may change to non-preferred, with details available from Express Scripts.

Non-Medicare Eligible

Premiums

There will be no change in premiums in 2024 for enrollees in the Aetna Choice POS II Plan.

There will be a 4% premium increase in 2024 for enrollees in the AultCare PPO Plan.

Benefits

Primary Care co-pay will decrease to \$10 from \$20.

Special Visit co-pay will decrease to \$25 from \$40.

There are no pharmacy changes. However, a few prescription drugs may change to non-preferred.

SERS Wraparound HRA

The Health Reimbursement Arrangement (HRA) limit is increasing to \$2,100 from \$1,950 per family per calendar year. Enrollees seeking non-Medicare coverage are required to participate in a counseling session to explore the affordability of available SERS alternatives, including the SERS Marketplace Wraparound Plan.

Disability Subsidization

Effective January 1, 2024, the non-Medicare disability health care subsidy amounts will change to reflect amounts equal to that of service retirees by years of service.

8. Assumption changes since the prior valuations include:
 - The assumption for percent of pre-Medicare eligible retirees who choose the Wraparound plan has been increased from 10% to 20%
 - The health care trend assumption on retiree premiums has been updated to not apply trend to the \$35 surcharge
 - The morbidity factors have been updated based on the Society of Actuaries' June 2013 research report Health Care Costs—From Birth to Death by Dale Yamamoto and from the ASOP 6 practice note developed by the American Academy of Actuaries.
 - An assumption has been added to assume that 15% of pre-65 retirees who waive will elect coverage upon Medicare eligibility



9. The statute sets a contribution cap of 24.00% of payroll: 14.00% from employers and 10.00% from employees. The funding policy states that employer contributions in excess of those required to support the basic benefits may be allocated to retiree health care funding. If the funded ratio is less than 70%, the entire 14.00% employers' contribution shall be allocated to SERS' basic benefits. If the funded ratio is 70% but less than 80%, at least 13.50% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund SERS' basic benefits.
10. Contributions to the Health Care Fund will be 1.50% for fiscal year 2024, which is less than the actuarially determined employer contribution rate. However, as can be seen on page 16, the expected Health Care Fund solvency has increased by two years from 2060 in the prior valuation to 2062. This increase is primarily due to June 30, 2023 assets higher than expected in the prior valuation and payroll increase higher than expected leading to higher future year contributions due to the 1.50% surcharge.



SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the System as of June 30, 2023 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

Active Members

Number	Payroll	Group Averages		
		Salary	Age	Service
159,873	\$4,298,689,195	\$26,888	46.9	7.3

The following table shows a six-year schedule of active member valuation data.

SCHEDULE OF SERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2018	158,343	\$ 3,332,395,171	\$ 21,045	0.7%
6/30/2019	159,363	3,462,524,396	21,727	3.2
6/30/2020	156,579	3,477,578,726	22,210	2.2
6/30/2021	146,646	3,622,097,199*	24,700	11.2
6/30/2022	155,063	3,994,657,693	25,762	4.3
6/30/2023	159,873	4,298,689,195	26,888	4.4

* Effective June 30, 2021, the annual compensation reflects imputed salaries.



The following table shows the number of retiree members and their beneficiaries receiving health care as of the valuation date as well as average ages.

Retiree Lives

AultCare PPO, Aetna Choice POS II, and SERS Marketplace Wraparound HRA		Average
	Number	Age
Service Retirees	2,598	62.2
Disability Retirees	435	60.8
Spouses	259	61.4
Non-Spouse Dependents	158	20.7
Total	3,450	60.0

Aetna Medicare Plan (PPO) and Aetna Traditional Choice		Average
	Number	Age
Service Retirees	27,317	77.3
Disability Retirees	2,300	73.1
Spouses	6,515	78.5
Non-Spouse Dependents	74	58.8
Total	36,206	77.2

Non-Medicare Waiving Type of Benefit Recipient		Average
	Number	Age
Service Retirees	3,181	62.1
Disability Retirees	1,443	58.4
Total	4,624	61.0

This valuation also includes 6,413 deferred vested members eligible for health care not included in the counts above.



SECTION III – ASSETS

1. As of June 30, 2023 the total market value of assets amounted to \$706,785,561.

Asset Summary Based on Market Value			
(1)	Assets at June 30, 2022	\$	611,574,409
(2)	Contributions and Misc. Revenue		269,891,157
(3)	Investment Gain (Loss)		35,445,488
(4)	Total Health Care Expenses		<u>(210,125,493)</u>
(5)	Assets at June 30, 2023	\$	706,785,561
	(1) + (2) + (3) + (4)		
(6)	Annualized Rate of Return*		5.53 %

*Based on the approximation formula: $I/[0.5 \times (A + B - I)]$, where

I = Investment Gain (Loss)

A = Beginning of year asset value

B = End of year asset value



SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of June 30, 2023.

1. The total health care valuation balance sheet shows that the System has total future health care liabilities of \$2,116,322,363 of which \$606,867,180 is for the future benefits payable for present retiree members and beneficiaries of deceased members; \$22,677,627 is for the future benefits payable for current deferred vested members; and \$1,486,777,556 is for the future benefits payable for present active members. Against these health care liabilities, the System has a total market value of assets of \$706,785,561 as of June 30, 2023. The difference of \$1,409,536,802 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future for health care. Of this amount, no future contributions are expected to be made by members, and the balance of \$1,409,536,802 represents the present value of future contributions payable by SERS.
2. SERS' contributions on account of health care consists of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 1.40% of payroll are required to provide the benefits of the System for the average new member of SERS.
3. Prospective employer normal contributions on account of health care at the above rates have a present value of \$584,645,987. When this amount is subtracted from \$1,409,536,802 which is the present value of the total future contributions to be made by the employer, there remains \$824,890,815 as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by SERS on account of health care be set at 1.25% of payroll. This rate is sufficient to liquidate the unfunded accrued liability of \$824,890,815 over 30 years on the assumption that the aggregate payroll for members will increase by 1.75% each year.



SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2023 is shown below.

Experience Gain/(Loss) (\$ Thousands)

(1)	UAAL* as of 6/30/22	\$ 736,680
(2)	Normal cost from last valuation	52,213
(3)	Expected employer contributions	107,897
(4)	Interest accrual: [(1) + (2)] x .070 - (3) x .070/2	51,446
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$ 732,442
(6)	Change due to claims and retiree premiums	107,776
(7)	Change due to assumption changes**	(270,394)
(8)	Change due to benefit changes***	16,987
(9)	Expected UAAL after changes: (5) - (6) - (7) - (8)	\$ 878,073
(10)	Actual UAAL* as of 6/30/23	824,891
(11)	Total gain/(loss): (9) - (10)	\$ 53,182
(a)	Asset Gain/(Loss)	12,018
(b)	Experience Gain/(Loss) (11) - (11a)	\$ 41,164
(12)	Accrued Liabilities as of 6/30/23	\$ 1,531,676
(13)	Experience Gain/(Loss) as percent of actuarial accrued liabilities at end of year (11c) / (12)	2.7%

* unfunded actuarial liability

** Assumptions regarding Wraparound Plan election and uptake of the plan upon Medicare eligibility as well as health care aging factors and retiree premium trend were updated

***Reflects changes to the health care subsidy for disabled retirees on Non-Medicare plans effective January 1, 2024



**Gains and Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience and Actual Experience
(\$ Millions)**

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/23
Age & Service Retirements. If members retire at older ages or participate in lower numbers, there is a gain. If younger ages or higher participation, a loss.	\$ 0.8
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	0.0
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.6)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	29.3
Claims Increases (Including Wrap Plan). If smaller claims increases than assumed, there is a gain; if larger, a loss.	107.8
New Members. Additional accrued liability attributable to members who entered the plan since the last valuation.	(12.8)
Asset Experience. If there is a greater investment income than assumed, there is a gain. If less income, a loss. If there are more contributions than the ARC, there is a gain. If less contributions, a loss.	12.0
Death After Retirement. If retiree members live longer than assumed, there is a loss. If not as long, a gain.	12.4
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	13.1
Gain (or Loss) During Year From Financial Experience	\$ 161.0
Non-Recurring Items. Adjustments for plan amendments, assumption changes and method changes	(253.4)
Composite Gain (or Loss) During Year	\$ (92.4)



SECTION VI – REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for FY2023.

Required Contribution Rates

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 62,098,626	1.40%
B. Member Contributions*	\$ 0	0.00%
C. Employer Normal Cost: [A - B]	\$ 62,098,626	1.40%
D. Unfunded Actuarial Accrued Liability**	\$ 53,778,775	1.25%
E. Total Recommended Employer Contribution Rate: [C + D]	\$ 115,877,401	2.65%
F. Employer Contribution Toward Health Care ⁺	\$ 65,315,014	1.50%

* The liabilities are net of retiree contributions towards their health care.

** Based on 30-year amortization of the UAAL from June 30, 2023.

+ Includes 1.50% payroll surcharge.

Fourteen-Year History of Employer Contribution Rates

Fiscal Year Ending June 30	Employer Health Care Contribution Rate	Surcharge Percentage	Total Health Care Contribution Rate
2010	0.46%	1.50%	1.96%
2011	1.43	1.50	2.93
2012	0.55	1.50	2.05
2013	0.16	1.50	1.66
2014	0.14	1.50	1.64
2015	0.82	1.50	2.32
2016	0.00	1.50	1.50
2017	0.00	1.50	1.50
2018	0.50	1.50	2.00
2019	0.50	1.50	2.00
2020	0.00	1.50	1.50
2021	0.00	1.50	1.50
2022	0.00	1.50	1.50
2023	0.00	1.50	1.50



SECTION VII - ACCOUNTING INFORMATION

Governmental Accounting Standards Board Statements 74 and 75 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2023. Additional information will be provided in separate reports.

Valuation date	6/30/2023
Actuarial cost method	Entry Age
Amortization	Level Percent Open
Remaining amortization period	30 years
Asset valuation method	Market Value
Actuarial assumptions	
Investment rate of return*	7.00%
* Includes price inflation at	2.40%
Wage increases	1.75%
Medical Trend Assumption	6.75% - 4.40%
Year of Ultimate Trend	2033



Twelve-Year Schedule of Funding Progress
(\$ Millions)

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / (c))
6/30/2012	\$355	\$2,691	\$2,336	13.2%	\$2,788	83.8%
6/30/2013	379	2,918	2,539	13.0	2,747	92.4
6/30/2014	414	2,476	2,062	16.7	2,759	74.7
6/30/2015	408	2,425	2,016	16.8	2,845	70.9
6/30/2016	370	2,407	2,037	15.4	2,932	69.5
6/30/2017	382	2,396	2,014	15.9	3,303	61.0
6/30/2018	436	2,525	2,089	17.3	3,332	62.7
6/30/2019	464	2,199	1,735	21.1	3,463	50.1
6/30/2020	483	1,797	1,314	26.9	3,478	37.8
6/30/2021	600	1,289	689	46.5	3,622	19.0
6/30/2022	612	1,348	736	45.4	3,995	18.4
6/30/2023	707	1,532	825	46.1	4,299	19.2



SCHEDULE A
VALUATION BALANCE SHEET

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of June 30, 2023 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2022.

VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

	June 30, 2023	June 30, 2022
ASSETS		
Current market value of assets	\$ 706,785,561	\$ 611,574,409
Prospective contributions		
Employer normal contributions	584,645,987	514,981,761
Unfunded accrued liability contributions	824,890,815	736,679,661
Total prospective contributions	<u>\$ 1,409,536,802</u>	<u>\$ 1,251,661,422</u>
Total assets	<u>\$ 2,116,322,363</u>	<u>\$ 1,863,235,831</u>
LIABILITIES		
Present value of benefits payable on account of present retiree members and beneficiaries	\$ 606,867,180	\$ 519,877,530
Present value of benefits payable on account of active members	1,486,777,556	1,331,072,628
Present value of benefits payable on account of deferred vested members	<u>22,677,627</u>	<u>12,285,673</u>
Total liabilities	<u>\$ 2,116,322,363</u>	<u>\$ 1,863,235,831</u>



The following twelve-year table provides the solvency test for SERS members. The table allocates the valuation assets of the System to its liabilities based on an order of precedence. The highest order of precedence is active member contributions. The second highest order of precedence are members in pay status and vested and non-vested terminated members. The lowest order of precedence is the employer financed portion of active member accrued benefits. The liabilities are determined using the System's assumed rate of return.

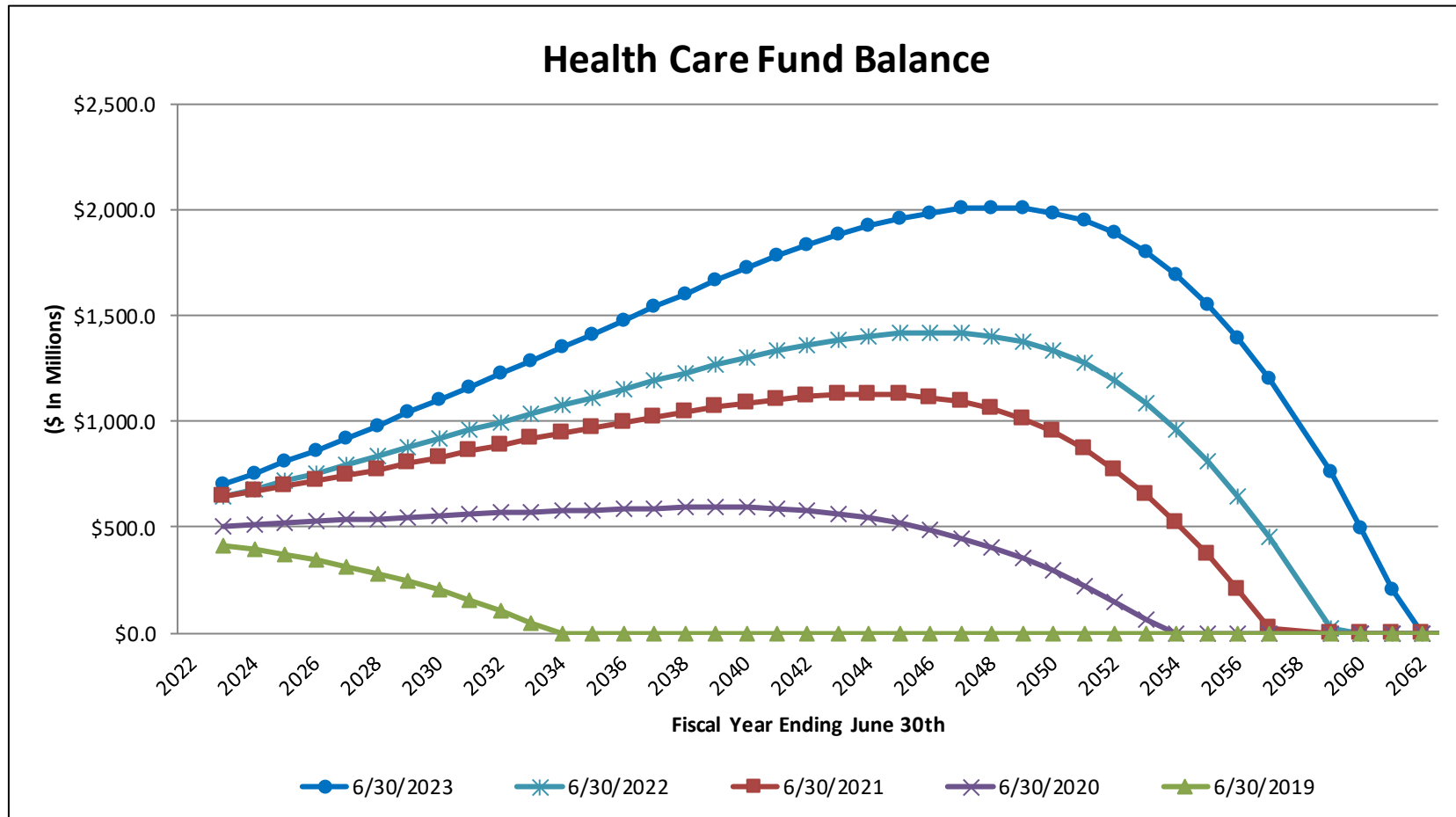
Solvency Test
(\$ Millions)

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retiree Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2012	\$0	\$1,074	\$1,617	\$355	100.0%	33.1%	0.0%
6/30/2013	0	1,157	1,761	379	100.0	32.8	0.0
6/30/2014	0	968	1,508	414	100.0	42.8	0.0
6/30/2015	0	979	1,507	408	100.0	41.7	0.0
6/30/2016	0	918	1,489	370	100.0	40.3	0.0
6/30/2017	0	916	1,480	382	100.0	41.7	0.0
6/30/2018	0	968	1,557	436	100.0	45.0	0.0
6/30/2019	0	813	1,386	464	100.0	57.0	0.0
6/30/2020	0	626	1,171	483	100.0	77.1	0.0
6/30/2021	0	544	745	600	100.0	100.0	7.5
6/30/2022	0	532	816	612	100.0	100.0	9.8
6/30/2023	0	630	902	707	100.0	100.0	8.5



Solvency Chart

The following chart shows the projected Health Care Fund Balances from the five most recent valuations. The prior year projections were based on the funding policy and assumptions in effect on the prior year valuation dates. The current year projection is based on a 7.00% future asset rate of return assumption, on a payroll growth assumption of 1.75% per year, and on the assumption that the health contribution rate will be 0.00%, plus a health care surcharge of 1.50%. These projections assume there will be no health care cost increases due to ACA law changes or COVID-19 impact other than anticipated health care trend.





SCHEDULE B

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

The decremental assumptions used in the valuation were adopted by the Board on April 15, 2021.

INTEREST RATE: 7.00% per annum, compounded annually (net after all System expenses).

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions. Trend is applied to total health care costs and retiree service based premiums. No trend is applied to the \$35 surcharge.

Calendar Year	
2023	6.75%
2024	6.50
2025	6.25
2026	6.00
2027	5.75
2028	5.50
2029	5.25
2030	5.00
2031	4.75
2032	4.50
2033 and beyond	4.40

ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of retiree participation and spouse coverage are as follows:

Retiree Gender	Spouse Coverage	Dependent Child Coverage
Male	25.0%	0.0%
Female	25.0%	0.0%

Wives are assumed to be three years younger than husbands.



Pre-65 Participants:

Years of Service	Service Retiree Participation	Disabled Retiree Participation	Deferred Vested Retiree Participation	Death in Service Surviving Spouse Participation
1.5 – 4	N/A	N/A	N/A	100.0%
5 – 9	N/A	25.0%	N/A	100.0
10 – 14	25.0%	25.0	50.0%	100.0
15 – 19	25.0	45.0	50.0	100.0
20 – 24	45.0	50.0	50.0	100.0
25 – 29	50.0	75.0	50.0	100.0
30 – 34	75.0	75.0	50.0	100.0
35 and over	90.0	90.0	50.0	100.0

15% of eligible pre-65 retirees who are waiving coverage are assumed to elect coverage upon Medicare eligibility

Post-65 Participants:

Years of Service	Service Retiree Participation	Disabled Retiree Participation	Deferred Vested Retiree Participation	Death in Service Surviving Spouse Participation
1.5 – 4	N/A	N/A	N/A	100.0%
5 – 9	N/A	70.0%	N/A	100.0
10 – 14	25.0%	70.0	50.0%	100.0
15 – 19	45.0	70.0	50.0	100.0
20 – 24	70.0	75.0	50.0	100.0
25 – 29	75.0	75.0	50.0	100.0
30 – 34	85.0	85.0	50.0	100.0
35 and over	90.0	90.0	50.0	100.0



ANTICIPATED PLAN ELECTIONS: The assumed annual rates of member plan elections are as follows:

Plan Type	Future Retirees	
	Non-Medicare	Medicare
PPO	80.0%	100.0%
Wraparound HRA	20.0%	N/A

Anticipated plan elections within the above plan types are further expanded below:

Plan Type	Future Retirees*	
	Non-Medicare	Medicare
<u>PPO</u>		
Aetna Choice POS II	96.0%	0.0%
Aetna Medicare SM Plan	0.0%	100.0%
AultCare PPO	4.0%	0.0%

**Future disabled retirees assumed 85% Non-Medicare coverage and 15% Medicare coverage before age 65.*

ANTICIPATED MEDICARE COVERAGE AT AGE 65: The assumed annual rates of future retirees obtaining Medicare coverage at age 65 are as follows:

Medicare Coverage	Percent Covered
No Medicare at age 65	1.0%
Medicare Part A	98.0%
Medicare Part B Only	1.0%

Current service retirees, disabled benefit recipients, spouses, and dependent children under age 65 were assumed to have similar Medicare coverage at age 65 as their post-Medicare counterparts.

Effective September 30, 2021, an individual who fails to enroll in Medicare Part B during their Medicare initial or special enrollment period will lose eligibility for SERS health care coverage. If an individual enrolls in Medicare Part B coverage but then fails to maintain the coverage, the individual must re-enroll during Medicare's first available general enrollment period.

HEALTH CARE PREMIUM DISCOUNT PROGRAM PARTICIPATION: Current Medicare-eligible service retirees, disabled benefit recipients, spouses and dependent children reported as qualifying for the health care Premium Discount Program were assumed to continue participating in the program for their lifetime. The health care premium Discount Program is not available for non-Medicare participants.



MONTHLY EXPECTED MEDICAL/PRESCRIPTION DRUG CLAIMS COSTS (INCLUDES ADMINISTRATIVE EXPENSES): Following are charts detailing expected claims for the year following the valuation date.

Retiree Costs			
Medicare Status	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO
Non-Medicare	\$1,465	N/A	\$1,114
Medicare A	\$154	\$504	N/A
Medicare B Only	\$154	N/A	N/A

Spouse Costs			
Medicare Status	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO
Non-Medicare	\$1,173	N/A	\$890
Medicare A	\$154	\$504	N/A
Medicare B Only	\$154	N/A	N/A

Children Costs			
Medicare Status	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO
Non-Medicare	\$367	N/A	\$197
Medicare A	\$154	\$504	N/A

The above amounts are shown as average costs and represent blended premiums rates.



EXPECTED ANNUAL CLAIMS: Per capita costs are adjusted to reflect expected cost changes related to age. The relative value factors used were developed from the Society of Actuaries' June 2013 research report Health Care Costs—From Birth to Death by Dale Yamamoto and from the ASOP 6 practice note developed by the American Academy of Actuaries. Representative values of the expected annual claims based on expected service retiree plan elections are as follows:

Pre-Medicare

Age	Retiree		Spouse	
	Male	Female	Male	Female
40	\$ 4,700	\$ 7,670	\$ 3,863	\$ 6,304
45	5,825	8,120	4,788	6,674
50	7,608	9,460	6,253	7,776
55	9,982	11,021	8,205	9,058
60	12,859	12,854	10,569	10,565
64	15,705	15,049	12,908	12,369

Post-Medicare

Age	Retiree		Spouse	
	Male	Female	Male	Female
65	\$ 1,416	\$ 1,349	\$ 1,296	\$ 1,235
70	1,721	1,659	1,575	1,518
75	2,044	1,937	1,870	1,773
80	2,372	2,232	2,171	2,042
85	2,673	2,518	2,446	2,304
90	2,935	2,734	2,686	2,503



SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

Service	Annual Rates of Withdrawal
0	40.00%
1	19.00
2	11.00
3	9.00
4	8.00
5	6.50
10	3.50
15	2.25

Annual Rates of				
Age	Death *		Disability	
	Male	Female	Male	Female
20	.041%	.013%	.020%	.010%
25	.041	.012	.039	.010
30	.052	.019	.071	.028
35	.068	.030	.127	.059
40	.096	.047	.214	.106
45	.143	.072	.313	.180
50	.218	.107	.414	.300
55	.320	.157	.530	.450
60	.466	.238	.590	.450
65	.682	.380	.533	.300
70	1.025	.627	.300	.200
74	1.461	.937	.300	.200

* Pre-retirement mortality is based on the PUB-2010 General Amount Weighted Below Median Employee Mortality Table with fully generational projection using the MP-2020 projection scale. The above rates represent the base rates used.



Annual Rates of								
Age	Retirement Eligible prior to 8/1/17				Retirement Eligible after 8/1/17			
	Reduced	Reduced (55/25)	First Eligible Unreduced	Subsequent Unreduced	Reduced	Reduced (60/25)	First Eligible Unreduced	Subsequent Unreduced
50			21%	19%				
55		10%	27%	19%				
57		10%	27%	19%			30%	19%
60	43%	15%	27%	19%		6%	30%	19%
62	43%	15%	27%	19%	5%	6%	30%	19%
65			50%	33%	15%	17%	30%	19%
68			50%	33%			30%	18%
70			50%	33%			30%	18%
75			100%	100%			100%	100%

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Annual Rates of			
Service	Merit & Seniority (A)	Base (Economy) (B)	Increase Next Year $(1+(A))*(1+(B))$
0	10.00%	3.25%	13.58%
1	3.00	3.25	6.35
2	1.75	3.25	5.06
3	1.25	3.25	4.54
4	1.00	3.25	4.28
5-9	0.75	3.25	4.02
10-15	0.50	3.25	3.77
16-17	0.25	3.25	3.51
18 & over	0.00	3.25	3.25

PAYROLL GROWTH: 1.75% per annum, compounded annually.

PRICE INFLATION: 2.40% per annum, compounded annually.



DEATH AFTER RETIREMENT: These assumptions are used to measure the probabilities of each benefit payment being made after retirement.

SERVICE RETIREMENT: PUB-2010 General Employee Amount Weighted Below Median Healthy Retiree mortality table projected to 2017 with ages set forward 1 year and adjusted 94.20% for males and set forward 2 years and adjusted 81.35% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

DISABLED RETIREMENT: PUB-2010 General Disabled Retiree mortality table projected to 2017 with ages set forward 5 years and adjusted 103.3% for males and set forward 3 years and adjusted 106.8% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

CONTINGENT SURVIVOR: PUB-2010 General Amount Weighted Below Median Contingent Survivor mortality table projected to 2017 with ages set forward 1 year and adjusted 105.5% for males and adjusted 122.5% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally

VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.

ASSET VALUATION METHOD: Market value.



SCHEDULE C

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Main Plan Provisions as of June 30, 2023

ELIGIBILITY FOR ACCESS TO RETIREE HEALTH CARE:

Normal Retirement:

Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017: Attainment of age 65 with at least 10 years of creditable service, or completion of 30 years of creditable service, regardless of age.

Members attaining 25 years of service after August 1, 2017: Attainment of age 67 with at least 10 years of creditable service, or attainment of age 57 with at least 30 years of creditable service. Buy-up option available.

Early Retirement:

Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017: Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with 10 years of service.

Members attaining 25 years of service after August 1, 2017: Attainment of age 62 with at least 10 years of creditable service, or attainment of age 60 with at least 25 years of creditable service.

Disability Retirement: Permanently disabled after completion of at least 5 years of total service credit.

Survivor Allowances: Beneficiary must be receiving monthly benefits due to the death of a member, age and service retiree or disability benefit recipient.

Termination: Members that terminated with at least 10 years of creditable service and have attained age 60 (age 62 for those retiring after August 1, 2017).

PREMIUM PAYMENTS:

Retirees, spouses and dependent children pay either all or a portion of the cost of health care and prescription drug coverage as well as a \$35 monthly surcharge. The remainder of the cost is paid by SERS.

Medicare-eligible retirees, spouses and dependent children may qualify for the health care Premium Discount Program if their household income falls at or below a specified level. Income limits are updated annually. Retirees, spouses and dependent children qualifying for the program will receive a 25% discount in their monthly health care premiums.

**PREMIUM PAYMENTS (Continued):**

The following schedule lists the percentage of the retiree premium paid by service retirees:

Years of Service	Retirement Date on or before July 1, 1989	Retirement Date August 1, 1989 through July 1, 2008	Retirement Date on or after August 1, 2008
	Service Retiree Premium Contribution Percentage		
5 – 9	50.0%	N/A	N/A
10 – 14	17.5	100.0%	100.0%
15 – 19	17.5	50.0	100.0
20 – 24	17.5	25.0	50.0
25 – 29	17.5	17.5	30.0
30 – 34	17.5	17.5	20.0
35 and over	17.5	17.5	15.0*

* Additional 1% reduction for each year over 35.

The following schedule lists the percentage of the retiree premium paid by disability benefit recipients:

Non-Medicare Plans Prior to January 1, 2024 and Medicare Plans

Years of Service	Disabled Benefit Recipient Premium Contribution Percentage
5 – 9	50.0%
10 – 24	33.0
25 and over	17.5

Non-Medicare Plans Effective January 1, 2024

Years of Service	Retirement Date on or before July 1, 1989	Retirement Date August 1, 1989 through July 1, 2008	Retirement Date on or after August 1, 2008
	Disabled Benefit Recipient Premium Contribution Percentage		
5 – 9	50.0%	100.0%	100.0%
10 – 14	17.5	100.0	100.0
15 – 19	17.5	50.0	100.0
20 – 24	17.5	25.0	50.0
25 – 29	17.5	17.5	30.0
30 – 34	17.5	17.5	20.0
35 and over	17.5	17.5	15.0*

* Additional 1% reduction for each year over 35.



The following schedule lists the percentage of the spouse premium paid by spouses of retirees:

Service Retiree, Disability Recipient, or Member's Qualified Years of Service	Spouse Premium Contribution Percentage
1.5 – 24	100.0%
25 – 29	90.0
30 and over	80.0

Dependent children pay 70.0% of the child premium.

In addition, SERS offered a new coverage option beginning in 2017, the Marketplace Wraparound HRA. This option is only available to health care participants who are not eligible for Medicare and who are not enrolled in Medicaid. Participants will be able to choose insurance from any insurer offering coverage in the federal Marketplace, and if eligible, receive a federal subsidy to lower the premium and cost-sharing amounts. The SERS Marketplace Wraparound HRA offers additional benefits to help pay for deductibles, co-pays, and other costs.

OTHER POST-EMPLOYMENT BENEFITS: Health care and prescription drug coverage is provided in all post-employment group health care plan options. Dental and vision coverage are made available to retirees, spouses, and dependent children at the full cost.

2024 RETIREE HEALTH CARE PLAN OPTIONS:

Options available to members without Medicare

- ◇ Aetna Choice POS II with Express Scripts prescription drug coverage
- ◇ AultCare PPO with AultCare prescription drug coverage
- ◇ Wraparound HRA

Options available to members with Medicare:

- ◇ Aetna MedicareSM Plan (PPO) with Express Scripts Medicare Part D Prescription Drug Plan
- ◇ Aetna Traditional Choice with Express Scripts Medicare Part D Prescription Drug Plan (only available to members with special circumstances)

The following pages contain information that was provided by SERS in the 2024 *Open Enrollment Guide* and the 2024 *Member Health Care Guide*.



2024 Contribution Rates

Years of Service	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO
Service Retirement Date on or before July 1, 1989 Premiums			
5-9.999 years			
Without Medicare	\$780		\$592
With Medicare A & B	\$117	\$287	
With Medicare B Only	\$297		
10-24.999 years			
Without Medicare	\$296		\$230
With Medicare A & B	\$64	\$123	
With Medicare B Only	\$127		
25 years & over			
Without Medicare	\$296		\$230
With Medicare A & B	\$64	\$123	
With Medicare B Only	\$64		

Years of Service	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO
Service Retirement Date August 1, 1989 through July 1, 2008 Premiums			
10-14.999 years			
Without Medicare	\$1,524		\$1,149
With Medicare A & B	\$198	\$539	
With Medicare B Only	\$558		
15-19.999 years			
Without Medicare	\$780		\$592
With Medicare A & B	\$117	\$287	
With Medicare B Only	\$297		
20-24.999 years			
Without Medicare	\$407		\$314
With Medicare A & B	\$76	\$161	
With Medicare B Only	\$166		
25 years & over			
Without Medicare	\$296		\$230
With Medicare A & B	\$64	\$123	
With Medicare B Only	\$64		



**2024 Contribution Rates
(continued)**

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO
Service Retirement Date on or after August 1, 2008 Premiums*			
10-19.999 years			
Without Medicare	\$1,524		\$1,149
With Medicare A & B	\$198	\$539	
With Medicare B Only	\$558		
20-24.999 years			
Without Medicare	\$780		\$592
With Medicare A & B	\$117	\$287	
With Medicare B Only	\$297		
25-29.999 years			
Without Medicare	\$482		\$369
With Medicare A & B	\$84	\$186	
With Medicare B Only	\$84		
30-34.999 years*			
Without Medicare	\$333		\$258
With Medicare A & B	\$68	\$136	
With Medicare B Only	\$68		

* Further reductions for each year over 35.

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO
Disability Benefit Recipient Premiums**			
5-9.999 years			
Without Medicare	\$780		\$592
With Medicare A & B	\$117	\$287	
With Medicare B Only	\$297		
10-24.999 years			
Without Medicare	\$526		\$403
With Medicare A & B	\$89	\$201	
With Medicare B Only	\$208		
25 years & over			
Without Medicare	\$296		\$230
With Medicare A & B	\$64	\$123	
With Medicare B Only	\$64		

**** Effective January 1, 2024, Disability Benefit Recipient Premiums will be the same as Service Retirement Premiums for all Non-Medicare plans. Rates above are applicable for Medicare plans and for Non-Medicare plans prior to January 1, 2024.**



**2024 Contribution Rates
(continued)**

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO
Spouse Premiums (Service Retiree, Disability Recipient, or Member's Qualified Service)			
Up to 25 years			
Without Medicare	\$1,227		\$925
With Medicare A & B	\$198	\$539	
With Medicare B Only	\$558		
25-29.999 years			
Without Medicare	\$1,108		\$836
With Medicare A & B	\$182	\$489	
With Medicare B Only	\$182		
30 years & over			
Without Medicare	\$989		\$747
With Medicare A & B	\$166	\$438	
With Medicare B Only	\$166		

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO
Child Premiums			
Child w/o Medicare A	\$296		\$173
Child with Medicare A & B	\$149	\$388	



SERS' Non-Medicare Plans

Non-Medicare plans are available to benefit recipients and dependents under age 65 and not Medicare eligible. Beginning 1/1/2021, however, members who are under age 65 that are eligible for Medicaid are not eligible for the SERS Health Care Plan coverage. Beginning September 2021, plan enrollees eligible for Medicare B lose eligibility for SERS coverage if they do not enroll in Medicare B. Enrollees seeking non-Medicare coverage are required to participate in a counseling session to explore the affordability of available SERS alternatives, including the SERS Marketplace Wraparound Plan.

Aetna Choice POS II

This is a Preferred Provider Organization (PPO) plan with prescription drug coverage by Express Scripts. The plan is available throughout the United States.

To enroll in this plan, a member must:

- Be under age 65 and not eligible for Medicare

Use of out-of-network providers will increase out-of-pocket costs.

AultCare PPO

This is a Preferred Provider Organization (PPO) plan with prescription drug coverage by AultCare.

To enroll in this plan, a member must:

- Be under age 65 and not eligible for Medicare.
- Live in one of the Ohio counties listed on the map in the *2024 Open Enrollment Guide*.

Use of out-of-network providers will increase out-of-pocket costs.

2024 SERS Marketplace Wraparound HRA

The SERS Marketplace Wraparound HRA is available to participants who are not eligible for Medicare and who are not enrolled in Medicaid. Participants are able to choose insurance from any insurer offering coverage in the federal Marketplace. If eligible, participants receive a federal subsidy to lower the premium and cost-sharing amounts. The SERS Marketplace Wraparound HRA offers additional benefits to help pay for deductibles, co-pays, and other costs up to a federally established annual reimbursement limit.



SERS' Medicare Plans

Aetna Medicare Plan (PPO)

This is a Medicare Advantage plan with Medicare Part D prescription drug coverage administered by Express Scripts.

Ohio Residents: Aetna has a preferred provider network. Use of out-of-network providers will increase out-of-pocket costs.

Non-Ohio Residents: Can use any medical provider that accepts Medicare patients and agrees to file claims with Aetna.

This plan is available throughout the United States. To enroll, members must have:

- Medicare Part B
- Medicare Part A, if eligible

Aetna Traditional Choice Plan

This plan is NOT available for optional enrollment. It is only available in special circumstances. SERS determines when enrollment is appropriate. Medicare Part D prescription drug coverage is administered through Express Scripts.



Prescription Drug Coverage

Prescription drug coverage is included in SERS' health care coverage and does not require a separate premium. Express Scripts provides the prescription drug coverage for Aetna. AultCare provides their own prescription coverage. All prescription plans have a formulary of covered medications. These are referred to as preferred medications. Medications not on the formulary are referred to as non-preferred. The amount members are responsible for paying, known as the co-pay, is based on the medication's preferred status. Members pay the least for generic medications. Members pay the most for brand-name medications that are not preferred. Members can get prescriptions at retail pharmacies or through the mail. Members save money by having prescriptions for maintenance medications mailed to their homes.

The following is a partial list of situations or types of medications that are not covered.

- Prescriptions or medications dispensed in a hospital. These are typically covered under the medical plan.
- Prescriptions covered by Workers' Compensation.
- Prescriptions for fertility, erectile dysfunction, or cosmetic drugs.
- Over-the-counter drugs and herbal preparations, including homeopathic preparations.

With the exception of insulin, Express Scripts does not cover non-preferred medications. Members pay the full amount for non-preferred medications, and these costs do not count toward any out-of-pocket maximum or the Medicare coverage gap.

All prescription plans include these common coverage rules:

- Prior Authorization - For some medications, the doctor must contact the drug plan before certain prescriptions can be filled. The prescription is only covered if the doctor is able to confirm that the medication is necessary.
- Quantity Limits - Limits how much of a specific medication members can get at a time.
- Step Therapy - A process where certain medications that have proven to be safe and effective are tried as the first choice rather than starting with a more expensive prescribed medication.

Medicare Part D Prescription Drugs

SERS' health plan participants enrolled in a Medicare plan are automatically covered under a Medicare Part D prescription drug plan through SERS and should not enroll in a separate Medicare Part D plan. Enrolling in another Part D plan would cause cancellation of SERS coverage for both medical and prescription drug benefits per federal law.



Non-Medicare Plan Benefits

	Aetna Choice POS II (In-Network)	AultCare PPO (In Network)
Annual Combined Medical & Prescription Drug Out-of-Pocket Maximum	\$7,350/person \$14,700/family	\$7,350/person \$14,700/family
Deductible	\$2,000/person \$4,000/family	\$2,000/person \$4,000/family
Primary Care Office Visit	\$10 co-pay	\$20 co-pay
Specialist Office Visit	\$25 co-pay	\$40 co-pay
Outpatient Diagnostic X-Ray and Lab	20% coinsurance	20% coinsurance
Retail Walk-In Clinic	\$20 co-pay	\$20 co-pay
Urgent Care	\$40 co-pay	\$40 co-pay
Emergency Room	\$150 co-pay	\$150 co-pay
Ambulance	20% coinsurance	20% coinsurance
Inpatient Hospital	20% coinsurance after \$250 co-pay	20% coinsurance after \$250 co-pay
Outpatient Surgery	20% coinsurance	20% coinsurance
Skilled Nursing Facility (100-day max)	20% coinsurance	20% coinsurance
Home Health Care	20% coinsurance	20% coinsurance
Hospice Health Care	100% coverage	Inpatient: 100% coverage Outpatient: 20% coinsurance
Outpatient Short-Term Rehab	20% coinsurance	20% coinsurance
Chiropractic	20% coinsurance	20% coinsurance
Durable Medical Equipment	20% coinsurance	20% coinsurance
Prescription Drugs	Express Scripts <u>Retail 34-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail:</u> \$25 preferred brand, 25% or \$45 max non-preferred brand <u>Insulin Mail Order:</u> 25% preferred brand (\$45 min, \$60 max), 25% or \$115 max non-preferred brand <u>Specialty medications:</u> 25% of cost (\$25 min, \$100 max) <u>Specialty Mail order 90-day max:</u> 25% of cost (\$15 min, \$67 max per 30-day supply)	AultCare <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) Non-preferred at 100% <u>Insulin Retail:</u> \$30 preferred brand, \$45 non-preferred brand <u>Insulin Mail Order:</u> \$60 preferred brand, \$115 non-preferred brand <u>Specialty medications:</u> \$100 co-pay <u>Specialty Mail order:</u> \$100 co-pay; 30-day supply only



**Non-Medicare Plan Benefits
(continued)**

SERS Marketplace Wraparound HRA

Benefit	Maximum Reimbursement
Out-of-pocket expenses for Marketplace plan covered services. Examples include deductibles, co-pays, and coinsurance.	Reimbursements are limited to \$2,100 per family, per calendar year in accordance with federal limits*
* Reimbursement is limited to cost sharing after the Participant's Marketplace plan has adjudicated any claim(s). Actual reimbursement may vary according to the Participant's Marketplace plan's terms but will in no event exceed the Participant's actual out-of-pocket expenses under the applicable Marketplace plan.	
The SERS Marketplace Wraparound HRA eligible expenses noted above only apply to covered service under your Marketplace plan. Claims for non-covered services are not eligible for reimbursement.	



Medicare Plan Benefits

Aetna MedicareSM Plan (PPO)

Annual Out-of-Pocket Maximum	\$3,000 per person
Deductible	None
Primary Care Office Visit	\$10 co-pay
Specialist Office Visit	\$20 co-pay
Outpatient Diagnostic X-Ray	\$25 co-pay
Outpatient Diagnostic Lab	100% coverage
Urgent Care	\$40 co-pay
Emergency Room	\$100 co-pay
Ambulance	\$80 co-pay
Inpatient Hospital	\$150 co-pay per day 1-5, then 100%
Outpatient Surgery /Procedures	15% coinsurance up to \$200 max
Skilled Nursing Facility (100-day max)	Co-pay: \$0 per day 1-10, \$25 per day 11-20, \$50 per day 21-100
Home Health Care	100% coverage
Hospice	Covered per Medicare
Outpatient Short-Term Rehab	\$15 co-pay
Cardiac Rehabilitation Services	\$15 co-pay for in-network; 20% coinsurance for out-of-network
Chiropractic	\$20 co-pay limited to Medicare coverage
Durable Medical Equipment	20% coinsurance
Over-The-Counter Benefit	\$60 per quarter towards eligible health and wellness products from CVS pharmacy
Prescription Drugs	Express Scripts Medicare D PDP <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min,\$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail:</u> \$25 preferred brand, 25% or \$35 max non-preferred brand <u>Insulin Mail Order:</u> 25% preferred brand (\$45 min, \$60 max), 25% or \$90 max non-preferred brand <u>Specialty medications:</u> 25% of cost (\$25 min,\$100 max) <u>Specialty Mail order 90-day max:</u> 25% of cost (\$15 min,\$67 max per 30-day supply)



SCHEDULE D
DETAILED TABULATIONS OF THE DATA

All Retirees, Spouses and Dependents Receiving Health Care
Male and Female Demographic Breakdown
As of June 30, 2023
Tabulated by Attained Ages

Attained Age	Number of		Total Number
	Males	Females	
Under 20	24	37	61
20-24	33	35	68
25-29	18	12	30
30-34	1	1	2
35-39	1	6	7
40-44	9	5	14
45-49	12	12	24
50-54	62	71	133
55-59	245	412	657
60-64	952	1,919	2,871
65-69	2,415	5,192	7,607
70-74	2,577	5,748	8,325
75-79	1,824	4,896	6,720
80-84	1,612	4,497	6,109
85-89	1,105	3,175	4,280
90-94	424	1,564	1,988
95-99	79	578	657
100	7	36	43
101	2	22	24
102	0	22	22
103	1	5	6
104	1	3	4
105 & Over	1	3	4
Total	11,405	28,251	39,656

Retirees currently waiving insurance are not included in the headcounts above.



Schedule of Retiree Members Added to and Removed from Rolls
Last Twelve Fiscal Years

Year Ended	Added to Rolls		Removed from Rolls*		Rolls at Year-End		% Increase in Projected Benefits	Average Projected Benefits
	Number	Projected Benefits	Number	Projected Benefits	Number	Projected Benefits		
6/30/2012	2,073	9,280,779	3,785	5,391,796	46,439	90,708,513	11.49%	1,953
6/30/2013	2,110	8,977,566	3,217	4,370,993	45,332	100,514,730	10.81%	2,217
6/30/2014	2,251	8,658,731	2,873	4,834,922	44,710	87,007,272	(13.44)%	1,946
6/30/2015	2,329	8,897,861	2,932	4,682,901	44,107	90,855,858	4.42%	2,060
6/30/2016	2,820	10,209,470	2,650	4,258,016	44,277	90,484,518	(0.41)%	2,044
6/30/2017	2,355	10,099,985	2,774	4,834,866	43,858	91,554,056	1.18%	2,088
6/30/2018	2,383	7,833,624	2,820	5,004,204	43,421	90,696,175	(0.94)%	2,089
6/30/2019	1,791	6,375,244	2,665	4,496,857	42,547	82,778,168	(8.73)%	1,946
6/30/2020	2,058	6,645,569	2,749	4,275,713	41,856	69,600,381	(15.92)%	1,663
6/30/2021	2,213	7,152,506	3,172	4,050,170	40,897	69,028,349	(0.82)%	1,688
6/30/2022	2,245	6,676,697	3,011	4,299,770	40,131	63,016,244	(8.71)%	1,570
6/30/2023	2,155	5,780,866	2,630	3,716,184	39,656	59,374,856	(5.78)%	1,497

* The benefits removed from rolls do not include subsidies that were changed due to premium changes, plan election changes or reductions due to members obtaining Medicare eligibility.

Retirees currently waiving insurance are not included in the headcounts above.



Deferred Vested Members Eligible for Health Care
Male and Female Demographic Breakdown
As of June 30, 2023
Tabulated by Attained Ages

Attained Age	Number of		Total Number
	Males	Females	
Under 35	8	7	15
35-39	62	63	125
40-44	122	210	332
45-49	170	422	592
50-54	251	888	1,139
55-59	328	1,469	1,797
60 & Over	439	1,974	2,413
Total	1,380	5,033	6,413



Total Active Members as of June 30, 2023
Tabulated by Attained Ages and Years of Service

Attained Age	Years of Service to Valuation Date							Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
Under 20	3,328							3,328
Avg Pay	\$12,551							\$12,551
20-24	10,448	97						10,545
Avg Pay	\$14,022	\$31,868						\$14,186
25-29	9,992	1,118	35					11,145
Avg Pay	\$17,995	\$34,917	\$51,113					\$19,796
30-34	9,576	2,245	401	35	1			12,258
Avg Pay	\$18,710	\$36,396	\$48,496	\$49,768	\$79,767			\$23,017
35-39	10,258	3,063	834	308	32			14,495
Avg Pay	\$18,802	\$36,183	\$48,083	\$54,683	\$62,296			\$25,018
40-44	10,890	4,310	1,342	768	386	45		17,741
Avg Pay	\$18,269	\$33,764	\$44,528	\$56,075	\$61,040	\$58,035		\$26,688
45-49	9,314	4,368	1,828	1,100	753	268	17	17,648
Avg Pay	\$17,539	\$32,645	\$39,241	\$48,486	\$60,864	\$61,243	\$67,164	\$28,015
50-54	8,052	4,371	2,634	2,044	1,569	709	166	19,545
Avg Pay	\$18,390	\$32,933	\$36,432	\$42,742	\$50,496	\$61,718	\$64,484	\$31,161
55-59	6,405	3,534	2,431	2,714	2,906	1,556	498	20,044
Avg Pay	\$18,830	\$33,600	\$36,644	\$38,971	\$43,086	\$49,903	\$58,590	\$33,238
60-64	4,928	2,699	1,872	2,380	3,437	2,390	937	18,643
Avg Pay	\$17,174	\$31,278	\$36,004	\$38,252	\$41,216	\$44,084	\$52,145	\$33,437
65-69	3,366	1,443	850	808	1,148	1,038	739	9,392
Avg Pay	\$13,313	\$26,909	\$33,518	\$38,872	\$42,161	\$42,398	\$45,880	\$28,733
70 & over	2,451	906	399	304	281	229	519	5,089
Avg Pay	\$10,534	\$20,847	\$27,121	\$30,612	\$34,826	\$41,341	\$41,334	\$20,739
Totals	89,008	28,154	12,626	10,461	10,513	6,235	2,876	159,873
Avg Pay	\$17,149	\$32,948	\$38,380	\$42,049	\$45,253	\$47,998	\$50,501	\$26,888

Averages:
Age: 46.9
Service: 7.3
Annual Pay: \$26,888



Male Active Members as of June 30, 2023
Tabulated by Attained Ages and Years of Service

Attained Age	Years of Service to Valuation Date							Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
Under 20	1,631							1,631
Avg Pay	\$13,128							\$13,128
20-24	4,265	45						4,310
Avg Pay	\$14,619	\$36,088						\$14,062
25-29	4,069	527	26					4,622
Avg Pay	\$18,572	\$40,168	\$54,704					\$21,238
30-34	3,262	828	203	20	1			4,314
Avg Pay	\$19,220	\$41,647	\$55,094	\$57,710	\$79,767			\$25,405
35-39	2,964	870	354	187	25			4,400
Avg Pay	\$19,496	\$46,972	\$56,455	\$58,037	\$66,396			\$29,807
40-44	3,387	962	435	339	201	19		5,343
Avg Pay	\$18,227	\$44,561	\$59,097	\$66,963	\$70,498	\$63,622		\$31,516
45-49	3,342	932	425	284	278	129	10	5,400
Avg Pay	\$16,215	\$41,626	\$52,771	\$67,119	\$76,458	\$70,480	\$67,872	\$30,649
50-54	3,065	1,007	527	382	319	268	81	5,649
Avg Pay	\$16,859	\$40,947	\$49,727	\$60,211	\$73,039	\$75,979	\$70,133	\$33,892
55-59	2,496	1,019	525	437	431	323	193	5,424
Avg Pay	\$19,108	\$39,719	\$48,424	\$58,792	\$62,035	\$70,942	\$67,805	\$37,246
60-64	1,987	924	554	466	498	293	239	4,961
Avg Pay	\$18,660	\$36,905	\$45,401	\$53,960	\$59,468	\$66,799	\$67,528	\$37,654
65-69	1,449	594	353	230	228	130	134	3,118
Avg Pay	\$15,075	\$29,602	\$38,844	\$47,828	\$57,144	\$54,125	\$62,435	\$29,689
70 & over	1,066	472	202	121	72	42	61	2,036
Avg Pay	\$10,995	\$23,919	\$30,075	\$35,670	\$40,930	\$53,377	\$52,594	\$20,530
Totals	32,983	8,180	3,604	2,466	2,053	1,204	718	51,208
Avg Pay	\$17,153	\$39,680	\$49,194	\$57,958	\$64,682	\$68,461	\$65,682	\$28,764

Averages:
Age: 45.4
Service: 5.7
Annual Pay: \$28,764



Female Active Members as of June 30, 2023
Tabulated by Attained Ages and Years of Service

Attained Age	Years of Service to Valuation Date							Totals
	0-4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	
Under 20	1,697							1,697
Avg Pay	\$11,996							\$11,996
20-24	6,183	52						6,235
Avg Pay	\$13,610	\$26,434						\$13,717
25-29	5,923	591	9					6,523
Avg Pay	\$17,598	\$30,234	\$40,740					\$18,775
30-34	6,314	1,417	198	15				7,944
Avg Pay	\$18,447	\$33,327	\$41,730	\$39,179				\$21,721
35-39	7,294	2,193	480	121	7			10,095
Avg Pay	\$18,520	\$31,903	\$41,909	\$49,501	\$47,653			\$22,931
40-44	7,503	3,348	907	429	185	26		12,398
Avg Pay	\$18,288	\$30,662	\$37,540	\$47,471	\$50,764	\$53,952		\$24,607
45-49	5,972	3,436	1,403	816	475	139	7	12,248
Avg Pay	\$18,279	\$30,209	\$35,143	\$42,001	\$51,738	\$52,671	\$66,153	\$26,853
50-54	4,987	3,364	2,107	1,662	1,250	441	85	13,896
Avg Pay	\$19,331	\$30,533	\$33,107	\$38,727	\$44,743	\$53,051	\$59,100	\$30,051
55-59	3,909	2,515	1,906	2,277	2,475	1,233	305	14,620
Avg Pay	\$18,652	\$31,121	\$33,399	\$35,167	\$39,786	\$44,391	\$52,758	\$31,752
60-64	2,941	1,775	1,318	1,914	2,939	2,097	698	13,682
Avg Pay	\$16,170	\$28,349	\$32,054	\$34,428	\$38,123	\$40,910	\$46,877	\$31,908
65-69	1,917	849	497	578	920	908	605	6,274
Avg Pay	\$11,981	\$25,025	\$29,735	\$35,309	\$38,448	\$40,720	\$42,213	\$28,257
70 & over	1,385	434	197	183	209	187	458	3,053
Avg Pay	\$10,179	\$17,507	\$24,093	\$27,268	\$32,724	\$38,637	\$39,835	\$20,878
Totals	56,025	19,974	9,022	7,995	8,460	5,031	2,158	108,665
Avg Pay	\$17,146	\$30,191	\$34,060	\$37,142	\$40,538	\$43,101	\$45,450	\$26,004

Averages:

Age: 47.6

Service: 8.0

Annual Pay: \$26,004



Active Members as of June 30, 2023

Tabulated by Annual Pay

Annual Pay	Number of Active Members			Portion of Total Number	
	Men	Women	Totals	Group	Cumulative
Less than \$1,000	1,619	2,851	4,470	2.8%	2.8%
\$1,000 - 1,999	2,282	2,955	5,237	3.3%	6.1%
2,000 - 2,999	2,930	3,119	6,049	3.8%	9.9%
3,000 - 3,999	3,224	2,965	6,189	3.9%	13.7%
4,000 - 4,999	2,622	2,422	5,044	3.2%	16.9%
5,000 - 5,999	2,034	2,232	4,266	2.7%	19.5%
6,000 - 6,999	1,587	2,264	3,851	2.4%	22.0%
7,000 - 7,999	1,278	2,248	3,526	2.2%	24.2%
8,000 - 8,999	1,095	2,175	3,270	2.0%	26.2%
9,000 - 9,999	916	2,106	3,022	1.9%	28.1%
10,000 - 11,999	1,531	4,208	5,739	3.6%	31.7%
12,000 - 13,999	1,304	4,591	5,895	3.7%	35.4%
14,000 - 15,999	1,323	4,988	6,311	3.9%	39.3%
16,000 - 17,999	1,316	5,372	6,688	4.2%	43.5%
18,000 - 19,999	1,319	5,707	7,026	4.4%	47.9%
20,000 - 24,999	3,269	14,689	17,958	11.2%	59.1%
25,000 - 29,999	2,702	11,400	14,102	8.8%	68.0%
30,000 - 35,999	2,787	9,399	12,186	7.6%	75.6%
36,000 - 39,999	1,974	4,718	6,692	4.2%	79.8%
40,000 - 49,999	4,925	8,410	13,335	8.3%	88.1%
50,000 - 59,999	3,480	4,589	8,069	5.0%	93.2%
60,000 and over	5,691	5,257	10,948	6.8%	100.0%
Totals	51,208	108,665	159,873		



SCHEDULE E

GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Age-Related Morbidity. Assumed increase to the net incurred claims related to increase in age.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Health Care Cost Trend Rates. The annual assumed rate of increase for both claims and contributions.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.



Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.

ANNUAL ACTUARIAL VALUATION

ALLOCATION OF EMPLOYER CONTRIBUTIONS

_____ moved and _____ seconded that after review and discussion of the actuary's *Report on the Annual Basic Benefits Valuation of the School Employees Retirement System of Ohio* (prepared as of June 30, 2023) at the November 2023 Board meeting, the Board accept the actuary's recommended allocation of the 14% employer contribution for fiscal year 2024 as follows: Pension Fund (10.06%), Death Benefit Fund (0.04%), Medicare B Fund (0.47%) and Health Care Fund (0.00%). The Board decided at the September 2023 Board meeting that no allocation from the 14% employer contribution should be made to the Health Care Fund in fiscal year 2024, preferring instead to enhance the funding levels for Basic Benefits. The remainder (3.43%) of the 14% employer contribution will be allocated proportionately to the Pension Fund, Death Benefit Fund and Medicare B Fund in accordance with the funding policy approved by the Board on June 18, 2015.

Upon roll call, the vote was as follows:

<u>ROLL CALL:</u>	<u>YEA</u>	<u>NAY</u>	<u>ABSTAIN</u>
Matthew King	_____	_____	_____
Jeffrey DeLeone	_____	_____	_____
James Haller	_____	_____	_____
Catherine Moss	_____	_____	_____
Barbara Phillips	_____	_____	_____
James Rossler	_____	_____	_____
Aimee Russell	_____	_____	_____
Daniel Wilson	_____	_____	_____
Frank Weglarz	_____	_____	_____

Memo

To: Retirement Board
From: Joe Marotta and Michelle Miller
CC: Richard Stensrud and Karen Roggenkamp
Date: November 3, 2023
Re: Amended Solicitation to Employees Policy/Ethics Policy Review

At the November Board meeting, two policies will be discussed with the Board.

The first policy up for review is the Solicitation to Employees Policy ("Solicitation Policy"). The Solicitation Policy is jointly owned by the Board and Human Resources and sets forth appropriate instances for solicitation to employees. Proposed amendments (which have been reviewed by SERS' outside employment counsel) include more detailed examples of approved charitable solicitations by staff, the addition of electronic bulletin board posting parameters, and the addition of corrective action for violating the policy. The essence of the Solicitation Policy has not changed.

Due to the extent of proposed edits and reordering of proposed language, we have provided you both a redlined and clean version of the amended Solicitation Policy. If the amendments are acceptable, a resolution has been prepared for the Board's consideration.

The other policy brought to the Board for review this month is the Ethics Policy. By its terms, the Ethics Policy is to be reviewed by the Board on a biennial basis. The Ethics Policy was last reviewed in December 2021, and last amended in December 2019, with the assistance of the Ohio Ethics Commission and following review by the Ohio Retirement Study Council. At this time, staff has no proposed edits for the Ethics Policy, therefore no formal action is necessary. A copy of the current Ethics Policy is included in your materials for review.



Solicitation to Employees

BD999-002

Effective Date:	01/03/2007	Revision Date:	TBD	Audience:	Everyone
Owner:	Board	Certifier:	Richard Stensrud	Co-Owner (s):	Human Resources
Document Links:	Purpose , Policy , Procedure , Definitions , Related Documents , Policy History				

Purpose

The purpose of this policy is to establish SERS' intent to have a work environment that is free from solicitation efforts that do not relate to SERS business or interest. While SERS encourages employees' participation in community activities and organizations outside of work, the time spent at work is more productive and pleasant when not interrupted by solicitations and distribution of materials by employees. This policy defines the appropriate instances for solicitation to employees, and outline the reasons and definitions of inappropriate solicitation to employees.

Policy

This Policy applies to solicitation by SERS' employees and non-employees conducted for the purpose of advertising, promoting, or selling any product or service, or for encouraging membership in any group, association, or organization. It does not apply to an office-wide solicitation for a charitable purpose that has been approved by the Executive Director or Deputy Executive Director, or to [commercial](#) or educational organizations assisting in SERS' employer-provided or sponsored employee benefit programs.

Solicitation by SERS Employee

Employees may not solicit on [work time](#) (when either the employee or the person being solicited is on work time). Employees may not distribute any literature or other non-work related materials either on work time or in work areas, except as otherwise provided below.

SERS-sponsored charitable activities such as the annual United Way Campaign, school supply drive, toy drive, and other charitable activities are examples of allowable activities under this policy. In addition, solicitations for approved charitable organizations are also permissible. Examples include, but not limited to PTO or youth sport team fundraising, Girl Scout cookie sale, Boy Scout popcorn sale, etc. For questions regarding appropriateness of charitable organizations and/or fundraising activities, please contact Human Resources for clarification. Charitable or non-commercial solicitations shall be done only during [non-work times](#).

Solicitation Postings

SERS provides designated bulletin boards for employees to exchange, sell or give away personal items only. Examples include such things as announcing apartment openings, property for sale, pets, furniture sale, items wanted or services available, etc.

Employees are also permitted to post items on The Scoop at SERS Teams site. However, advertisements for commercial products and services are not acceptable. The content of any posting must be appropriate for the workplace environment. Any posting that does not meet the appropriate posting requirement will be removed. For questions regarding appropriate postings, please contact Human Resources.

Solicitation by Non-SERS Employee

Solicitation by non-employees may be conducted only for [non-commercial](#) purposes and only in [non-work areas](#) to employees on non-working time and under the following conditions:

- The soliciting person or organization must give the Deputy Executive Director or Human Resources at least three business days' notice of intent to solicit. The request will receive a response by 24 hours before requested date. The response will identify the non-work area where solicitation may occur.
- The name, address, and telephone number of a contact person for the soliciting person or organization must be provided, as well as the name of the person(s) who will conduct the solicitation at the facility.
- If more than one organization requests the right to solicit at the facility at the same time, they will be permitted to do so, if the facility is large enough to accommodate more than one without disruption to conduct business or to each other's proceedings. The decision will be at the discretion of the Deputy Executive Director.
- If there is more than one requesting party scheduled at the same time, each organization cannot have more than two representatives on site. If there is only one requesting party, there may be three representatives on site.
- If the facility can accommodate only one requesting party, or fewer than those requesting access for solicitation, equal access to the facility will be made available to all requesting parties on an alternate schedule basis.

Distribution of Solicitation Materials

SERS will not distribute materials to employees on behalf of any solicitation with the exception of office-wide solicitation for a charitable purpose that has been approved by the Executive Director or Deputy Executive Director, or to commercial or educational organizations assisting in SERS' employer-provided or sponsored employee benefit programs.

Use of System Equipment

The SERS' internal mail or email systems, telephones, copy/fax machines, computers, or any other SERS' equipment or materials cannot be used for any solicitation purposes by employees or non-employees, except as provided in this policy.

Solicitation Regulation or Prohibition

SERS reserves the right to regulate or prohibit any employee or non-employee solicitation activity which is disruptive to the operation of the office or which is disturbing or offensive to employees or others in the building.

Employees found to be in violation of this policy may be subject to corrective action, up to and including termination of employment.

Procedures None

Definitions

Commercial: This is any business activity involving the sale or purchase of goods or services.

Non-commercial: This is any activity encouraging support of or membership in any group, association, or organization

Non-Work Times: Non-work times for solicitation are before and after scheduled work time and during employees' breaks and lunch periods.

Non-Work Areas: Non-work areas for solicitation are the lobby, lunch areas, plaza, and parking garage.

Work time: Time when an employee is scheduled and expected to be properly engaged in performing their work tasks.

Related Documents and Information

Statutes: N/A

Rules: N/A

Document Links: [Purpose](#), [Policy](#), [Procedure](#), [Definitions](#), [Related Documents](#), [Policy History](#)

Forms: ---

Policy History

Version 1 – January 3, 2007 – Created – Approved by Board

Version 2 – May 2, 2013 – Edited – Approved by Board



BD999-002

Solicitation to Employees

Effective Date:	01/03/2007	Revision Date:	05/02/2013 <u>BD</u>	Audience:	Everyone
Owner:	Board	Certifier:	Richard Stensrud	Co-Owner (s):	Human Resources
Document Links:	Purpose , Policy , Procedure , Definitions , Related Documents , Policy History				

Purpose

The purpose of this policy is to ~~define~~establish SERS' intent to have a work environment that is free from solicitation efforts that do not relate to SERS business or interest. While SERS encourages employees' participation in community activities and organizations outside of work, the time spent at work is more productive and pleasant when not interrupted by solicitations and distribution of materials by employees. This policy defines the appropriate instances for solicitation to employees, and outline the reasons and definitions of inappropriate solicitation to employees.

Policy

This Policy applies to solicitation by SERS' employees and non-employees conducted for the purpose of advertising, promoting, or selling any product or service, or for encouraging membership in any group, association, or organization. It does not apply to an office-wide solicitation for a charitable purpose that has been approved by the Executive Director or Deputy Executive Director, or to commercial or educational organizations assisting in SERS' employer-provided or sponsored employee benefit programs.

~~Use of System Equipment~~

~~The SERS' internal mail or email systems, telephones, copy/fax machines, computers, or any other SERS' equipment or materials cannot be used for any solicitation purposes by employees or non-employees, except as provided in this policy.~~

~~Solicitation Postings~~

~~Postings of non-commercial materials will be permitted on a bulletin board designated by Human Resources, subject to reasonable size restrictions and prior authorization by Human Resources.~~

~~Distribution of Solicitation Materials~~

~~SERS will not distribute materials to employees on behalf of any solicitation~~Solicitation

by SERS Employee

Employees may not solicit on work time (when either the employee or the person being solicited is on work time). Employees may not distribute any literature or other non-work related materials either on work time or in work areas, except as otherwise provided below.

SERS-sponsored charitable activities such as the annual United Way Campaign, school supply drive, toy drive, and other charitable activities are examples of allowable activities under this policy. In addition, solicitations for approved charitable organizations are also permissible. Examples include, but not limited to PTO or youth sport team fundraising, Girl Scout cookie sale, Boy Scout popcorn sale, etc. For questions regarding appropriateness of charitable organizations and/or fundraising activities, please contact Human Resources for clarification. Charitable or non-commercial solicitations shall be done only during non-work times.

Solicitation by EmployeesPostings

- ~~• Solicitations by employees for a charitable purpose must be approved by Human Resources. Human Resources approval does not mean endorsement and/or encouragement of participation in charity.~~
- ~~• Solicitations for non-commercial purposes do not need approval.~~
- ~~• Charitable or non-commercial solicitations shall be done only during non-work times.~~

~~Any other employee solicitations shall be done only during non-work times and in non-work areas. SERS provides designated bulletin boards for employees to exchange, sell or give away personal items only. Examples include such things as announcing apartment openings, property for sale, pets, furniture sale, items wanted or services available, etc.~~

- Employees are also permitted to post items on The Scoop at SERS Teams site. However, advertisements for commercial products and services are not acceptable. The content of any posting must be appropriate for the workplace environment. Any posting that does not meet the appropriate posting requirement will be removed. For questions regarding appropriate postings, please contact Human Resources.

Solicitation by Non-EmployeesSERS Employee

• Solicitation by non-employees may be conducted only for ~~non-commercial~~non-commercial purposes and only in ~~non-work areas~~non-work areas to employees on non-working time and under the following conditions:

- The soliciting person or organization must give the Deputy Executive Director or Human Resources at least three business days' notice of intent to solicit. The request will receive a response by 24 hours before requested date. The response will identify the non-work area where solicitation may occur.
- The name, address, and telephone number of a contact person for the soliciting person or organization must be provided, as well as the name of the person(s) who will conduct the solicitation at the facility.
- If more than one organization requests the right to solicit at the facility at the

same time, they will be permitted to do so, if the facility is large enough to accommodate more than one without disruption to conduct business or to each other's proceedings. The decision will be at the discretion of the Deputy Executive Director.

- If there is more than one requesting party scheduled at the same time, each organization cannot have more than two representatives on site. If there is only one requesting party, there may be three representatives on site.
- If the facility can accommodate only one requesting party, or fewer than those requesting access for solicitation, equal access to the facility will be made available to all requesting parties on an alternate schedule basis.

Solicitation Regulation Or Distribution of Solicitation Materials

SERS will not distribute materials to employees on behalf of any solicitation with the exception of office-wide solicitation for a charitable purpose that has been approved by the Executive Director or Deputy Executive Director, or to commercial or educational organizations assisting in SERS' employer-provided or sponsored employee benefit programs.

Use of System Equipment

The SERS' internal mail or email systems, telephones, copy/fax machines, computers, or any other SERS' equipment or materials cannot be used for any solicitation purposes by employees or non-employees, except as provided in this policy.

Solicitation Regulation or Prohibition

SERS reserves the right to regulate or prohibit any employee or non-employee solicitation activity which is disruptive to the operation of the office or which is disturbing or offensive to employees or others in the building.

Employees found to be in violation of this policy may be subject to corrective action, up to and including termination of employment.

Procedures None

Definitions

Commercial: This is any business activity involving the sale or purchase of goods or services.

Non-commercial: This is any activity encouraging support of or membership in any group, association, or organization

Non-Work Times: Non-work times for solicitation are before and after scheduled work time and during employees' breaks and lunch periods.

Non-Work Areas: Non-work areas for solicitation are the lobby, lunch/~~smoking~~ areas, plaza, and parking garage.

Work time: Time when an employee is scheduled and expected to be properly engaged in performing their work tasks.

Related Documents and Information

Statutes: N/A

Rules: N/A

Document Links: [Purpose](#), [Policy](#), [Procedure](#), [Definitions](#), [Related Documents](#), [Policy History](#)

Forms: ---

Policy History

Version 1 – January 3, 2007 – Created – Approved by Board

Version 2 – May 2, 2013 – Edited – Approved by Board

AMENDED SERS SOLICITATION TO EMPLOYEES POLICY

It was moved by _____ and seconded by _____ to amend the SERS Solicitation to Employees Policy as recommended by staff and discussed at the November 2023 Board meeting. The effective date for the amended SERS Solicitation to Employees Policy is November 16, 2023.

Upon roll call, the vote was as follows:

<u>ROLL CALL:</u>	<u>YEA</u>	<u>NAY</u>	<u>ABSTAIN</u>
Matthew King	_____	_____	_____
Jeffrey DeLeone	_____	_____	_____
James Haller	_____	_____	_____
Catherine Moss	_____	_____	_____
Barbara Phillips	_____	_____	_____
James Rossler	_____	_____	_____
Aimee Russell	_____	_____	_____
Daniel Wilson	_____	_____	_____
Frank Weglarz	_____	_____	_____



BD2-003

Ethics Policy

Effective Date:	10/1/2005	Revision Date:	12/19/2019	Audience:	Everyone
Owner:	Board	Certifier:	Richard Stensrud	Co-Owner (s):	Executive
Document Links:	Purpose , Policy , Procedure , Definitions , Related Documents , Policy History				

Purpose

It is the policy of the School Employees Retirement System ("System") Board to carry out its mission in accordance with the strictest ethical guidelines and to ensure that Board Members and employees conduct themselves in a manner that fosters public confidence in the integrity of the System, its processes, and its accomplishments.

Policy

General Standards of Ethical Conduct

1. System Board Members and employees must, at all times, abide by protections to the public embodied in Ohio's ethics laws, as found in Chapters 102 and 2921 of the Ohio Revised Code, and as interpreted by the Ohio Ethics Commission and Ohio courts. (A copy of these laws is provided by the System, and receipt acknowledged, as required in R.C. 102.09(D)). Board Members and employees must conduct themselves, at all times, in a manner that avoids favoritism, bias, and the appearance of impropriety.
2. A general summary of the restraints upon the conduct of all Board Members and employees includes, but is not limited to, those listed below. No Board Member or employee shall:
 - a. Solicit or accept anything of value from anyone doing business with the Board or System;
 - b. Solicit or accept employment from anyone doing business with the Board or System, unless the Board Member or employee completely withdraws from any Board and System discretionary or decision-making activity regarding the party offering employment, and the Board approves the withdrawal in the case of a Board Member or the Executive Director of the System, and the Executive Director approves the withdrawal in the case of another employee;
 - c. Use his or her public position to obtain benefits for the Board Member or employee, a family member, or anyone with whom the Board Member or employee has a business or employment relationship;

- d. Be paid or accept any form of compensation for personal services rendered on a matter before, or sell goods or services to, the Board or System;

Be paid or accept any form of compensation for personal services rendered on a matter before, or sell (except by competitive bid) goods or services to, any state agency other than the Board or System, unless the Board Member or employee first discloses the services or sales and withdraws from matters before the Board or System that directly affect officials and employees of the other state agency, as directed in R. C. 102.04;

Have an unlawful interest in a public contract as follows:

1. Vote, authorize, recommend, or in any other way use his or her position to secure the investment of public funds when the Board Member or employee, a family member, or anyone with whom the Board Member or employee has a business or employment relationship, has an interest in, or will receive a fee from, the investment;;
2. Vote, authorize, recommend, or in any other way use his or her position to secure approval of a public contract (including employment or personal services) in which the Board Member or employee, a family member, or anyone with whom the Board Member or employee has a business or employment relationship, has an interest;
3. During public service, and for one year after leaving public service, profit from a Board or System contract authorized by the Board or the employee unless the contract was competitively bid and awarded to the best and lowest bidder;
4. Have an interest in the profits or benefits of a Board or System contract;
5. The Ethics Law does except some interests in a public contract when all criteria under R.C. 2921.42 are met including that the interest is disclosed in advance; stockholdings are limited; and, as to contracts, they are for necessary goods and services and are objectively shown as the lowest cost services.

Solicit or accept honoraria (see R.C. 102.01(H) and 102.03(H)), except that employees who are not financial disclosure filers may receive an honorarium only if the honorarium is paid in recognition of a demonstrable business, professional, or esthetic interest of the employee that exists apart from public office or employment, and is not paid by any person or other entity, or by a representative or association of those persons or entities, doing business with the Board or System;

During public service, and for one year after leaving public service, represent any person, in any fashion, before any public agency, with respect to a matter in which the Board Member or employee personally participated while serving with the Board or

System;

Use or disclose confidential information protected by law, unless appropriately authorized;

Use, or authorize the use of, his or her title, the name of the Board or System, or the Board's or System's logo in a manner that suggests impropriety, favoritism, or bias by the Board or System, or the Board Member or employee;

Solicit or accept any compensation, except as allowed by law, to perform his or her official duties or any act or service in his or her official capacity; and

No Board Member, state retirement system investment officer, or an employee of the System whose position involves substantial and material exercise of discretion in the investment of System funds shall solicit or accept from any person, including a partnership of which the System is a partner, payment of actual travel expenses, including expenses incurred with the travel for lodging, meals, food, and beverages.

In addition to complying with the restrictions in the Ethics Law and related statutes, no Board Member of the System who is running for a position on the System Board shall:

Solicit or accept campaign contributions from any person or entity that the Board Member knows or has reason to know:

- i. has a contract related to investment of the System's funds;
- ii. is marketing or otherwise attempting to secure business involving the System's funds; or
- iii. is an agent or acting on behalf of any person or entity described in (1) or (2).

Campaign contributions include contributions made to a campaign committee, political party, legislative campaign fund, political action committee, or political contributing entity on behalf of the Board Member.

For purposes of this policy:

"Anything of value" includes anything of monetary value, including, but not limited to, money, loans, gifts, food or beverages, social event tickets and expenses, travel expenses, golf outings, consulting fees, compensation, or employment. "Value" means worth greater than de minimis or nominal.

"Anyone doing business with the Board or System" includes, but is not limited to, any person, corporation, or other party that is doing or seeking to do business with, regulated by, or has interests before the Board or System, including anyone who is known or should be known to be an agent or acting on behalf of such a party, including any partnership of which the system is a partner, any person or entity that has a contract related to investment of the System's funds, and any person marketing or otherwise attempting to secure business involving the System's funds.

Financial Disclosure

1. Every Board Member or employee required to file a financial disclosure statement must file a complete and accurate statement with the Ethics Commission by May 15 of each year. Any Board Member or employee
-

appointed to, or employed in a filing position after May 15 and required to file a financial disclosure statement must file a statement within ninety days of appointment or employment. However, if a Board Member is filling an unexpired term of an elected position, the Board Member must file their statement within fifteen days of being sworn into office.

Assistance

1. The Ethics Commission is available to provide advice and assistance regarding the application of the Ethics Laws and related statutes. The Commission can be contacted at (614) 466-7090. The Commission's web site address is: www.ethics.ohio.gov.
2. Attached to this Policy is a Commission Fact Sheet titled "Helpful Ethics Guidance for State and Local Board and Commission Members" that provides useful guidance to Board Members and employees in complying with Ohio's ethics laws. This Fact Sheet and others may be found at the Commission web site. System counsel are available to answer questions regarding this policy.

Penalties

Failure of any Board Member or employee to abide by this Ethics policy, or to comply with the Ethics Laws and related statutes, will result in discipline, which may include dismissal, as well as any potential civil or criminal sanctions under the law.

Evaluation and Changes

This policy shall be evaluated for effectiveness by the Board of the School Employees Retirement System no less than biennially. The policy may be changed only by a majority vote of the Board, after approval by the Ethics Commission and review by the Ohio Retirement Study Council.

None

Definitions

None

Related Documents and Information

Statutes: Chapter 102, 2921.42, 2921.43

Rules: N/A

Document Links: [Purpose](#), [Policy](#), [Procedure](#), [Definitions](#), [Related Documents](#), [Policy History](#)

Forms: ---

Policy History

Version 1 – October 1, 2005 – Created – Approved by Board

Version 1 – October 18, 2007 – Reviewed by Board

Version 1 – October 15, 2009 – Reviewed by Board

Version 1 – October 20, 2011 – Reviewed by Board
Version 2 – October 18, 2013 – Edited – Approved by Board
Version 2 – October 15, 2015 – Reviewed by Board
Version 3 – December 19, 2019 – Edited – Approved by Board
Version 3 – December 16, 2021 – Reviewed by Board



OHIO ETHICS COMMISSION
William Green Building
30 West Spring Street, L3
Columbus, Ohio 43215-2256
Telephone: (614) 466-7090
Fax: (614) 466-8368

www.ethics.ohio.gov

Helpful Ethics Guidance for State and Local Board and Commission Members

DO:

- Avoid any action that might give rise to the appearance of impropriety
- Abstain from all formal or informal issues if you have a relationship with a private company or organization that is seeking public funds (through, for example, a contract, tax abatement, grant, or loan) from your board.
- Withdraw completely from questions or issues regarding those who do business with the board or have direct interests before, or are regulated by the board where your interest, or the interest of your family or a business associate is presented
- Comply with financial disclosure as required by law to remind of potential conflicts of interest
- Feel free to seek the advice and assistance from the Ohio Ethics Commission

DON'T:

- Solicit or accept anything of value from anyone doing business with your board
- Use your position to obtain financial gain or benefit for yourself, a family member, or anyone with whom you have a business or employment relationship
- Vote, authorize, recommend, or in any other way use your position to secure the approval of board services, supplies, property, investments, or other contracts or acquisitions in which you, a family member, or anyone with whom you have an ongoing business relationship, has an interest
- Accept compensation, other than from the Board, for the performance of Board duties and responsibilities
- Be paid for personal services rendered on matters before, or sell goods or services to your board or commission (See R.C. 102.04(A))
- Do business directly with or benefit from a contract with, the Board unless exception applies for limited stockholding or contracts are objectively shown as the lowest cost services, where all criteria under R.C. 2921.42 are met
- Be paid for personal services rendered on matters before, or sell (except by competitive bid) goods or services to other state agencies, boards, or commissions, unless you first disclose and withdraw from matters before the board that directly affect officials and employees of the other state agency, board, or commission (See R.C. 102.04(B))
- Solicit or accept honoraria, unless you meet the limited exceptions allowed by law
- Use or disclose confidential information protected by law, unless appropriately authorized
- During public service and for one year thereafter, represent any person, in any fashion, before any public agency, with respect to a matter in which you personally participated while serving with the board
- Use or authorize the use of your title, the board or its name in a manner that suggests impropriety, favoritism, or bias by the board or any board official or employee
- Hesitate to seek advice or guidance from the Ohio Ethics Commission by calling or writing



GLOBAL FIXED INCOME PORTFOLIO REVIEW

As of September 30, 2023

Presented by Investment Staff:

Jason Naber

Meeting Date: November 2023

Agenda



- Portfolio Summary & Structure
- Performance
- Portfolio Activity/Goals Review
- Outlook
- Appendix

As of September 30, 2023



FIXED INCOME

Portfolio Summary

\$2.2 Billion Market Value

- 14 Active Mandates across 3 Strategies (Core, Core Plus and Tactical & Diversifying)
 - 13 ranked as B or higher (9 ranked as A)
 - 1 new strategy
- Fixed Income Allocation is 12.8% versus 18% Target Allocation

Fixed Income Performance

- Total Return for 1 Year ending September 2023 was 2.12%
- Excess Net Return was 1.48% for 1 Year
- Long-Term Net Excess Returns for 3, 5, & 10 Years are Positive

Portfolio Structure

- Moved Core Portfolio Exposures Closer to Benchmark Weights
- Portfolio Yield is 6.2%, an Advantage of 0.8% Over Benchmark
- Interest Income of \$68m Transferred to Pay Benefits (12 months)
- Portfolio Management Fee Average is 33 bps

Offers Diversification & Risk Reduction to Total Fund

- Contribution of Total Fund Risk is 2.0%

As of September 30, 2023



FIXED INCOME

Characteristics

Strategy	Average Quality Rating	Yield to Maturity	Effective Duration
Core	AA-	5.66%	6.2 yrs
Core Plus	A	6.30%	6.1 yrs
Tactical & Diversifying	BBB	6.46%	3.2 yrs
Portfolio	A+	6.17%	5.8 yrs
Bloomberg US Aggregate Index	AA	5.37%	6.1 yrs

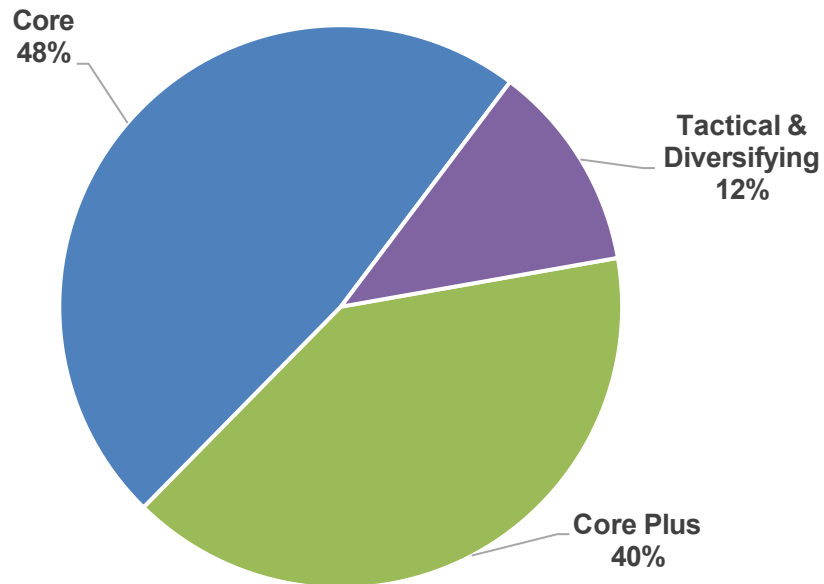
As of September 30, 2023



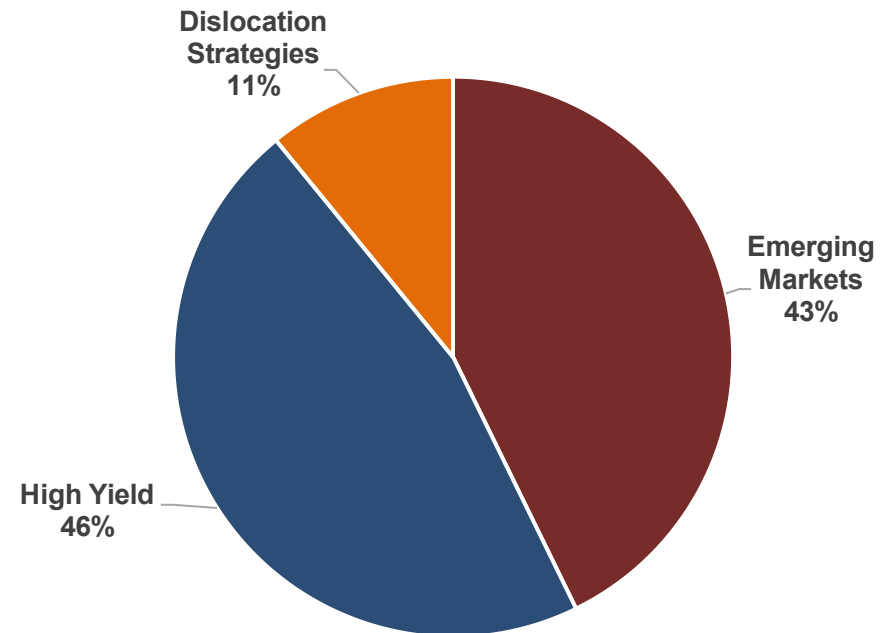
FIXED INCOME

Portfolio Structure

Portfolio Strategy



Tactical & Diversifying: Strategy Breakout

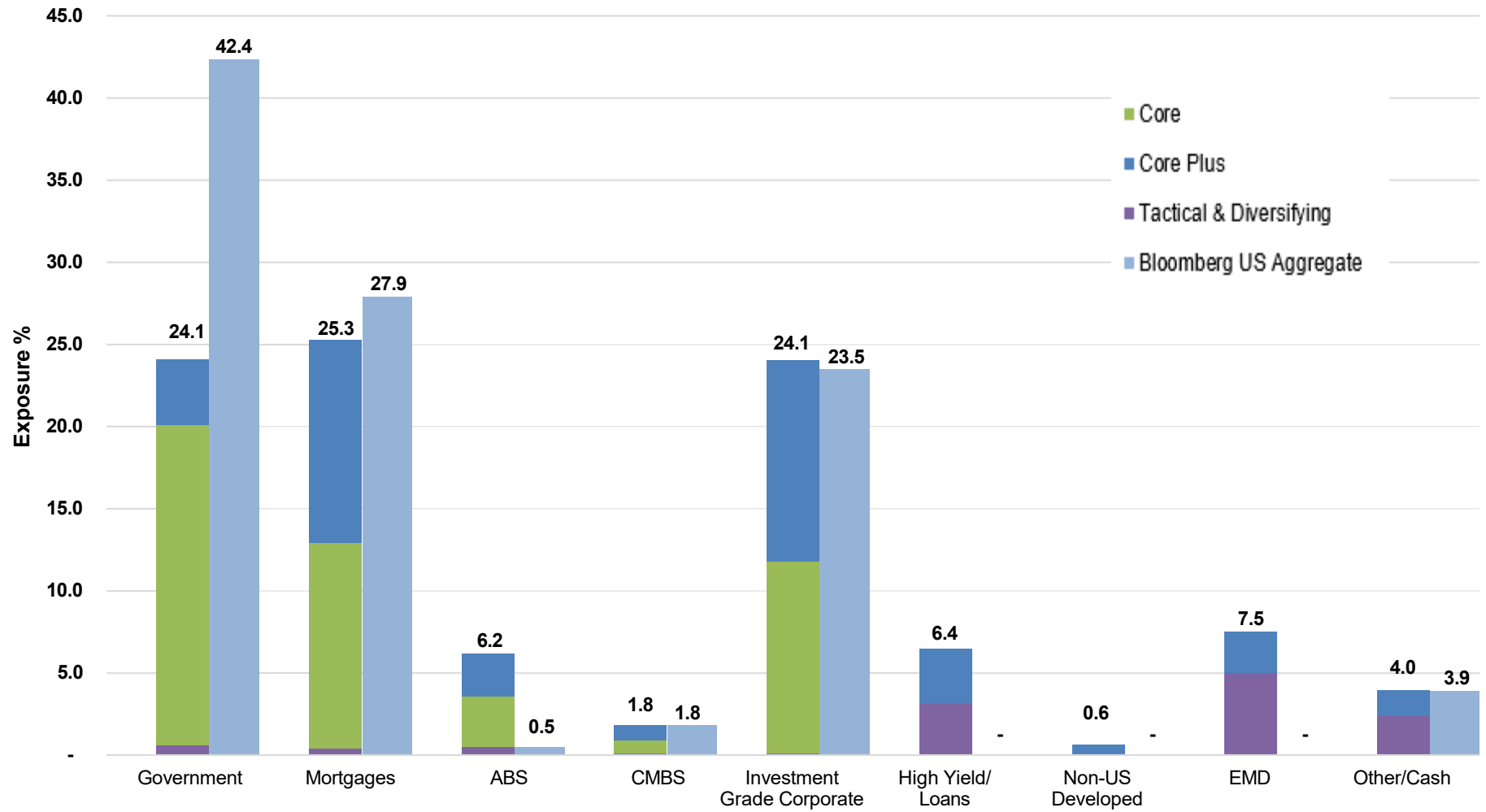


As of September 30, 2023



FIXED INCOME

Security Sector Exposures



As of September 30, 2023



FIXED INCOME

Market Performance

YTD	One Year	Three Years	Five Years	Ten Years
High Yield 5.86%	High Yield 10.31%	High Yield 1.76%	High Yield 2.96%	High Yield 4.24%
Asset-Backed 2.67%	EMD Blend 6.71%	Asset-Backed -0.80%	U.S. TIPS 2.12%	Inv. Grade Corp. 2.23%
EMD Blend 0.43%	Inv. Grade Corp. 3.65%	U.S. TIPS -1.98%	Asset-Backed 1.47%	U.S. TIPS 1.74%
Inv. Grade Corp. 0.02%	Asset-Backed 2.82%	EMD Blend -2.71%	Inv. Grade Corp. 0.93%	Asset-Backed 1.49%
U.S. TIPS -1.04%	U.S. TIPS 1.25%	Inv. Grade Corp. -4.94%	Agency MBS 0.77%	EMD Blend 1.47%
U.S. Aggregate -1.21%	U.S. Aggregate 0.64%	Agency MBS -5.09%	EMD Blend 0.74%	U.S. Aggregate 1.13%
U.S. Treasury -1.52%	Agency MBS -0.17%	U.S. Aggregate -5.21%	U.S. Aggregate 0.10%	UST 30 Year 0.75%
Agency MBS -2.26%	U.S. Treasury -0.81%	U.S. Treasury -5.84%	U.S. Treasury -0.07%	U.S. Treasury 0.63%
UST 30 Year -8.55%	UST 30 Year -9.12%	UST 30 Year -15.75%	UST 30 Year -2.77%	Agency MBS 0.61%

Source: Bloomberg

As of September 30, 2023



FIXED INCOME

Net of Fee Performance

	One Year	Three Years	Five Years	Ten Years
Fixed Income	2.12%	-3.70%	1.24%	1.96%
-Core (48%)	0.86	-4.68	0.56	1.51
-Core Plus (40%)	2.53	-3.97	1.07	2.10
-Tactical & Diversifying (12%)	4.81	0.78	2.61	0.29
Fixed Income Benchmark*	0.64%	-5.21%	0.10%	1.13%
Excess Return	1.48%	1.51%	1.14%	0.83%

Portfolio Return & Relative Performance Driven By:

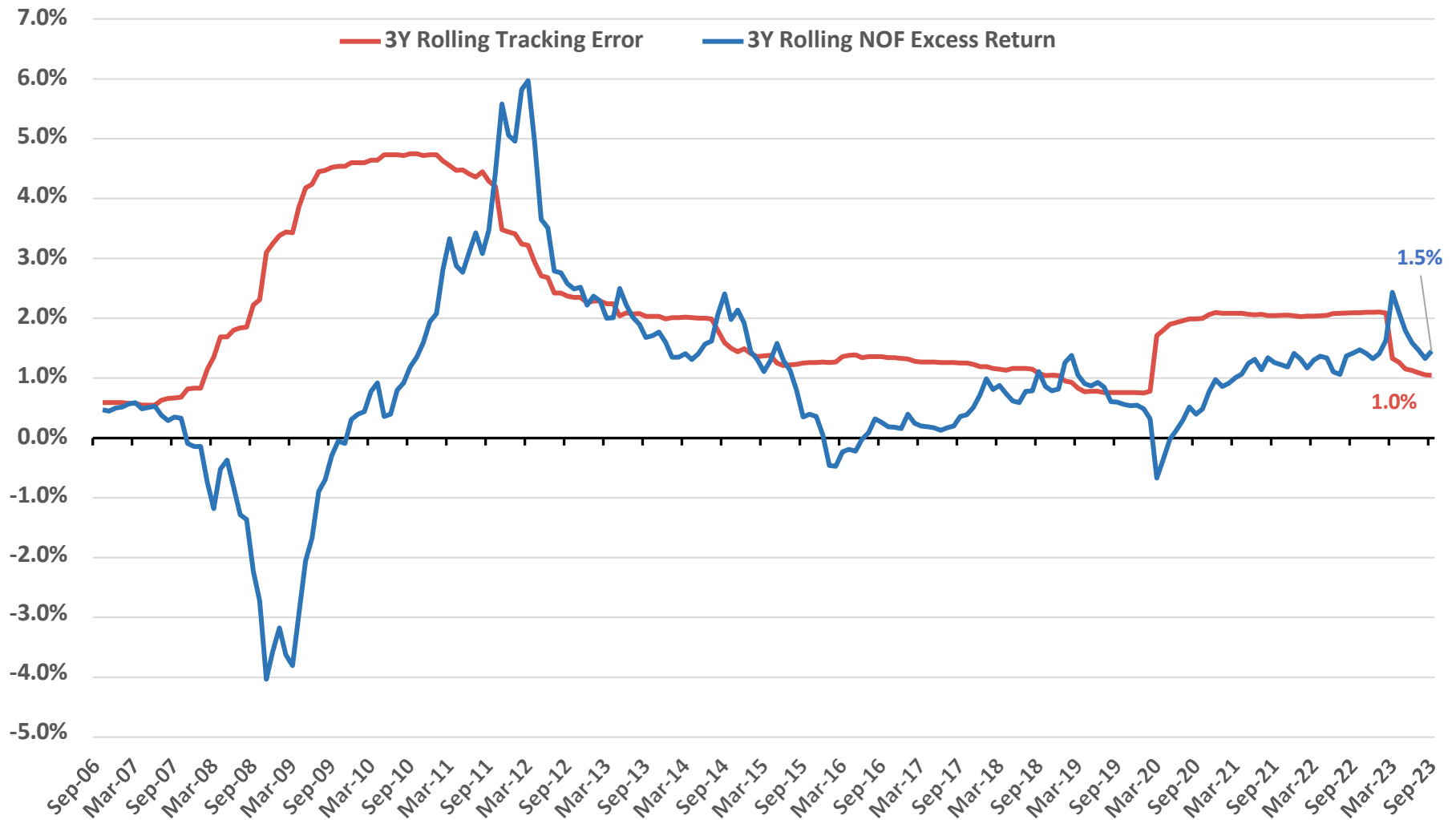
- Positive Drivers:
 - Lower Duration Relative to the US Aggregate Index in a Rising Rate Environment
 - Sectors: Overweights to IG Corporate, HY, EMD, ABS & CMBS; Underweights to UST/RMBS
 - Cash Contributions to Core Plus & Tactical & Diversifying strategies
- Negative Drivers:
 - Cash Contributions to Core and US Treasury strategies

*Fixed Income Benchmark is the Bloomberg U.S. Aggregate Bond Index

As of September 30, 2023

FIXED INCOME

Three Year Risk and Return



As of September 30, 2023



FIXED INCOME

Portfolio Activity and Goals Review

Tactically Managed Strategy Allocations

- \$50 Million Contributed to Core
- \$70 Million Contributed to Core Plus
- \$56 Million Contributed to Tactical & Diversifying

Manager Updates

- Funded the Externally Managed ETF Strategy with \$50 Million in February
- Securitized Asset Dislocation Strategy Returned \$4 Million

Portfolio Management

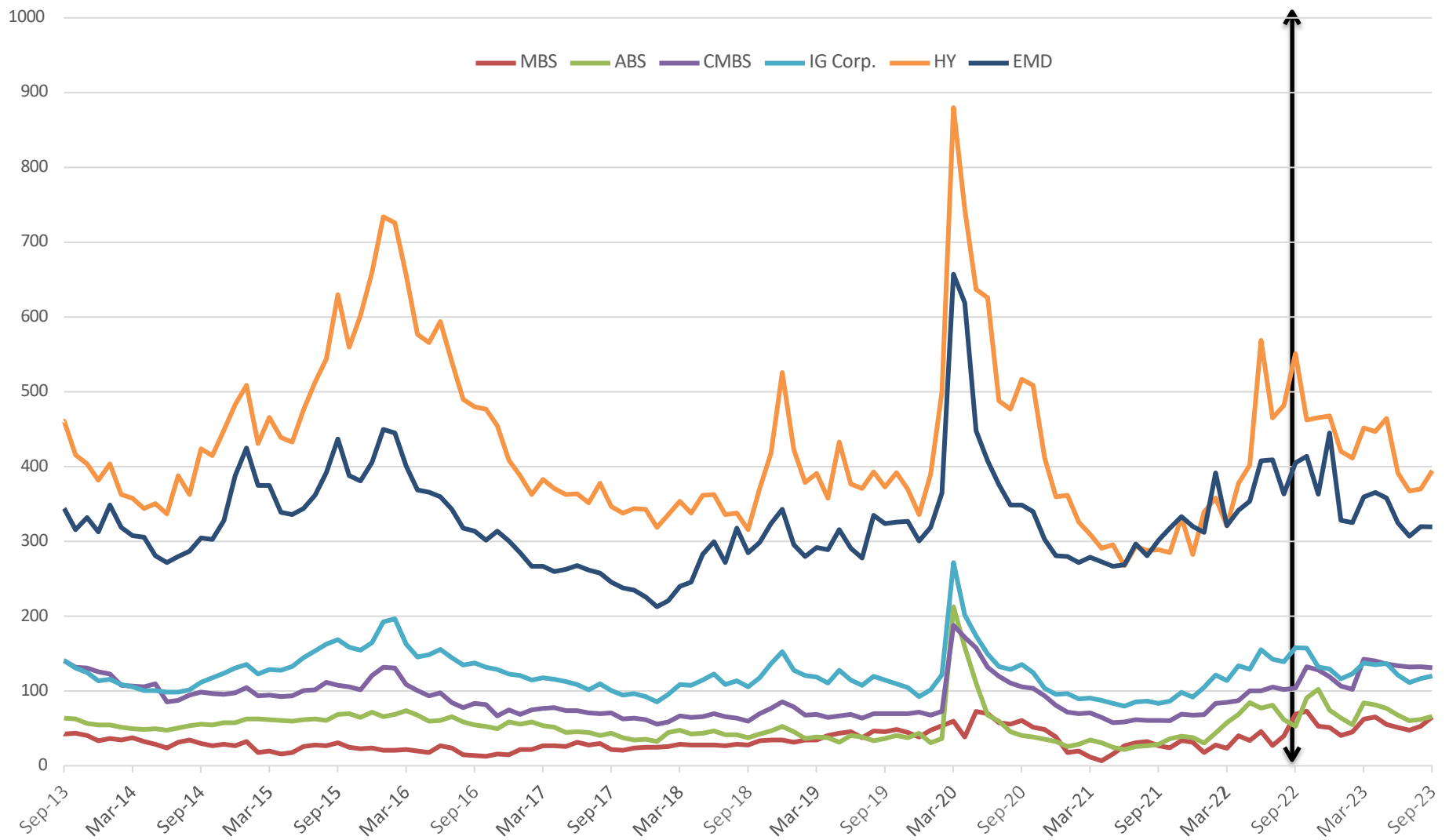
- Portfolio Continued to be Underweight vs Strategic Allocation
- Strategy Positioning has a Higher Allocation to Core Assets to Reduce Risk
- Portfolio Optimization Review with Wilshire
- Fully Renegotiated One Manager IMA

As of September 30, 2023



FIXED INCOME

Sector Spreads



Source: Bloomberg

As of September 30, 2023



FIXED INCOME

Fixed Income Outlook

Current Fixed Income Markets

- Credit Spreads are Tight, & Defaults Continue to be Low
- Higher for Longer Interest Rates & Tightening Lending Standards
- Rising Interest Rates have Moved Real Rates from Negative to Positive
- Markets are Weighing a Recession versus Soft Landing

Potential Portfolio Changes

- Increase Fixed Income Strategic Allocation
- Increase Portfolio Duration
- Continue Adding to US Treasury and Core Allocations

Future Portfolio Impact

- Interest Income will Continue Rising Leading to Higher Fixed Income Returns
- Long-Term Fixed Income Returns Expected to be Closer to Current Portfolio Yield of 6.2%



Core: Mandates holding securities like the index

Core Plus: Mandates that hold core securities plus higher yielding, riskier securities. Riskier securities include high yield, Non-U.S. and emerging market debt.

Tactical & Diversifying: Mandates with non-index holdings in emerging market debt and high yield as well as non-traditional strategies like long/short credit, dislocation opportunities and emerging market macro.

ABS: Asset Backed Security

CMBS: Commercial Mortgage-Backed Securities

EMD: Emerging Market Debt

ETF: Exchange Traded Fund

HY: High Yield

IG Corp: Investment Grade Corporates

MBS: Residential Mortgage-Backed Securities

NOF: Net of Fee

U.S. TIPS: United States Treasury Inflation Protected Securities

Wilshire



Executive Summary of Investment Performance

As of September 30, 2023

Market Commentary

U.S. Equity

The U.S. stock market was down -3.3% for the third quarter and is up 20.5% for the past 12 months. The best performing sectors were energy (+12.9%) and communication services (+2.3%). The worst performing sectors were utilities (-9.3%) and real estate (-8.4%). From a size perspective, large-cap outperformed small-cap by 104 basis points. Growth stocks underperformed value during the third quarter but lead meaningfully for the one-year return.

The bellwether 10-year U.S. Treasury yield has been on a steep upward trend since its COVID-induced historical lows – the minimum being 0.5% in August 2020. The current 10-year yield stands at 4.63%. The 3-month yield is nearly a percent higher at 5.58%, resulting in a level of inversion not seen in decades. The duration of that negative spread is also meaningful as these conditions initially appeared nearly a year ago – arguably the longest curve inversion in more than 40 years. While the current yield level may seem high given the period since the Global Financial Crisis, a longer view reveals what history suggests is possible.

Non-U.S. Equity

The eurozone fell into a mild recession around the start of the new year as real GDP fell during the fourth and first quarters. Recent data suggests that conditions are not improving – and that contraction is spreading. Germany continues to suffer due to a sustained decline in demand for goods and services while weakness is also showing in France. The Bank of England paused interest rate increases as Britain's economy has slowed. The outlook in China is complicated but with signs of improvement.

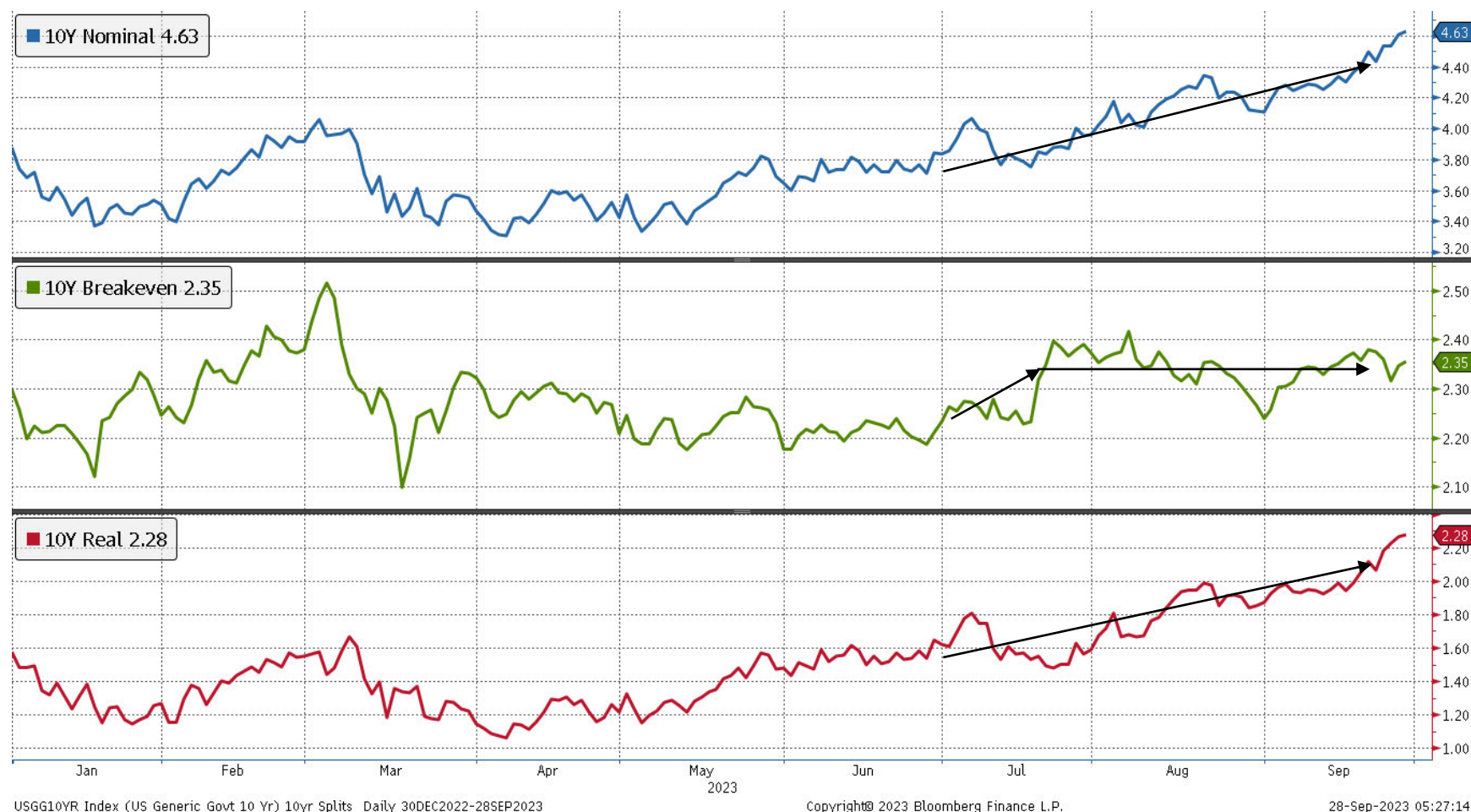
Fixed Income

The U.S. Treasury yield curve was up across the maturity spectrum during the quarter, and to a greater degree in the long end of the curve. Credit spreads were little changed. The FOMC increased the overnight rate by 0.25% in July, targeting a range of 5.25% to 5.50%, before again pausing increases in September. In late September, Fed Chair Jerome Powell said that inflation is currently the central bank's top priority, "the worst thing we can do is to fail to restore price stability, because the record is clear on that."

September 2023 Asset Class Assumptions

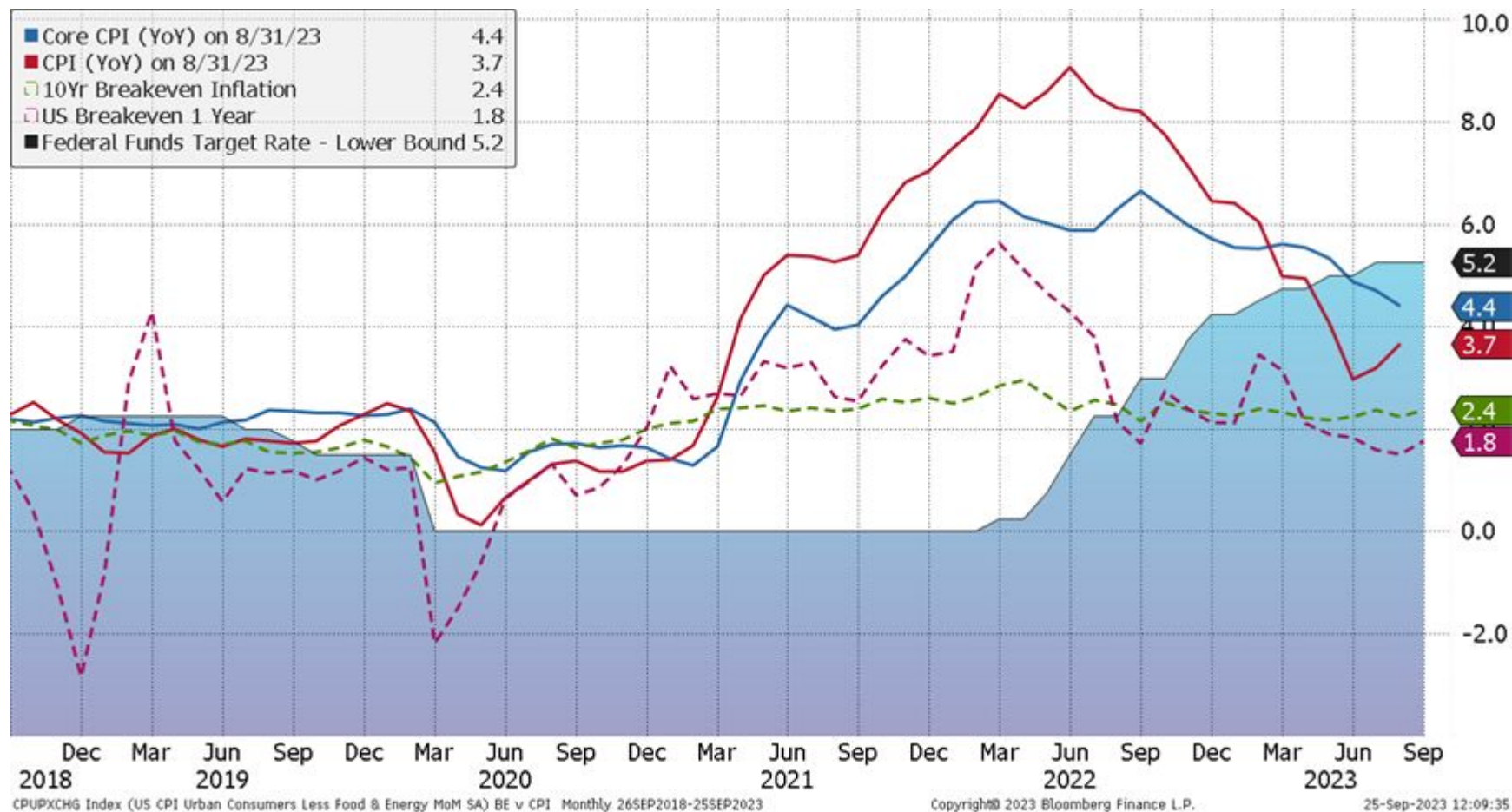
	EQUITY						FIXED INCOME / CREDIT						REAL ASSETS						
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Equity	Cash	Core Bond	Core Bond	TIPS	High Yield	Private Credit	Dev ex- US Bond (Hdg)	Real Estate US RES	Global RES	Private RE	Cmdty	Real Assets	US CPI
Compound Retrun (%)	6.00	7.00	7.25	7.35	6.65	9.65	4.25	5.60	5.55	4.85	6.85	8.95	3.50	6.20	6.35	6.20	6.60	7.05	2.35
Arithmetic Return (%)	7.30	8.45	10.20	9.00	8.00	13.35	4.25	5.70	6.00	5.00	7.30	9.70	3.60	7.60	7.60	7.10	7.75	7.75	2.35
Risk (%)	17.00	18.00	26.00	19.05	17.10	29.65	0.75	4.70	9.85	6.00	10.00	12.75	4.00	17.50	16.45	13.90	16.00	12.35	1.75
Cash Yield (%)	1.60	3.15	2.60	3.00	2.15	0.00	4.25	5.90	5.95	5.15	10.15	5.20	4.45	4.45	4.45	2.30	4.25	3.50	0.00
Growth Factor 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 Factor 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

2023 Rate Environment



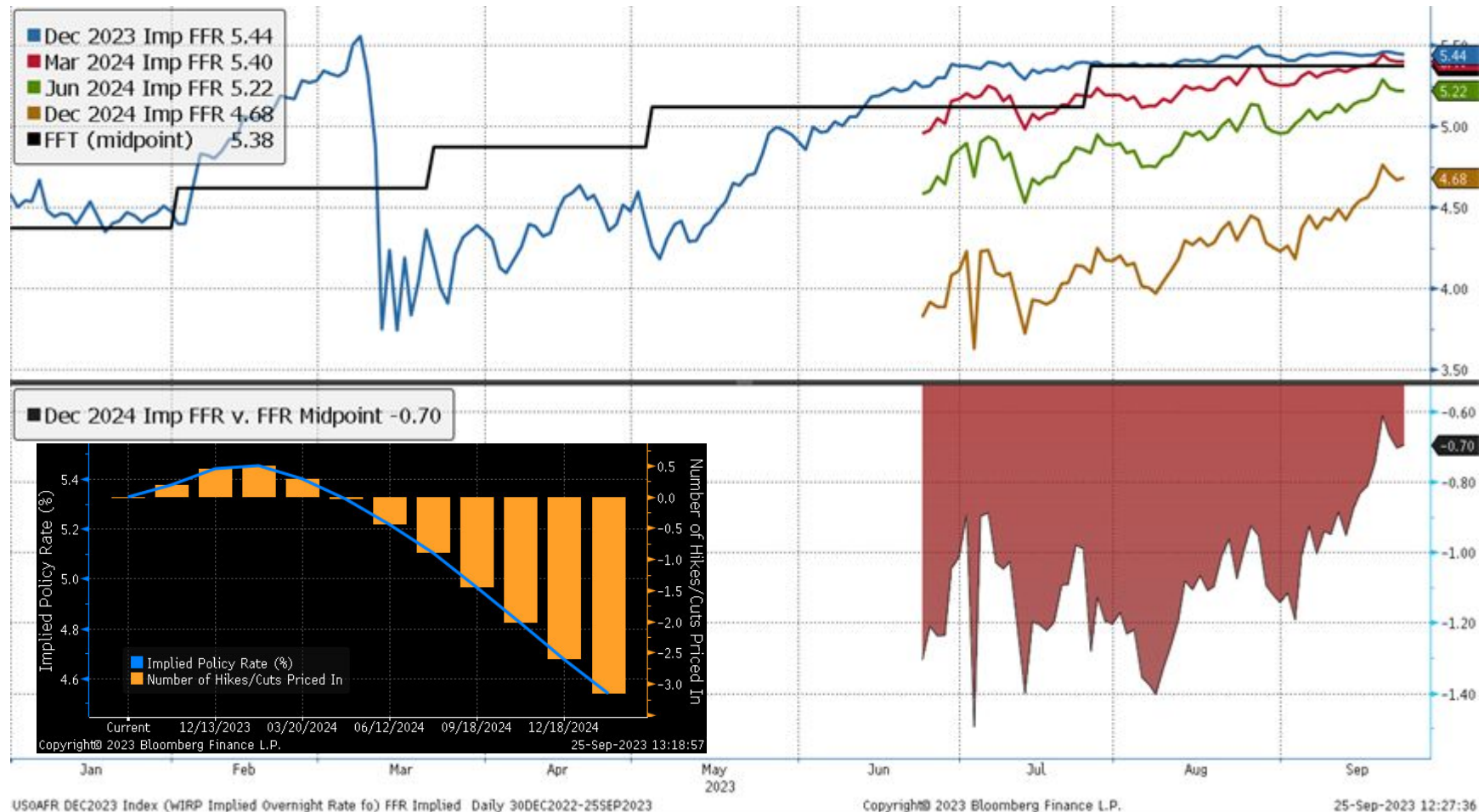
Data Sources: Wilshire, Bloomberg

Inflation Update v. Fed Policy: At/Near the Neutral Rate?



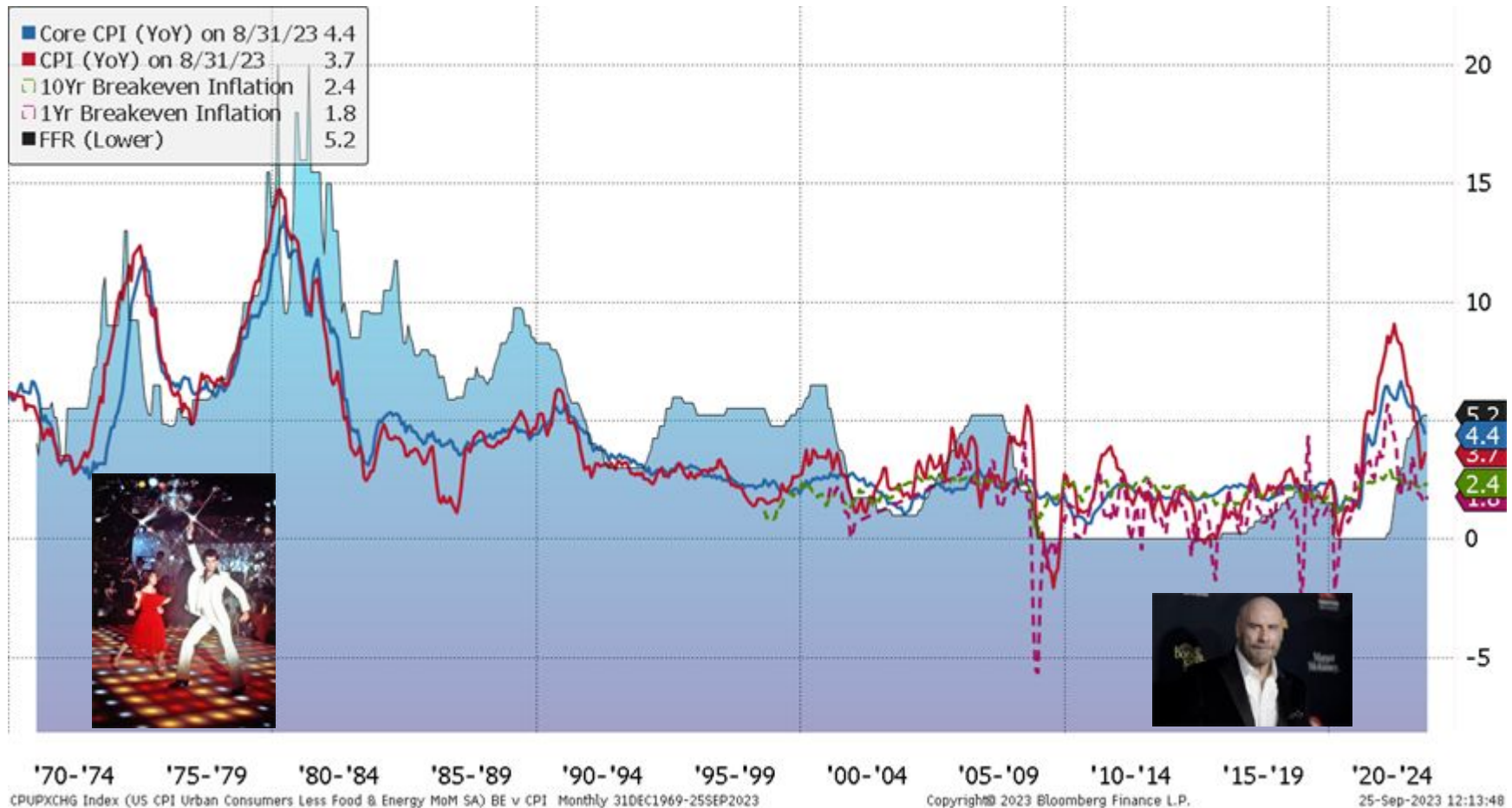
Data Sources: Bloomberg

At/Near Neutral Rate?: The Market Thinks So (and that we'll be Lower Next Year)...



Data Sources: Bloomberg

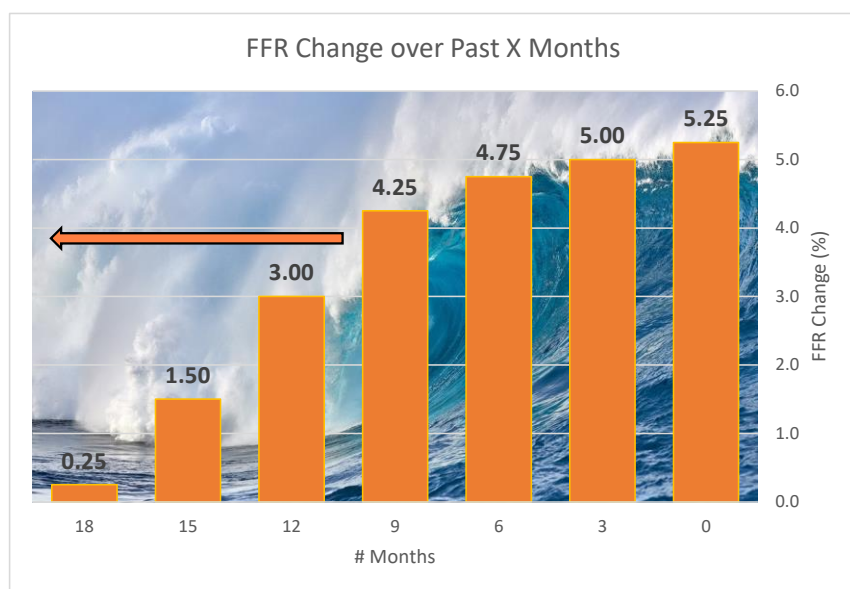
Inflation: I Know, It's Not the 70s, But the Path Back to Target Might Be Bumpy....



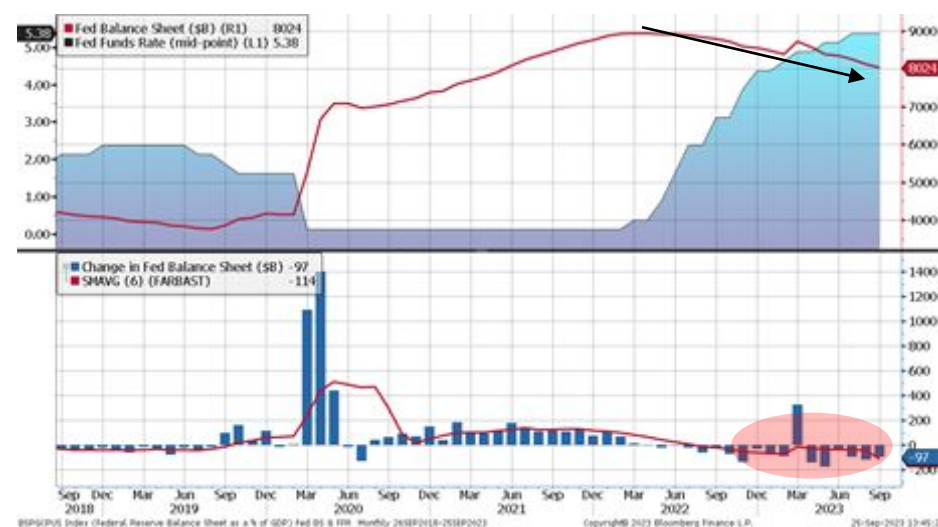
Data Sources: Bloomberg

Tightening Continues, Even If the FFR Target Rate Remains Unchanged

Impact of Fed tightening known to have long & variable lag



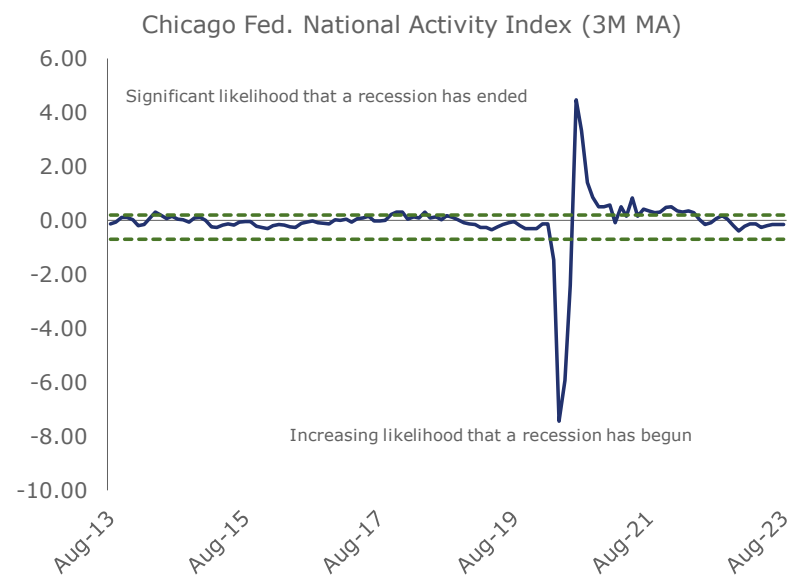
Fed BS run-off (~\$1T/year)



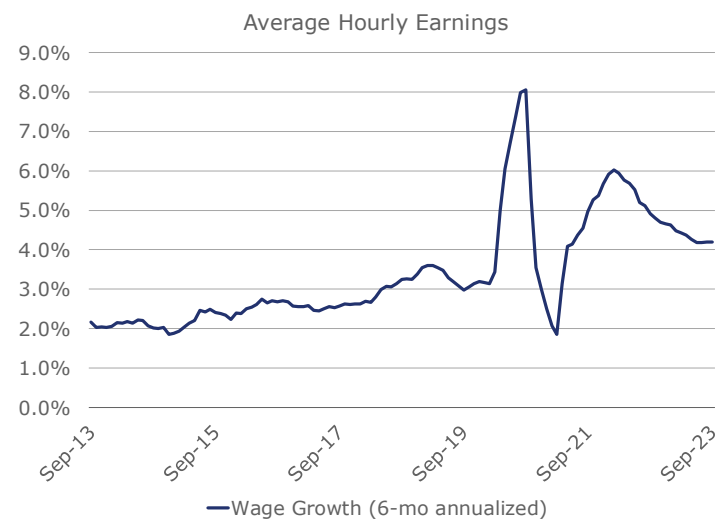
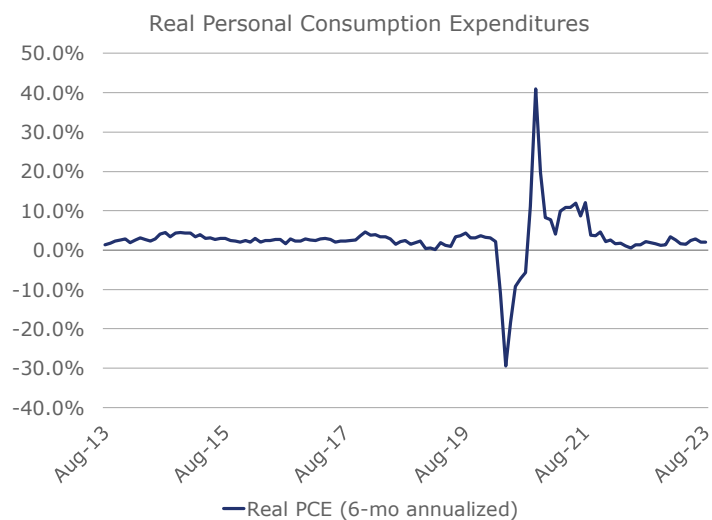
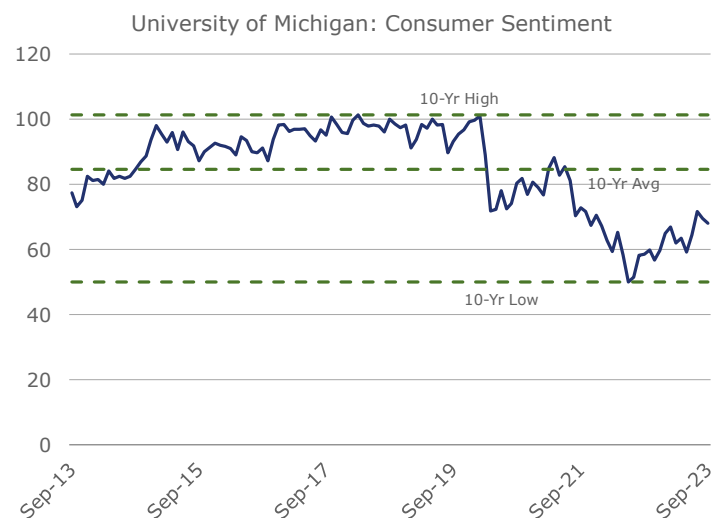
Data Sources: Bloomberg

Economic/Market Activity

Economic Growth

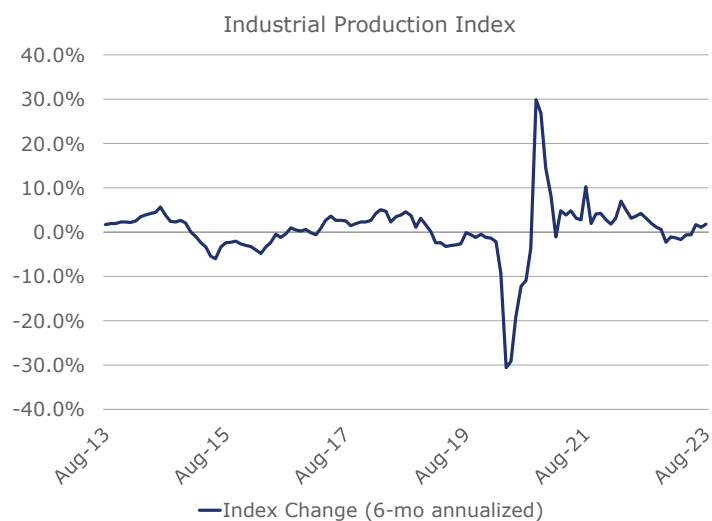
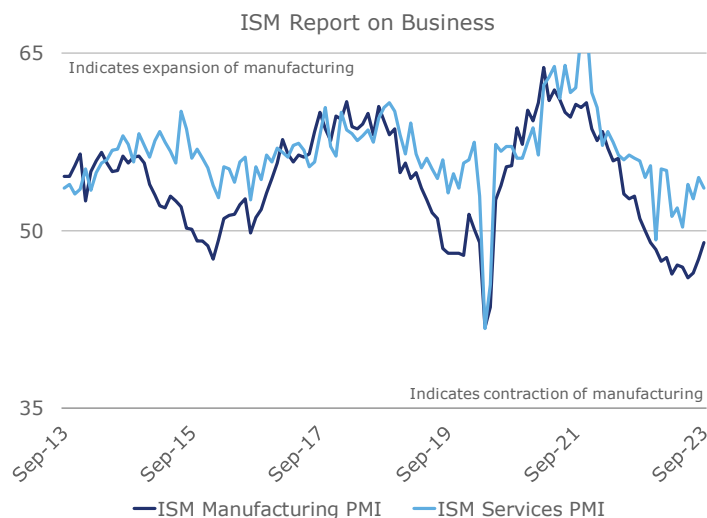


Consumer Activity



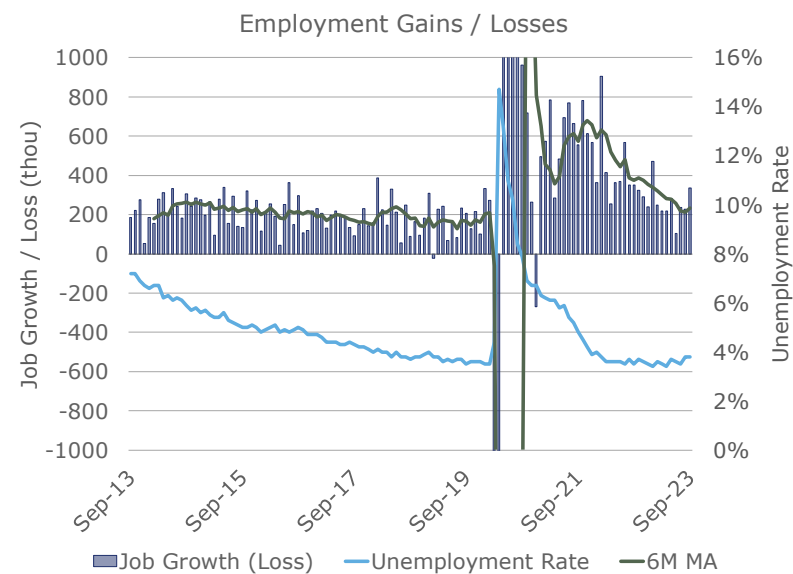
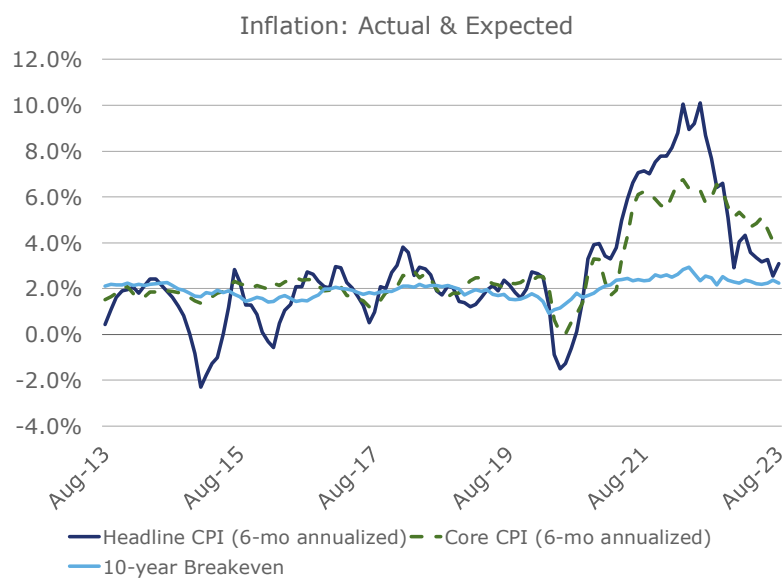
Data Sources: Bloomberg

Business Activity



Data Sources: Bloomberg

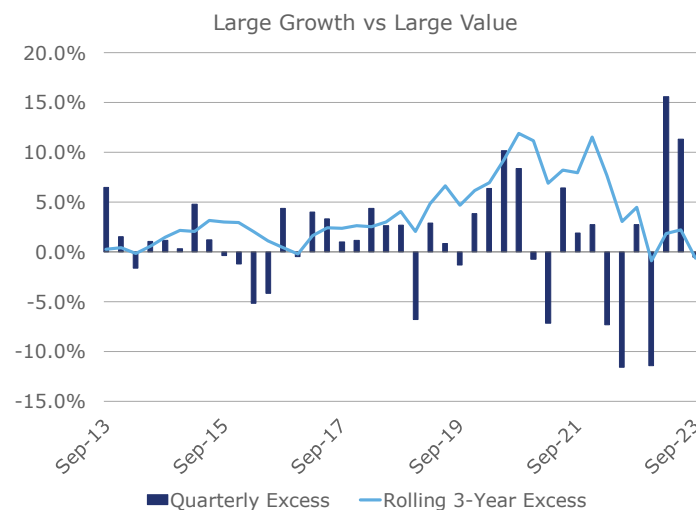
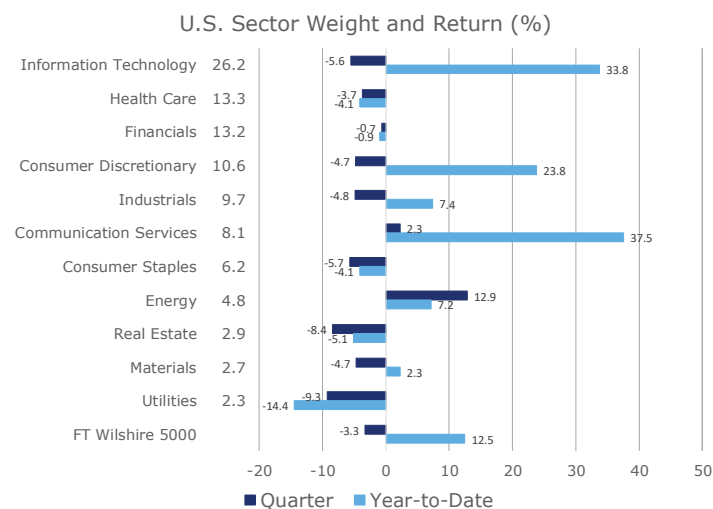
Inflation And Employment



Data Sources: Bloomberg

U.S. Equity Market

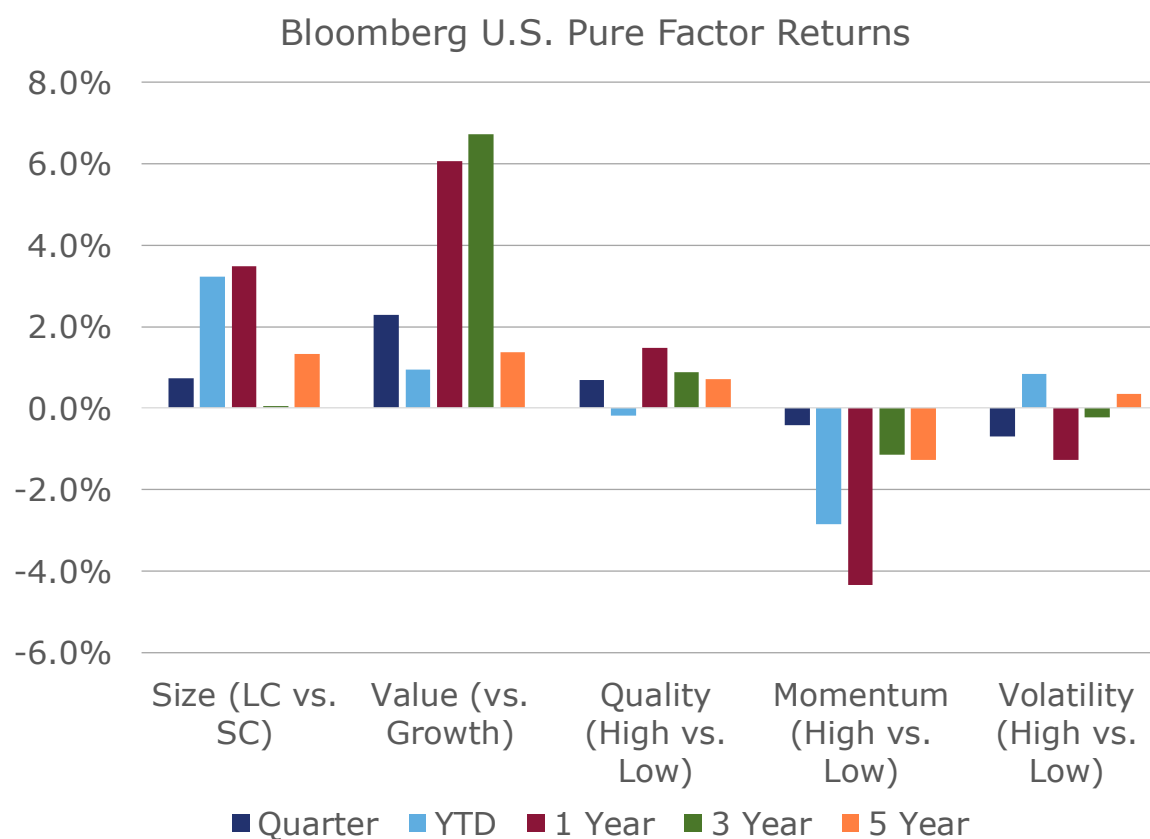
As of 9/30/2023	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
FT Wilshire 5000	-3.3	12.5	20.5	9.7	9.4	11.5
Wilshire U.S. Large Cap	-3.2	13.3	21.3	9.8	10.0	11.9
Wilshire U.S. Small Cap	-4.9	3.5	11.7	9.5	3.6	7.4
Wilshire U.S. Large Growth	-3.4	27.6	28.6	9.3	12.1	14.1
Wilshire U.S. Large Value	-2.9	-0.3	13.4	10.1	7.5	9.6
Wilshire U.S. Small Growth	-5.0	7.8	15.4	5.8	4.0	7.6
Wilshire U.S. Small Value	-4.7	-0.4	8.3	13.5	3.2	7.1
Wilshire REIT Index	-6.4	-0.2	3.9	5.7	2.9	6.0
MSCI USA Min. Vol. Index	-2.0	1.9	11.8	6.2	7.0	10.4
FTSE RAFI U.S. 1000 Index	-2.2	4.4	17.4	14.3	8.7	10.4



Data Sources: Bloomberg, Wilshire Atlas

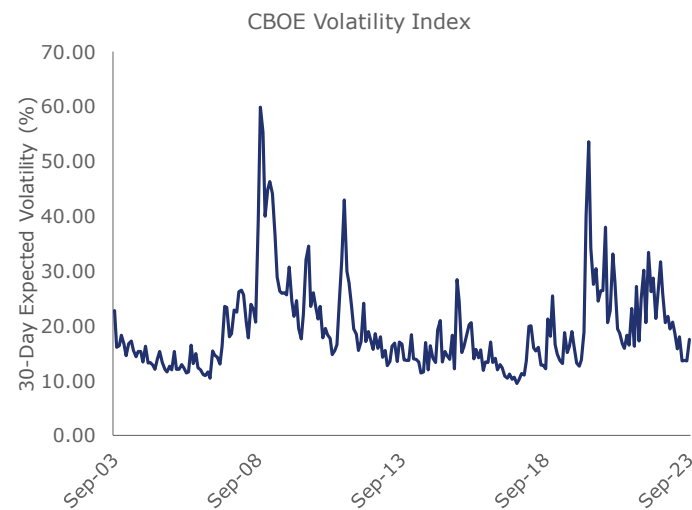
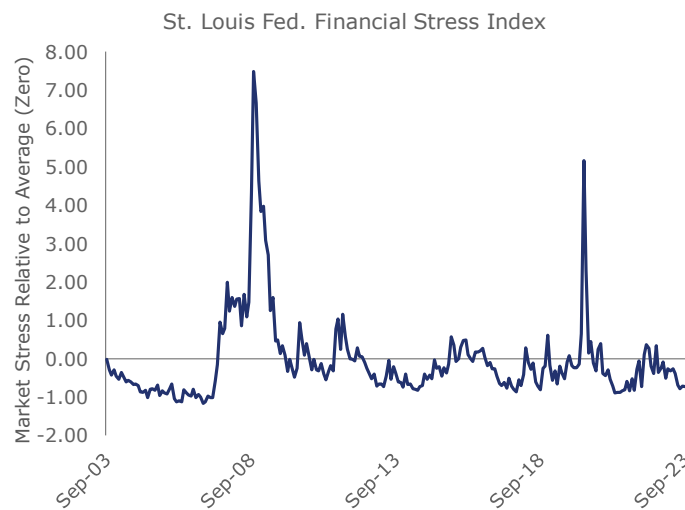
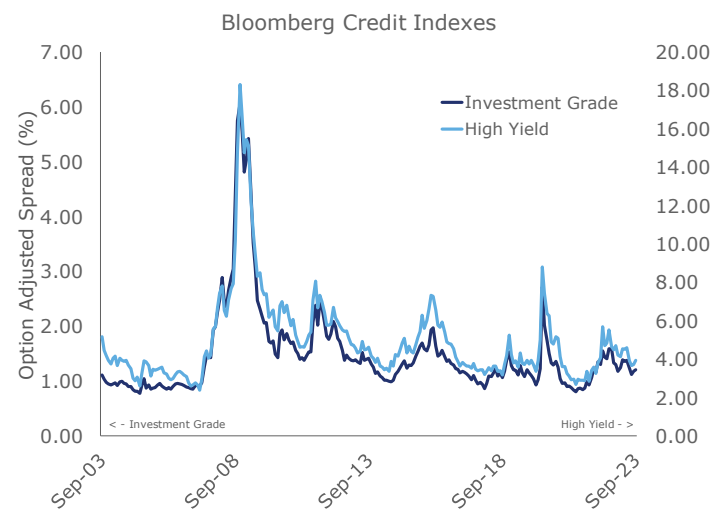
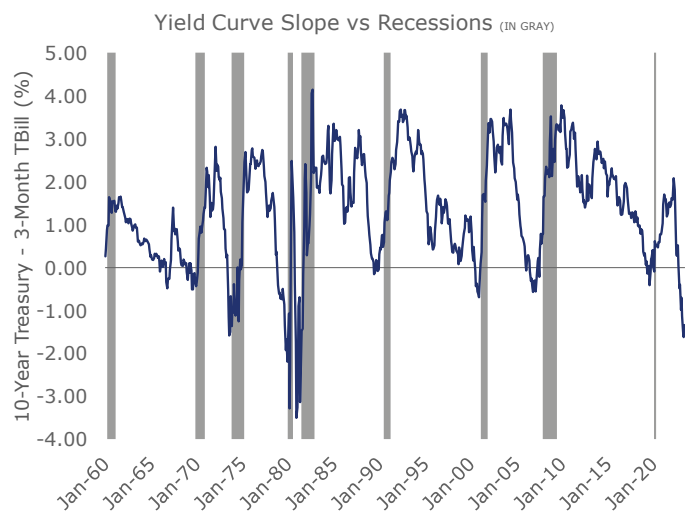
U.S. Factor Returns

- Factor returns represent the contribution from large cap, value, etc. stocks within Bloomberg's Portfolio & Risk Analytics module
- Large cap and high volatility have mostly outperformed this year



Data Sources: Bloomberg

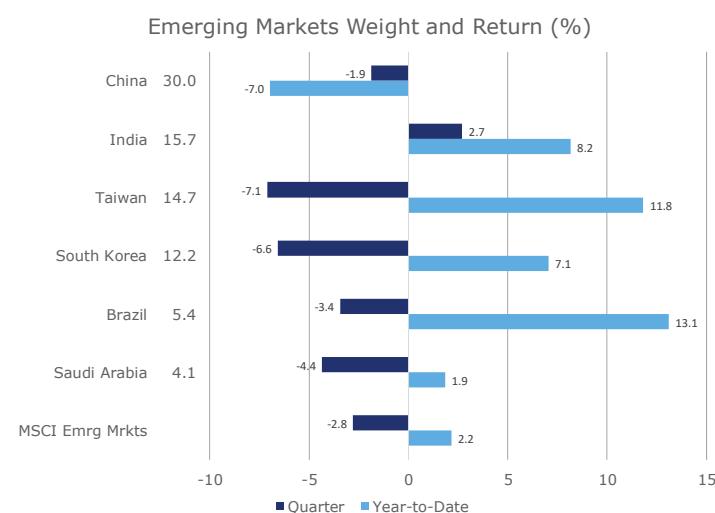
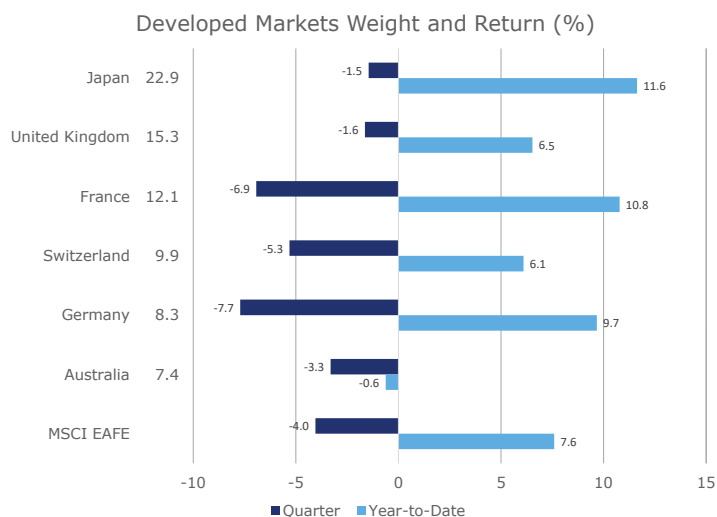
Risk Monitor



Data Sources: Bloomberg

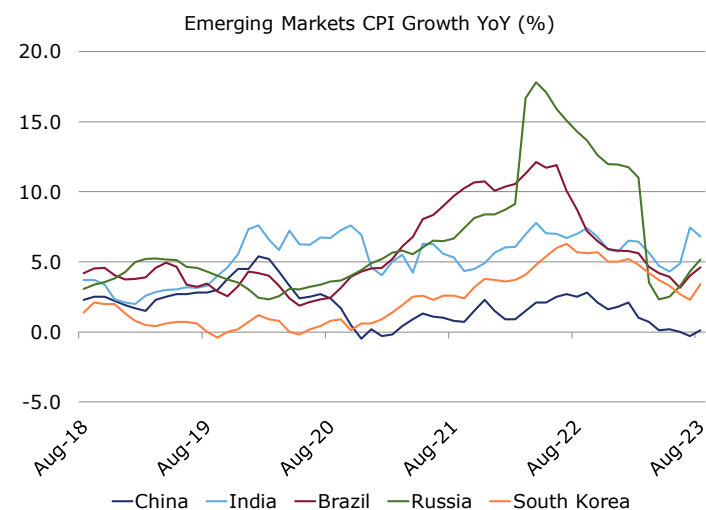
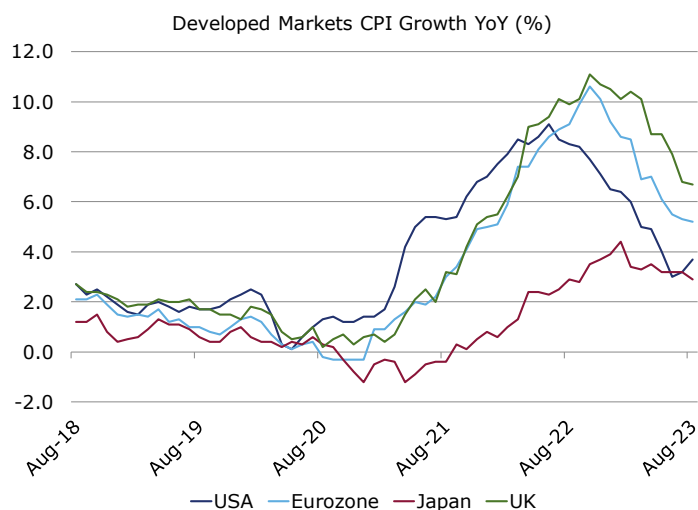
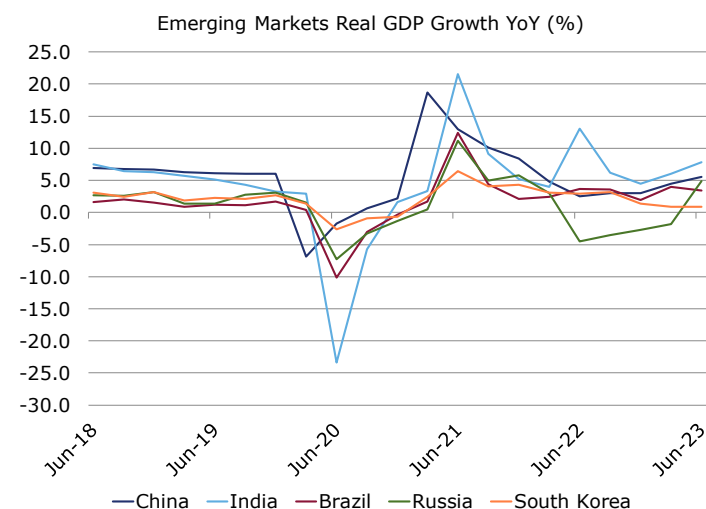
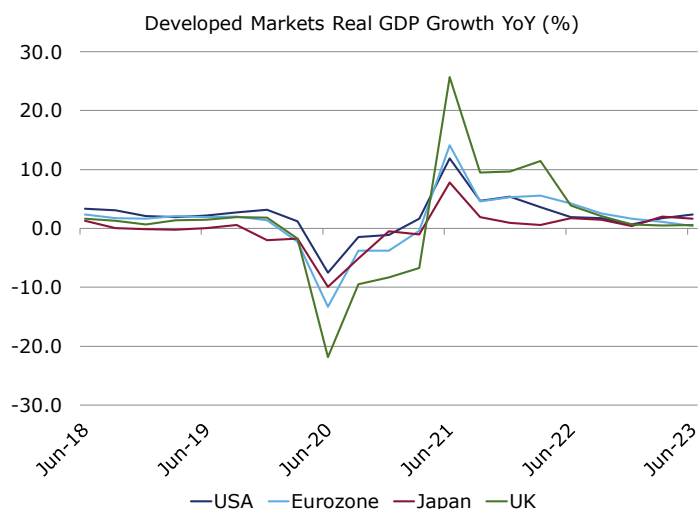
Non-U.S. Equity Market

As of 9/30/2023	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
MSCI ACWI ex-US (\$G)	-3.7	5.8	21.0	4.2	3.1	3.8
MSCI EAFE (\$G)	-4.0	7.6	26.3	6.3	3.7	4.3
MSCI Emerging Markets (\$G)	-2.8	2.2	12.2	-1.3	0.9	2.5
MSCI Frontier Markets (\$G)	-0.2	4.6	14.2	1.8	-0.7	0.3
MSCI ACWI ex-US Growth (\$G)	-7.3	2.9	16.2	-1.6	2.9	4.3
MSCI ACWI ex-US Value (\$G)	0.1	8.6	25.7	10.1	3.0	3.4
MSCI ACWI ex-US Small (\$G)	-1.6	5.5	19.6	4.5	3.0	4.8
MSCI ACWI Minimum Volatility	-2.3	1.7	10.4	3.8	4.3	7.2
MSCI EAFE Minimum Volatility	-2.7	4.8	17.9	1.3	1.1	4.2
FTSE RAFI Developed ex-US	-1.6	8.7	28.6	11.4	3.9	4.2
MSCI EAFE LC (G)	-1.2	11.2	21.0	11.4	6.2	7.3
MSCI Emerging Markets LC (G)	-1.3	4.4	11.3	1.0	3.1	5.3



Data Sources: Bloomberg

Non-U.S. Growth and Inflation

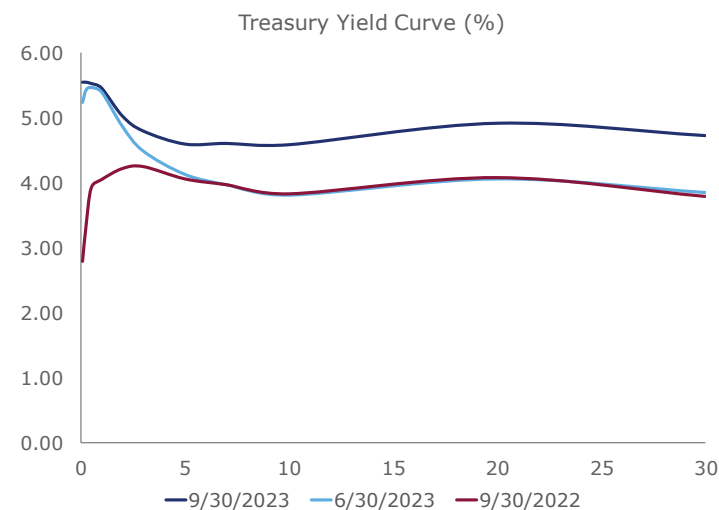
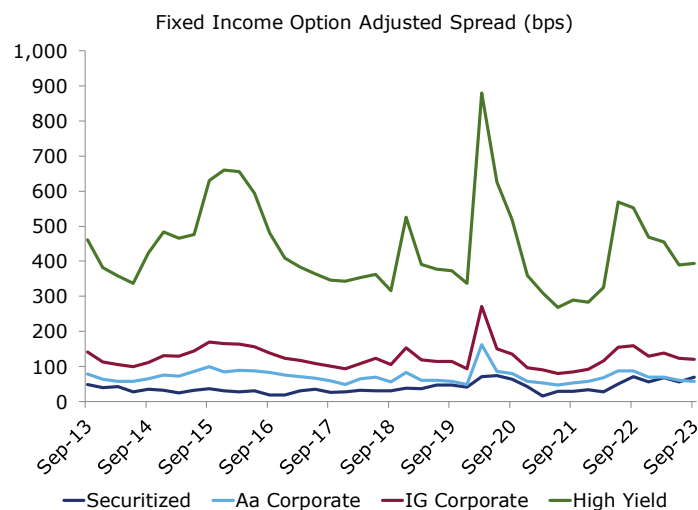


Data Sources: Bloomberg

U.S. Fixed Income

As of 9/30/2023	YTW	DUR.	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg Aggregate	5.4	6.1	-3.2	-1.2	0.6	-5.2	0.1	1.1
Bloomberg Treasury	4.9	5.9	-3.1	-1.5	-0.8	-5.8	-0.1	0.6
Bloomberg Gov't-Rel.	5.4	5.1	-2.0	0.4	2.2	-3.8	0.6	1.4
Bloomberg Securitized	5.6	6.2	-3.8	-2.1	0.0	-4.9	-0.6	0.7
Bloomberg Corporate	6.0	6.8	-3.1	0.0	3.6	-4.9	0.9	2.2
Bloomberg LT Gov't/Credit	5.5	13.7	-9.4	-5.4	-2.9	-11.9	-1.2	1.9
Bloomberg LT Treasury	4.9	15.3	-11.8	-8.6	-9.1	-15.7	-2.8	0.8
Bloomberg LT Gov't-Rel.	6.0	11.3	-7.2	-2.1	2.0	-8.5	-0.6	2.4
Bloomberg LT Corporate	6.1	12.5	-7.2	-2.7	2.6	-9.1	-0.2	2.7
Bloomberg U.S. TIPS *	4.6	7.4	-2.6	-0.8	1.2	-2.0	2.1	1.7
Bloomberg High Yield	8.9	3.5	0.5	5.9	10.3	1.8	3.0	4.2
S&P/LSTA Leveraged Loan	9.5	0.3	3.5	10.2	13.1	6.1	4.5	4.3
Treasury Bills	5.5	0.3	1.3	3.6	4.6	1.7	1.7	1.1

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

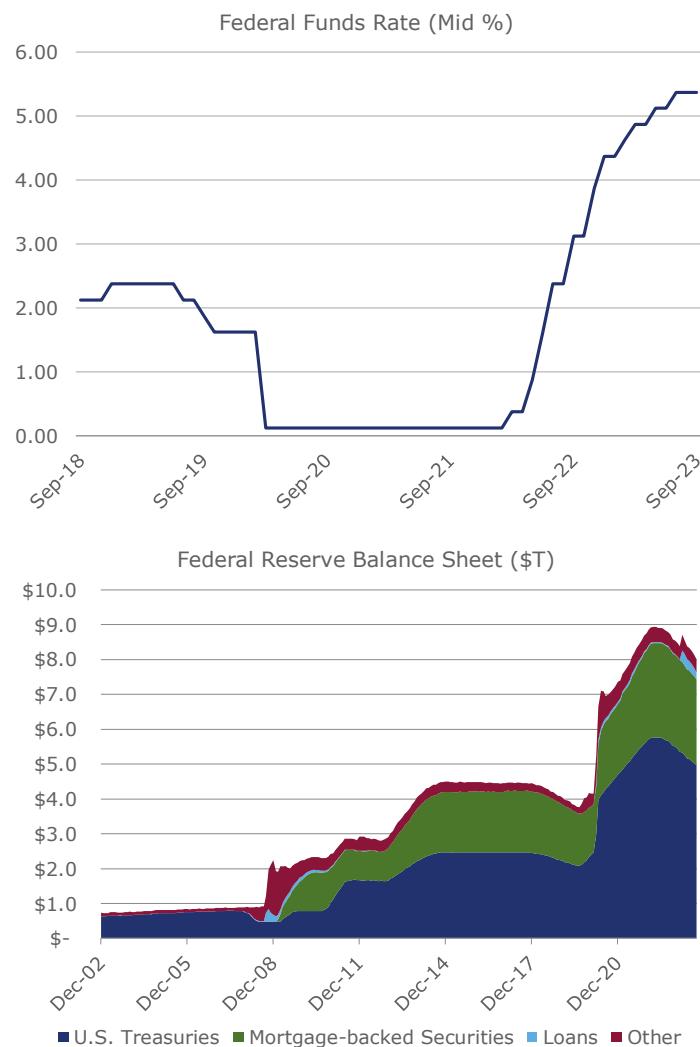


Data Sources: Bloomberg

Federal Reserve

- The Federal Open Market Committee increased the rate an additional 25 basis points in July before pausing increases in September
- QE4 was larger than the 3 phases of quantitative easing – combined – following the global financial crisis
- The Fed's balance sheet has begun to shrink again during the past six months

	Announced	Closed	Amount (bil)
QE1	11/25/2008	3/31/2010	\$1,403
QE2	11/3/2010	6/29/2012	\$568
QE3	9/13/2012	10/29/2014	\$1,674
QE4	3/23/2020	3/15/2022	\$4,779

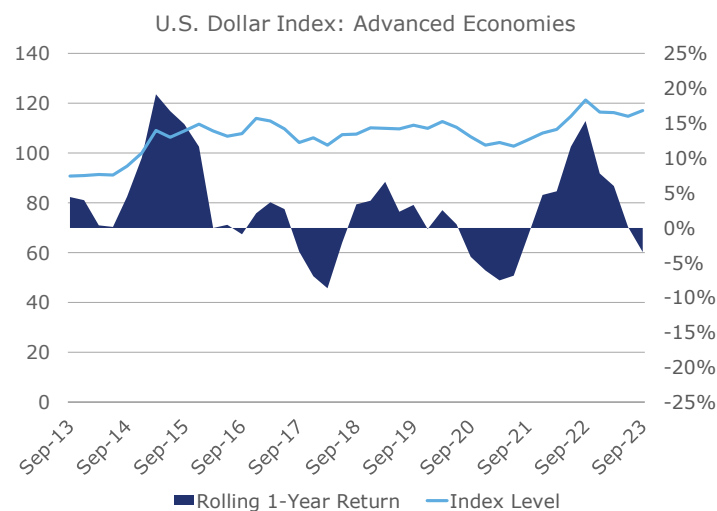
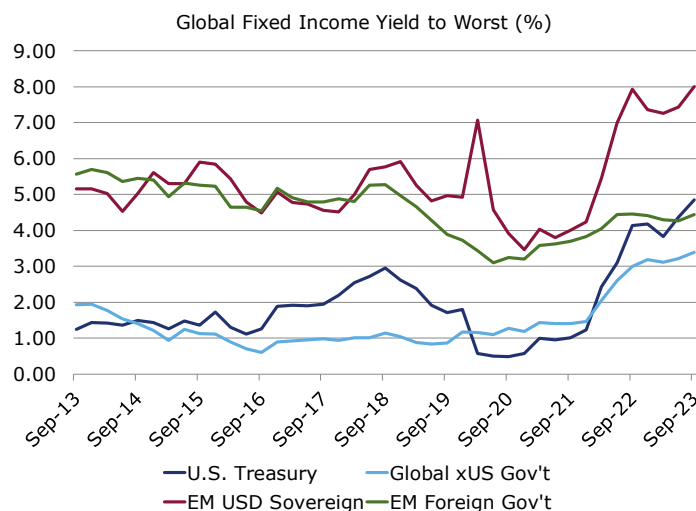


Data Sources: Bloomberg

Non-U.S. Fixed Income

As of 9/30/2023	Quarter	YTD	1 Year	3 Year	5 Year	10 Year
Developed Markets						
Bloomberg Global Aggregate xUS	-4.0	-3.2	3.4	-8.4	-3.1	-1.7
Bloomberg Global Aggregate xUS *	-0.8	2.8	3.0	-2.6	0.8	2.3
Bloomberg Global Inflation Linked xUS	-7.1	-4.1	1.5	-10.1	-3.8	-1.3
Bloomberg Global Inflation Linked xUS *	-3.5	-2.1	-3.8	-6.2	-0.8	2.5
Emerging Markets (Hard Currency)						
Bloomberg EM USD Aggregate	-2.3	0.9	7.6	-4.2	0.2	2.3
Emerging Markets (Foreign Currency)						
Bloomberg EM Local Currency Gov't	-1.7	0.0	5.8	-1.2	1.3	0.6
Bloomberg EM Local Currency Gov't *	0.2	4.5	6.4	0.4	2.9	2.6
Euro vs. Dollar	-3.1	-1.2	7.9	-3.4	-1.8	-2.4
Yen vs. Dollar	-3.4	-12.2	-3.1	-10.9	-5.3	-4.1
Pound vs. Dollar	-4.0	1.0	9.2	-1.9	-1.3	-2.8

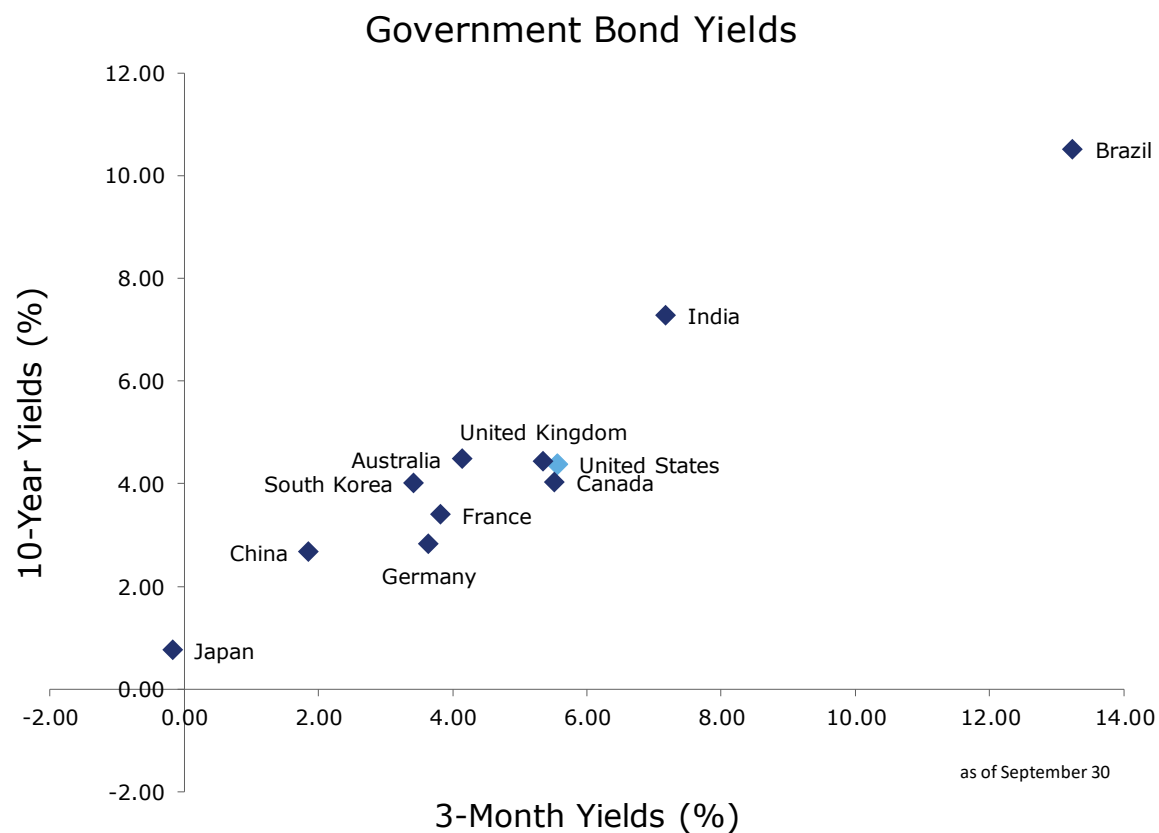
* Returns are reported in terms of local market investors, which removes currency effects.



Data Sources: Bloomberg

Global Interest Rates

Short-term rates have turned positive in most larger countries; longer-term rates above 4.0% in the U.K. and the U.S.

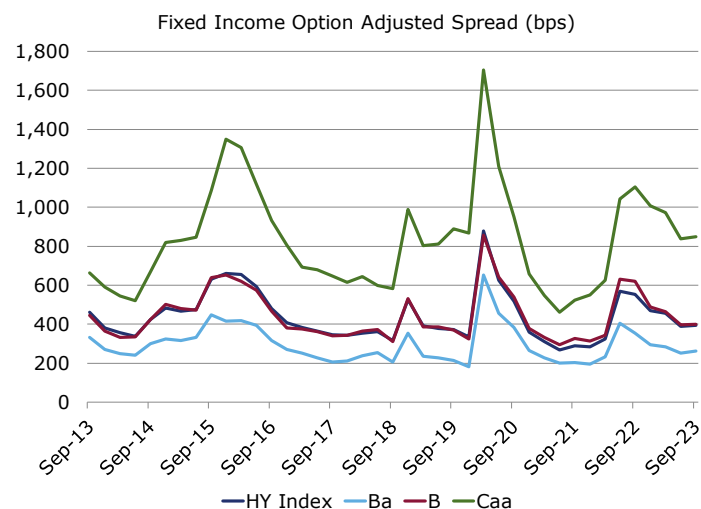


Data Sources: Bloomberg

High Yield Bond Market

As of 9/30/2023

		YTW	QTR	YTD	1 YR	3 YR	5 YR	10 YR
Bloomberg High Yield		8.9	0.5	5.9	10.3	1.8	3.0	4.2
S&P LSTA Leveraged Loan		9.5	3.1	9.7	13.8	5.2	4.2	3.9
High Yield Quality Distribution	Weight							
Ba U.S. High Yield	47.8%	7.6	-0.4	3.9	8.4	0.8	3.7	4.6
B U.S. High Yield	40.0%	9.0	0.8	6.3	11.6	1.9	2.8	3.9
Caa U.S. High Yield	11.4%	13.3	2.5	12.1	12.7	3.8	0.7	3.7
Ca to D U.S. High Yield	0.9%	15.6	3.0	10.8	26.1	14.4	-2.8	-3.6



Data Sources: Bloomberg

Asset Class Performance

Asset Class Returns - Best to Worst

2018	2019	2020	2021	2022	2023 YTD
T-Bills 1.9%	U.S. Equity 31.0%	U.S. Equity 20.8%	REITs 46.2%	Commodities 16.1%	U.S. Equity 12.5%
Core Bond 0.0%	REITs 25.8%	Emrg Mrkts 18.7%	Commodities 27.1%	T-Bills 1.3%	Developed 7.6%
U.S. TIPS -1.3%	Developed 22.7%	U.S. TIPS 11.0%	U.S. Equity 26.7%	High Yield -11.2%	High Yield 5.9%
High Yield -2.1%	Emrg Mrkts 18.9%	Developed 8.3%	Developed 11.8%	U.S. TIPS -11.8%	T-Bills 3.6%
REITs -4.8%	High Yield 14.3%	Core Bond 7.5%	U.S. TIPS 6.0%	Core Bond -13.0%	Emrg Mrkts 2.2%
U.S. Equity -5.3%	Core Bond 8.7%	High Yield 7.1%	High Yield 5.3%	Developed -14.0%	REITs -0.2%
Commodities -11.2%	U.S. TIPS 8.4%	T-Bills 0.7%	T-Bills 0.0%	U.S. Equity -19.0%	U.S. TIPS -0.8%
Developed -13.4%	Commodities 7.7%	Commodities -3.1%	Core Bond -1.5%	Emrg Mrkts -19.7%	Core Bond -1.2%
Emrg Mrkts -14.2%	T-Bills 2.3%	REITs -7.9%	Emrg Mrkts -2.2%	REITs -26.8%	Commodities -3.4%

Annualized 5-Year as of 9/23

U.S. Equity 9.4%
Commodities 6.1%
Developed 3.7%
High Yield 3.0%
REITs 2.9%
U.S. TIPS 2.1%
T-Bills 1.7%
Emrg Mrkts 0.9%
Core Bond 0.1%

Data Sources: Bloomberg

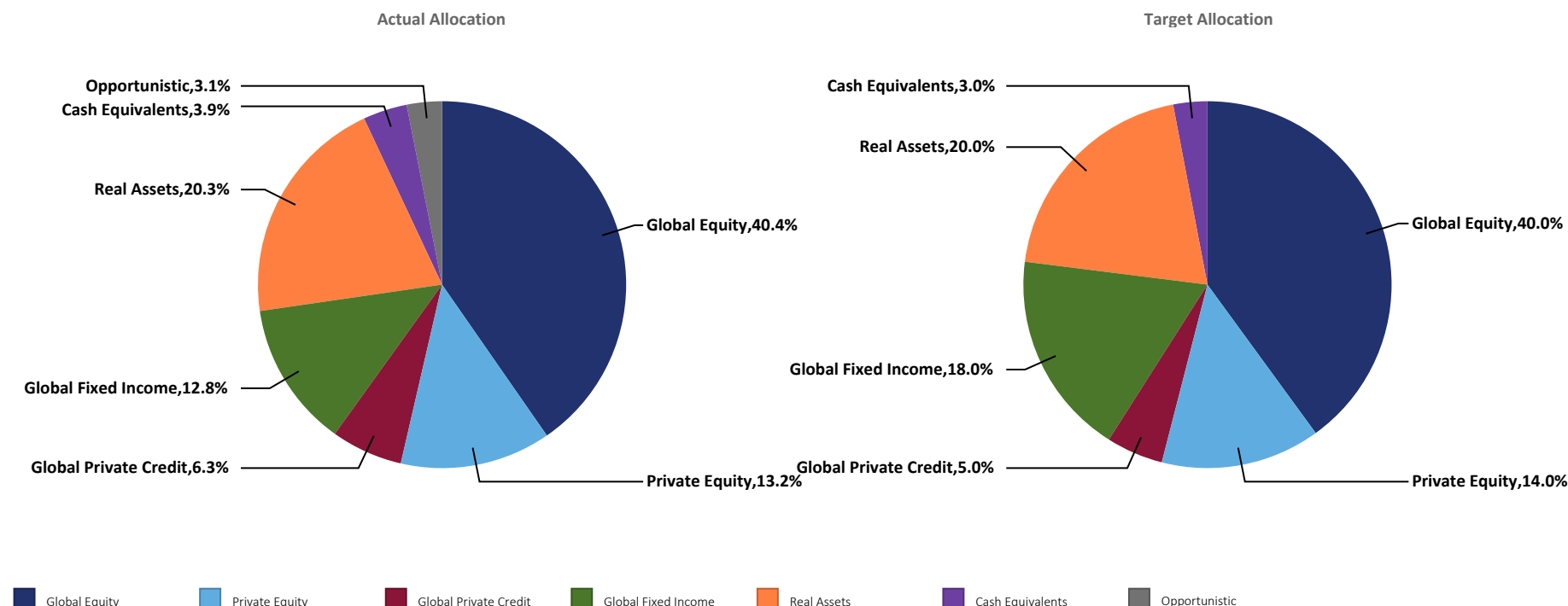
Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

Total Fund

Asset Allocation Compliance

Total Fund

Periods Ended As of September 30, 2023



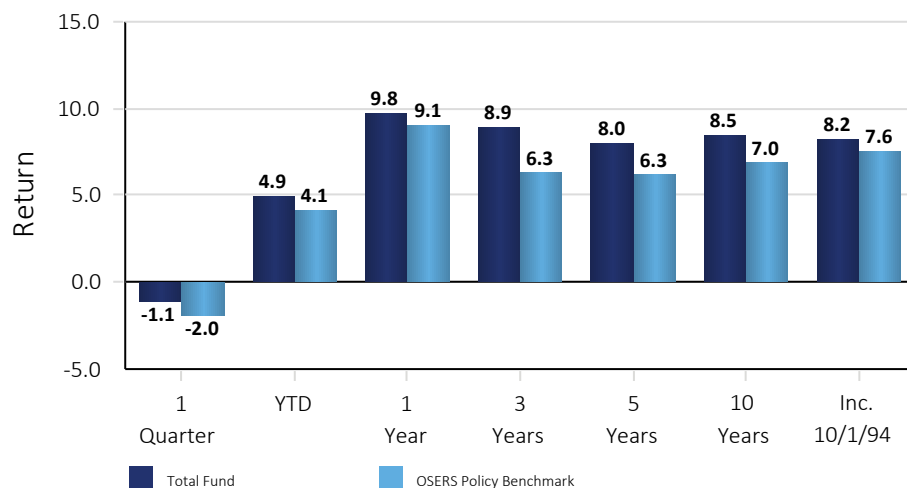
	Asset Allocation \$	Asset Allocation (%)	Target Allocation (%)	Differences (%)
Total Fund	17,455,148,332	100.0	100.0	0.0
Global Equity	7,045,226,854	40.4	40.0	0.4
Private Equity	2,312,081,574	13.2	14.0	-0.8
Global Private Credit	1,097,269,183	6.3	5.0	1.3
Global Fixed Income	2,235,925,967	12.8	18.0	-5.2
Real Assets	3,548,830,535	20.3	20.0	0.3
Cash Equivalents	676,492,829	3.9	3.0	0.9
Opportunistic	539,321,389	3.1	0.0	3.1

Composite Performance Summary

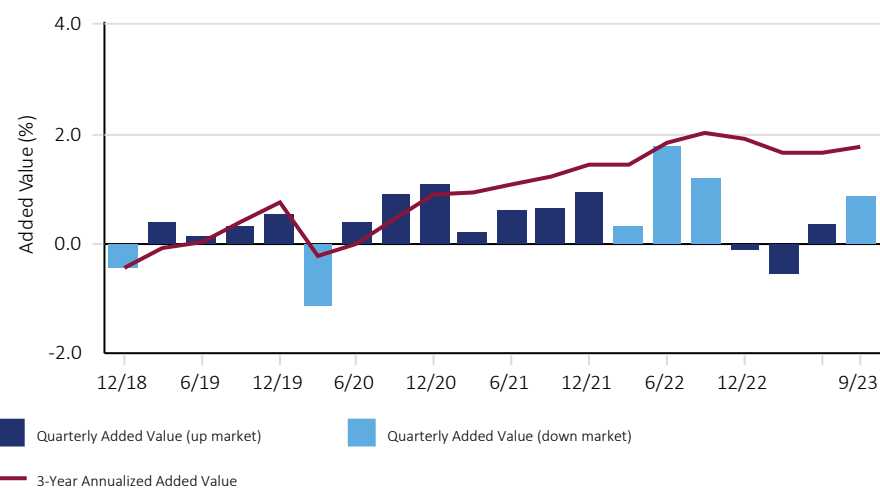
Total Fund

Periods Ended September 30, 2023

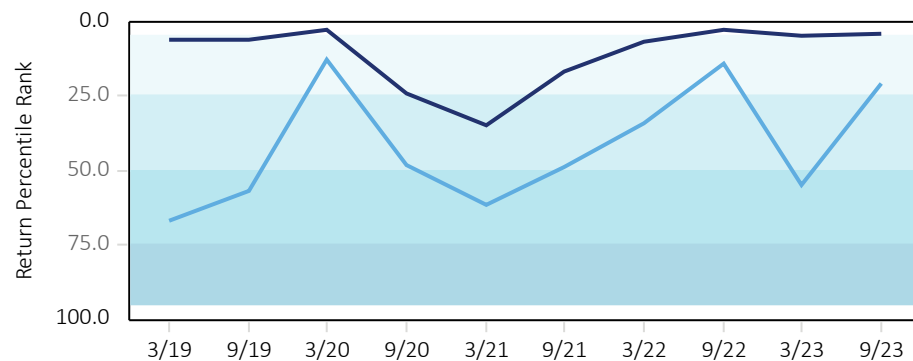
Comparative Performance



Added Value History

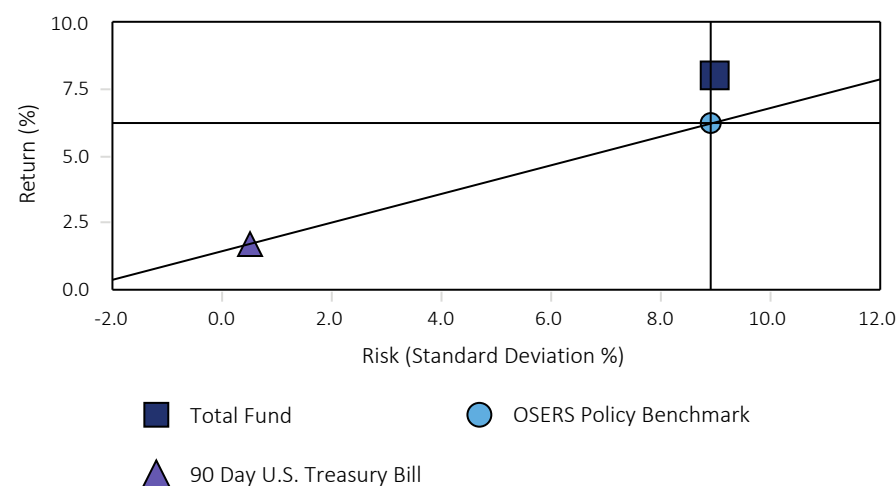


Rolling 3-Year Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
— Total Fund	10	9 (90%)	1 (10%)	0 (0%)	0 (0%)
— Benchmark	10	3 (30%)	3 (30%)	4 (40%)	0 (0%)

Risk and Return 10/1/18 - 09/30/23

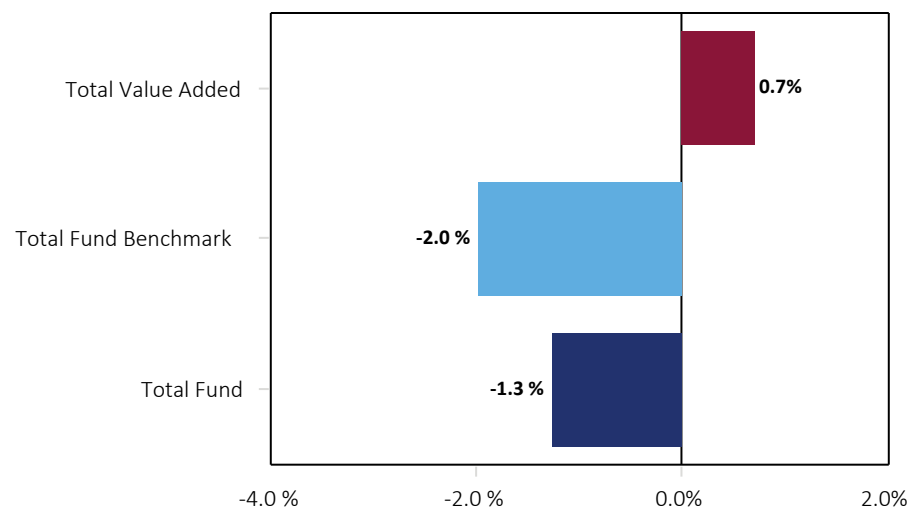


Total Fund Attribution

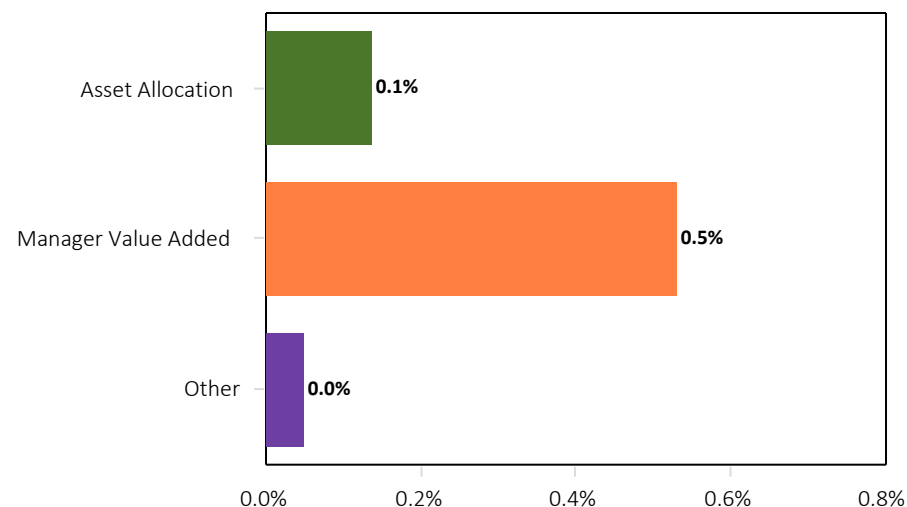
Total Fund

Periods Ended 1 Quarter Ending September 30, 2023

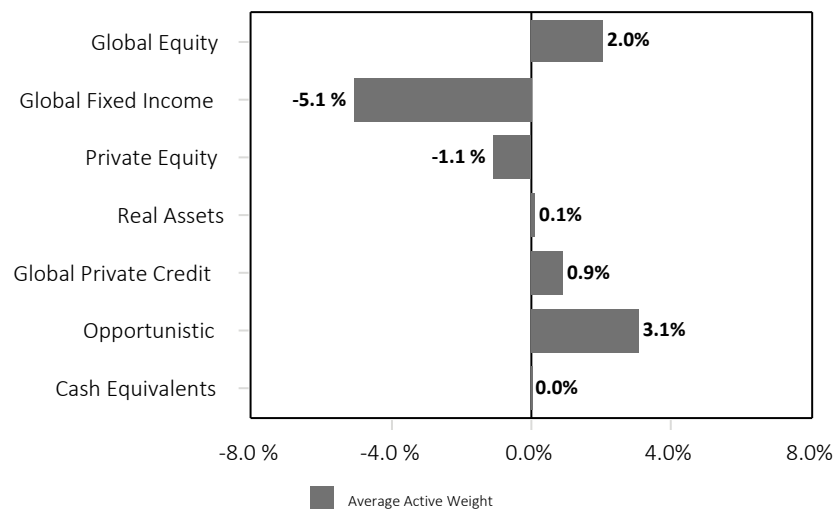
Total Fund Performance



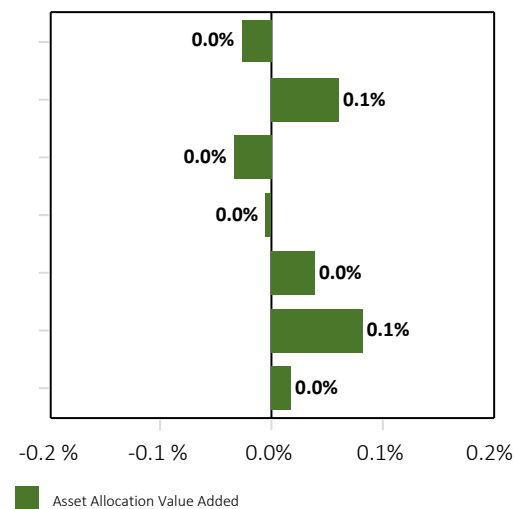
Total Value Added:0.7%



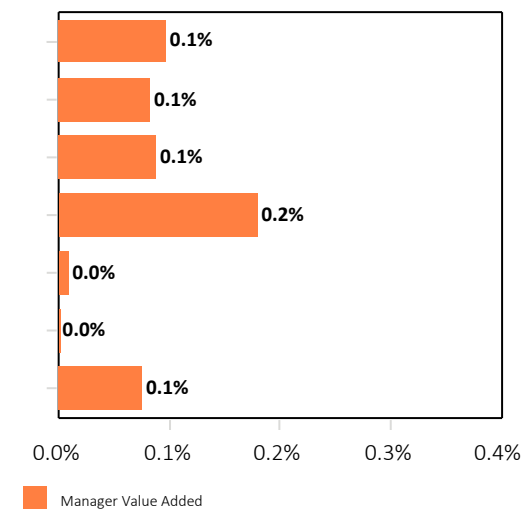
Total Asset Allocation:0.1%



Asset Allocation Value Added:0.1%



Total Manager Value Added:0.5%

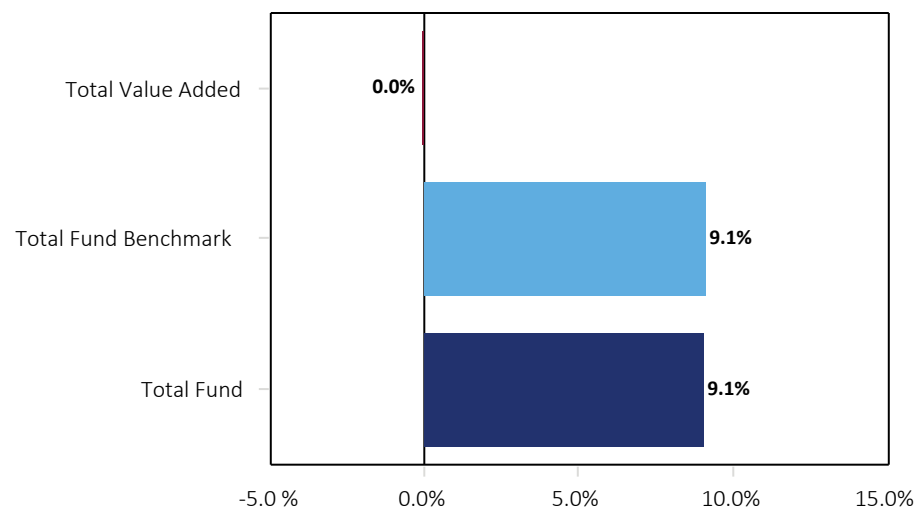


Total Fund Attribution

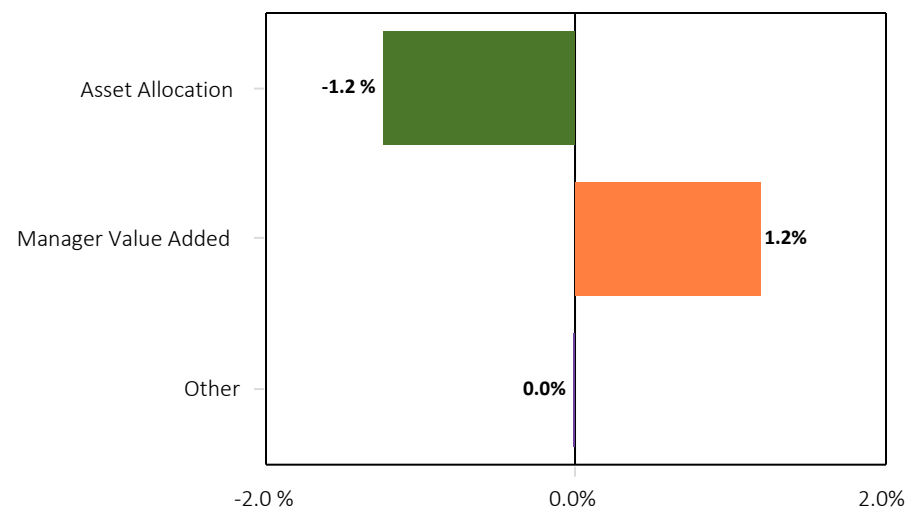
Total Fund

Periods Ended 1 Year Ending September 30, 2023

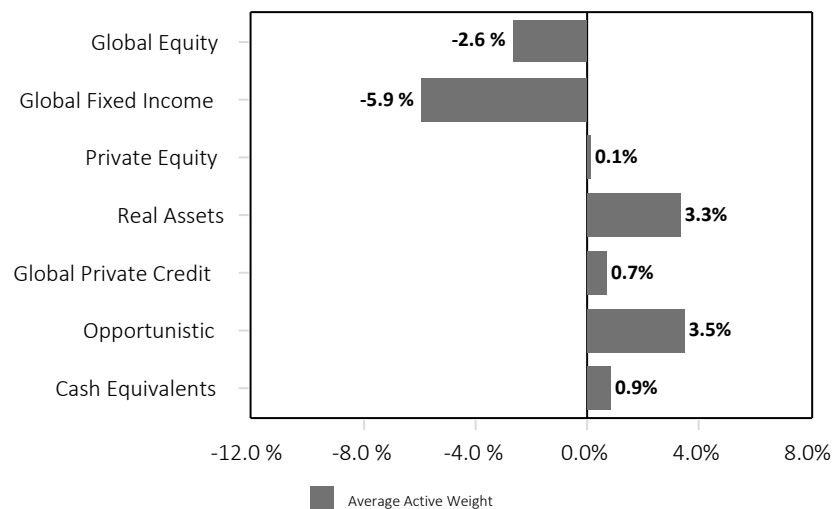
Total Fund Performance



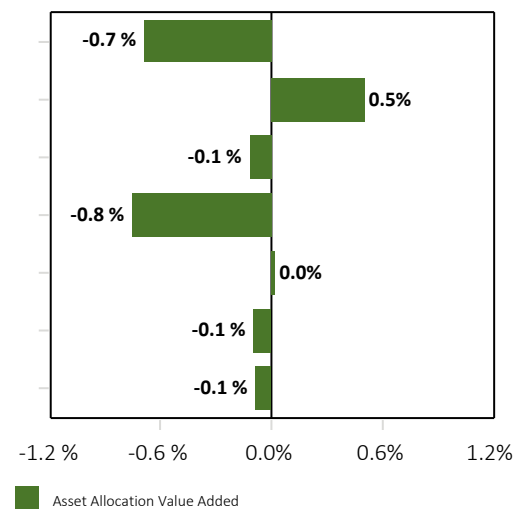
Total Value Added:0.0%



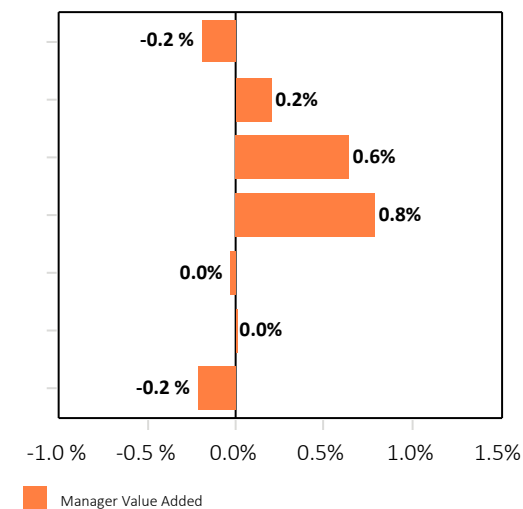
Total Asset Allocation:-1.2 %



Asset Allocation Value Added:-1.2 %



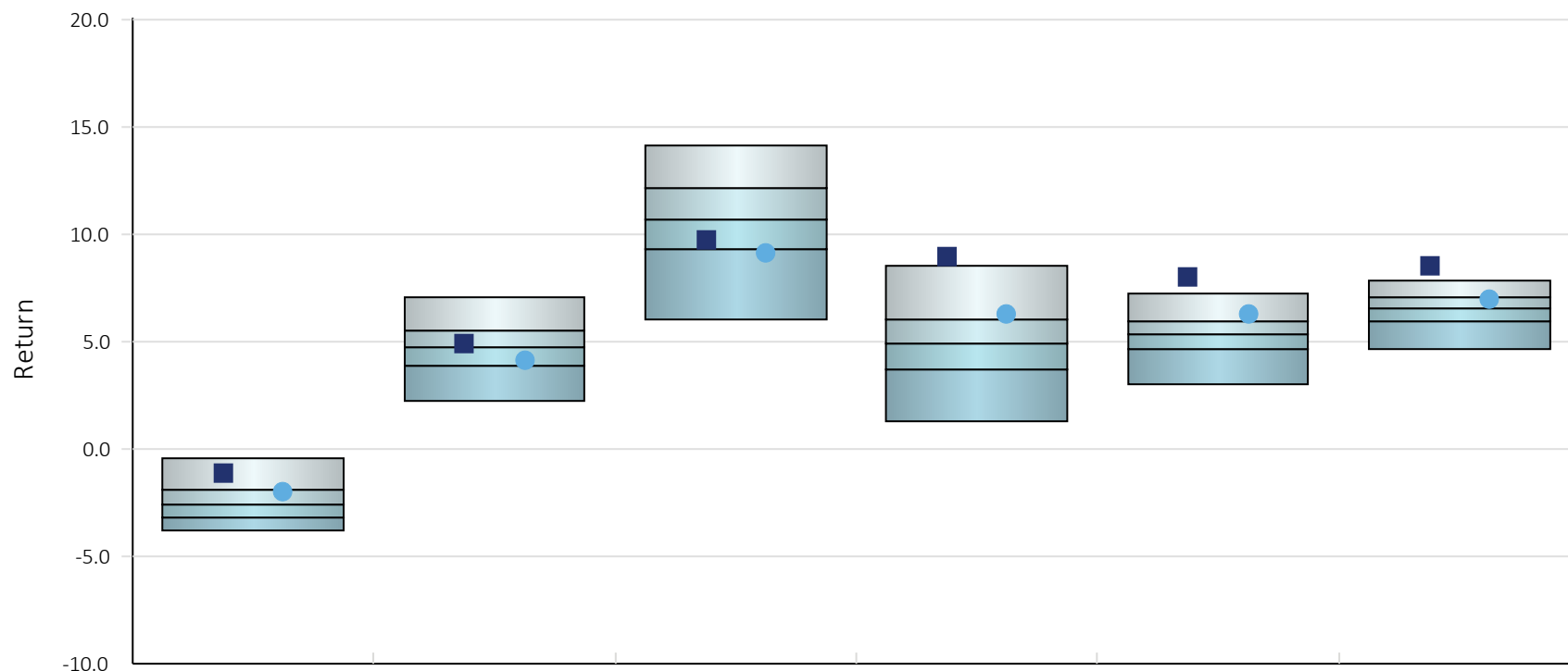
Total Manager Value Added:1.2%



Plan Sponsor Peer Group Analysis

Total Fund vs All Public Plans-Total Fund (GOF)

Periods Ended September 30, 2023



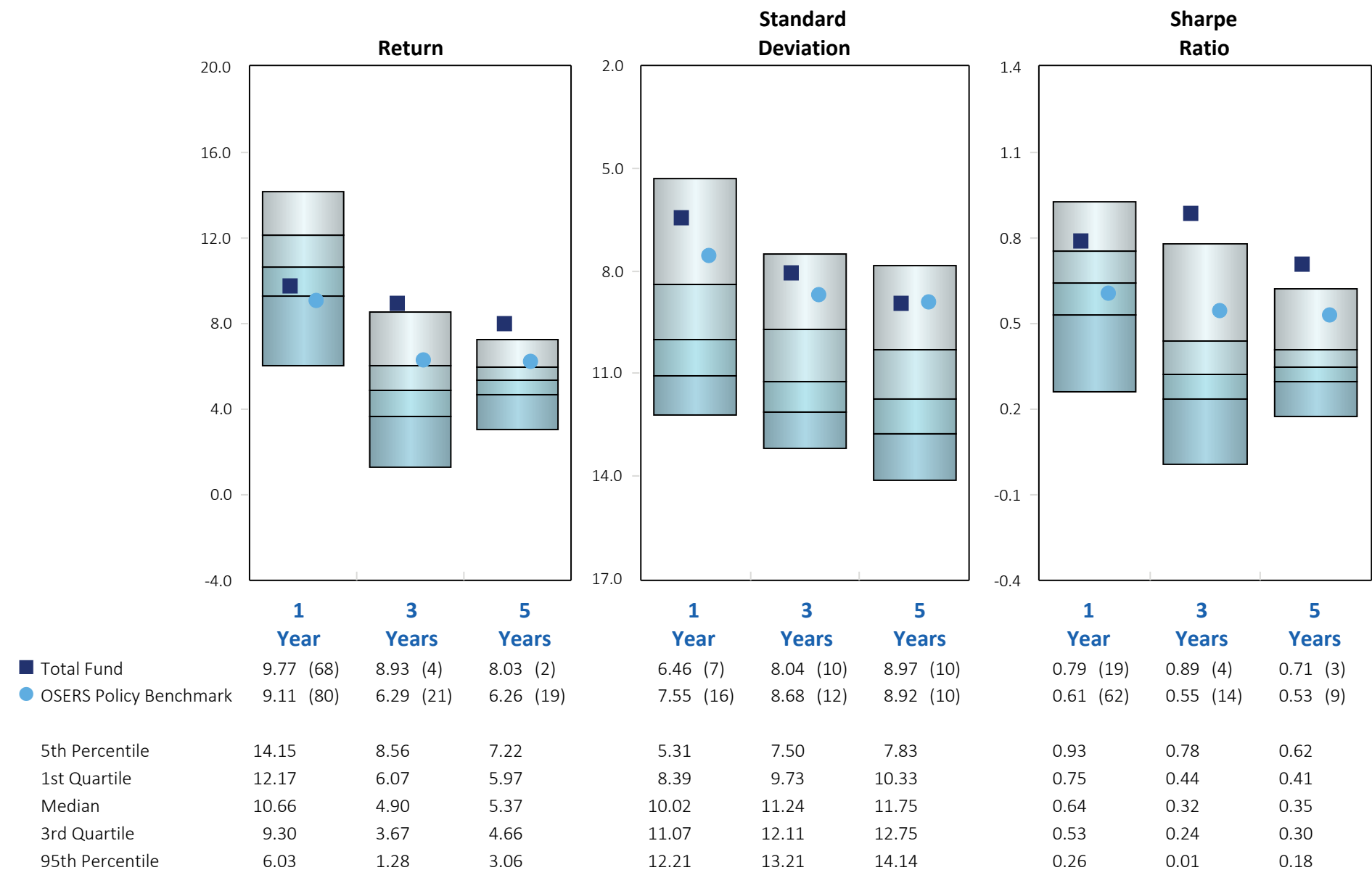
	QTD	YTD	1 Year	3 Years	5 Years	10 Years
■ Total Fund	-1.10 (10)	4.89 (44)	9.77 (68)	8.93 (4)	8.03 (2)	8.53 (1)
● OSERS Policy Benchmark	-1.99 (29)	4.13 (71)	9.11 (80)	6.29 (21)	6.26 (19)	6.95 (32)
5th Percentile	-0.40	7.04	14.15	8.56	7.22	7.85
1st Quartile	-1.88	5.48	12.17	6.07	5.97	7.05
Median	-2.57	4.74	10.66	4.90	5.37	6.51
3rd Quartile	-3.18	3.88	9.30	3.67	4.66	5.91
95th Percentile	-3.79	2.22	6.03	1.28	3.06	4.64
Population	417	402	396	379	369	324

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.
Ohio SERS performance is Gross of Fees

Plan Sponsor Peer Group Analysis - Multi Statistics

Total Fund vs All Public Plans-Total Fund (GOF)

Periods Ended September 30, 2023

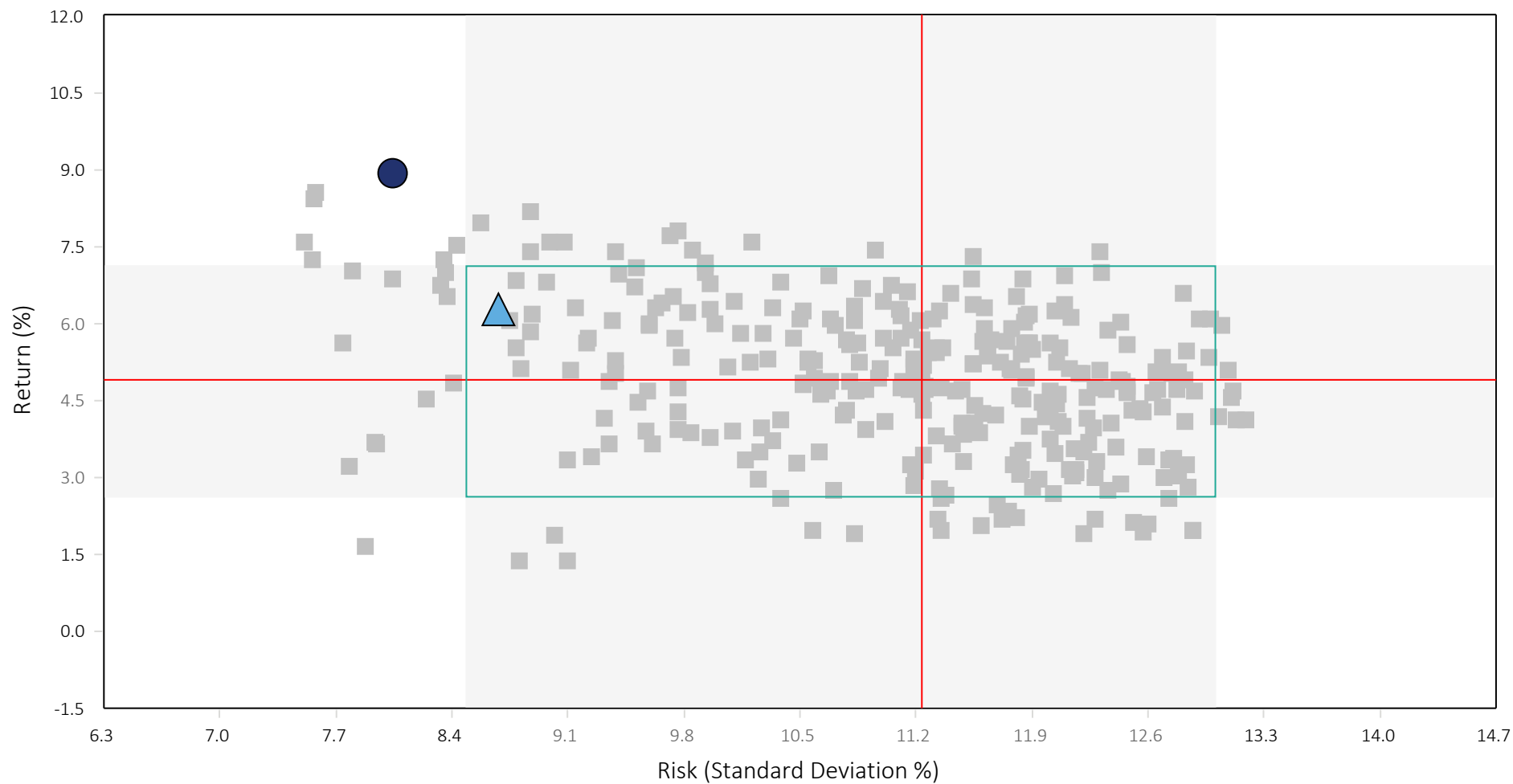


Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.
 Ohio SERS performance is Gross of Fees

Plan Sponsor Scattergram

Total Fund vs All Public Plans-Total Fund

Periods Ended October 1, 2020 To September 30, 2023

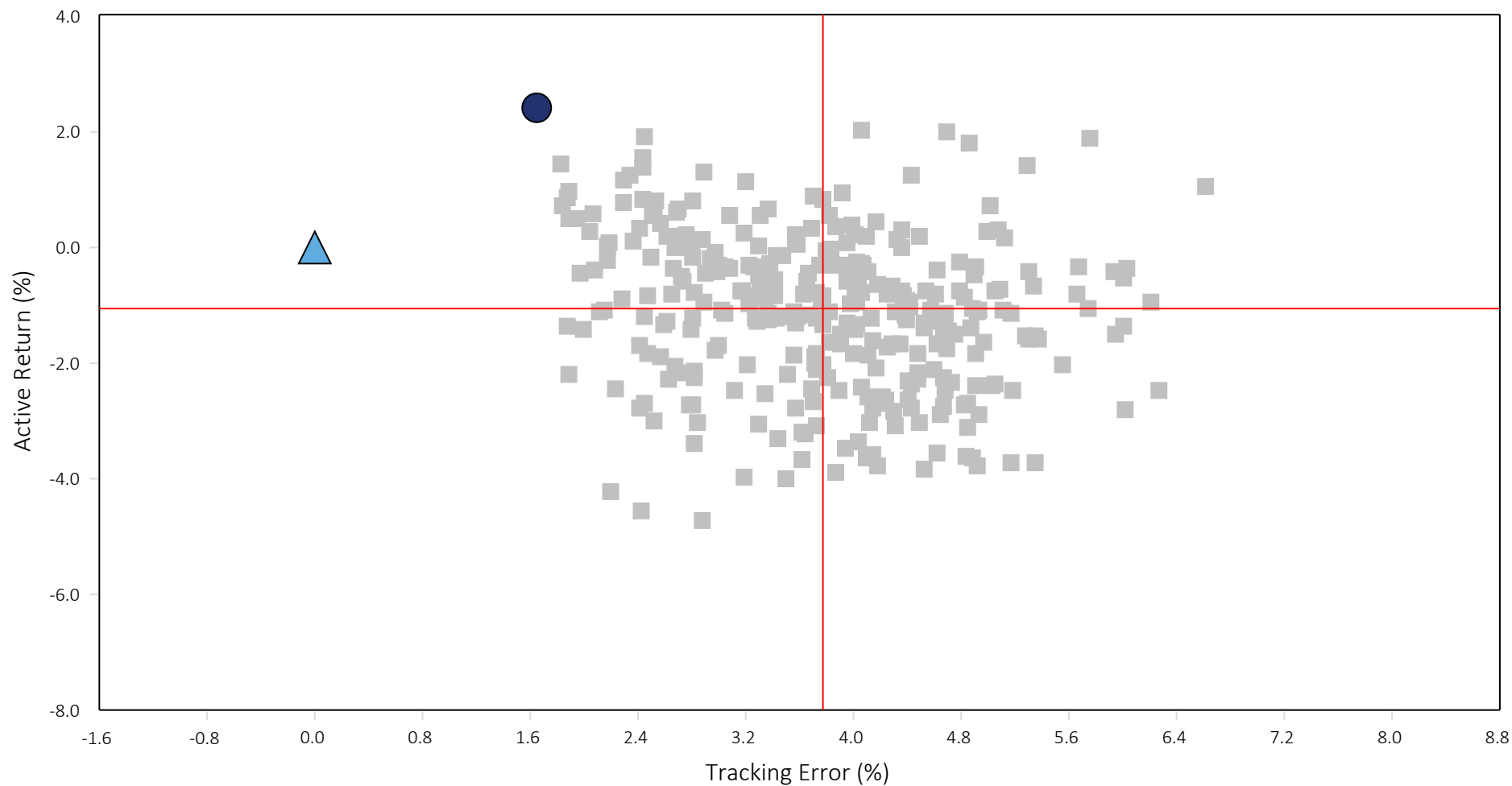


	Return	Standard Deviation
● Total Fund	8.93	8.04
▲ OSERS Policy Benchmark	6.29	8.68
— Median	4.90	11.24

Plan Sponsor Scattergram

Total Fund vs All Public Plans-Total Fund

Periods Ended October 1, 2020 To September 30, 2023



	Active Return	Tracking Error
● Total Fund	2.42	1.64
▲ OSERS Policy Benchmark	0.00	0.00
— Median	-1.04	3.77

Asset Allocation & Performance

Total Fund

Periods Ended September 30, 2023

	Allocation		Performance (%) net of fees									
	Market Value \$000	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	10 Years	20 Years	Since Inception	Inception Date
Total Fund	17,455,148	100.00	-1.27	4.38	-1.27	9.06	8.23	7.35	7.86	7.31	7.70	10/1/1994
OSERS Policy Benchmark			-1.99	4.13	-1.99	9.11	6.29	6.26	6.95	7.08	7.63	
Value Added			0.72	0.25	0.72	-0.05	1.94	1.09	0.91	0.23	0.07	
Global Equity	7,045,227	40.36	-3.16	9.00	-3.16	20.38	7.10	6.68	7.80	7.79	7.43	7/1/2002
Global Equity Benchmark			-3.40	10.06	-3.40	20.80	7.00	6.13	7.45	7.50	7.12	
Value Added			0.24	-1.06	0.24	-0.42	0.10	0.55	0.35	0.29	0.31	
Global Private Equity	2,312,082	13.25	1.92	6.36	1.92	6.92	24.30	17.47	18.10	13.44	13.32	10/1/1994
Global PE Benchmark			1.21	3.80	1.21	1.99	18.84	14.48	14.11	12.21	12.85	
Value Added			0.71	2.56	0.71	4.93	5.46	2.99	3.99	1.23	0.47	
Global Private Credit	1,097,269	6.29	2.46	7.47	2.46	8.33	10.51				10.83	7/1/2020
Global Private Credit Benchmark			2.32	6.99	2.32	9.09	6.31				6.19	
Value Added			0.14	0.48	0.14	-0.76	4.20				4.64	
Global Fixed Income	2,235,926	12.81	-2.60	0.23	-2.60	2.12	-3.70	1.24	1.96	3.77	5.11	10/1/1994
Blmbg. U.S. Aggregate Index			-3.23	-1.21	-3.23	0.64	-5.21	0.10	1.13	2.85	4.45	
Value Added			0.63	1.44	0.63	1.48	1.51	1.14	0.83	0.92	0.66	
Cash Equivalents	676,493	3.88	2.99	5.34	2.99	-1.76	4.65	4.88	2.97	2.53	2.45	7/1/2002
FTSE 1 Month T-Bill			1.36	3.70	1.36	4.61	1.74	1.68	1.07	1.30	1.29	
Value Added			1.63	1.64	1.63	-6.37	2.91	3.20	1.90	1.23	1.16	

Asset Allocation & Performance

Total Fund

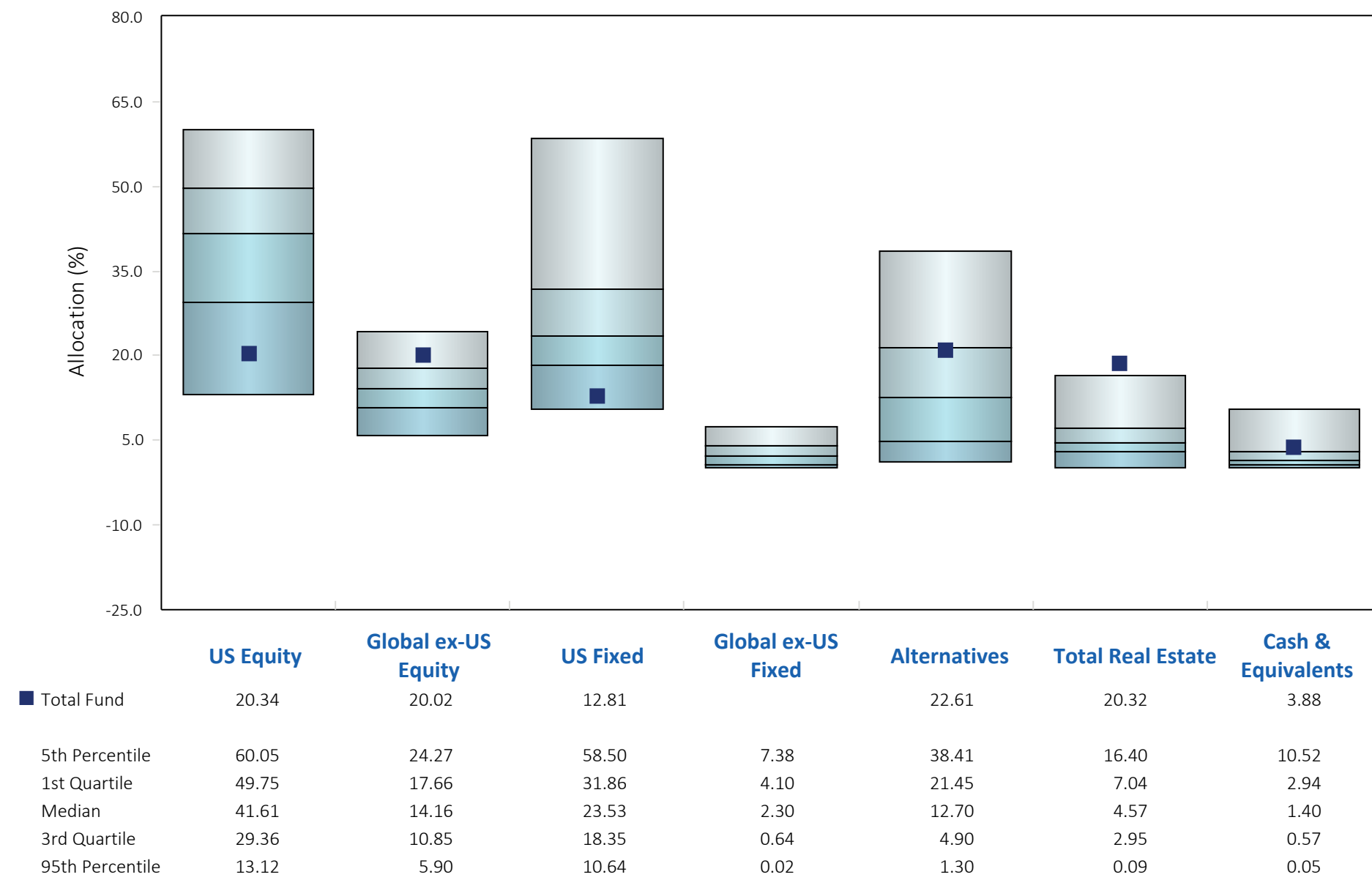
Periods Ended September 30, 2023

	Allocation		Performance (%) net of fees									
	Market Value \$000	%	1 Quarter	YTD	FYTD	1 Year	3 Years	5 Years	10 Years	20 Years	Since Inception	Inception Date
Global Real Assets	3,548,831	20.33	-1.09	-4.33	-1.09	-3.09	10.08	8.45	9.69	7.16	7.64	10/1/1994
Real Assets Benchmark			-1.98	-7.12	-1.98	-6.60	6.79	5.90	7.82	8.41	9.03	
Value Added			0.89	2.79	0.89	3.51	3.29	2.55	1.87	-1.25	-1.39	
Opportunistic & Tactical	539,321	3.09	0.78	4.63	0.78	7.31	9.92	5.30	6.58		6.74	6/1/2013
Opportunistic Benchmark			-2.67	0.30	-2.67	2.64	-3.20	-0.24	3.63		3.81	
Value Added			3.45	4.33	3.45	4.67	13.12	5.54	2.95		2.93	

Plan Sponsor TF Asset Allocation

Total Fund vs All Public Plans-Total Fund

Periods Ended September 30, 2023



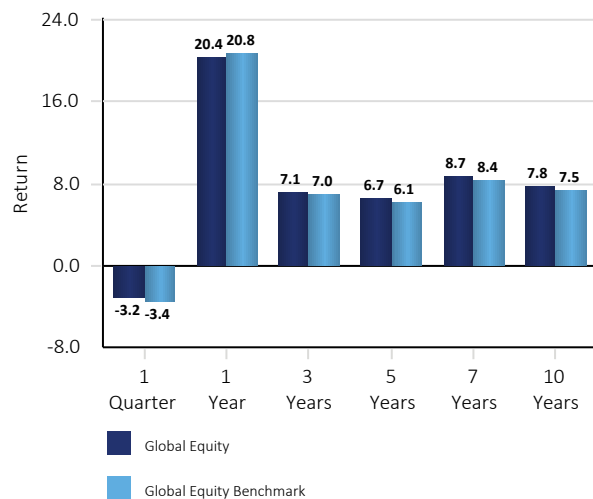
Global Equity

Performance Summary

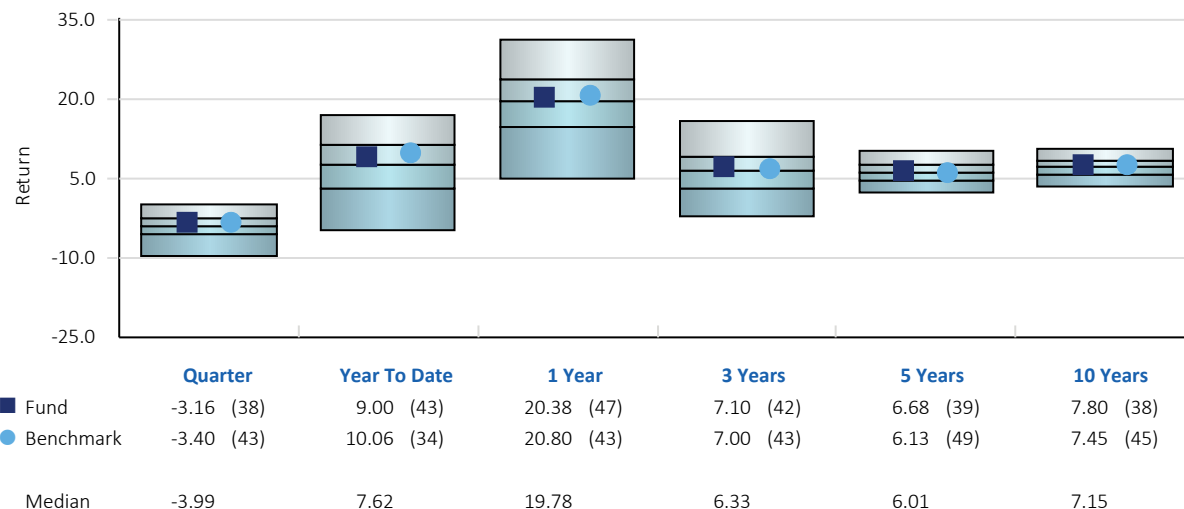
Global Equity

Periods Ended September 30, 2023

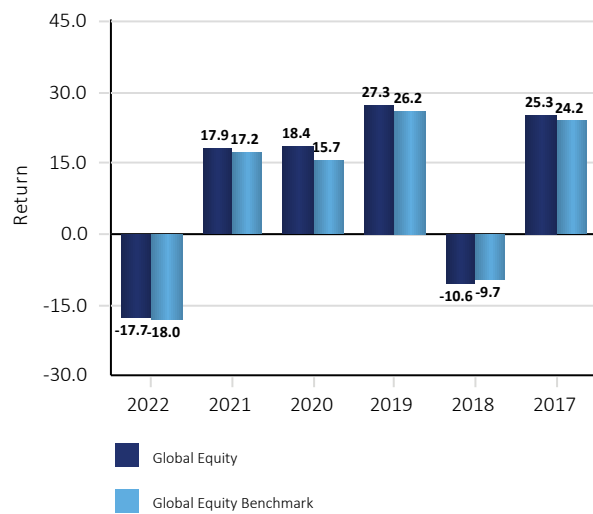
Comparative Performance



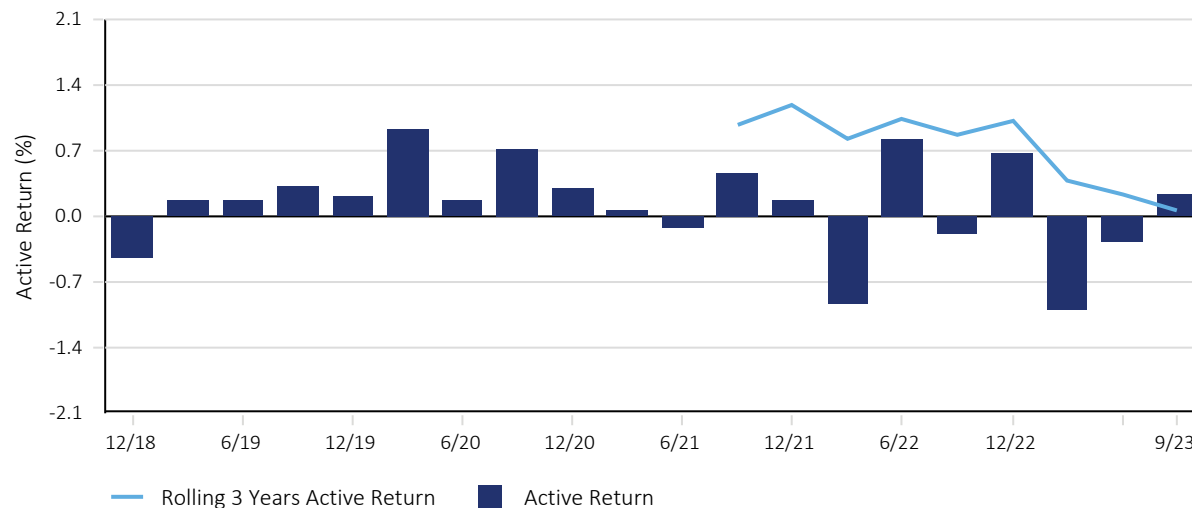
Peer Group Analysis: IM Global Equity (SA+CF)(NOF)



Comparative Performance



Quarterly Active Return



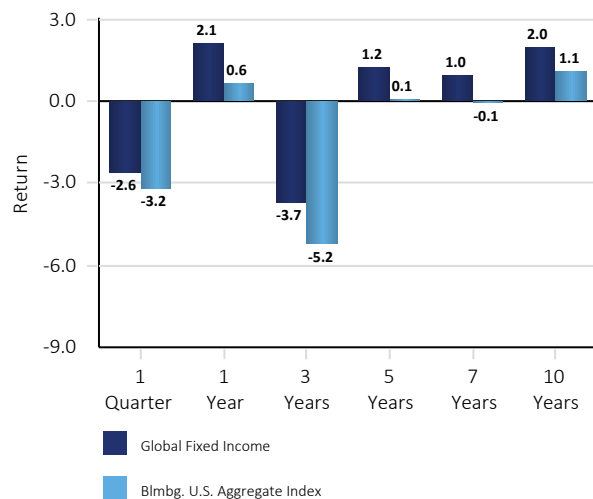
Global Fixed Income

Performance Summary

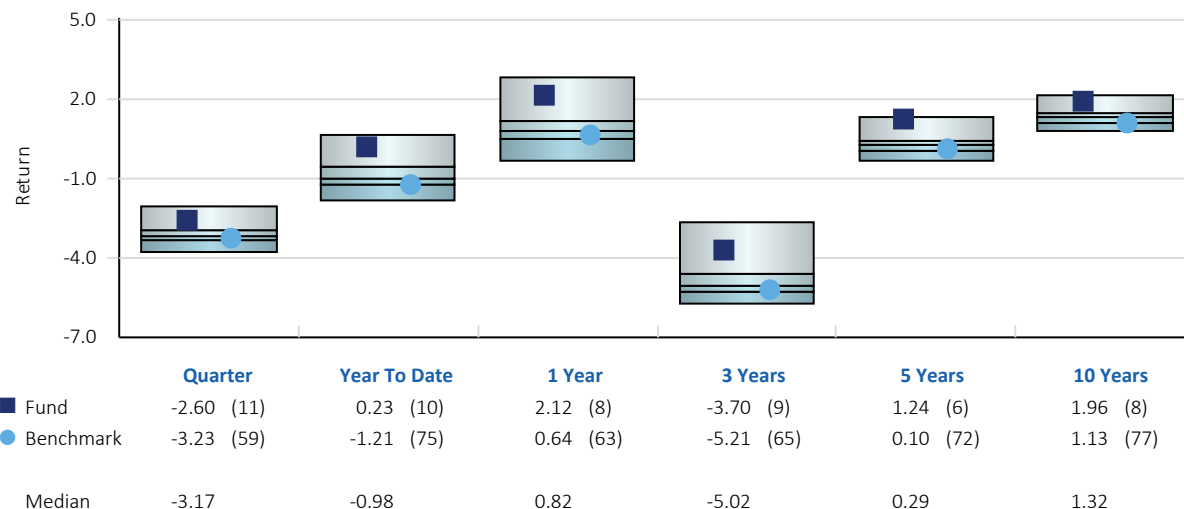
Global Fixed Income

Periods Ended September 30, 2023

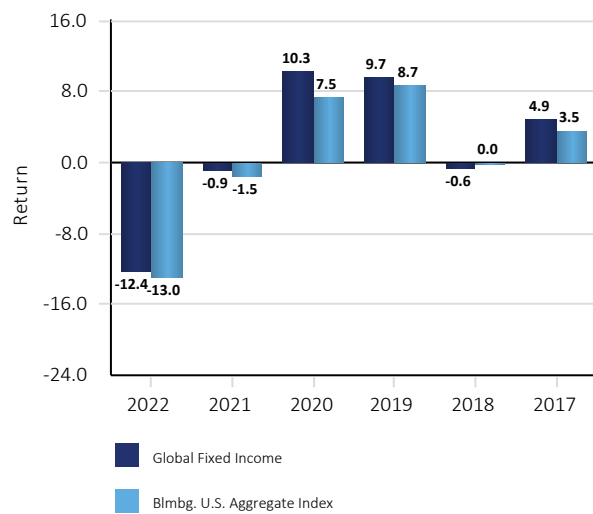
Comparative Performance



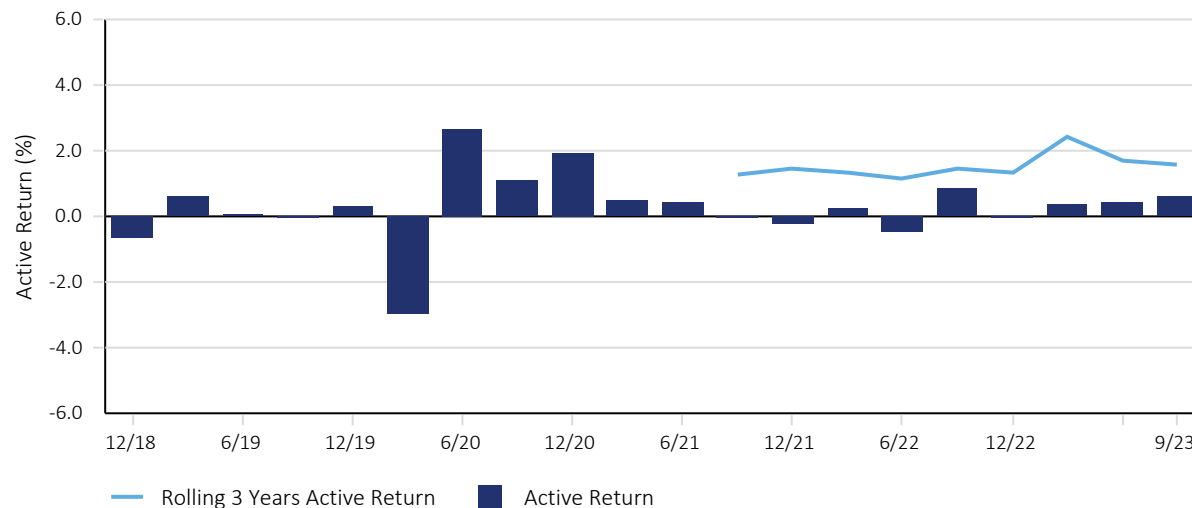
Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF) (NOF)



Comparative Performance



Quarterly Active Return



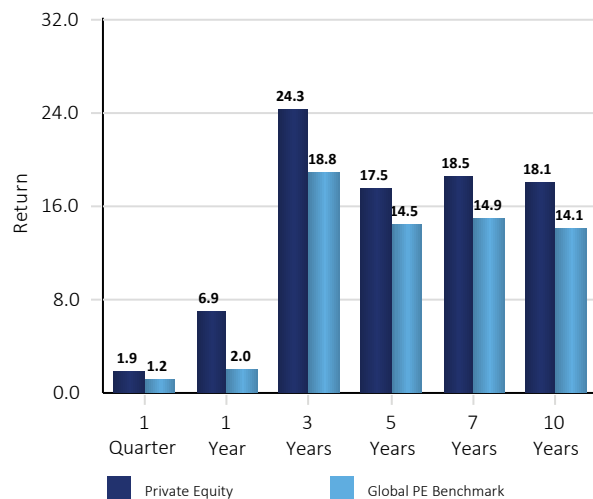
Global Private Equity

Performance Summary

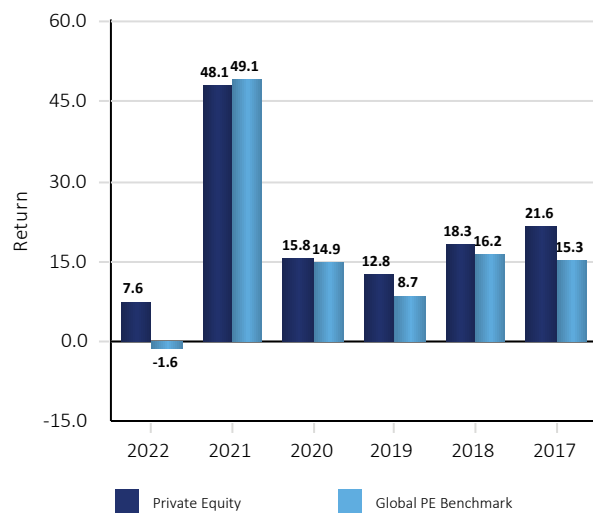
Global Private Equity

Periods Ended September 30, 2023

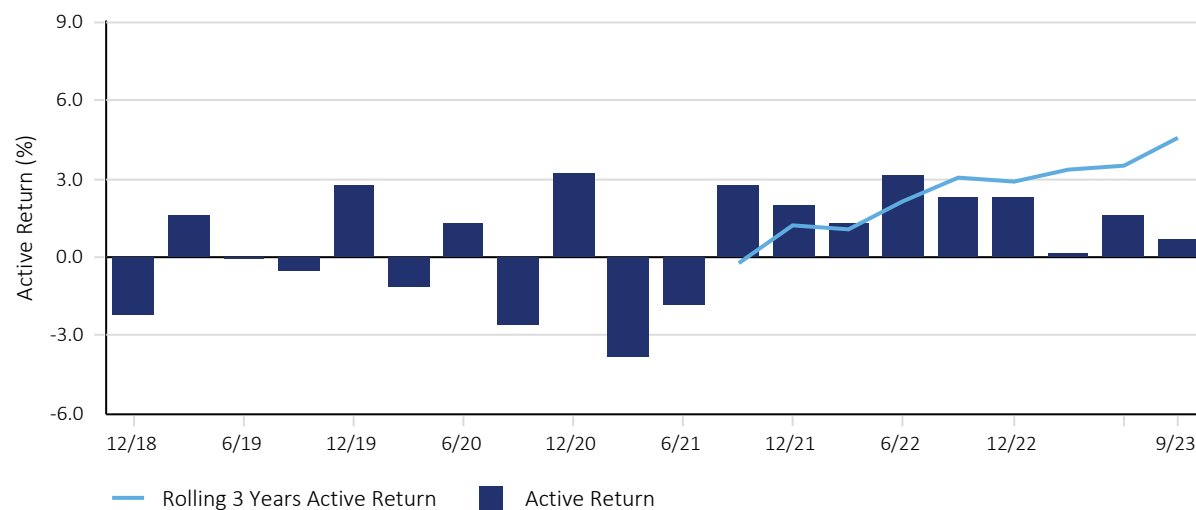
Comparative Performance



Comparative Performance



Quarterly Active Return



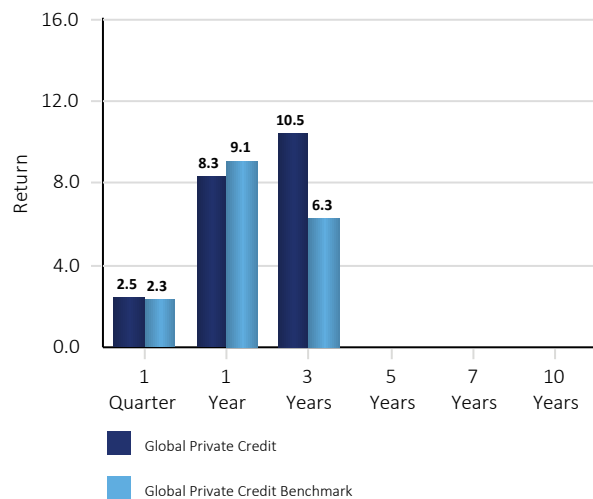
Global Private Credit

Performance Summary

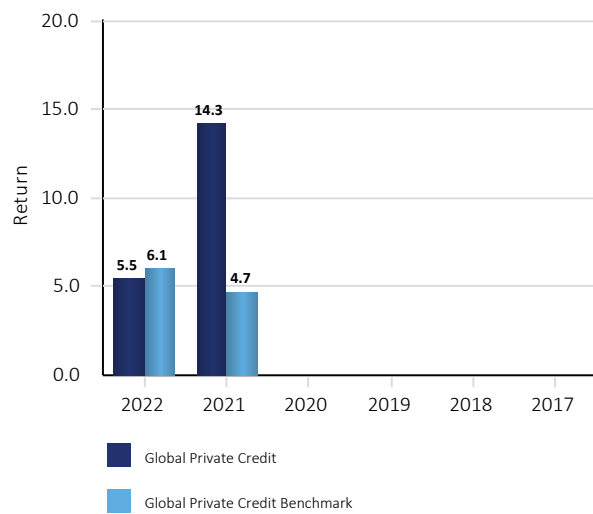
Global Private Credit

Periods Ended September 30, 2023

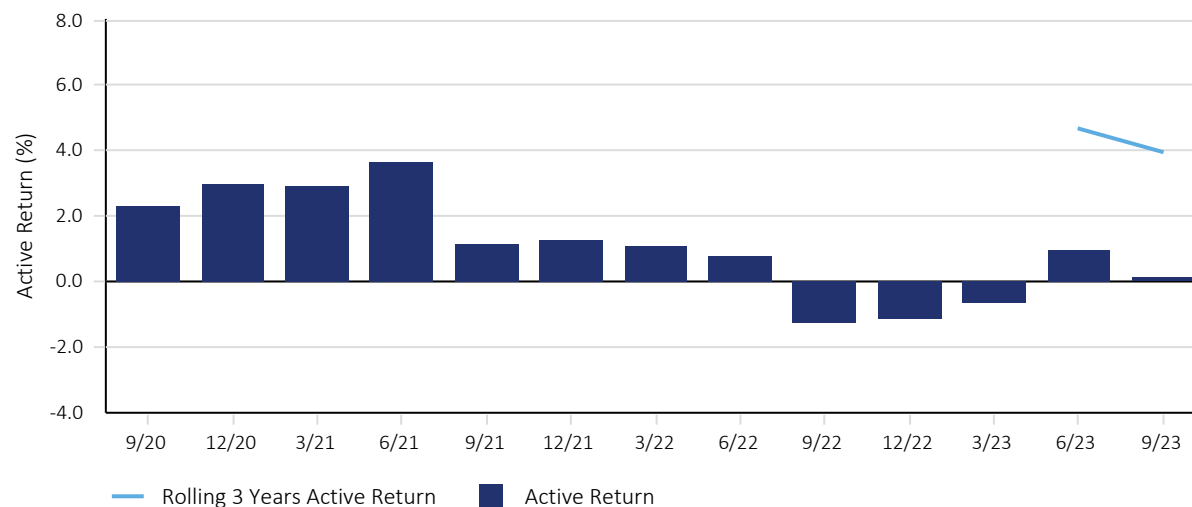
Comparative Performance



Comparative Performance



Quarterly Active Return



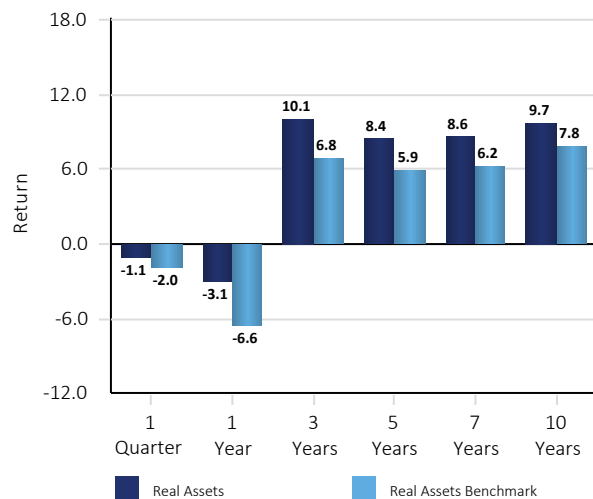
Global Real Assets

Performance Summary

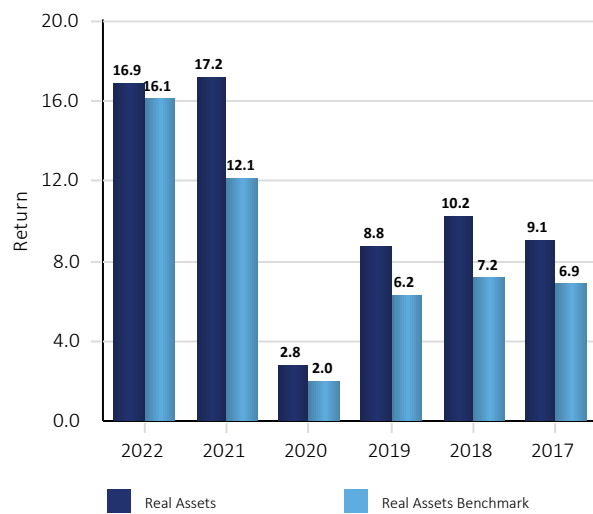
Global Real Assets

Periods Ended September 30, 2023

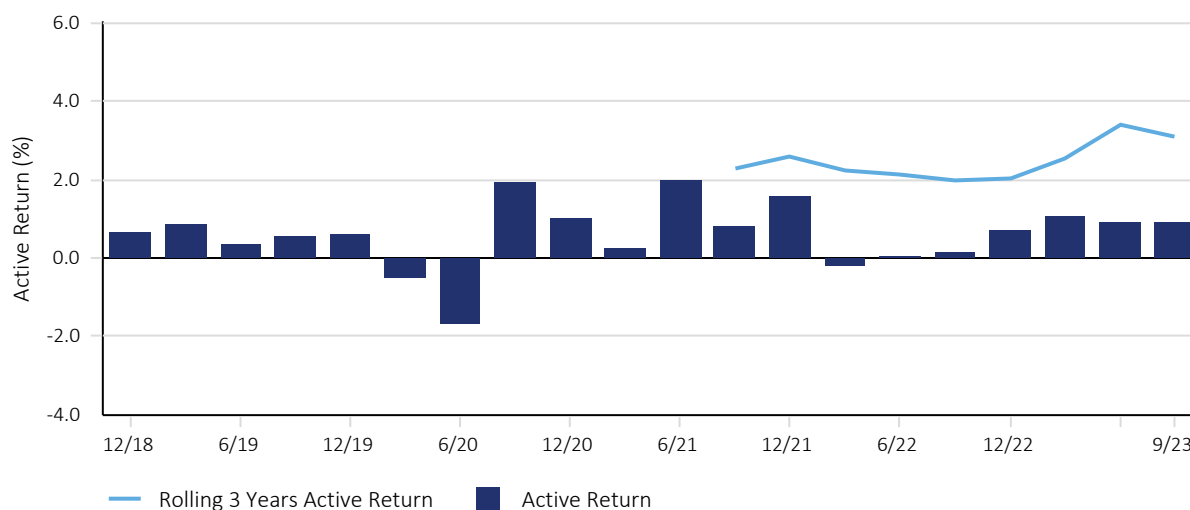
Comparative Performance



Comparative Performance



Quarterly Active Return



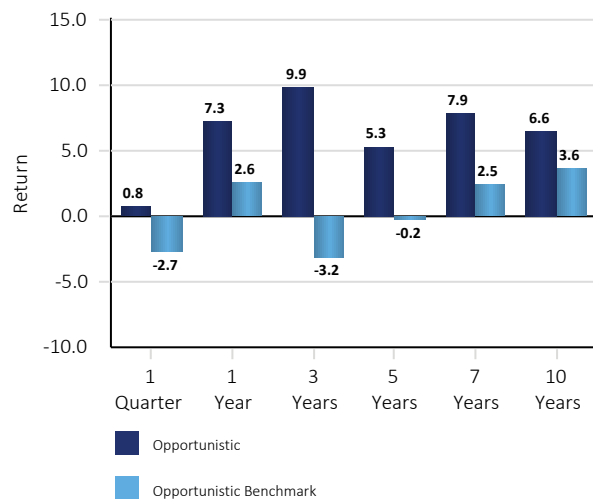
Opportunistic & Tactical

Performance Summary

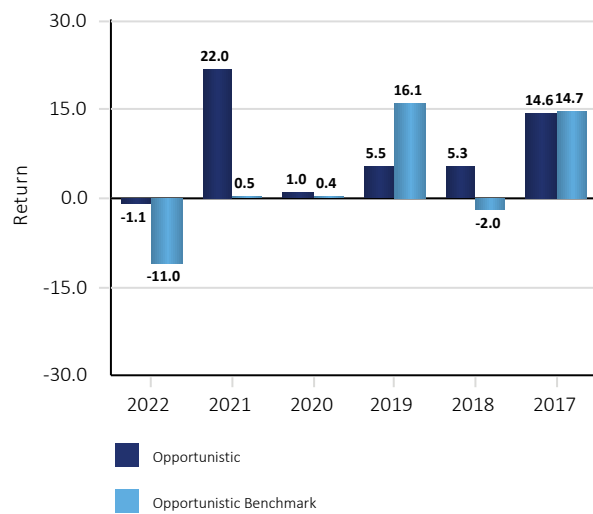
Opportunistic & Tactical

Periods Ended September 30, 2023

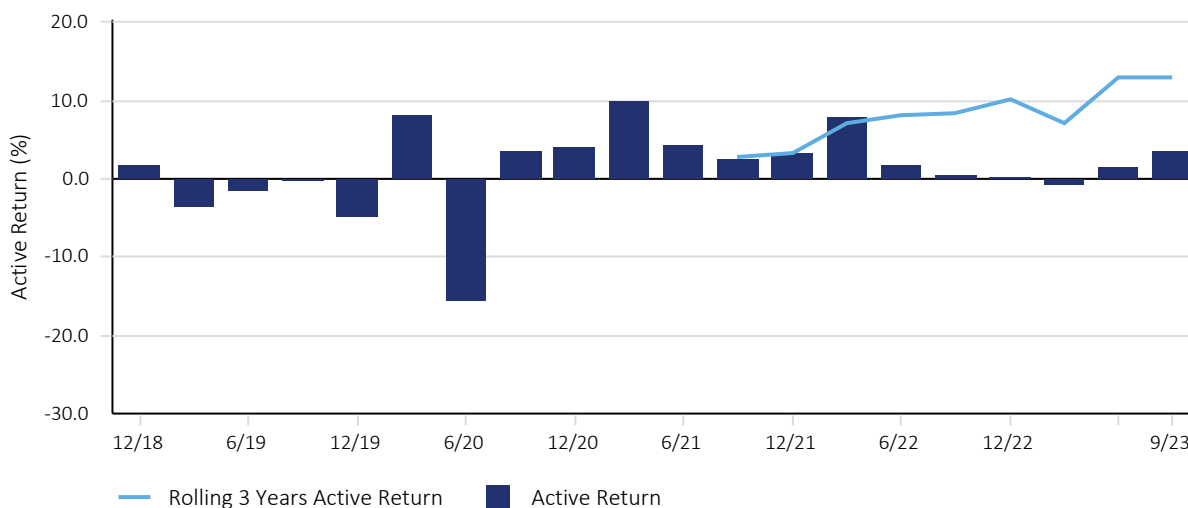
Comparative Performance



Comparative Performance



Quarterly Active Return





Ohio SERS Investment Report

Quarterly Report to the Board

For the period ending: September 30, 2023

Prepared by Investment and IAD Staff

Farouki Majeed, Chief Investment Officer

Meeting Date: November 2023



Investment Agenda

- Annual Portfolio Review – Fixed Income
- Wilshire Quarterly Performance Report (September 30, 2023)
- Quarterly Investment Report (September 30, 2023)



Economic and Financial Market Outlook

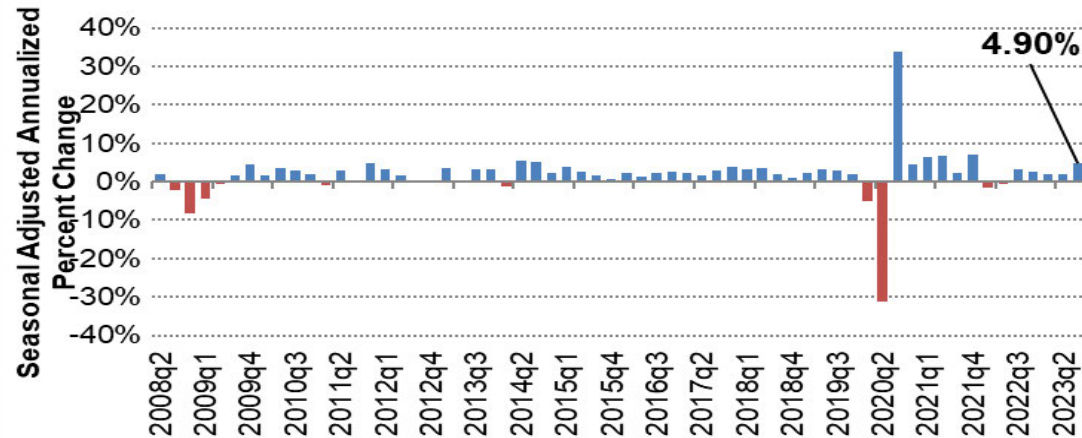
- US growth accelerated in Q3 2023 at a 4.9% rate, a sharp increase from 2.1% in Q2. The main drivers of Q3 growth were increases in consumer spending (+4.0%), government spending (+4.6%) and exports (+6.2%). The consensus GDP growth expectation slowed drastically for Q4 2023 (+0.7%) and Q1 2024 (+0.2%). (Source: *Bureau of Economic Analysis and October Blue Chip Economic Indicators*)
- The US labor market remained resilient, adding 366,000 jobs in September. Unemployment rate held steady at 3.8% as the labor force participation was unchanged at 62.8%, staying below pre-pandemic level of 63.3%, (Sources: *Bureau of Labor Statistics and Department of Labor*)
- US headline inflation remained at 3.7% in September. The core inflation was 4.1%, 0.2% lower than the previous month. The energy price index increased 1.5% for the month of September and decreased 0.5% for the last 12 months. The food index was up 3.7% for the last 12 months. (Source: *Bureau of Labor Statistics*).
- The 10-year Treasury nominal yield increased by 29 bps from the previous month to 4.88% as of October end. The current 10-year real yield, estimated by the gap between the 10-year Treasury nominal yield and current headline inflation was 0.89% in September. This indicator turned positive in June after being consistently negative for almost 4 years. The Fed decided to hold the Fed Funds rate in the range 5.25-5.50% during the 10/31-11/1 meeting, expressing a “cautious” approach without clear determination of further tightening.
- The housing market continued the positive momentum as the S&P Case-Shiller 20-City home price index generated 1.0% for the month and 2.2% for the 1-year period as of August 2023.
- The Consumer Sentiment Index released by Thomson Reuters and University of Michigan was down to 63.8 in October although increased significantly from the trough in June 2022. The US Economic Surprise index trended upward since January 2023 remaining positive at 63.4 in October. The September Leading Economic Index (LEI) issued by the Conference Board was 104.6, down 0.7% from the previous month. The index has been trending down for the last 18 consecutive months, indicating a high level of economic uncertainty.
- In October, the US Manufacturing PMI reading remained below 50, indicating manufacturing activity contraction, while the US Services PMI was above 50, indicating expansion in service sectors. High interest rates and high inflation continue to be the largest challenges to US and global economies. (Source: *Institute for Supply Management*).
- Equity markets continued to fall in October, after two negative months. The US market (Russell 3000) was down 2.65%; the Non-US Developed markets (MSCI World ex-USA) and Emerging markets were down 4.22% and 3.89% for the month, respectively.
- The US fixed income market, Bloomberg Barclay's US Aggregate Bond Index, was down 1.58% for October which was the sixth consecutive negative month.



ECONOMY

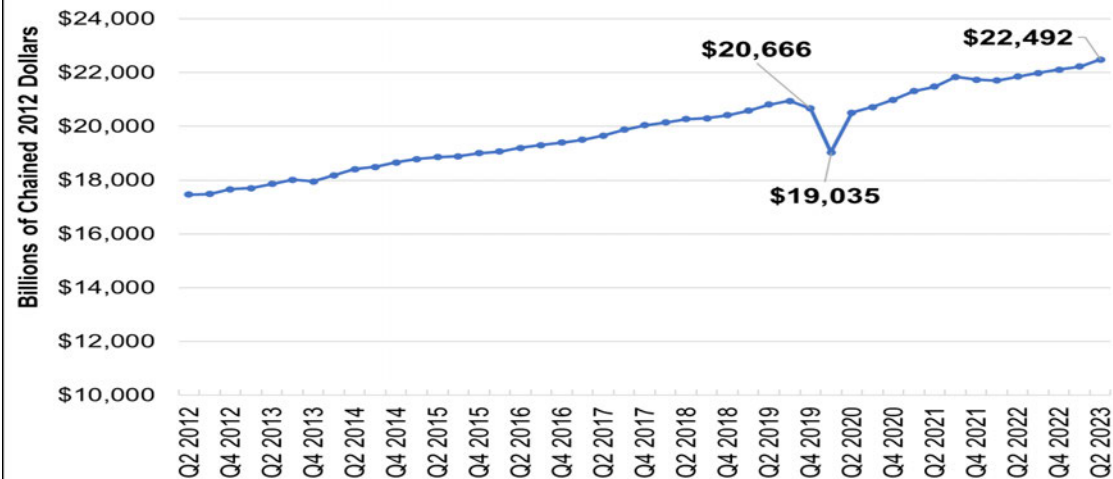
US Real Gross Domestic Product

US Real GDP Growth



Source: Bureau of Economic Analysis

US Real GDP Value

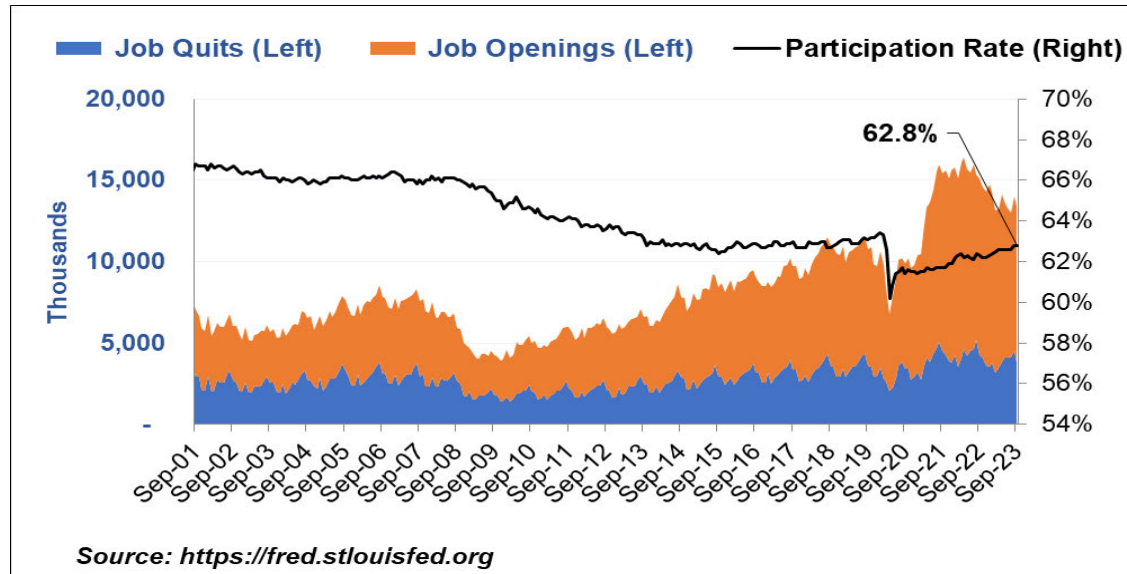
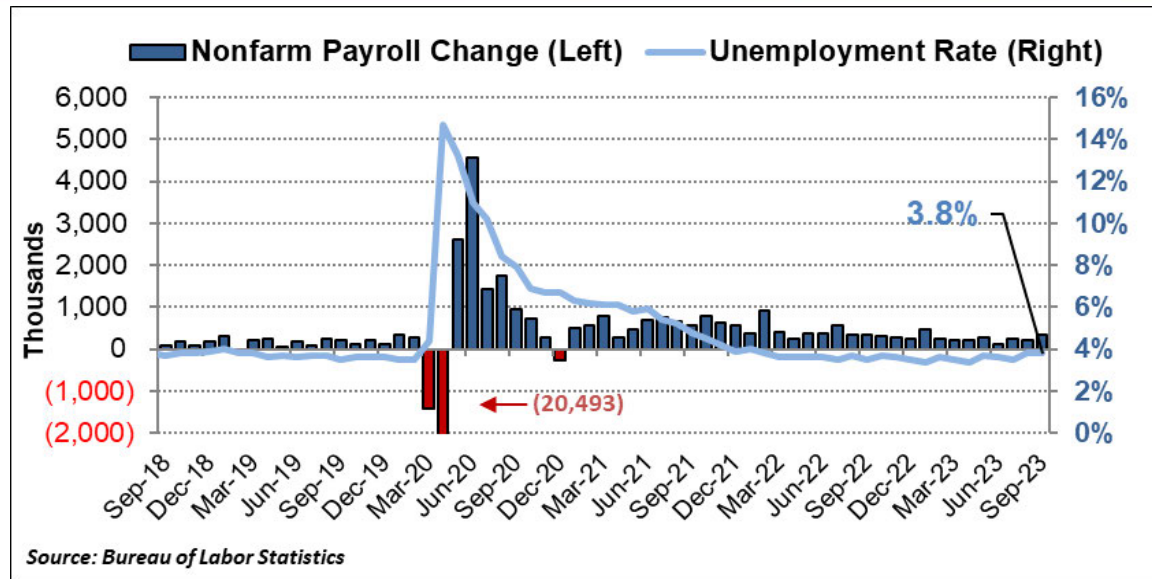


Source: U.S. Bureau of Economic Analysis



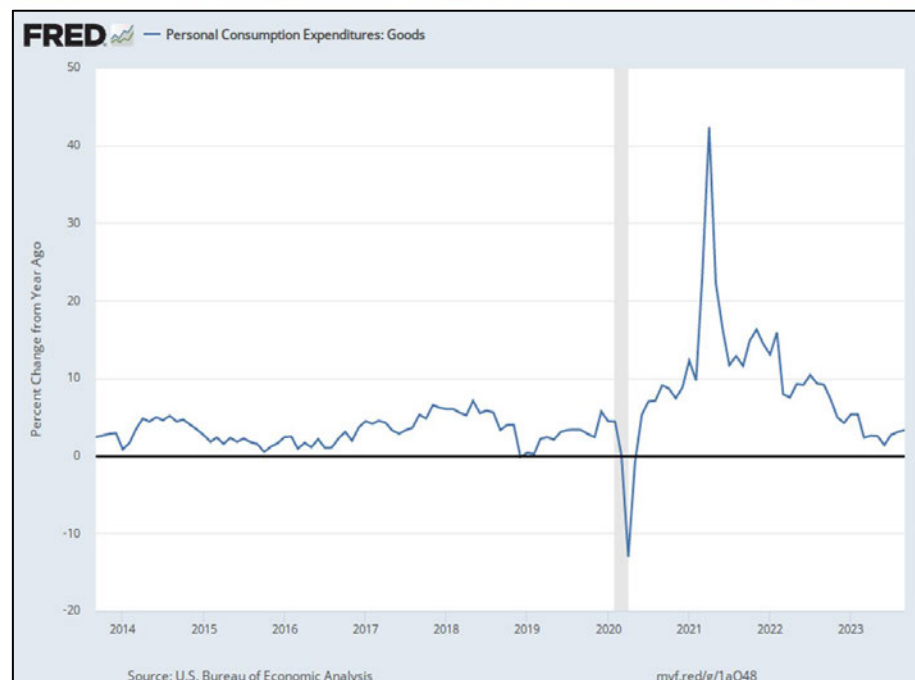
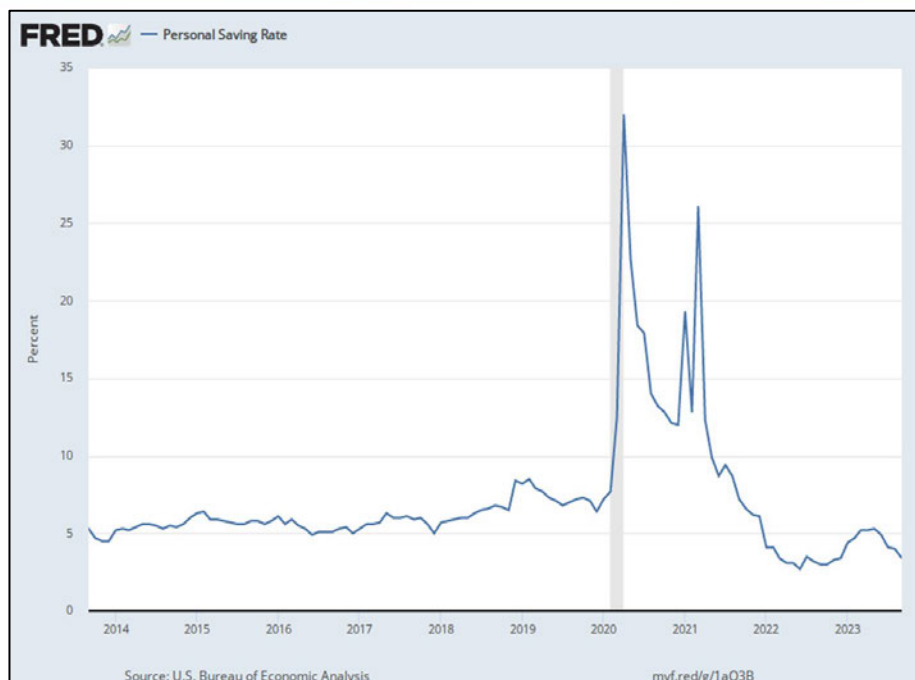
ECONOMY

US Labor Market





ECONOMY Personal Savings Rate & Personal Expenditures: Goods

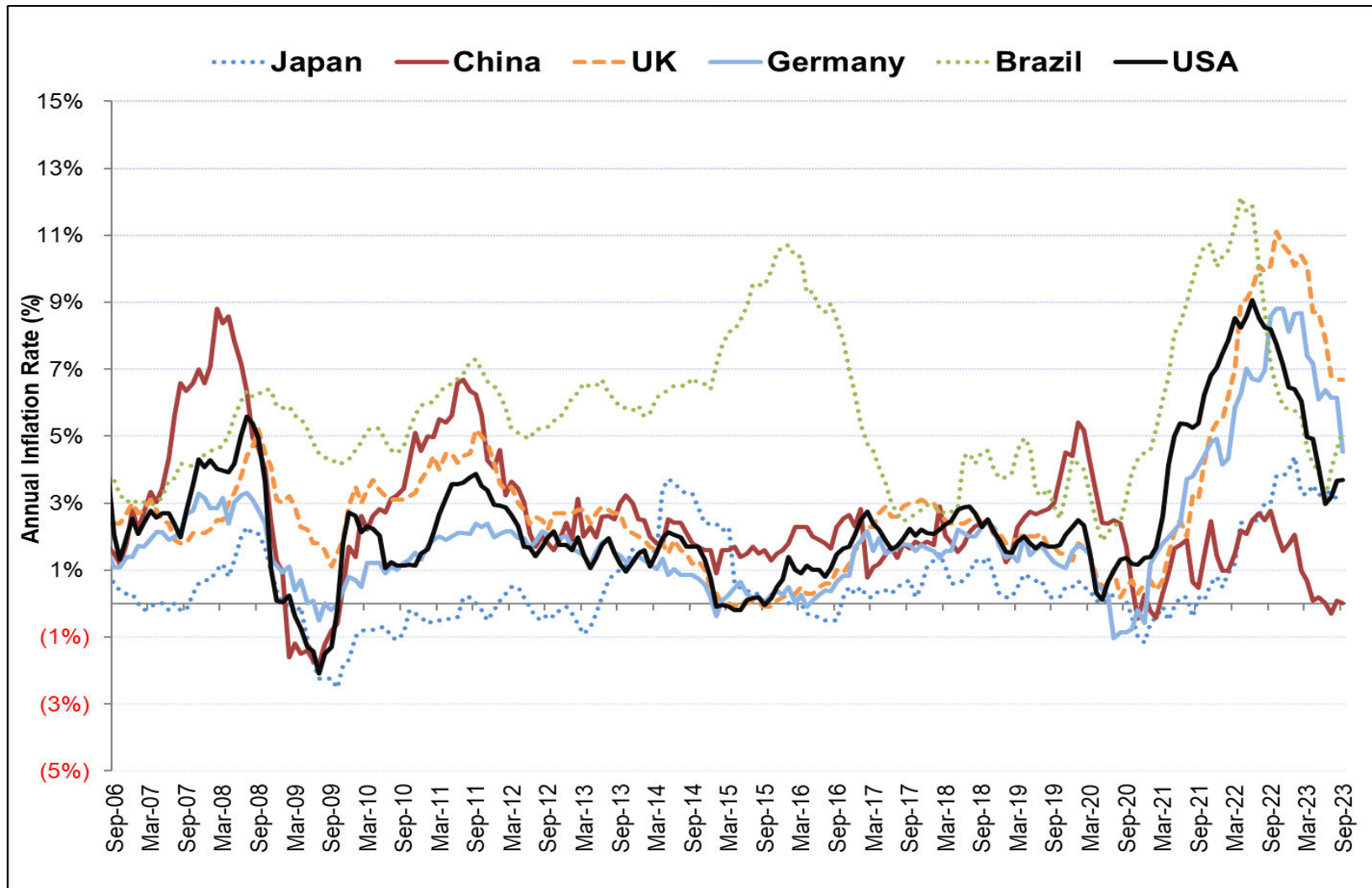


Date	Annual Personal Savings Rate
Jun-20	18.4%
Jun-21	8.7%
Jun-22	2.7%
Jun-23	4.9%
Sep-23	3.4%

Date	Personal Consumption Expenditures: Goods Change from Prior Year
Jun-20	5.3%
Jun-21	16.3%
Jun-22	9.1%
Jun-23	1.4%
Sep-23	3.3%



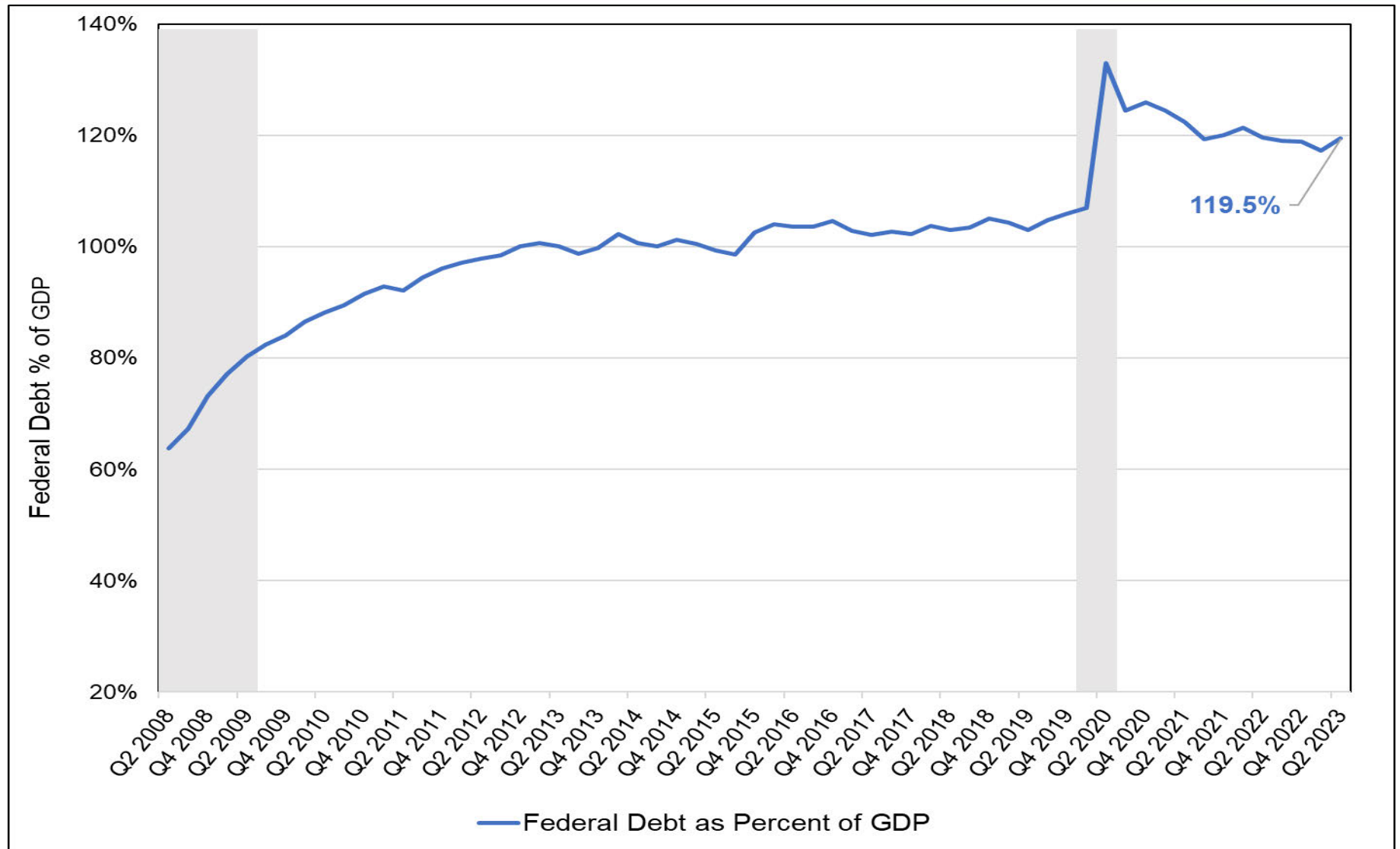
ECONOMY Headline Inflation



	Japan	China	UK	Germany	Brazil	USA
Sep-23	3.0	0.0	6.7	4.5	5.2	3.7



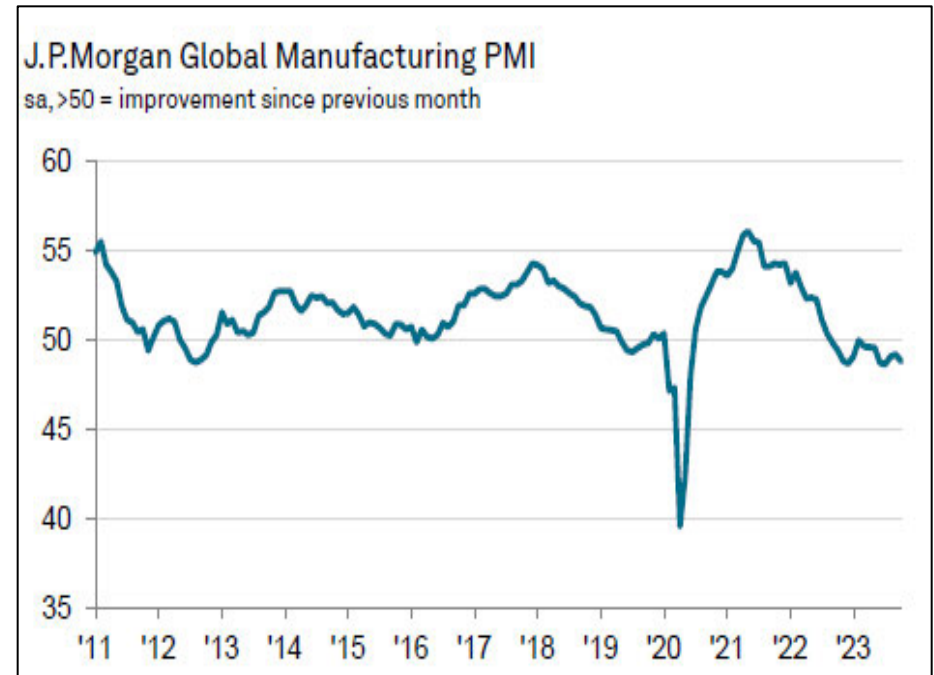
ECONOMY Federal Debt as Percent of GDP





ECONOMY

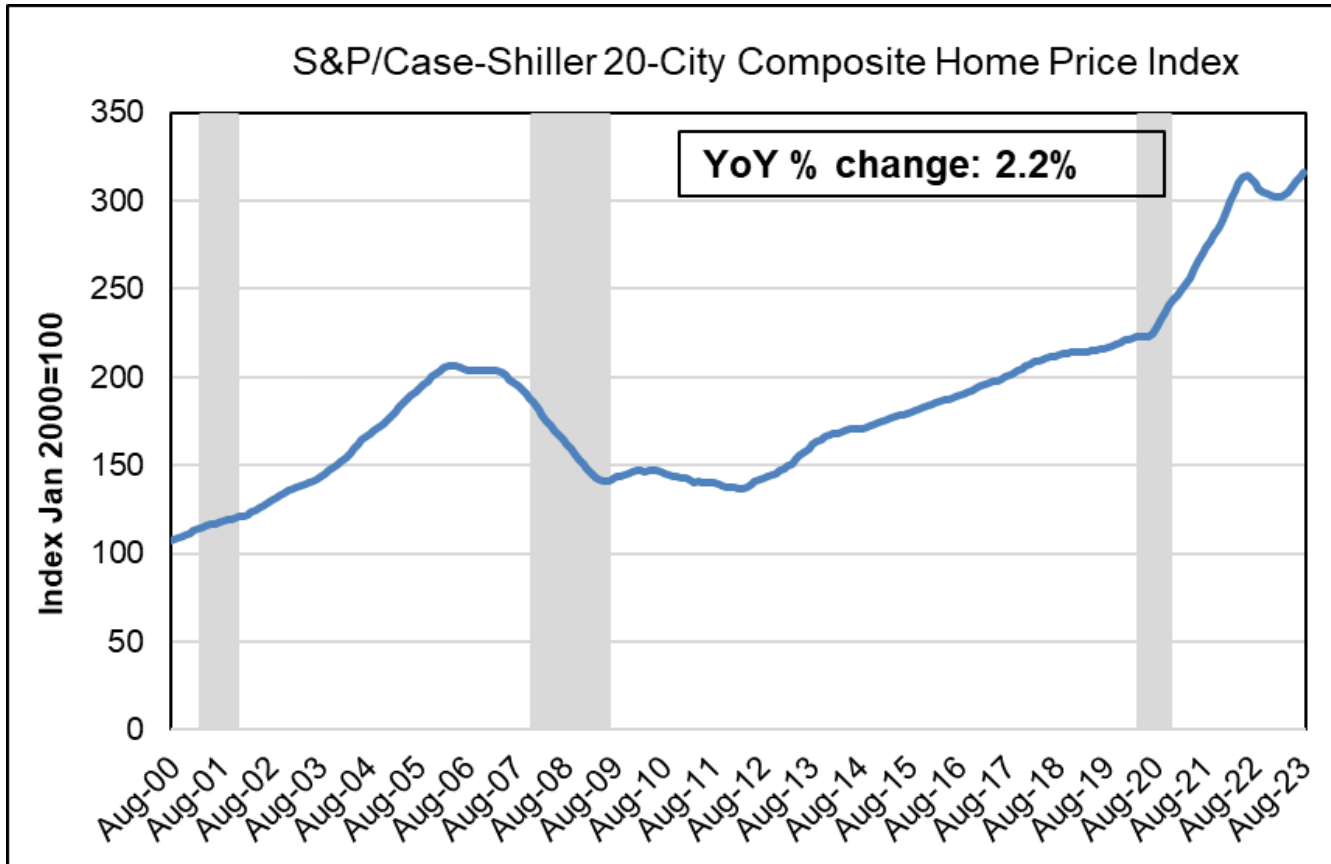
US & Global Manufacturing Activities





ECONOMY

US Housing Market

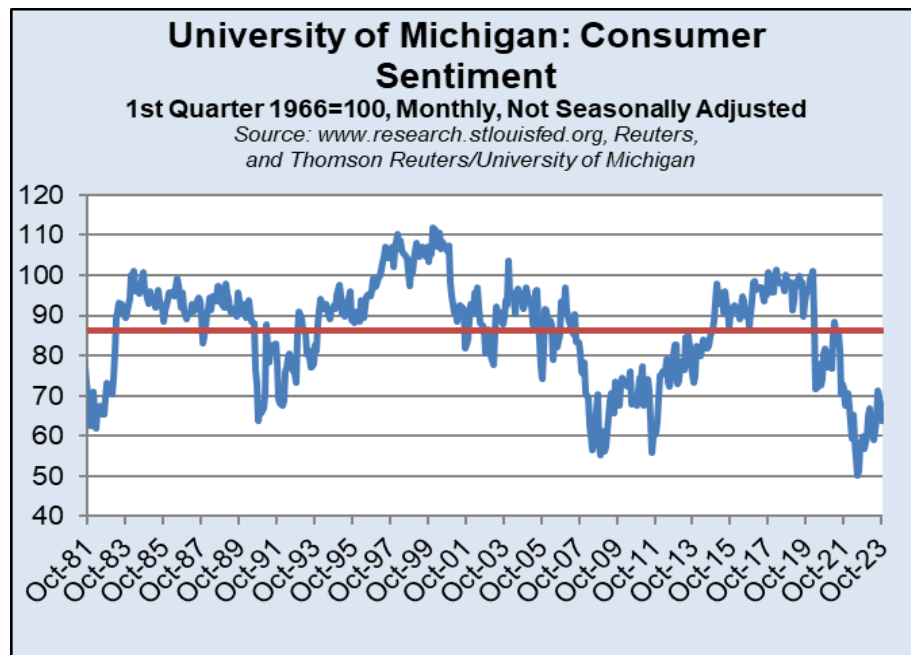


Date	S&P Case-Shiller 20-City Home Price Index January 2000 = 100, Seasonally Adjusted
Jul-20	224.95
Jul-21	269.80
Jul-22	312.92
Jul-23	313.31
Aug-23	316.46



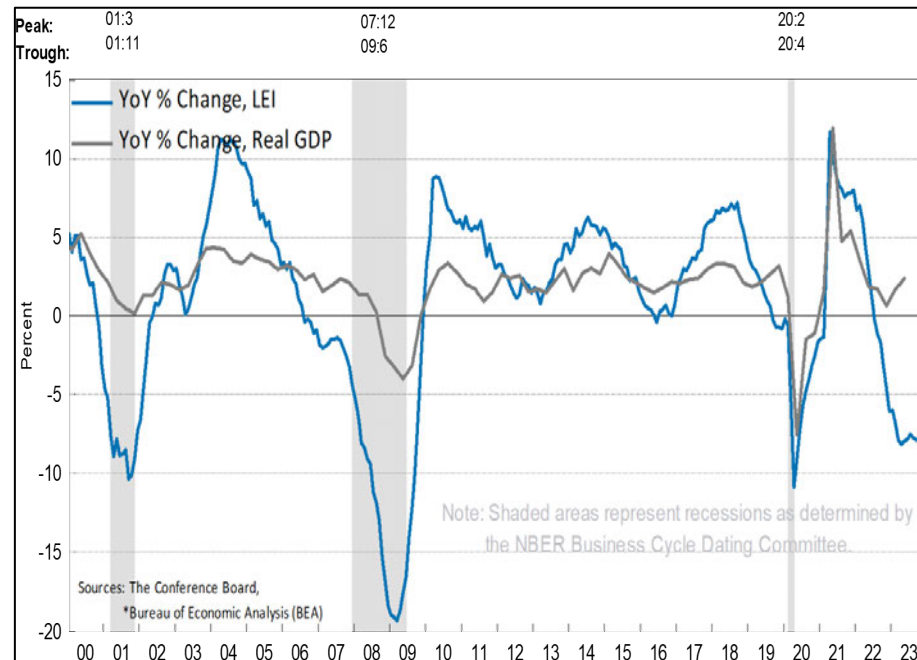
ECONOMY

Consumer Sentiment



Index of Consumer Sentiment				
Sep-23	Oct-23	Oct-22	M-M Change	Y-Y Change
67.9	63.8	59.9	-6.0%	6.5%

The Leading Economic Index (LEI)



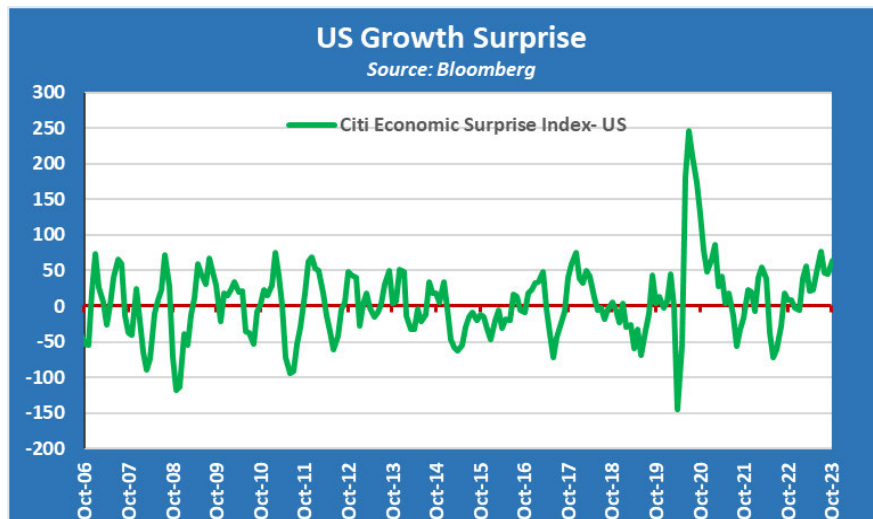
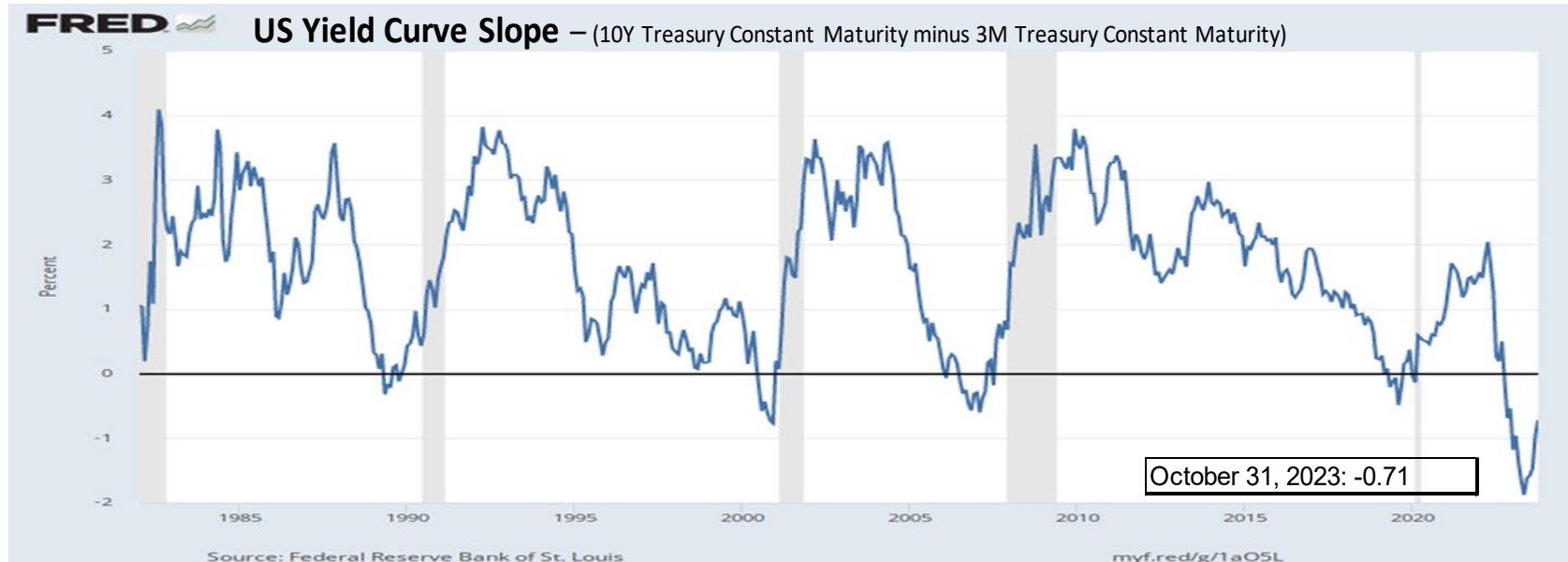
Shaded areas represent US recessions

Index	Aug-23	Sep-23	Month -Month Percent Change	6-Month Percent Change (Mar-Sep)
LEI	105.3 r	104.6 p	-0.7	-3.4

p Preliminary; r Revised; Indexes equal 100 in 2016

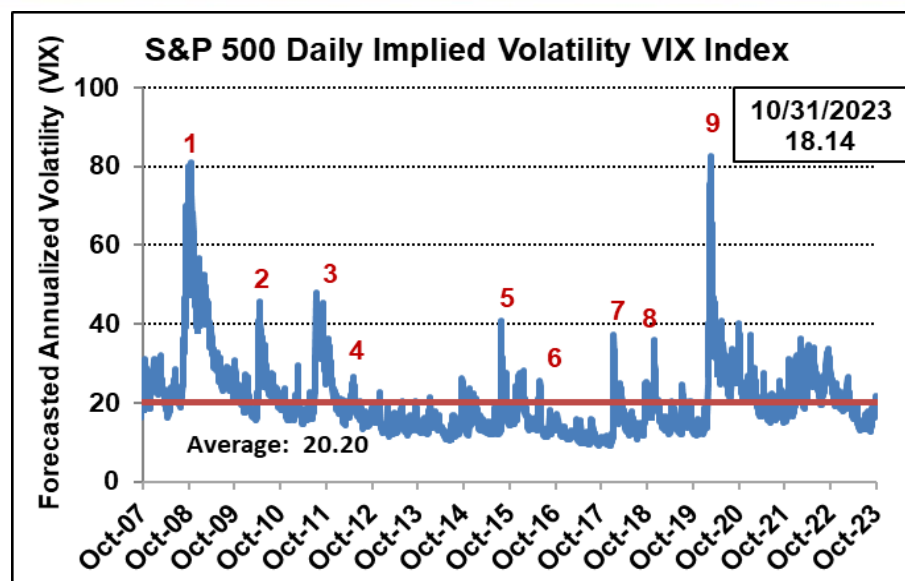
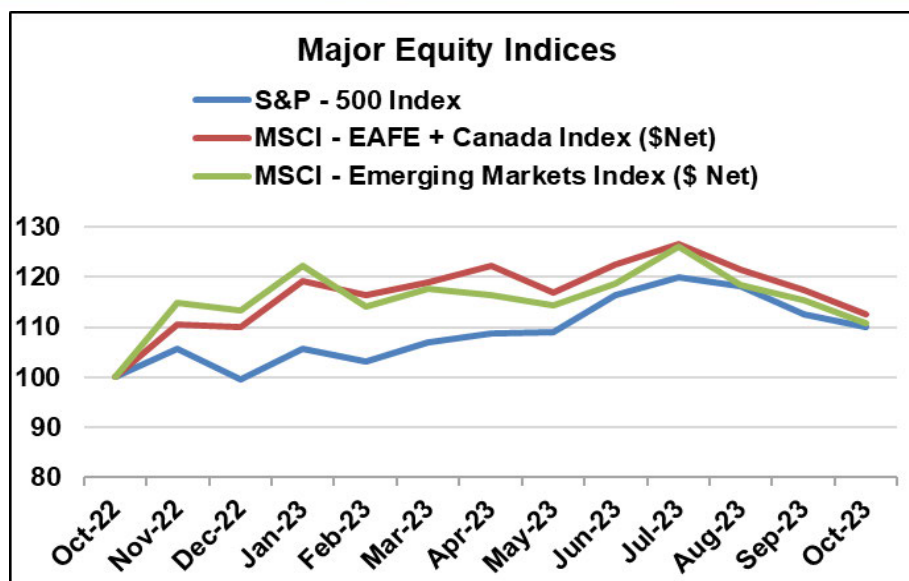


ECONOMY





MARKETS Equity

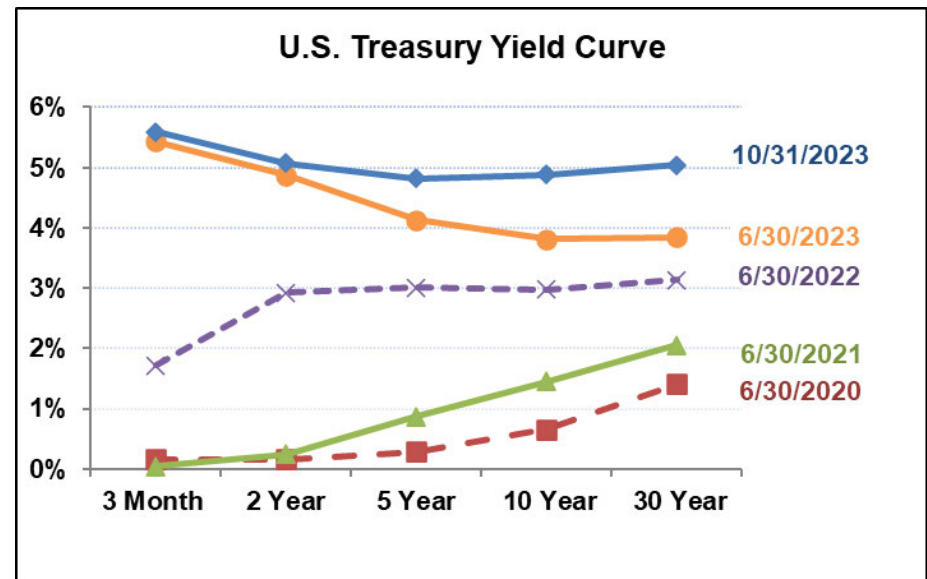
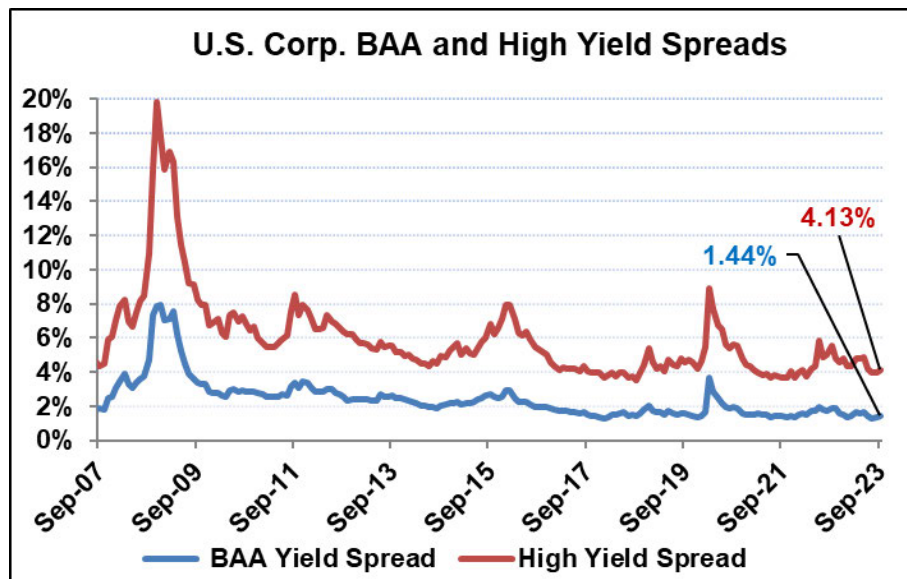


	Return as of 10/31/2023	
	1 Year	FYTD
S&P 500	10.14	(5.31)
MSCI - EAFE + Canada Index (\$Net)	12.56	(8.15)
MSCI - Emerging Markets Index (\$Net)	10.80	(6.70)

- 2008 (Nov.) Financial Crisis S&P 500: -48.8%
- 2010 (May) Flash crash; Europe/ Greece debt S&P 500: -16%
- 2011 (Aug.) US downgrade, Europe periphery S&P 500: -19.4%
- 2012 (June) Eurozone double dip S&P 500: -9.9%
- 2015 (Aug.) Global slowdown, China, Fed S&P 500: -12.4%
- 2016 (Feb.) Oil crash, US recession fear, China S&P 500: -10.5%
- 2018 (Feb.) Inflation, trade, tech S&P 500 : -10.2%
- 2018 (Dec.) Interest rate hike, trade tension, global slowdown S&P 500: -10.5%
- 2020 (Mar.) Coronavirus, S&P 500 : -23.7%

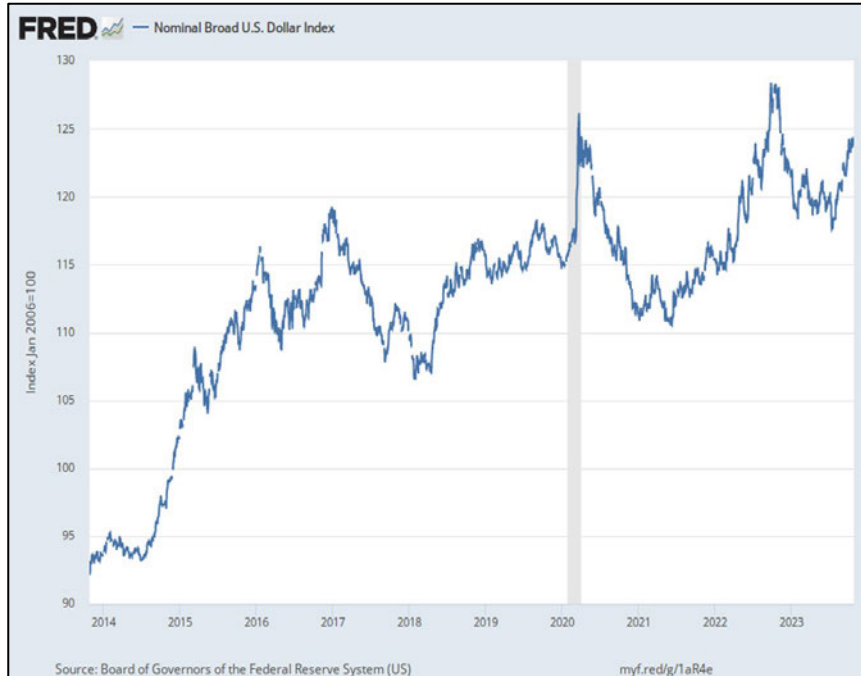


MARKETS Fixed Income

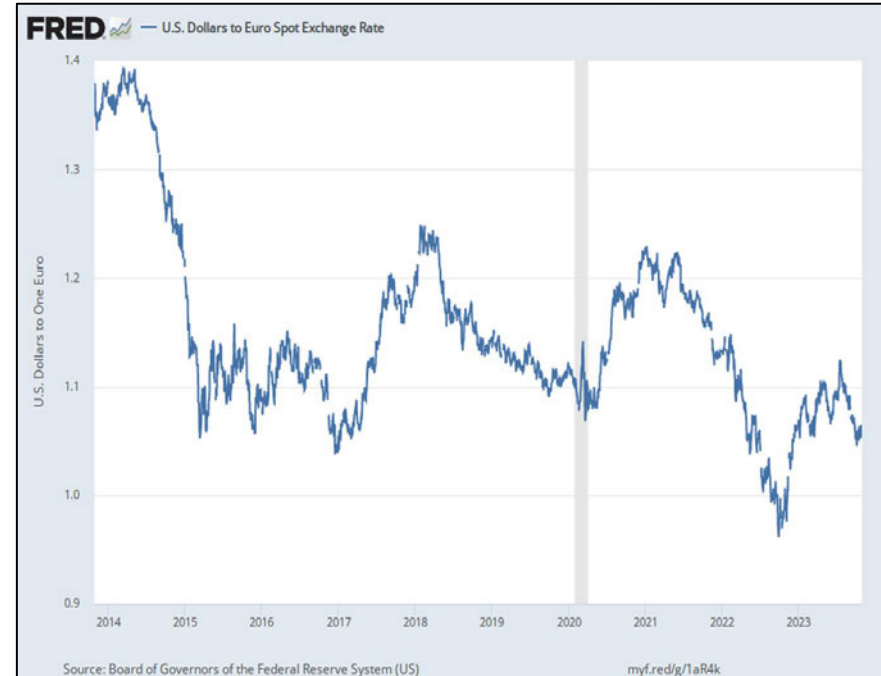




MARKETS Foreign Exchange



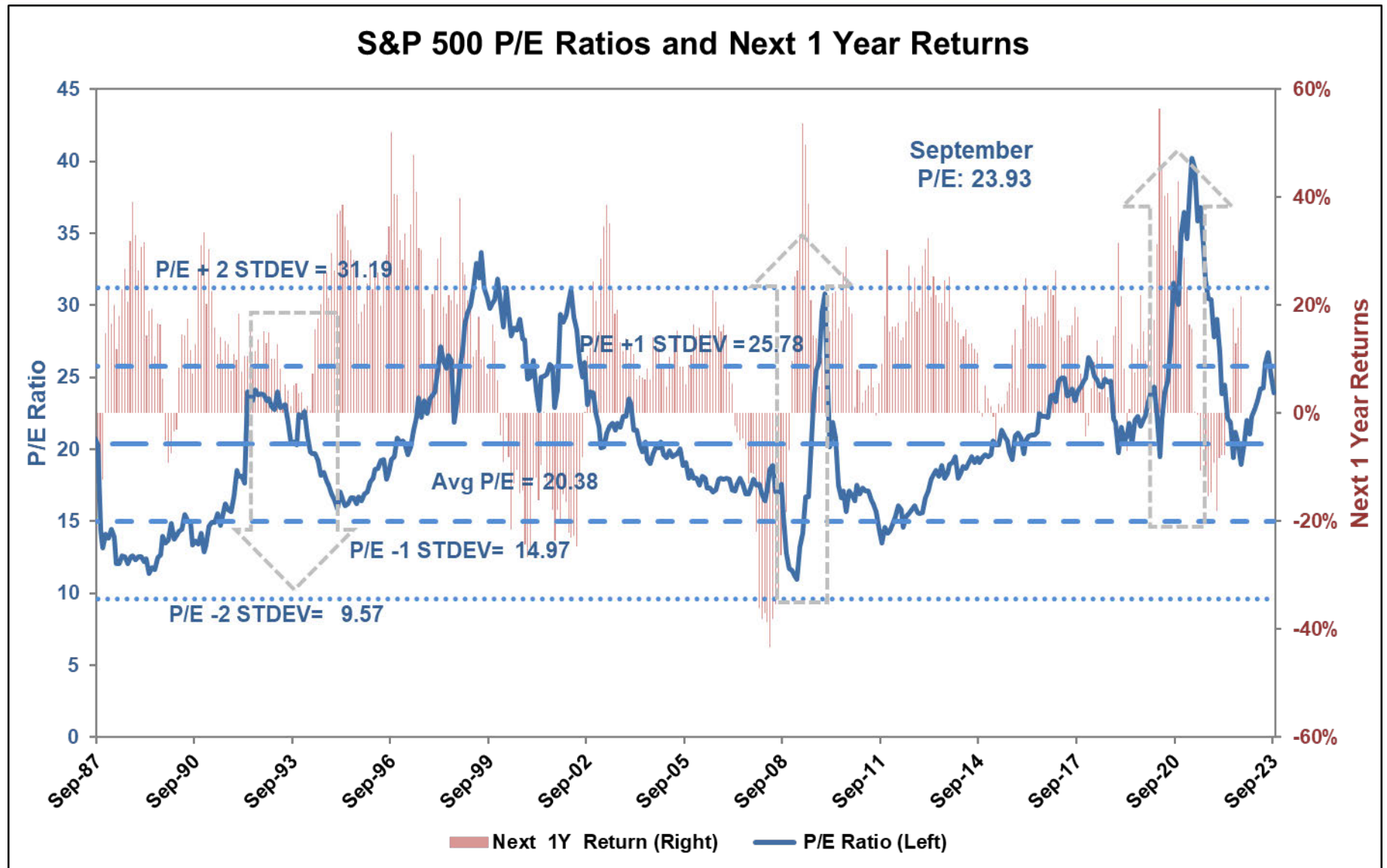
Date	Nominal Broad U.S. Dollar Index January 2006=100
June-20	120.86
June-21	112.85
June-22	121.05
June-23	119.89
October 27, 2023	124.02



Date	U.S. / Euro Foreign Exchange Rate U.S. Dollars to One Euro
June-20	1.12
June-21	1.18
June-22	1.05
June-23	1.09
October 27, 2023	1.06

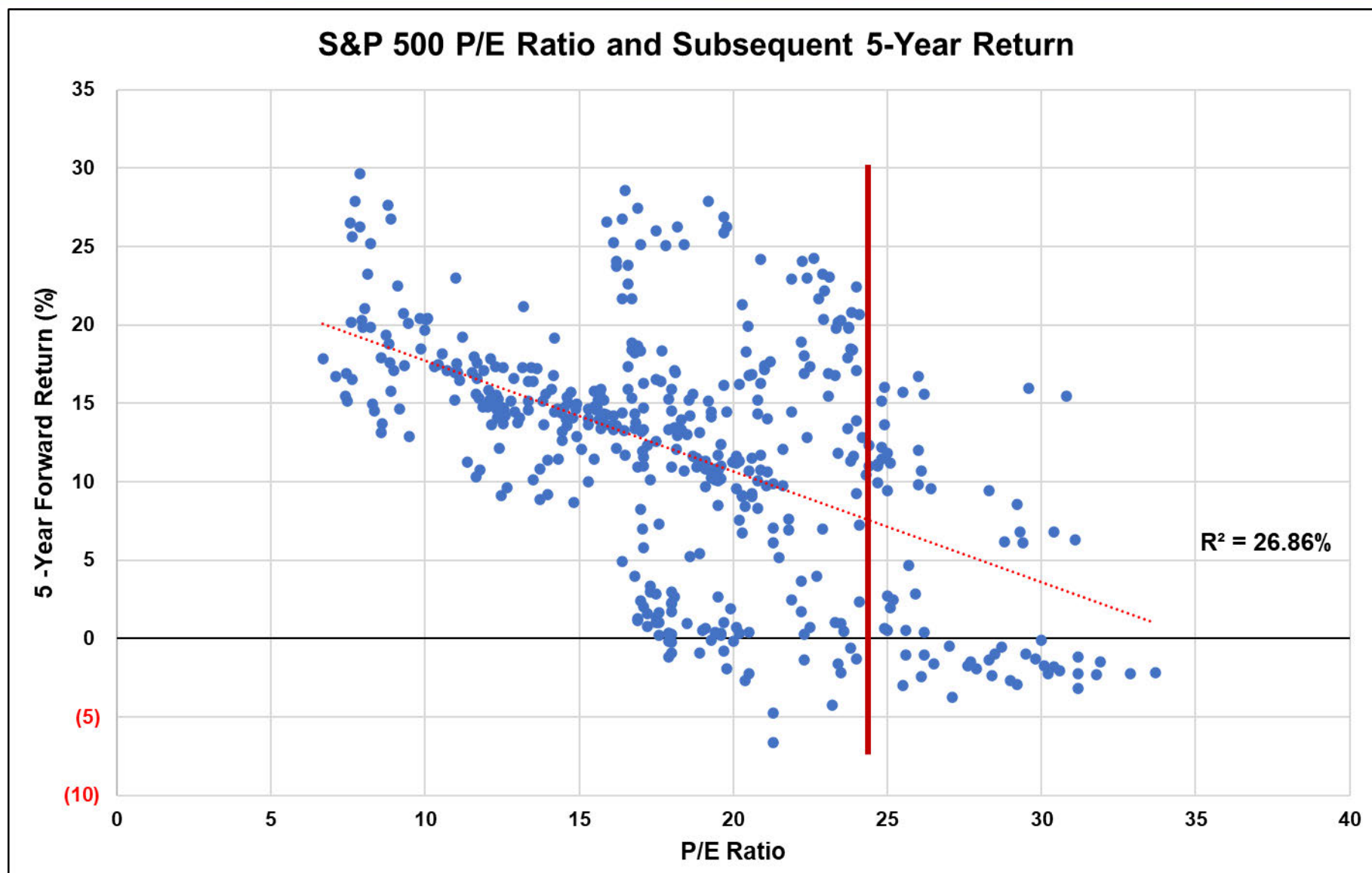


VALUATION US Equity



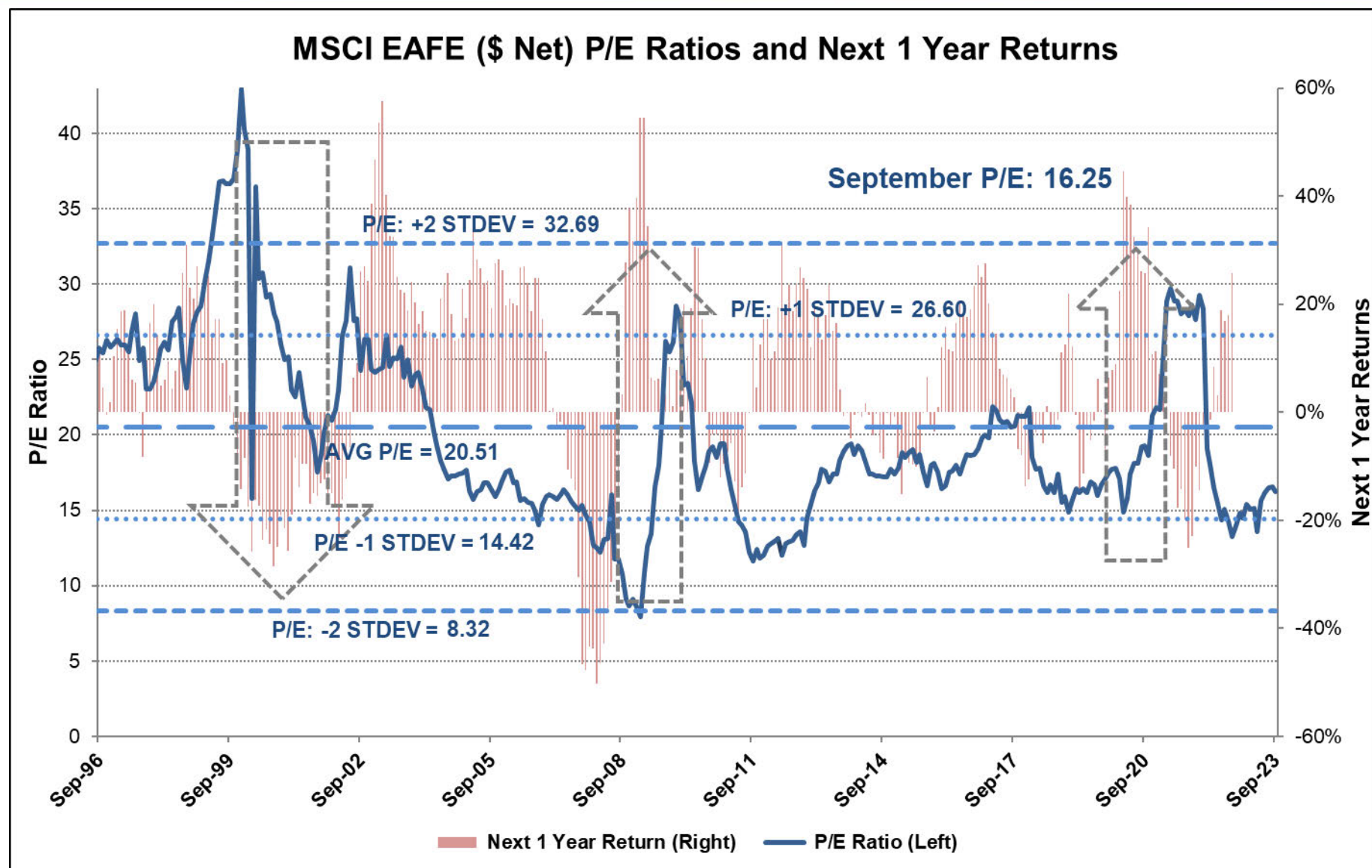


VALUATION US Equity



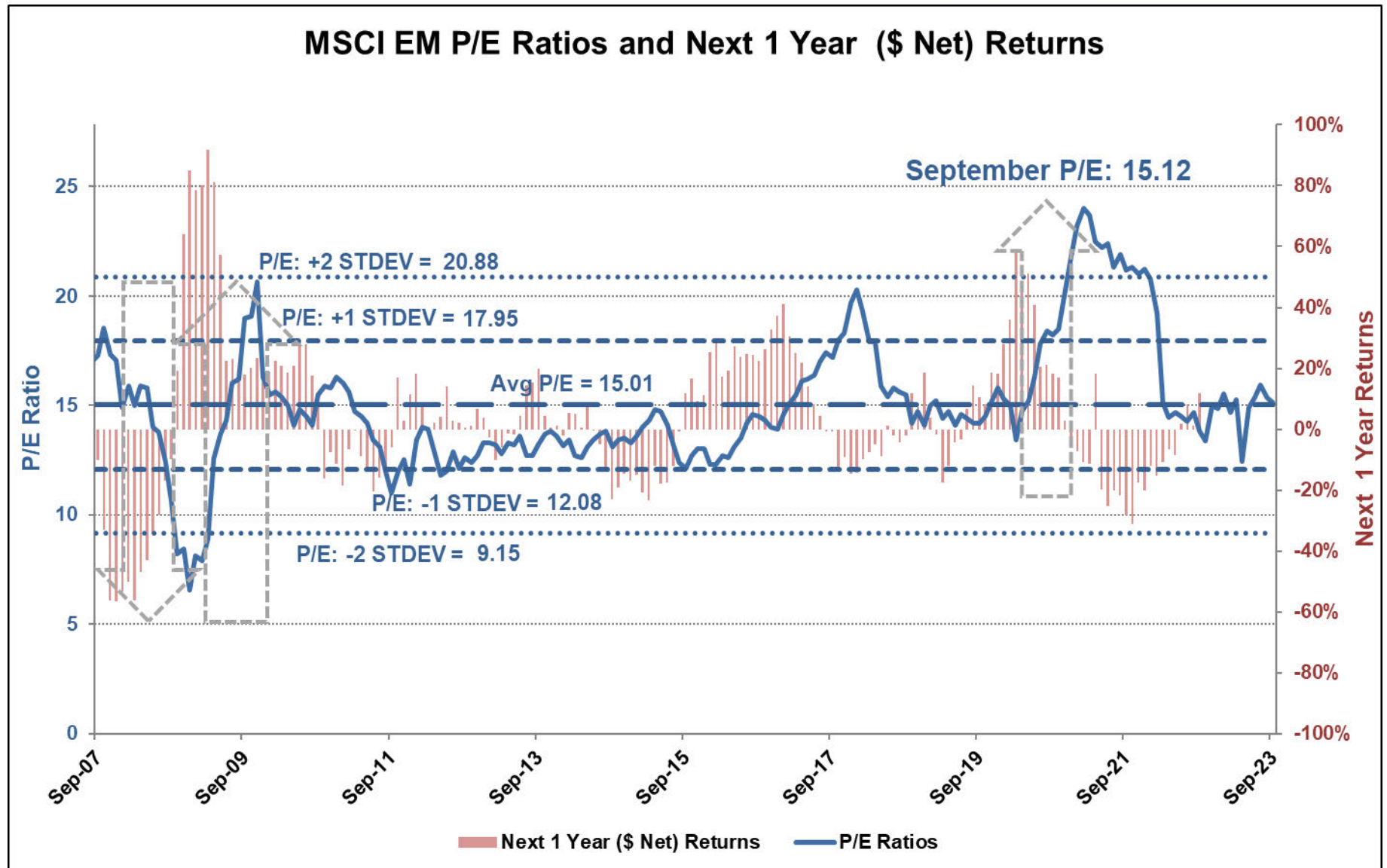


VALUATION Non US Developed Market Equity



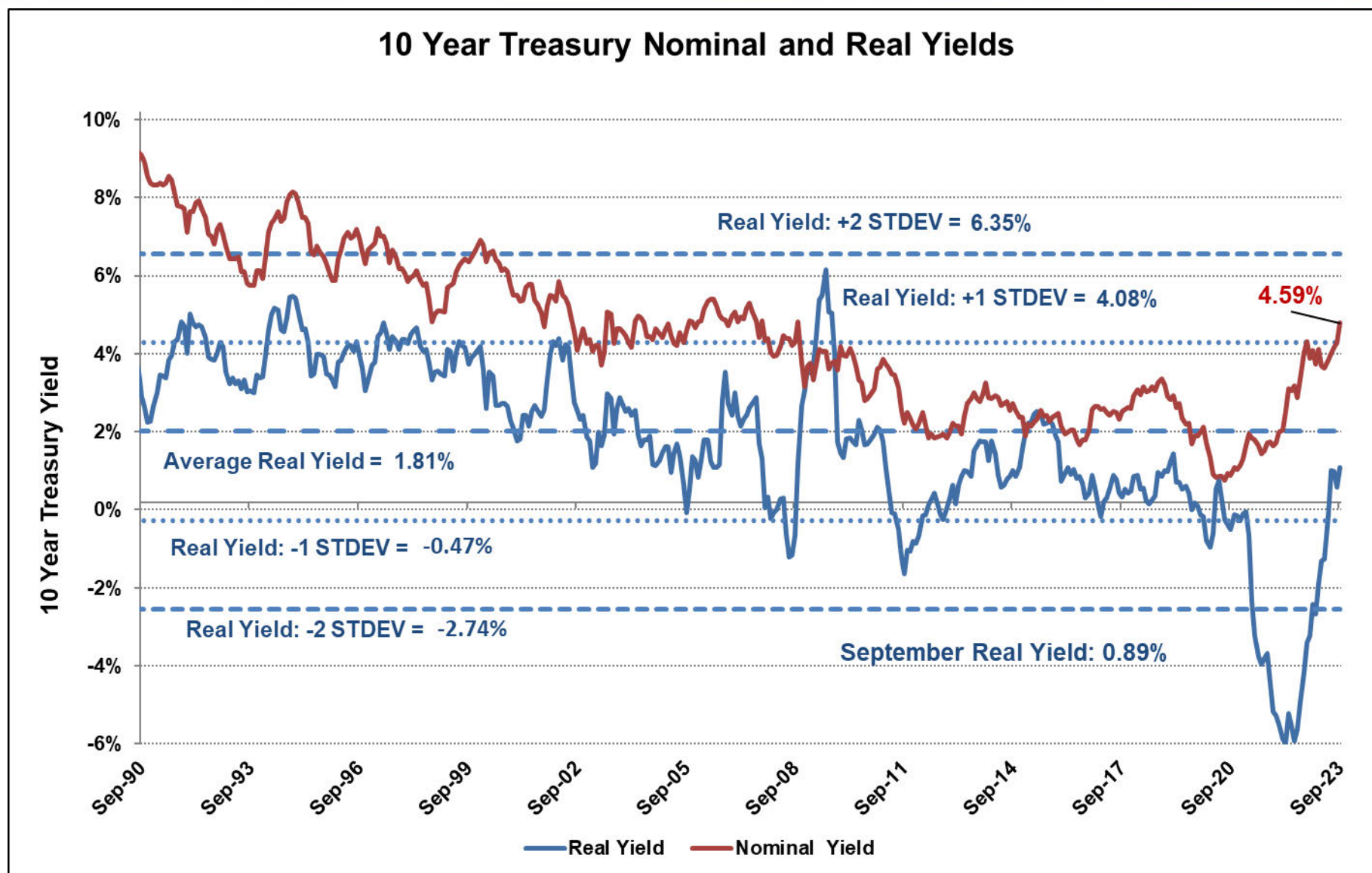


VALUATION Emerging Market Equity





VALUATION US Treasury Bonds





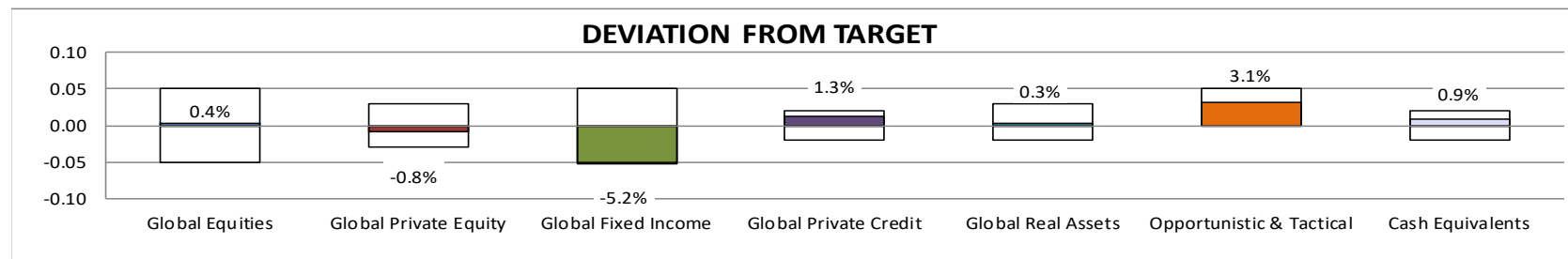
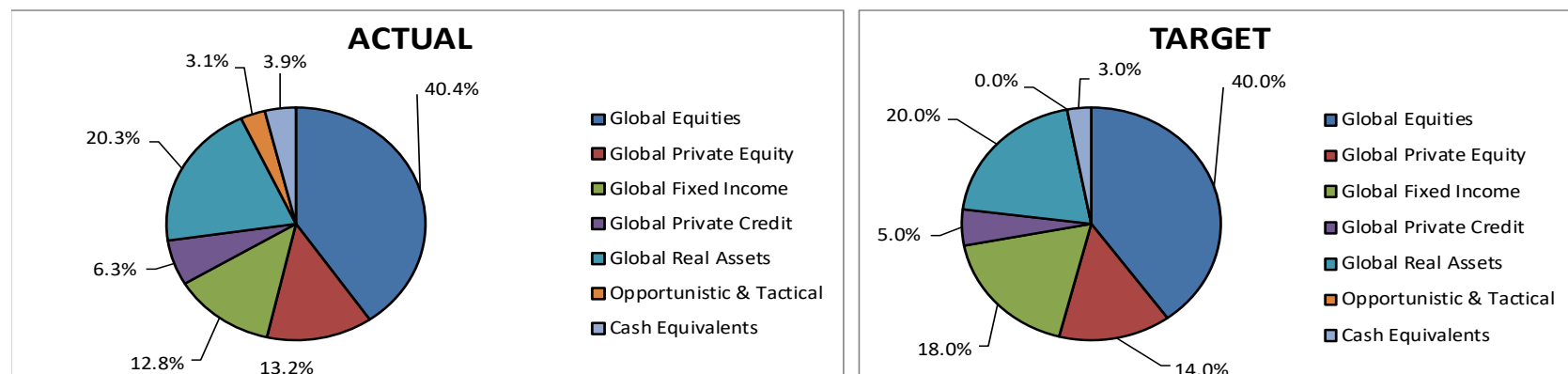
SERS' Investment Portfolios Review



Total Fund Asset Allocation

Asset Class	Market Value \$	Actual	Target	Range
Global Equities	7,045,226,853	40.4%	40.0%	35% - 45%
Global Private Equity	2,312,081,574	13.2%	14.0%	11% - 17%
Global Fixed Income	2,235,925,967	12.8%	18.0%	13% - 23%
Global Private Credit	1,097,269,183	6.3%	5.0%	3% - 7%
Global Real Assets	3,548,830,535	20.3%	20.0%	17% - 22%
Opportunistic & Tactical	539,321,389	3.1%	0.0%	0% - 5%
Cash Equivalents	676,492,829	3.9%	3.0%	1% - 5%
Short-Term	613,933,542	3.5%	2.0%	
Russell EA Overlay	19,672,809	0.1%	0.0%	
Direct Rebalance Overlay	4,025,225	0.0%	0.0%	
Transition / Operational Account	1,657,762	0.0%	0.0%	
Currency Overlay	37,203,491	0.2%	0.0%	
Total Fund	17,455,148,331	100.0%	100.0%	

Source: BNY Mellon GRS





Total Fund Change in Net Assets

CHANGE IN NET ASSETS

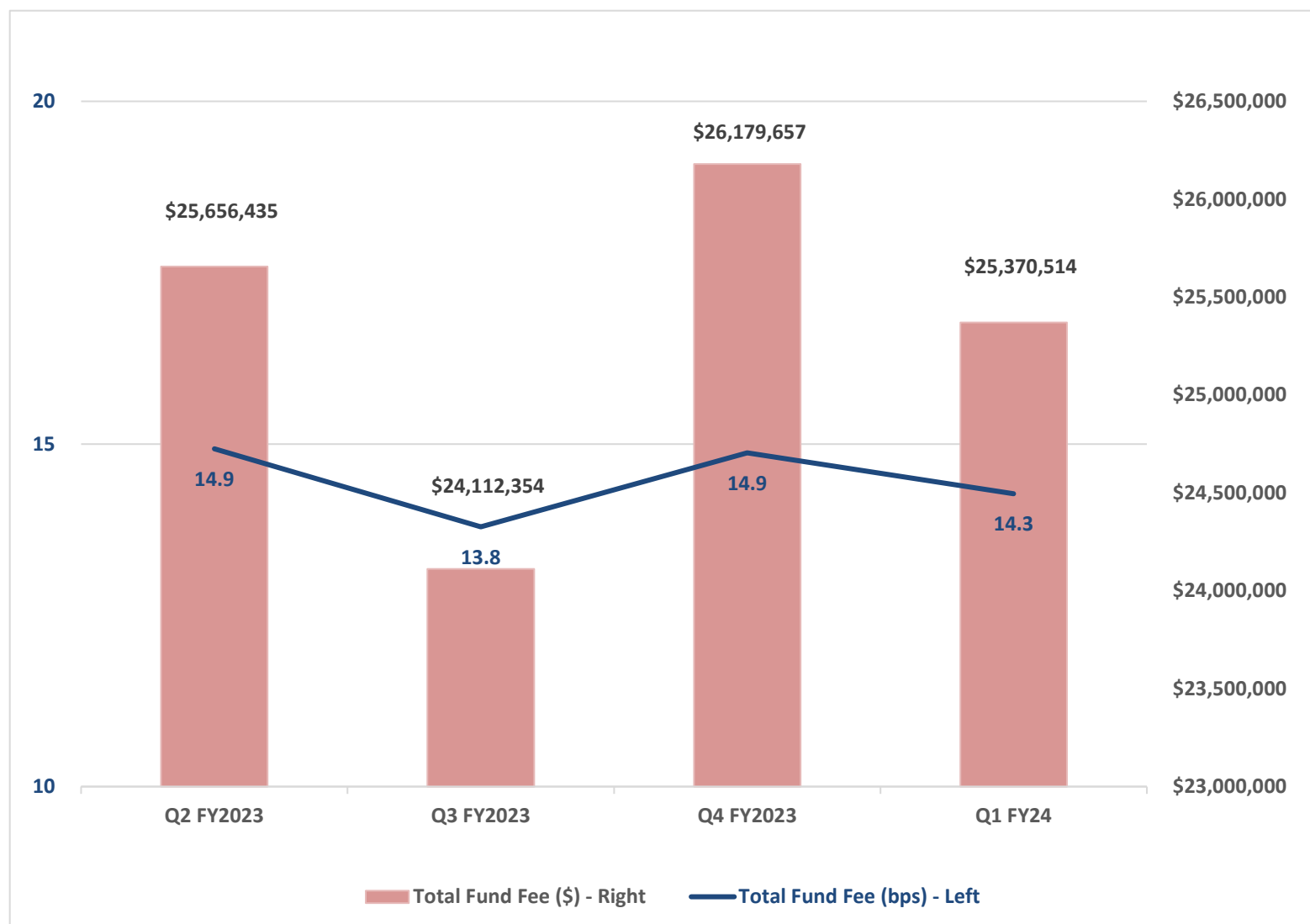
	vs. One Year Ago, since 10/01/2022	vs. Three Years Ago, since 10/01/2020
Beginning Market Value	16,527,286,785	15,190,082,625
Gain/Loss	1,583,603,654	4,246,613,414
Expenses	(95,742,107)	(272,843,688)
Net Transfer	(560,000,000)	(1,708,704,020)
End of Period Market Value	17,455,148,332	17,455,148,332

**Sources of Net Transfer*

<i>Dividends/Interest</i>	224,721,432
<i>Net Distributions</i>	335,278,568
<i>Cash on Hand</i>	Not Required



Total Fund Fees by Quarter

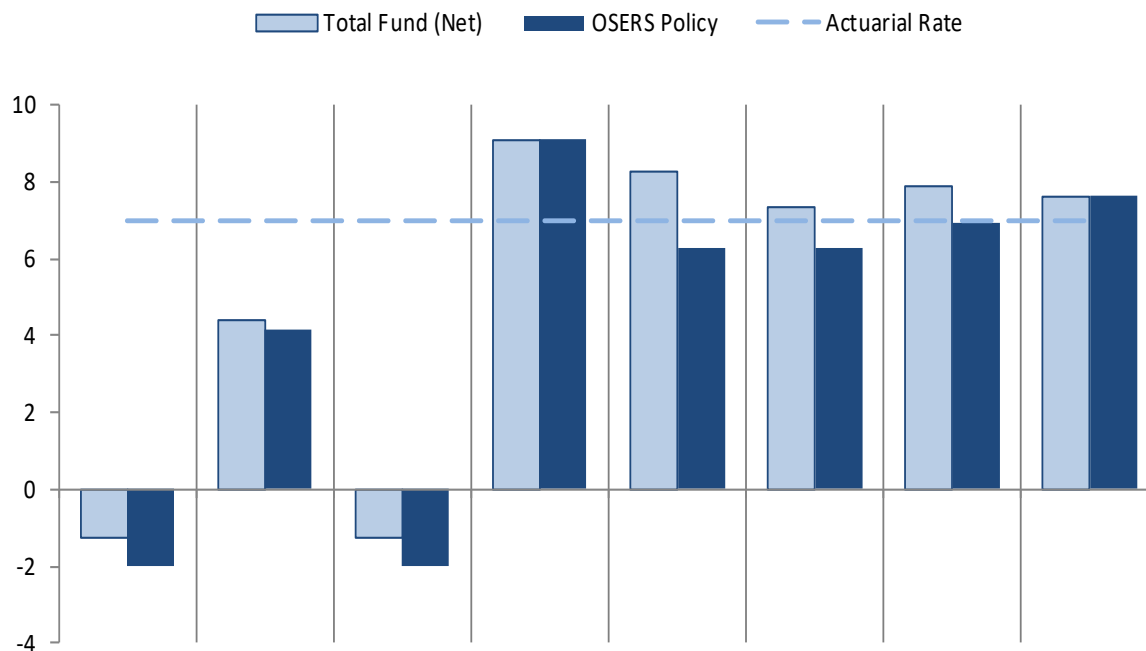




Total Fund Performance

Current Benchmark:

40% MSCI ACWI (Net Dividends)
 14.00% Burgiss All Private Equity
 benchmark (1q lag) (BAPE)
 18.00% Bloomberg Aggregate Bond
 20.00% NCREIF Property (1q lag)
 5.00% 90 Day T-Bill (1q lag) + 4.5%
 3.00% FTSE 30 Day T-Bill



Actuarial Rate

(7.0% effective 7/1/21, adopted 4/15/21)

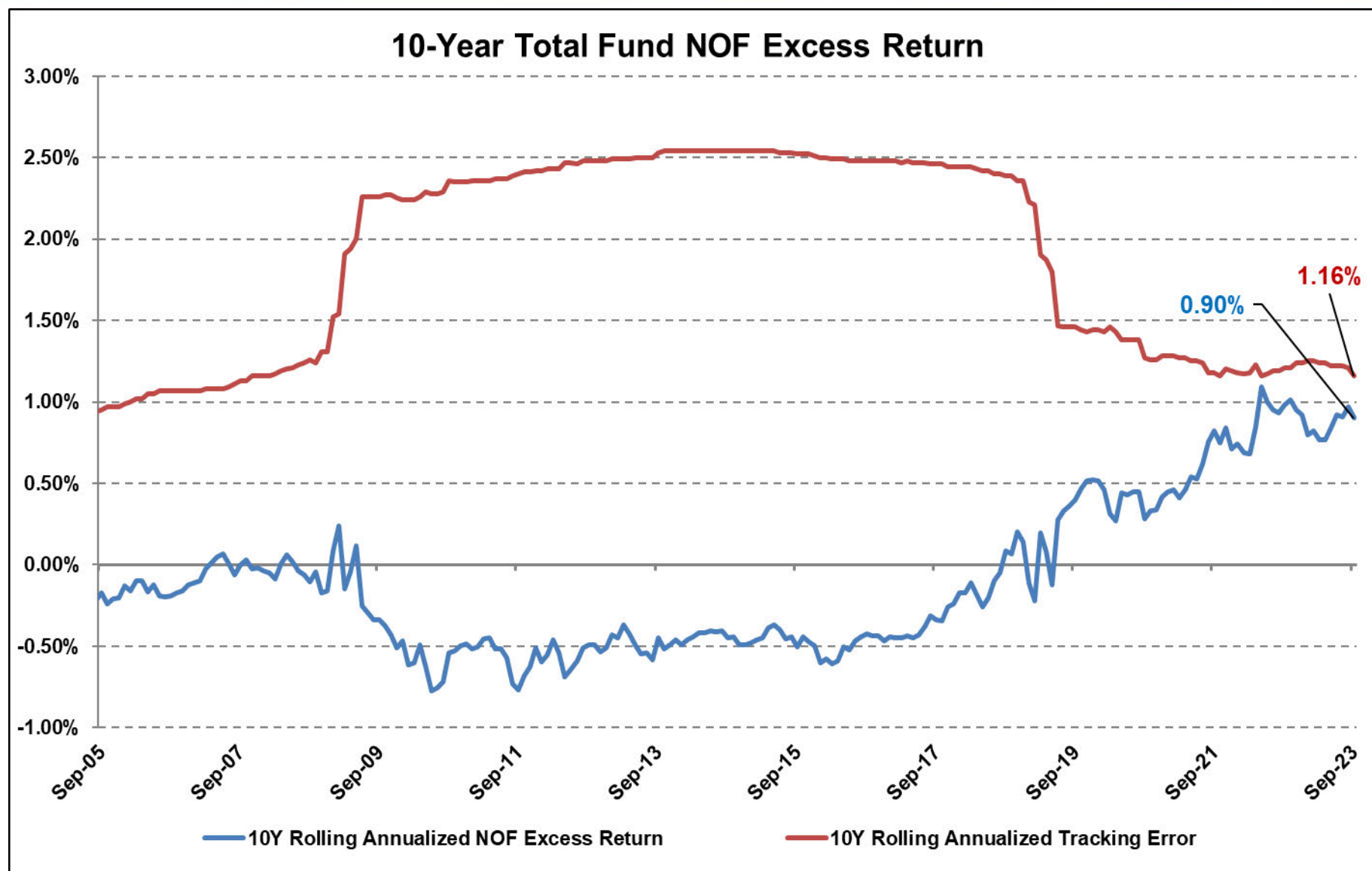
	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year	ITD*
Total Fund (Gross)	(1.10)	4.89	(1.10)	9.77	8.94	8.03	8.54	8.23
Total Fund (Net)	(1.27)	4.38	(1.27)	9.06	8.23	7.35	7.85	7.70
OSERS Policy	(1.99)	4.13	(1.99)	9.11	6.29	6.26	6.95	7.63
Value Added (Net of Fee)	0.72	0.25	0.72	(0.05)	1.94	1.09	0.90	0.07

Source: BNY Mellon GRS

*ITD is Inception date 10/1/1994 (29 years and 0 months)

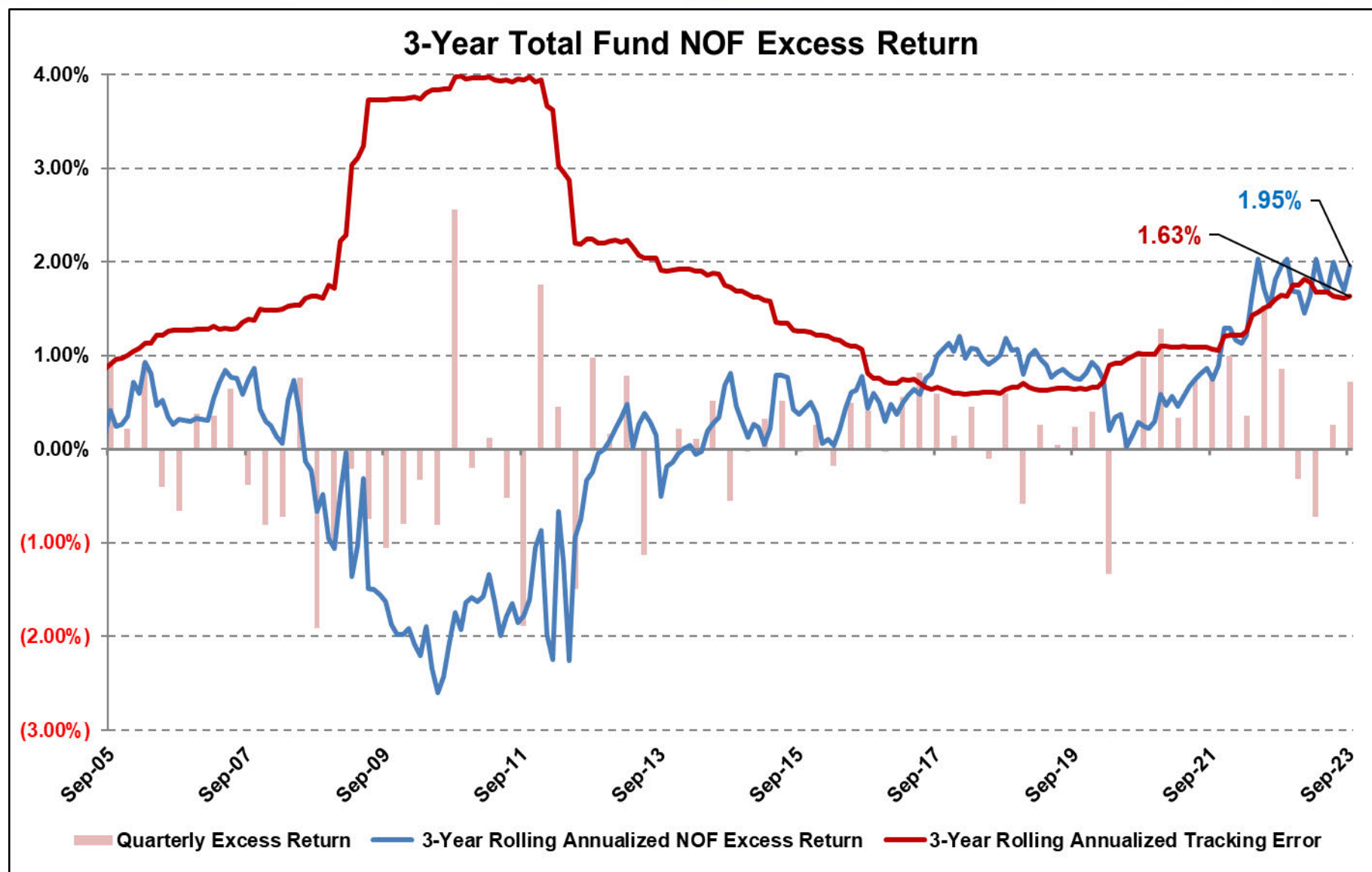


Total Fund Performance





Total Fund Performance





Total Fund Performance

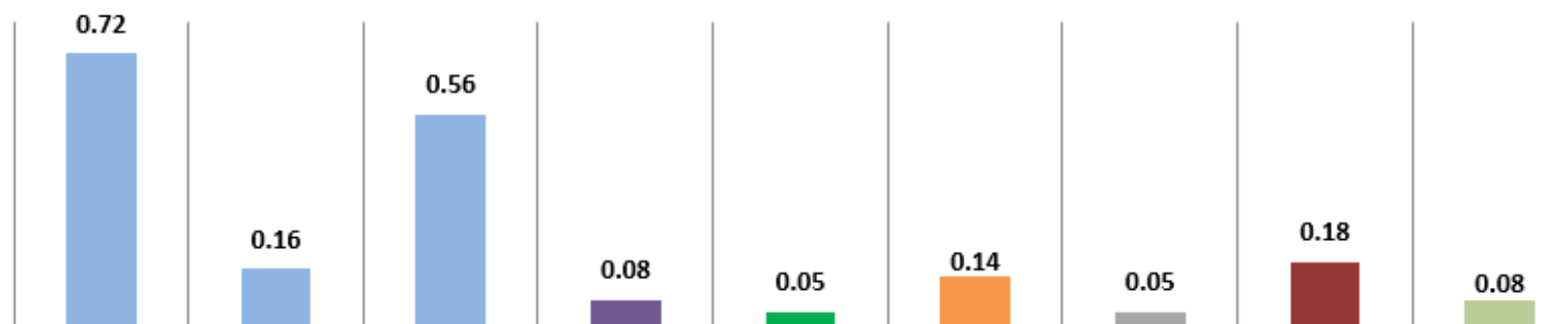
10-Year Total Fund NOF Total Return



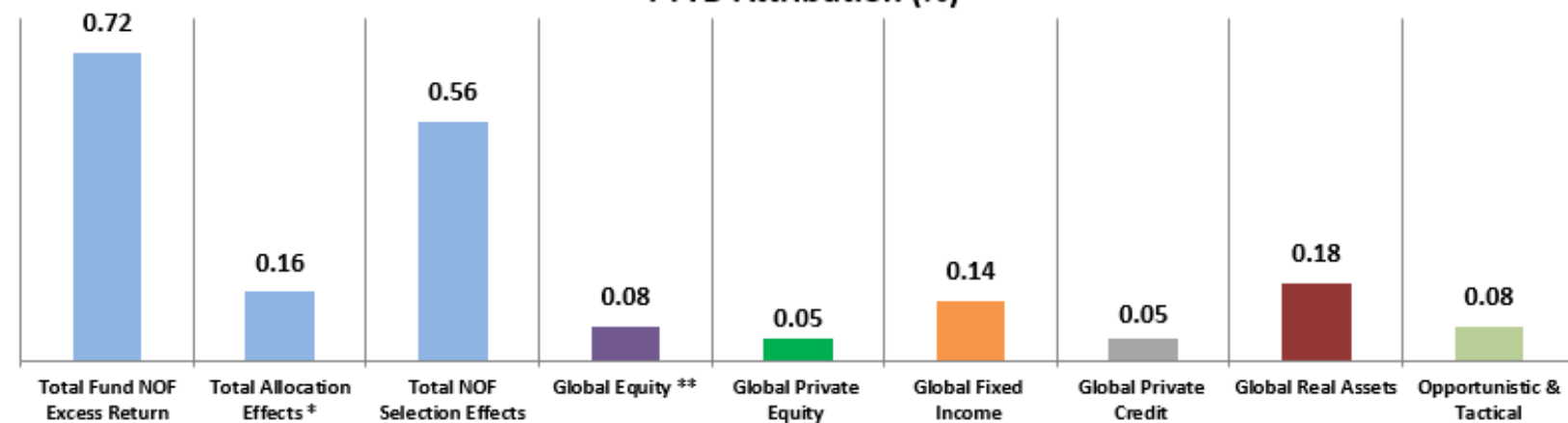


Total Fund Attribution

3 Month Attribution (%)



FYTD Attribution (%)

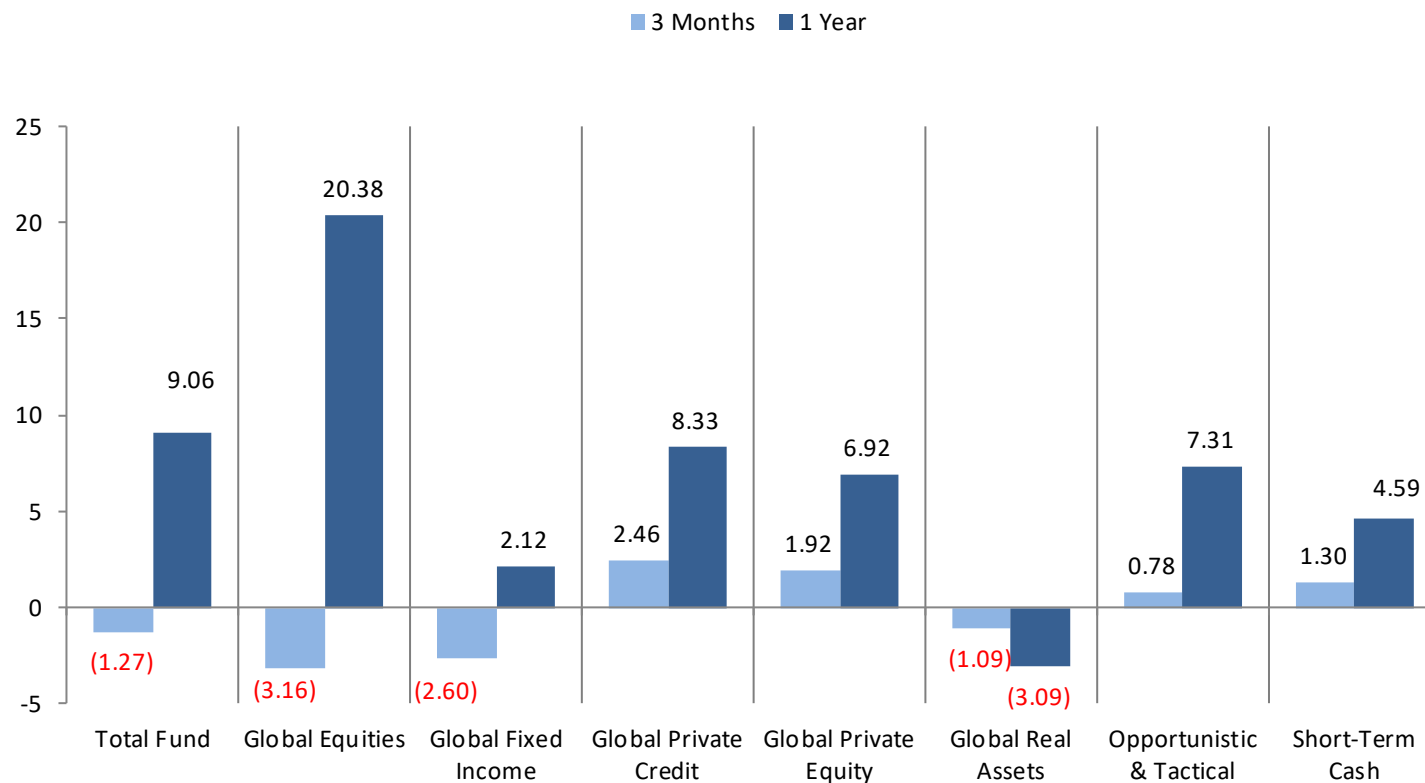


* Total Allocation Effects include net contributions from the Enhanced Asset Allocation and Currency Overlay Programs

** Global Equity including Global, US Equity, Non-US Equity Developed Market and Non-US Equity Emerging Market Portfolios



Total Fund and Asset Class Performance (Net)



Source: BNY Mellon GRS



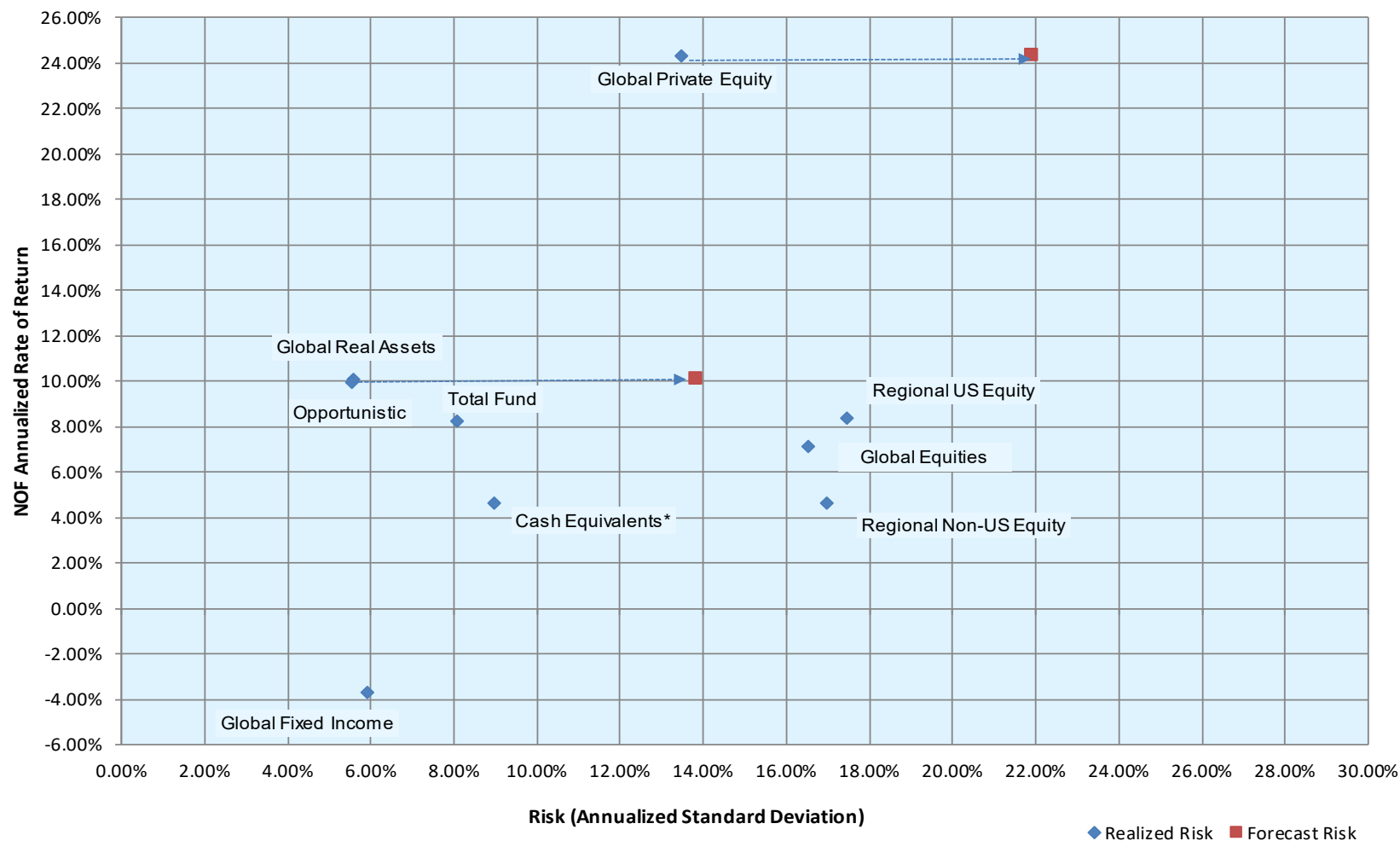
5 Year Risk and Return



*Cash Equivalents include Short-Term, Enhanced Allocation Overlay and Currency Overlay



3 Year Risk and Return



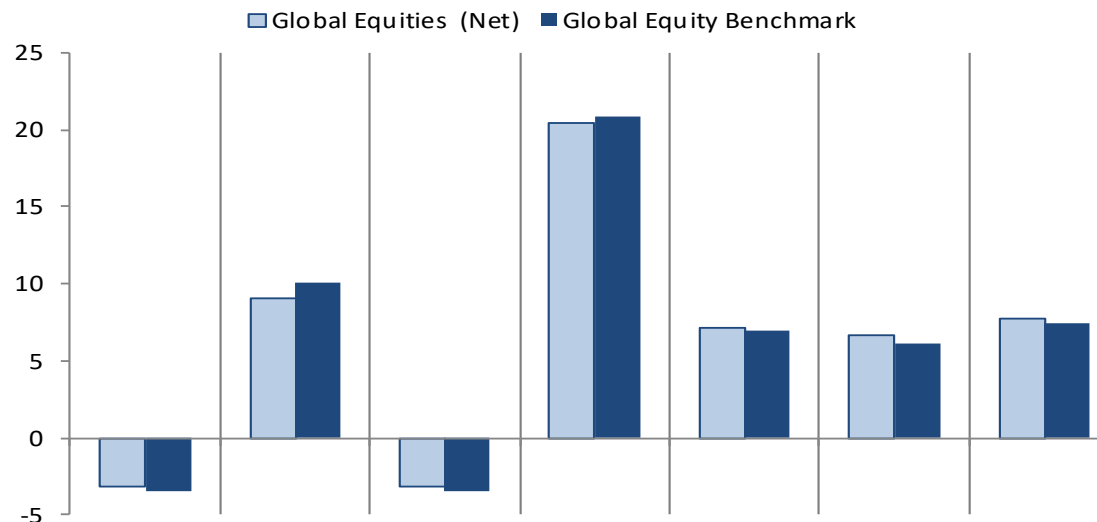
*Cash Equivalents include Short-Term, Enhanced Allocation Overlay and Currency Overlay



Global Equities Performance

Current Benchmark:

MSCI ACWI (Net Dividends)



	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Global Equities (Gross)	(3.08)	9.24	(3.08)	20.72	7.42	7.00	8.14
Global Equities (Net)	(3.16)	9.00	(3.16)	20.38	7.10	6.68	7.80
Global Equity Benchmark	(3.40)	10.06	(3.40)	20.80	7.00	6.13	7.46
Value Added (Net of Fee)	0.24	(1.05)	0.24	(0.42)	0.10	0.56	0.35
Regional US Equity	(3.43)	10.00	(3.43)	18.44	8.38	8.59	10.71
Russell 3000 Index	(3.25)	12.39	(3.25)	20.46	9.38	9.14	11.28
Value Added (Net of Fee)	(0.18)	(2.39)	(0.17)	(2.02)	(1.00)	(0.55)	(0.57)
Regional Non-US Equity	(4.46)	5.14	(4.46)	20.22	4.61	3.95	4.51
Custom Non-US Equity BM	(3.77)	5.34	(3.77)	20.39	3.65	2.53	3.35
Value Added (Net of Fee)	(0.69)	(0.20)	(0.69)	(0.17)	0.96	1.42	1.16

Source: BNY Mellon GRS

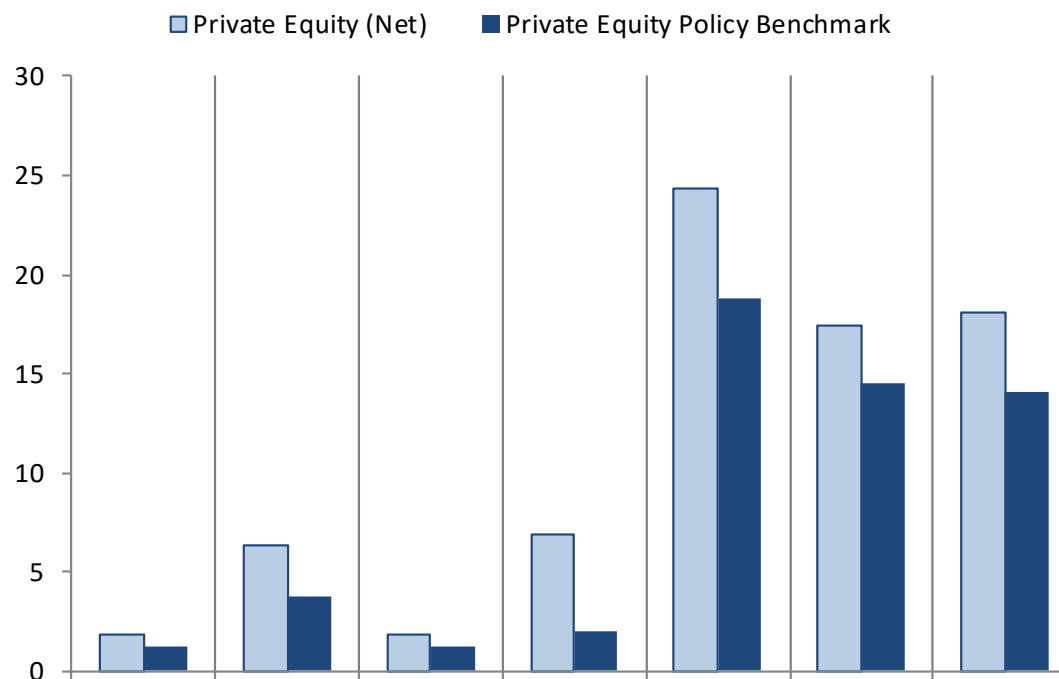


Global Private Equity Performance

Results as of: 06/30/2023

Current Benchmark:

Burgiss All Private Equity Index



	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Private Equity (Gross)	2.33	7.55	2.33	8.59	26.21	19.25	19.78
Private Equity (Net)	1.92	6.36	1.92	6.92	24.30	17.47	18.10
Private Equity Policy Benchmark	1.21	3.80	1.21	1.99	18.84	14.48	14.11
Value Added (Net of Fee)	0.70	2.56	0.70	4.92	5.46	2.99	3.99

Source: BNY Mellon GRS

The difference between Gross and Net is management fee only. Performance based fees are captured in the Gross return.

Global Private Equity performance is reported one quarter in arrears.



Public vs Private Equity Performance (Net)

Public vs Private Equity - Performance (Net)

	3 Year	5 Year	10 Year
Regional US Equity	8.38	8.59	10.71
Global Equity	7.10	6.68	7.80
Private Equity	24.30	17.47	18.10

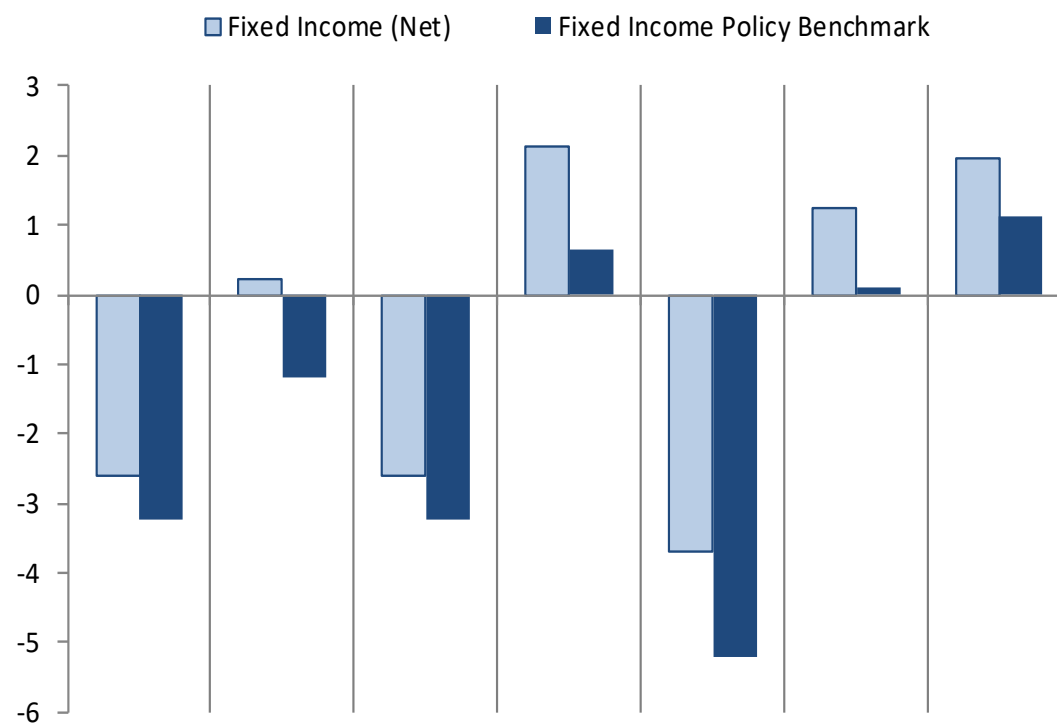
* Private Equity returns are lagged one quarter



Global Fixed Income Performance

Current Benchmark:

Bloomberg Aggregate Bond Index



	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Fixed Income (Gross)	(2.53)	0.43	(2.53)	2.40	(3.44)	1.49	2.20
Fixed Income (Net)	(2.60)	0.23	(2.60)	2.12	(3.70)	1.24	1.96
Fixed Income Policy Benchmark	(3.23)	(1.21)	(3.23)	0.64	(5.21)	0.10	1.13
Value Added (Net of Fee)	0.63	1.43	0.63	1.48	1.51	1.14	0.83

Source: BNY Mellon GRS

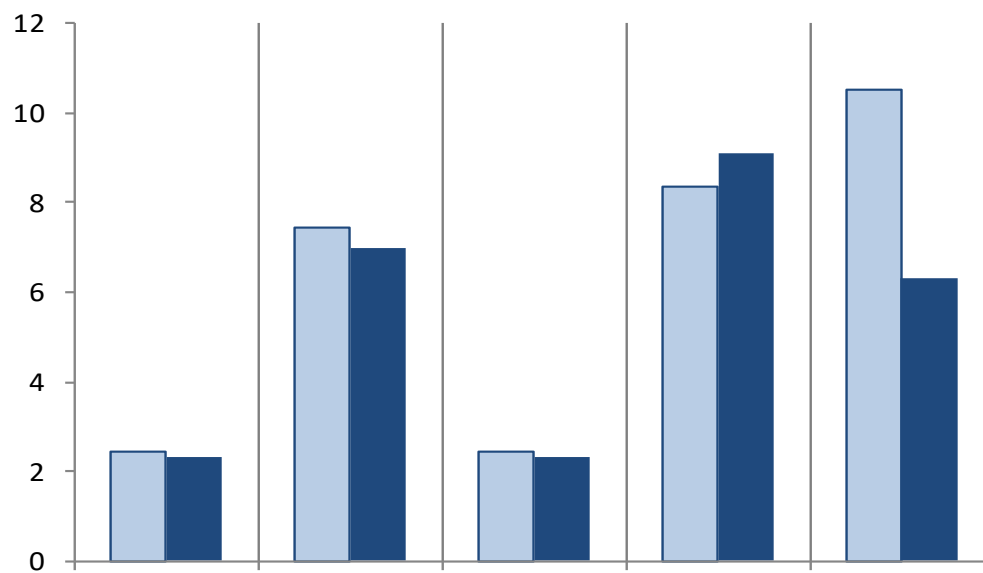


Global Private Credit Performance

Global Private Credit (Net) Global Private Credit Policy Benchmark

Current Benchmark:

90 Day T-Bill (1q lag) + 4.5%



	Qtr	CYTD	FYTD	1 Year	3 Year
Global Private Credit (Gross)	2.86	8.72	2.86	9.99	12.07
Global Private Credit (Net)	2.46	7.47	2.46	8.33	10.51
Global Private Credit Policy Benchmark	2.32	6.99	2.32	9.08	6.29
Value Added (Net of Fee)	0.14	0.47	0.14	(0.75)	4.22

Source: BNY Mellon GRS

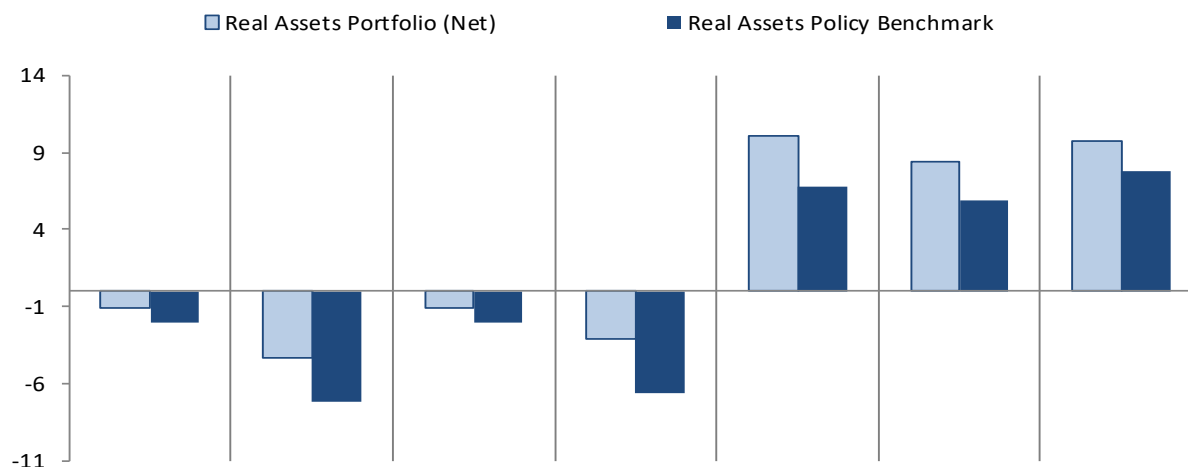
The difference between Gross and Net is management fee only. Performance based fees are captured in the Gross return.



Global Real Assets Performance

Results as of: 06/30/2023

Current Benchmark:
NCREIF Property Index (1q lag)



	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Real Assets Portfolio (Gross)	(0.88)	(3.73)	(0.88)	(2.27)	11.01	9.39	10.74
Real Assets Portfolio (Net)	(1.09)	(4.33)	(1.09)	(3.09)	10.09	8.45	9.70
Real Assets Policy Benchmark	(1.98)	(7.12)	(1.98)	(6.60)	6.79	5.90	7.82
Real Assets Value Added (NOF)	0.89	2.79	0.89	3.50	3.29	2.54	1.88
Real Assets Core (Net)	(2.04)	(9.33)	(2.04)	(8.21)	10.86	8.70	9.58
Real Assets Policy Benchmark	(1.98)	(7.12)	(1.98)	(6.60)	6.79	5.90	7.82
Real Assets Core Value Added (NOF)	(0.06)	(2.21)	(0.06)	(1.61)	4.07	2.80	1.76
Real Assets Non-Core (Net)	(2.31)	(4.13)	(2.31)	(6.02)	5.03	5.33	8.68
Real Assets Policy Benchmark	(1.98)	(7.12)	(1.98)	(6.60)	6.79	5.90	7.82
Real Assets Non-Core Value Added (NOF)	(0.33)	2.99	(0.33)	0.58	(1.76)	(0.57)	0.86
Real Assets Infrastructure (Net)	1.18	6.61	1.18	9.05	10.15	9.97	n/a
Real Assets Policy Benchmark	(1.98)	(7.12)	(1.98)	(6.60)	6.79	5.90	n/a
Real Assets Infrastructure Value Added (NOF)	3.16	13.73	3.16	15.65	3.36	4.07	n/a

Source: BNY Mellon GRS

The difference between Gross and Net is management fee only. Performance based fees are captured in the Gross return.

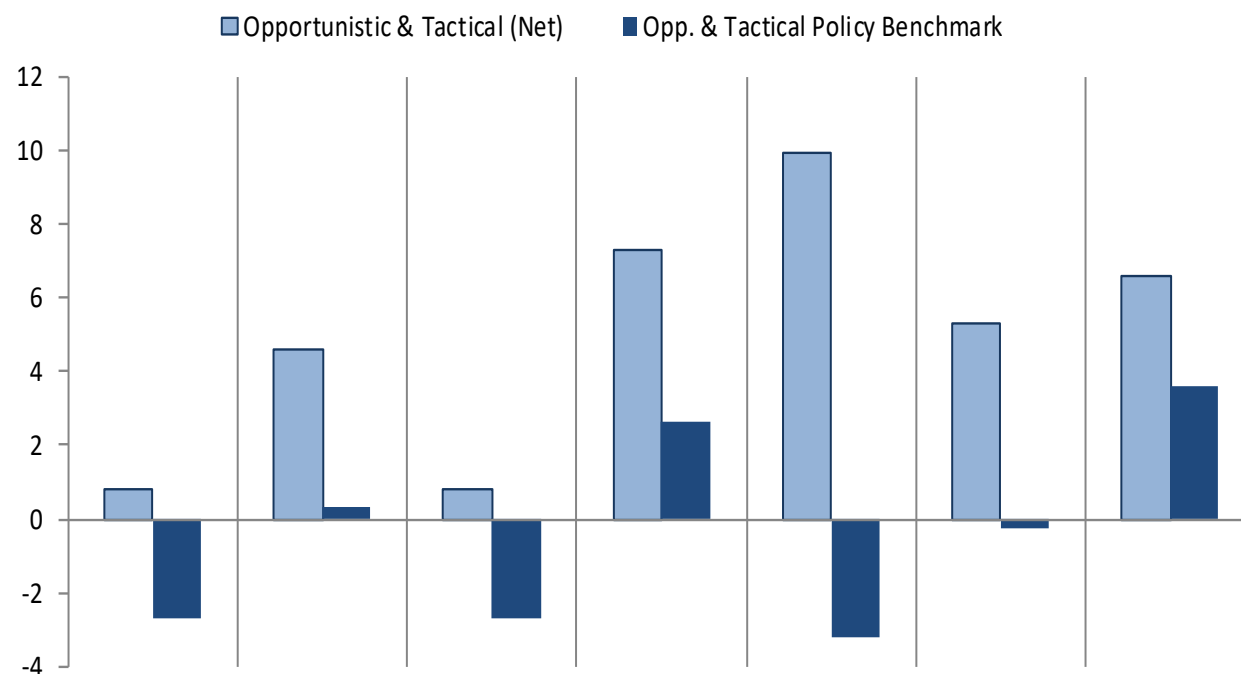
Global Real Assets performance is reported one quarter in arrears.



Opportunistic & Tactical Performance

Current Benchmark:

Bloomberg Aggregate
Bond Index + 2%



	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Opportunistic & Tactical (Gross)	1.04	5.44	1.04	8.39	11.12	6.67	8.38
Opportunistic & Tactical (Net)	0.78	4.63	0.78	7.31	9.92	5.30	6.58
Opp. & Tactical Policy Benchmark	(2.67)	0.30	(2.67)	2.64	(3.20)	(0.24)	3.63
	3.45	4.33	3.44	4.67	13.12	5.54	2.95

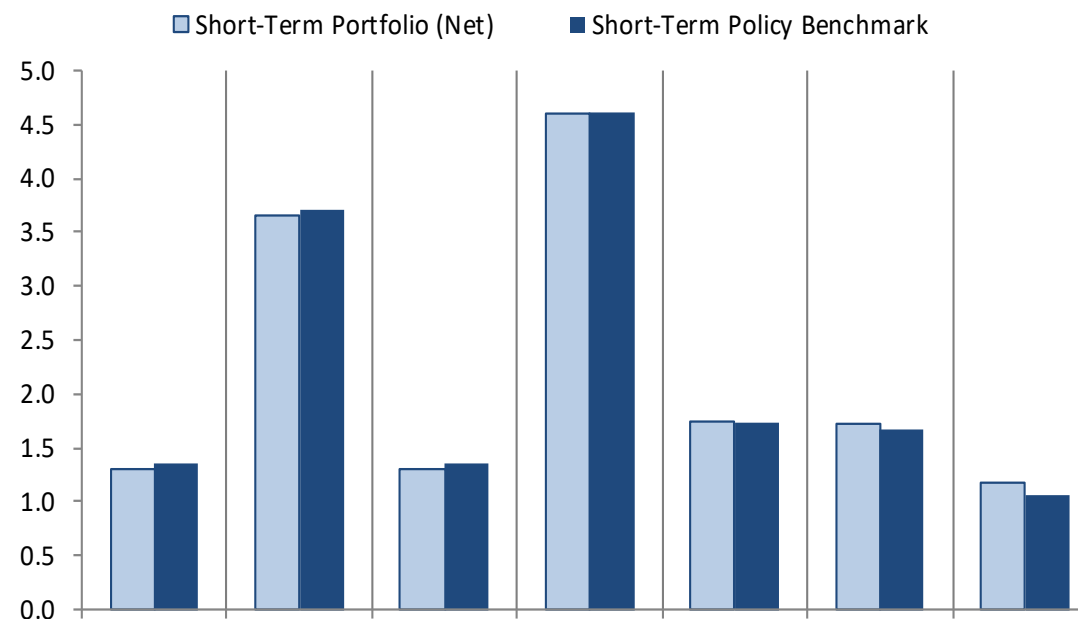
Source: BNY Mellon GRS



Short-Term Performance

Current Benchmark:

FTSE 30 Day Treasury Bill Index



	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Short-Term Portfolio (Gross)	1.30	3.65	1.30	4.59	1.74	1.72	1.17
Short-Term Portfolio (Net)	1.30	3.65	1.30	4.59	1.74	1.72	1.17
Short-Term Policy Benchmark	1.36	3.70	1.36	4.61	1.74	1.68	1.07
Value Added (Net of Fee)	(0.06)	(0.05)	(0.06)	(0.02)	0.00	0.04	0.10

Source: BNY Mellon GRS



Overlay Performance

	Qtr	CYTD	FYTD	1 Year	3 Year	5 Year	10 Year
Cash Equivalents with Overlays (Net)	2.99	5.34	2.99	(1.76)	4.65	4.88	2.97
Short-Term Policy Benchmark	1.36	3.70	1.36	4.61	1.74	1.68	1.07
Value Added (Net of Fee)	1.63	1.64	1.63	(6.37)	2.91	3.20	1.90
Short-term Cash w/o Overlays (Net)	1.30	3.65	1.30	4.59	1.74	1.72	1.17
Short-Term Policy Benchmark	1.36	3.70	1.36	4.61	1.74	1.68	1.07
Value Added (Net of Fee)	(0.06)	(0.05)	(0.06)	(0.02)	0.00	0.04	0.10
Overlay Cumulative Net Value Added (\$MM)	\$17.1	\$18.0	\$17.1	(\$30.7)	\$87.2	\$106.2	\$125.8



Proposed Investment Agenda – Next Meeting

- Annual Portfolio Review – Opportunistic & Tactical
- Monthly Investment Report (October 31, 2023)

Memo

To: Retirement Board
From: Chris Collins
cc: Richard Stensrud, Karen Roggenkamp
Date: November 3, 2023
Re: **Federal Legislative Report**

OVERVIEW

U.S. House Republicans voted for Mike Johnson (R-LA) as speaker in a chamber that has been frozen for more than three weeks after former Speaker Kevin McCarthy (R-CA) was ousted.

In a 220-209 party-line vote, all Republicans present backed Johnson, 51, a lawyer who represents northwest Louisiana's 4th District. All Democrats present voted for Minority Leader Hakeem Jeffries (D-NY).

Johnson, who was praised by his colleagues for unifying a fractured and divided GOP conference, will now need to seek the cooperation of Democrats as Congress risks another partial government shutdown in less than a month. Johnson will be tasked with working with the Democratic-controlled Senate on a quickly approaching November 17th government funding deadline to prevent a government shutdown, and critical legislation such as the recent nearly \$106 billion supplemental request from the Biden administration to fund Ukraine, Israel and global aid and U.S. border security.

Strongly conservative, Johnson has voted against several recent bipartisan pieces of legislation such as the infrastructure law, a gun safety bill signed into law and the reauthorization of the Violence Against Women Act. He was one of more than 100 House Republicans who voted to block Pennsylvania and Arizona's presidential results following the January 6th attack on the U.S. Capitol. In advance of the joint session of Congress on January 6th, Johnson also led a statement with 36 fellow Republicans outlining opposition to the Electoral College results in Georgia and Michigan as well.

Johnson, with his legal experience, has spent most of his time in Congress working on the Judiciary Committee, although he also serves on Armed Services. He'll now have to pass legislation from agriculture to defense to foreign policy, while also undertaking massive fundraising to help expand Republicans' majority. He also sits on the newly formed Select Subcommittee on the Weaponization of the Federal Government.

President Joe Biden congratulated Johnson in an official White House statement.

Johnson, who was the fourth GOP nominee for the speakership, will have to walk a tightrope while establishing a relationship with the White House and wrangling in those same far-right members who ousted McCarthy in early October.

In a letter to colleagues dated October 23rd, Johnson laid out an aggressive timeline to pass the individual funding bills. He wrote that “if another stopgap measure is needed to extend government funding beyond the November 17 deadline, I would propose a measure that expires on January 15 or April 15 (based on what can obtain Conference consensus), to ensure the Senate cannot jam the House with a Christmas omnibus.” The Senate is currently taking up a minibus of three spending bills.

Many House Republicans are likely to vote against a continuing resolution, but as long as they don’t retaliate against Johnson for leaning on some Democratic votes to pass it, Congress will be in good shape to avert a shutdown on November 17th.

Rep. Matt Gaetz (R-FL), who brought the motion to vacate McCarthy to the floor, said that he was pleased with Johnson’s plan to pass all 12 appropriation bills separately.

Following the vote for speaker, Johnson quickly scheduled a vote on a resolution in support of Israel.

On October 7th, the White House released a statement from President Biden condemning Hamas’ terrorist attacks on Israel. Among other things, the statement said “Israel has a right to defend itself and its people” and emphasized that the Biden administration’s support for Israel’s security is “rock solid and unwavering.”

SOCIAL SECURITY COLA ANNOUNCEMENT

The Social Security Administration announced in October that Social Security and Supplemental Security Income (SSI) benefits for more than 71 million Americans will increase 3.2 percent in 2024.

More than 66 million Social Security beneficiaries will see the 3.2 percent cost-of-living adjustment (COLA) beginning in January 2024. Increased payments to approximately 7.5 million people receiving SSI will begin on December 29, 2023. (Note: some people receive both Social Security and SSI benefits).

Some other adjustments that take effect in January of each year are based on the increase in average wages. Based on that increase, the maximum amount of earnings subject to the Social Security tax (taxable maximum) will increase to \$168,600 from \$160,200.

Social Security begins notifying people about their new benefit amount by mail starting in early December. Information about Medicare changes for 2024 will be available at www.medicare.gov. For Social Security beneficiaries enrolled in Medicare, their new 2024 benefit amount will be available in December through the mailed COLA notice and online at the “my Social Security” Message Center.

The Social Security Act provides for how the COLA is calculated. The Social Security Act ties the annual COLA to the increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) as determined by the Department of Labor’s Bureau of Labor Statistics.

WINDFALL ELIMINATION PROVISION (WEP) AND GOVERNMENT PENSION OFFSET (GPO)

The ousting of Speaker McCarthy and the subsequent 22-day delay in selecting a successor has ground to a halt all legislative action in the House, including any progress on addressing WEP or GPO repeal/reform.

Despite continuing to gain co-sponsors, full WEP/GPO repeal bill (HR 82) lead sponsor Rep. Garret Graves (R-LA) has indicated that he wants to try to work with the House Ways and Means committee to try to find a path forward for relief, rather than file the motion to force a potential floor vote right away. He is seeking to avoid a repeat of last Congress when the filing of such a motion led to the committee holding a hearing on the bill without providing support for further action, effectively killing the bill in committee.

HEALTH CARE

CMS Unveils 2024 Medicare Parts A and B Costs

On October 12th, the Centers for Medicare and Medicaid Services (CMS) released a fact sheet on 2024 premiums, deductibles, and coinsurance amounts for Medicare Part A and Part B, and 2024 Medicare Part D income-related monthly adjusted amounts.

The release indicates that the in-patient hospital deductibles for Medicare Part A enrollees will be \$1,632 in 2024, an increase of \$32 from 2023. The fact sheet also explains that the 2024 premium for Part B enrollees, determined according to provisions in the Social Security Act, will increase by \$9.80 to \$174.70. Yearly deductibles for Part B enrollees will be \$240, a \$14 increase. CMS stated that the income-related monthly adjustment amounts will only affect eight percent of individuals with Medicare Part D.

CMS explained that the Part B premium and deductible increase is “mainly due to projected increases in health care spending and, to a lesser degree, the remedy for the 340B-acquired drug payment policy for the 2018-2022 period under the Hospital Outpatient Prospective Payment System.”

Senators Introduce Bill to Expand Medicare Access for Retired First Responders

U.S. Senators Sherrod Brown (D-OH), Richard Blumenthal (D-CT), and John Fetterman (D-PA) have introduced the Expanding Health Care Options for First Responders Act. This bill aims to allow retired first responders, including police officers, firefighters, and emergency medical services personnel, to buy into Medicare starting at age 50. Many first responders retire early due to the physically demanding and often dangerous nature of their work, leaving them with gaps in healthcare coverage until they become eligible for Medicare at 65. The proposed legislation would ensure that retired first responders aged 50 and older have access to affordable and comprehensive health insurance with the same benefits as the existing Medicare program. The bill also allows for tax credits, subsidies, and contributions from their former employers or pension plans, all while ensuring that it does not negatively impact the existing Medicare program.

This initiative has received widespread support from numerous organizations representing first responders, including the Fraternal Order of Police, the International Association of Fire Fighters, the International Union of Police Associations, the National Association of Police Organizations, the National Conference on Public Employee Retirement Systems, the National Sheriffs' Association, and the National Troopers Coalition. These organizations recognize the need to provide quality healthcare options for those who have dedicated their lives to protecting their communities. Companion legislation has also been introduced in the House by U.S. Representative Dean Phillips (D-MN-3).

Updates on Inflation Reduction Act (IRA) Drug Pricing Provisions

On October 2nd, the manufacturers of the first 10 drugs subject to price negotiations under the IRA agreed to participate in the negotiation program. The manufacturers had to notify CMS whether they were participating in the negotiation process by October 1st and submit manufacturer-specific data by October 2nd.

The list is heavy on drugs for diabetes, heart failure and kidney disease, and also includes drugs for blood clot and stroke prevention, blood cancers, and inflammatory conditions such as rheumatoid arthritis and psoriasis.

The list is historic because it is the first time Medicare has had the authority to negotiate prescription drug prices. However, no fewer than eight challenges to the law have been filed by pharmaceutical manufacturers and their allies, including Astellas Pharma; AstraZeneca; Bristol Myers Squibb; Johnson & Johnson; Merck; the drug industry's trade group Pharmaceutical Research and Manufacturers of America (PhRMA); and the Michigan and Ohio chambers of commerce.

Manufacturers argue the drug pricing provision violates the Due Process Clause of the Fifth Amendment, the Nondelegation Doctrine, the Administrative Procedure Act, and the First Amendment.

That these claims are being pursued despite Congress's specific directions to HHS on how to implement the drug negotiation program indicates that the industry will rely on every plausible theory to derail the landmark legislation. US Supreme Court precedent, however, is clear that the Nondelegation Doctrine is not violated if Congress lays down an intelligible principle to guide federal agencies, which the IRA does.

These cases are proceeding in federal trial courts across the United States, launching what will become a prolonged battle over drug negotiations akin to litigation over the Affordable Care Act. The first glimpse of judicial reasoning, however, is promising. Last month, a federal judge appointed by Donald Trump to the Southern District of Ohio denied the Chamber of Commerce's preliminary request to halt drug negotiations, noting "there is no constitutional right ... to engage in business with the government" and allowing negotiations to proceed alongside the litigation.

"Although drug companies are attempting to block Medicare from being able to negotiate for better drug prices, we will not be deterred. The Biden administration will continue working to ensure that Americans with Medicare have access to innovative, lifesaving treatments at lower costs," said HHS Secretary Xavier Becerra.

The negotiations with participating drug companies will occur in 2023 and 2024, and any negotiated prices will become effective beginning in 2026. Medicare enrollees taking the 10 drugs covered under Part D selected for negotiation paid a total of \$3.4 billion in out-of-pocket costs in 2022 for these drugs, according to HHS.

FEDERAL LEGISLATION BOARD REPORT
118th United States Congress
(Prepared by Chris Collins as of November 3, 2023)

H.R.82

SPONSOR: Rep. Graves, Garret (R-LA)

LAST ACTIONS: House - 01/09/2023 Referred to the House Committee on Ways and Means

CAPTION: Social Security Fairness Act of 2023

COMMENT: Repeals the GPO and WEP. 298 co-sponsors; 11 Ohioans

S.597

SPONSOR: Sen. Brown, Sherrod [D-OH]

LAST ACTIONS: Senate - 03/01/2023 Read twice and referred to the Committee on Finance.

CAPTION: Social Security Fairness Act

COMMENT: Repeals the GPO and WEP. 46 co-sponsors; Both Ohio Senators

H.R.4260

SPONSOR: Rep. Neal, Richard (D-MA)

LAST ACTIONS: House - 06/21/2023 Referred to the House Committee on Ways and Means

CAPTION: To amend title II of the Social Security Act to provide an equitable Social Security formula for individuals with noncovered employment and to provide relief for individuals currently affected by the Windfall Elimination Provision.

COMMENT: 102 co-sponsors; two Ohioans

H.R.4583

SPONSOR: Rep. John Larson (D-CT)

LAST ACTIONS: House - 07/12/2023 Referred to the Committee on Ways and Means, and in addition to the Committees on Education and the Workforce, and Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned.

CAPTION: Social Security 2100 Act. To protect our Social Security system and improve benefits for current and future generations.

COMMENT: 179 co-sponsors; four Ohioans

H.R.5342

SPONSOR: Rep. Jodey Arrington (R-TX)

LAST ACTIONS: House - 09/05/2023 Referred to the House Committee on Ways and Means

CAPTION: To amend title II of the Social Security Act to replace the windfall elimination provision with a formula equalizing benefits for certain individuals with noncovered employment, and for other purposes.

COMMENT: 28 co-sponsors; one Ohioan

STATE LEGISLATION BOARD REPORT
(Prepared by Chris Collins as of November 3, 2023)

135th General Assembly

SB6 ESG POLICIES-STATE ENTITIES (Schuring, K) - Regarding environmental, social, and corporate governance policies with respect to the state retirement systems, Bureau of Workers' Compensation, and state institutions of higher education.

Current Status: 05/23/2023, Referred to House Financial Institutions

HB4 LEGISLATIVE INTENT-ECONOMIC BOYCOTTS (Young, T., King, A.) To declare the General Assembly's intention to enact legislation regarding financial institutions and other businesses that conduct economic boycotts or discriminate against certain companies or customers based on certain factors.

Current Status: 02/16/2023, Referred to Financial Institutions Committee

HB33 FY24-25 OPERATING BUDGET (Edwards, J.) To make operating appropriations for the biennium beginning July 1, 2023, and ending June 30, 2025, to levy taxes, and to provide authorization and conditions for the operation of state programs. [Includes SERS' CBBC provision]

Current Status: 07/03/2023 SIGNED BY GOVERNOR; effective 7/1/23

HB146 SERS BENEFIT CAP (Bird, A.) To establish a contribution based benefit cap in calculating a School Employees Retirement System member's retirement benefit.

Current Status: 05/16/2023, REPORTED OUT, House Pensions, (Third Hearing)

HCR 6 URGE CONGRESS - REPEAL WINDFALL ELIMINATION PROVISION (King, Plummer) To urge Congress to repeal the Windfall Elimination Provision.

Current Status: 05/16/2023, REPORTED OUT AS AMENDED, House Pensions, (Third Hearing)

HB257 VIRTUAL MEETINGS FOR PUBLIC BODIES (Hoops, Claggett) - To authorize certain public bodies to meet virtually, and to declare an emergency.

Current Status: 10/31/2023 BILL AMENDED, House Government Oversight (Third Hearing)

EXECUTIVE SESSION

_____ moved and _____ seconded the motion that the Board convene in Executive Session pursuant to R.C. 121.22 (G)(5) to discuss a matter required to be kept confidential by law.

IN EXECUTIVE SESSION AT _____ A.M./P.M.

Upon roll call, the vote was as follows:

<u>ROLL CALL:</u>	<u>YEA</u>	<u>NAY</u>	<u>ABSTAIN</u>
Matthew King	_____	_____	_____
Jeffrey DeLeone	_____	_____	_____
James Haller	_____	_____	_____
Catherine Moss	_____	_____	_____
Barbra Phillips	_____	_____	_____
James Rossler	_____	_____	_____
Aimee Russell	_____	_____	_____
Daniel Wilson	_____	_____	_____
Frank Weglarz	_____	_____	_____

RETURN TO OPEN SESSION AT _____ A.M. / P.M.

EXECUTIVE SESSION

_____ moved and _____ seconded the motion that the Committee convene in Executive Session pursuant to R.C. 121.22 (G)(2) to discuss the sale of property.

IN EXECUTIVE SESSION AT _____ A.M./P.M.

Upon roll call, the vote was as follows:

<u>ROLL CALL:</u>	<u>YEA</u>	<u>NAY</u>	<u>ABSTAIN</u>
Matthew King	_____	_____	_____
Jeffrey DeLeone	_____	_____	_____
James Haller	_____	_____	_____
Catherine Moss	_____	_____	_____
Barbra Phillips	_____	_____	_____
James Rossler	_____	_____	_____
Aimee Russell	_____	_____	_____
Daniel Wilson	_____	_____	_____
Frank Weglarz	_____	_____	_____

RETURN TO OPEN SESSION AT _____ A.M. / P.M.

Finance Headline News – Nov 2023



- Budget Administration
 - FY24 SERS administrative expenses are tracking under budget for the first quarter
 - FY25 budget cycle planning has begun
- The following detailed reports are attached for further analysis:
 - FY24 Budget Administrative expense reports
 - Budget to Actual through 1st Qtr FY24
 - SERS & OSERS Broad St.
 - Administrative expense summary for October 2023
 - Administrative expense detail for October 2023
 - Parameters report for October 2023
 - Financial highlights
 - As of October 2023
 - June 30, 2023 audited financial statement will be presented in December 2023

School Employees Retirement System of Ohio
System Year-to-Date Budget Analysis
Through September 30, 2023

	FYTD24					Notes
	FYTD23 Actual	Actual	Budget	Actual to Budget %	Budget to Actual Under/(Over)	
PERSONNEL SERVICES	\$ 6,879,562	\$ 6,531,694	\$ 6,669,603	97.9%	\$ 137,909	Note 1
Salaries & Wages	5,460,999	4,952,450	4,983,057	99.4%	30,607	
PERS Retirement Contributions	698,897	643,425	659,675	97.5%	16,250	
Benefits	719,666	935,819	1,026,871	91.1%	91,052	
PROFESSIONAL SERVICES	1,602,517	1,543,575	1,778,426	86.8%	234,851	
Actuarial Advisors	76,957	57,561	66,125	87.0%	8,564	
Audit Services	110,000	20,850	25,000	83.4%	4,150	
Banking Fees	333,582	270,401	315,735	85.6%	45,334	
Investment Related	682,290	709,835	614,216	115.6%	(95,619)	Note 2
Medical	11,250	11,250	11,250	100.0%	-	
Technical	388,438	473,678	746,100	63.5%	272,422	Note 3
COMMUNICATIONS EXPENSE	228,851	243,762	334,343	72.9%	90,581	
Postage	114,956	113,908	192,163	59.3%	78,255	
Telecommunications Services	101,225	80,464	86,555	93.0%	6,091	
Member/Employer Education	4,879	4,140	5,375	77.0%	1,235	
Printing & Publication	7,791	45,250	50,250	90.1%	5,000	
OTHER OPERATING EXPENSE	1,216,798	1,044,288	1,322,136	79.0%	277,849	
Computer Support Services	894,526	741,076	1,016,146	72.9%	275,070	Note 4
Office Equipment & Supplies	33,153	28,928	40,625	71.2%	11,697	
Training	20,827	29,980	96,934	30.9%	66,954	
Transportation & Travel	28,878	24,563	56,218	43.7%	31,655	
Memberships Subscriptions	55,335	40,895	54,509	75.0%	13,614	
Property & Mgmt. Liability Insurance	119,754	133,279	-	0.0%	(133,279)	Note 5
Maintenance	19,837	6,237	15,525	40.2%	9,288	
Staff Support	31,034	22,037	26,944	81.8%	4,907	
School District Reimbursement	1,357	1,420	3,135	45.3%	1,715	
Mandatory Costs- ORSC	12,097	15,873	12,100	131.2%	(3,773)	
TOTAL DEPARTMENT EXPENSES	9,927,728	9,363,319	10,104,508	92.7%	741,190	
ADMINISTRATIVE CAPITAL	54,181	-	-	0.0%	-	
Computer Hardware > \$5,000	54,181	-	-	0.0%	-	
TOTAL SERS ADMIN EXPENSES	9,981,909	9,363,319	10,104,508	92.7%	741,190	
NET BUILDING EXPENSE	170,072	167,457	344,953	48.5%	177,496	Note 6
TOTAL ADMINISTRATIVE EXPENSES	<u>\$ 10,151,981</u>	<u>\$ 9,530,776</u>	<u>\$ 10,449,461</u>	<u>91.2%</u>	<u>\$ 918,686</u>	

See notes on following page

Note 1: Personnel - FYTD 24 actuals are trending fairly close to budget. FYTD 23 personnel is higher due to July 2022 containing a 3rd pay.

Note 2: Investment Related - FYTD 24 actuals are higher due to an unusual class action claim. SERS contracts with Financial Recovery Technologies who monitors SERS' portfolio for potential class actions to join. SERS was awarded a \$1 million settlement in the Valeant Pharmaceuticals International suit producing a \$87,500 claim expense.

Note 3: Technical - FYTD 24 actuals are trending under budget due to a) the timing of CBBC programming and Agile coaching/training activities versus when originally planned b) Sagitec monthly services received were less than planned and c) contracting for service desk is no longer needed.

Note 4: Computer Support Services - FYTD 24 are trending under budget mainly due to the timing of the payment of Microsoft Enterprise agreement, which was budgeted for September but paid in October.

Note 5: Liability Insurance - FYTD 24 is over budget due to the timing when the insurance was expensed versus when it was budgeted in October 2023.

Note 6: OSERS Broad Street - FYTD 24 net building expense is trending under budget due to pending invoices for insurance, janitorial and security services. In addition, leasehold improvements are under budget by \$6,000 as the 1st quarter planned work is continuing into the 2nd quarter.

FYTD = Fiscal Year To Date

OSERS Broad Street, LLC
Year-to-Date Budget Analysis
Through September 30, 2023

		FYTD 2024					
	FY2023	FY2024			Budget to		
	Actuals	Budget	Budget	Actuals	Actual	Notes	
					Under/(Over)		
OPERATING INCOME							
Suite Income	\$ 436,731	\$ 506,057	\$ 133,547	\$ 133,977	(430)		
Parking Income	212,775	206,100	52,125	57,520	(5,395)		
Miscellaneous Income	53,571	-	-	450	(450)		
	703,077	712,157	185,672	191,947	(6,274)		
OPERATING EXPENSES							
Property Management & Labor	305,000	305,000	76,250	76,250	-		
Administrative Services	6,365	6,825	350	241	109		
Building Maintenance	1,062,340	1,129,299	298,865	215,717	83,148	Note 1	
Utilities	323,827	408,940	93,860	86,180	7,680		
Building & Equipment Insurance	71,396	87,000	87,000	17,849	69,151	Note 2	
Real Estate Taxes	285,677	288,050	15,550	15,519	31		
	2,054,605	2,225,114	571,875	411,756	160,118		
NON-OPERATING EXPENSES							
Lease Commission Fees	10,611	-	-	-	-		
Special Counsel Fees	1,556	5,000	5,000	-	5,000		
Building Remodeling	6,805	150,000	-	-	-		
	18,972	155,000	5,000	-	5,000		
CAPITAL							
Leasehold Improvements	266,088	30,000	30,000	23,898	6,102	Note 3	
	266,088	30,000	30,000	23,898	6,102		
TOTAL	\$ 1,636,588	\$ 1,697,957	\$ 421,203	\$ 243,707	177,046		

Note 1 – Building maintenance variance is mainly due to the timing of janitorial and security invoices as compared to when the services were budgeted.

Note 2 – Insurance variance is due to a pending invoice from the vendor.

Note 3 - Leasehold Improvements planned for the first quarter were not completed and are continuing into the 2nd quarter.

FY - Fiscal Year

FYTD - Fiscal Year To Date

School Employees Retirement System of OhioSummary of administrative operation expenses during the period **October 1, 2023-October 31, 2023.**Actuals
Oct-2023

Account	Amount
Salaries & Wages	1,172,583.20
Salaries & Wages- Overtime	5,295.04
Vacation Leave Expense	103,884.45
Sick Leave Expense	38,784.32
Voluntary Life Insurance Reimbursement	219.42
Employer Contributions- PERS	178,369.21
Group Life	9,515.88
Long Term Disability	3,441.91
Short Term Disability	2,660.15
Group Health Claims	294,855.27
Group Health- Admin Fees	7,505.94
Prescription Claims	126,725.12
Prescription Admin Fees	1,040.80
Group Health- Stop Loss Admin	17,716.68
Vision Claims	2,275.23
Vision Admin Fees	124.56
Group Health- Employee Cost	(35,571.52)
Group Health- Wellness Incentive	3,845.00
Group Health- Tobacco Premiums	(720.00)
Medicare Premium- Employer	18,062.06
Workers Compensation	2,659.00
Deferred Compensation Match	4,845.00
Actuarial Services	63,068.00
Audit	60,000.00
Custodial Fees	80,000.00

Account	Amount
Custodial Banking	69.44
Master Recordkeeper Fees	86,666.67
Performance/ Analytics Fee	96,762.91
Medical Consultant	3,750.00
Special Counsel	3,422.50
Technical	57,379.70
Other Professional Services	40,387.74
Postage	3,563.84
Telecommunications Services	9,523.81
Member/Employer Education	303.82
Communications & Publications	15.98
Software Maintenance	281,943.83
Software Subscriptions	45,652.05
Hardware < \$5,000	609.89
Equipment Repairs & Maintenance	56,982.54
Records Storage	125.00
Seminars & Conferences	25,163.99
Tuition	(10,431.80)
Travel & Transportation	29,068.23
Mileage	1,507.22
Subscriptions	13,281.94
Memberships	3,508.00
Management and Liability Insurance	371,221.50
Interior Landscaping	1,366.37
Vehicle Expense	14.00
Staff Support	7,711.04
Recruiting Expense	1,401.37

Account	Amount
Ohio Retirement Study Council	15,872.90
Reimbursement of Leased Svcs.	(25,416.67)
Total Administrative Expenses	3,282,612.53

School Employees Retirement System of Ohio
REVIEW OF ADMINISTRATIVE EXPENSES
Oct-23

Expense Account	Vendor		Amount
53100 - Salaries & Wages	ADP, LLC		1,172,583.20
		Subtotal	1,172,583.20
53110 - Salaries & Wages - Overtime	ADP, LLC		5,295.04
		Subtotal	5,295.04
53111 - Vacation Leave Expense	ADP, LLC		103,884.45
		Subtotal	103,884.45
53112 - Sick Leave Expense	ADP, LLC		38,784.32
		Subtotal	38,784.32
53113- Voluntary Life Insurance Reimbursement	ADP, LLC		219.42
		Subtotal	219.42
53200 - Employer Contributions - PERS	ADP, LLC		178,369.21
		Subtotal	178,369.21
53300 - Group Life	American United Life Insurance Company		9,515.88
		Subtotal	9,515.88
53310 - Long Term Disability	American United Life Insurance Company		3,441.91
		Subtotal	3,441.91
53315 - Short Term Disability	American United Life Insurance Company		2,660.15
		Subtotal	2,660.15
53320 - Group Health Claims	Aetna Daily Wires - ESERS		294,855.27
		Subtotal	294,855.27
53321 - Group Health - Admin Fees	Aetna Admin - ESERS		7,505.94
		Subtotal	7,505.94
53322 - Prescription Claims	Express Scripts - ESERS SaveonSP, LLC		124,751.43
			1,973.69
		Subtotal	126,725.12
53323 - Prescription Admin fees	Beyond Blue Corporation		1,040.80
		Subtotal	1,040.80
53324 - Group Health - Stop Loss Admin	Aetna Admin - ESERS		17,716.68
		Subtotal	17,716.68
53326 - Vision Claims	VSP - (OH)		2,275.23
		Subtotal	2,275.23
53327 - Vision Admin Fees	VSP - (OH)		124.56
		Subtotal	124.56
53330 - Group Health - Employee Cost	Employee Premiums		(35,571.52)
		Subtotal	(35,571.52)
53331 - Group Health - Wellness Incentive	ADP, LLC		3,845.00
		Subtotal	3,845.00
53332 - Group Health - Tobacco Premiums	ADP, LLC		(720.00)
		Subtotal	(720.00)
53340 - Medicare Premium - Employer	ADP, LLC		18,062.05
	ADP, LLC - adjustment		0.01
		Subtotal	18,062.06
53350 - Workers Compensation	Ohio Bureau Of Workers Compensation		2,659.00
		Subtotal	2,659.00
53380 - Deferred Compensation Match	ADP, LLC		4,845.00
		Subtotal	4,845.00
54100 - Actuarial Services	Cavanaugh MacDonald Consulting, LLC Cavanaugh MacDonald Consulting, LLC		12,000.00
			51,068.00
		Subtotal	63,068.00
54200 - Audit	Plante & Moran, PLLC		60,000.00
		Subtotal	60,000.00

54310 - Custodial Fees	BNY Mellon Asset Servicing		80,000.00
		Subtotal	80,000.00
54320 - Custodial Banking	Treasurer of State - Warrants		69.44
		Subtotal	69.44
54410 - Master Recordkeeper Fees	BNY Mellon Asset Servicing		86,666.67
		Subtotal	86,666.67
54430 - Performance/Analytics Fee	BNY Mellon Asset Servicing		34,151.66
	Barra LLC		59,611.25
	Wilshire Advisors, LLC		3,000.00
		Subtotal	96,762.91
54520 - Medical Consultant	Borchers, M.D., Glen G.		3,750.00
		Subtotal	3,750.00
54610 - Special Counsel	Seyfarth Shaw LLP		980.00
	Porter, Wright, Morris,		1,000.00
	Frost Brown Todd, LLC		475.00
	Calfee Halter & Griswold LLP		967.50
		Subtotal	3,422.50
54620 - Technical	Sagitec Solutions, LLC		34,852.13
	LexisNexis Risk Data Management, Inc		3,008.82
	ComResource		7,158.75
	Velosio		980.00
	ForeFront Web		5,000.00
	Improving Ohio, Inc.		6,380.00
		Subtotal	57,379.70
54630 - Other Professional Services	Wickert, Kimberly		360.00
	Vorys Advisors LLC		3,666.66
	Attorney General		16,289.08
	Steven R. Edwards		3,000.00
	CMM Digitization Services, LLC		17,072.00
		Subtotal	40,387.74
55100 - Postage	Notifii LLC		267.00
	Pitney Bowes Inc.		1,289.95
	Postmaster		1,220.00
	Columbus Courier & Freight LLC		129.00
	Postmaster		310.00
	Unishippers Association		281.59
	FedEx		66.30
		Subtotal	3,563.84
55200 - Telecommunications Services	Verizon Wireless		232.22
	AT&T		40.10
	LUMEN		3,946.79
	Spectrum		2,009.90
	Everstream Solutions LLC		1,376.00
	XO Verizon		1,863.26
	T-Mobile		55.54
		Subtotal	9,523.81
55300 - Member/Employer Education	Vaughan, Cameron		303.82
		Subtotal	303.82
55420 - Communications & Publications	Amazon.com		15.98
		Subtotal	15.98
56030 - Software Maintenance	Sagitec Solutions, LLC		35,000.00
	Dell Marketing LP		246,943.83
		Subtotal	281,943.83
56035 - Software Subscriptions	Sharegate		5,995.00
	NAVEX Global, Inc.		115.06
	Jet Brains		458.00
	ADP, LLC		2,935.60
	Melissa Data Corporation		5,450.00
	Liquid Web Inc		341.67
	Zoho Corporation		12,410.00
	Zoom		556.81
	ForeFront Web		3,470.00
	Wellable LLC		475.80
	Expedient		13,380.40
	Amazon Web Services		63.71
		Subtotal	45,652.05

56040 - Hardware < \$5,000	Amazon.com		609.89
		Subtotal	609.89
56110 - Equipment Repairs & Maintenance	Ricoh USA, Inc		751.42
	Digital Print Solutions		2,915.65
	Amazon.com		314.95
	The Data House		138.14
	Canon Financial Services, Inc		4,382.54
	LD Products Inc.		643.96
	Quadient		42,815.68
	US Bank Equipment Finance		4,956.45
	Number and Fold		63.75
		Subtotal	56,982.54
56160 - Records Storage	Vital Records Holdings, LLC		125.00
		Subtotal	125.00
56210 - Seminars & Conferences	Public Pension Financial Forum		6,400.00
	Gartner, Inc		5,375.00
	ISC2		1,495.00
	Global Arc		425.00
	Ohio State University		1,800.00
	Microsoft Corp.		2,249.00
	CommVault		2,000.00
	Hyland Software, Inc.		4,190.00
	TPC Training		1,229.99
		Subtotal	25,163.99
53370 - Tuition	Employee reimbursement per SERS policy		(10,431.80)
		Subtotal	(10,431.80)
56310 - Travel & Transportation	Fifth Third Bank - cancelled hotel room		(297.86)
	Kroger		93.66
	Rossler, James		244.00
	Haller, James		244.00
	Rider, Trisha		1,656.53
	Phillips, Barbra		971.97
	Talbert, Katie		358.87
	Cole, John		2,331.17
	Sam's Club		37.80
	Le, Hai Yen		1,967.70
	Trickett, Kirk		739.42
	Thomas, Drew		2,059.13
	Majeed, Farouki		3,462.26
	Masri, Judi		1,967.70
	Moss, Catherine		421.29
	Castle, Chris		1,564.65
	Browning, Michael		859.00
	Wilson, Daniel L.		122.00
	Ochoa, Karen		1,599.26
	Easterday, Stacy		277.80
	King, Matt		244.00
	Patel, Jay		1,859.79
	Weglarz, Frank		332.67
	Messerschmitt, Adam		1,232.88
	Meijer		15.89
	Cheng, Paul		553.09
	Carrabine, Jeff		465.26
	Hall, Marni		1,692.94
	Hyland, Christopher		536.43
	ABC Shuttle		189.95
	O'Brien, Tim		1,145.80
	AllianceBernstein LP		48.63
	Carlyle Investment Management, LLC		70.55
		Subtotal	29,068.23
56311 - Mileage	Rossler, James		181.79
	Haller, James		126.80
	Rider, Trisha		50.18
	Phillips, Barbra		198.98
	Cole, John		15.98
	Thomas, Drew		26.60
	Moss, Catherine		226.64
	Castle, Chris		19.06
	Browning, Michael		11.26
	Wilson, Daniel L.		195.20
	Ochoa, Karen		35.38
	King, Matt		157.20
	Patel, Jay		25.16
	Weglarz, Frank		213.54
	Messerschmitt, Adam		8.12
	Cheng, Paul		15.33
		Subtotal	1,507.22

56410 - Subscriptions	Wall Street Journal	125.73	
	Constant Contact	429.00	
	Shutterstock, Inc.	29.00	
	Stylebooks.com, Inc.	26.10	
	SurveyMonkey.com	503.10	
	Pluralsight	10,906.02	
	Toledo Blade	12.99	
	Currency Research Associates LLC	1,250.00	
	Subtotal	13,281.94	
56420 - Memberships	AICPA	340.00	
	Public Sector Healthcare Roundtable	2,800.00	
	Sisson, Phil	70.00	
	PayrollOrg	298.00	
	Subtotal	3,508.00	
56510 - Management Liability Insurance	ARC Excess & Surplus, LLC.	371,221.50	
	Subtotal	371,221.50	
56630 - Interior Landscaping	Ambius Inc. (05)	1,366.37	
	Subtotal	1,366.37	
56640 - Vehicle Expense	Moo Moo Car Wash	14.00	
	Subtotal	14.00	
56620 - Staff Support	Cintas Corporation	505.98	
	ADP, LLC	3,463.00	
	Kroger	34.45	
	Premier ProduceOne	314.30	
	Giant Eagle	25.00	
	Amazon.com	1,328.36	
	PayFlex Systems USA, Inc.	343.00	
	Sam's Club	59.44	
	Tim Horton's	36.76	
	Bibibop Asian Grill	480.00	
	Dick's Sporting Goods	50.00	
	Aetna Behavioral Health, LLC	282.60	
	Acorn Distributors Inc.	115.57	
	Shera, Rebecca	123.34	
	Matt & Tony's	65.00	
	Hound Dog's Pizza	484.24	
	Subtotal	7,711.04	
56621 - Recruiting Expense	ADP Screening & Selection Services	161.06	
	Indeed	642.91	
	Delta Airlines	597.40	
	Subtotal	1,401.37	
56820 - Ohio Retirement Study Council	Ohio Retirement Study Council	15,872.90	
	Subtotal	15,872.90	
56900 - Reimbursement of Leased Svcs	Reimbursement of Leased Services	(25,416.67)	
	Subtotal	(25,416.67)	
	Total SERS Administrative Expense	3,282,612.53	

FY2024 Administrative Budget
Board Expense to Budget Reporting
Year-to-Date Through October 31, 2023

Major Category/Sub-Major Category	Line Item	Vendor	FY2024 Budget Approved	Year to Date Expense	Additional Information
PROFESSIONAL SERVICES			\$ 6,456,304.92	\$ 2,035,081.78	
ACTUARIAL ADVISORS			\$ 292,500.00	\$ 120,629.00	
	Actuarial	Cavanaugh Macdonald	292,500.00	120,629.00	Actuarial Consultant
AUDITING			\$ 234,000.00	\$ 80,850.00	
	Auditing	Plante Moran	184,000.00	80,000.00	External Auditor
BANKING FEES			\$ 1,262,940.00	\$ 350,470.80	
	Custodial Banking		1,068,000.00	321,955.93	
		Fifth Third	336,000.00	98,268.35	Domestic Custodian
		BNYM	732,000.00	223,687.58	International Custodian
	Administrative Banking	Huntington National Bank/ TOS	194,940.00	28,514.87	Banking Services
INVESTMENT RELATED			\$ 2,465,348.92	\$ 893,264.49	
	Master Recordkeeper		1,056,000.00	365,063.44	
	Investment Consulting & Advisory Services		525,000.00	131,609.58	
		Wilshire	450,000.00	112,499.95	Investment Consulting
	Performance Analytics Services		703,264.92	281,389.18	
		Barra-One Risk Mgmt Sys	238,445.00	119,222.50	Investment Risk Analytics
		BNY Mellon GRS	412,820.00	153,166.68	Investment Performance Analytics
TECHNICAL			\$ 2,156,516.00	\$ 574,867.49	
	Special Counsel		240,000.00	36,957.50	
	Technical		1,360,084.00	274,211.58	
		Merative	121,000.00	29,500.00	Data Warehouse
		Sagitec	550,000.00	140,736.76	SMART Development Resources
		Waco	105,600.00	-	Service Desk Contract Services
	Other Professional Services		556,432.00	263,698.41	
OTHER OPERATING EXPENSE			\$ 4,108,942.43	\$ 1,787,619.08	
COMPUTER SUPPORT SERVICES			\$ 2,737,127.33	\$ 1,069,282.22	
	Software Maintenance		1,047,108.00	534,986.50	
		Hyland	119,061.00	117,916.85	ImageNow
		Dell	290,000.00	246,888.48	Microsoft Enterprise Agreement/ True Up
		Sagitec	420,000.00	140,000.00	SMART Silver Support
	Software Subscriptions		1,444,815.33	508,257.02	
		DRaaS	158,000.00	53,521.60	Expedient
		Dynamo	202,000.00	199,940.00	Dynamo Software, INC
		Carahsoft	124,850.00	125,911.80	ServiceNow System
		UCaaS Vendor- TBD	128,500.00	-	Telecommunication Services
PROPERTY MANAGEMENT LIABILITY INSURANCE			\$ 582,403.00	\$ 504,500.50	
	Management Liability Insurance		582,403.00	504,500.50	
		Cyber Liability Insurance	190,315.00	163,592.50	ARC Excess & Surplus, LLC
		Crime Fiduciary D&O Insurance	389,388.00	340,908.00	ARC Excess & Surplus, LLC

PROJECT ITEMS

Major Category/Sub-Major Category	Line Item	Project	FY2024 Budget	YTD Expense	Additional Information
PROFESSIONAL SERVICES					
TECHNICAL					

	CBBC Programming	150,000.00	-	CBBC programming
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SERS

UNBUDGETED PROJECT ITEMS

Major Category/Sub-Major Category	Line Item	Project	FY2024 Budget	YTD Expense	Expense Reallocation
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OSERS BROAD STREET, LLC

UNBUDGETED PROJECT ITEMS

Major Category	Line Item	Project	FY2024 Budget	YTD Expense
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SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

FINANCIAL HIGHLIGHTS

As of September 30, 2023 and 2022

(unaudited)

SERS (All Funds)	9/30/23 YTD	9/30/22 YTD	Comparative Difference	% Difference
<u>ADDITIONS</u>				
Employer Contributions	\$144,032,432	\$136,188,066	\$7,844,366	6%
Member Contributions	93,072,859	88,120,067	4,952,792	6
Health Care Premiums, Subsidies & Other Income	52,501,141	27,069,519	25,431,622	94
Total Investment Loss, Net	(287,770,399)	(582,411,666)	294,641,267	(51)
TOTAL ADDITIONS	1,836,033	(331,034,014)	332,870,047	(101)
<u>DEDUCTIONS</u>				
Retirement, Disability, Survivor & Death Benefits	354,185,934	342,261,210	11,924,724	3
Health Care Expenses	56,094,752	50,105,341	5,989,411	12
Refunds & Transfers	24,959,416	22,938,574	2,020,842	9
Administrative Expenses (excluding Investments)	7,226,190	7,866,033	(639,843)	(8)
TOTAL DEDUCTIONS	442,466,292	423,171,158	19,295,134	5
Changes in Net Position	(440,630,259)	(754,205,172)	313,574,913	(42)
Net Position - Beginning	18,265,722,222	17,574,319,449	691,402,773	4
SERS Net Position - Ending	\$17,825,091,962	\$16,820,114,275	\$1,004,977,687	6%

HEALTH CARE FUND

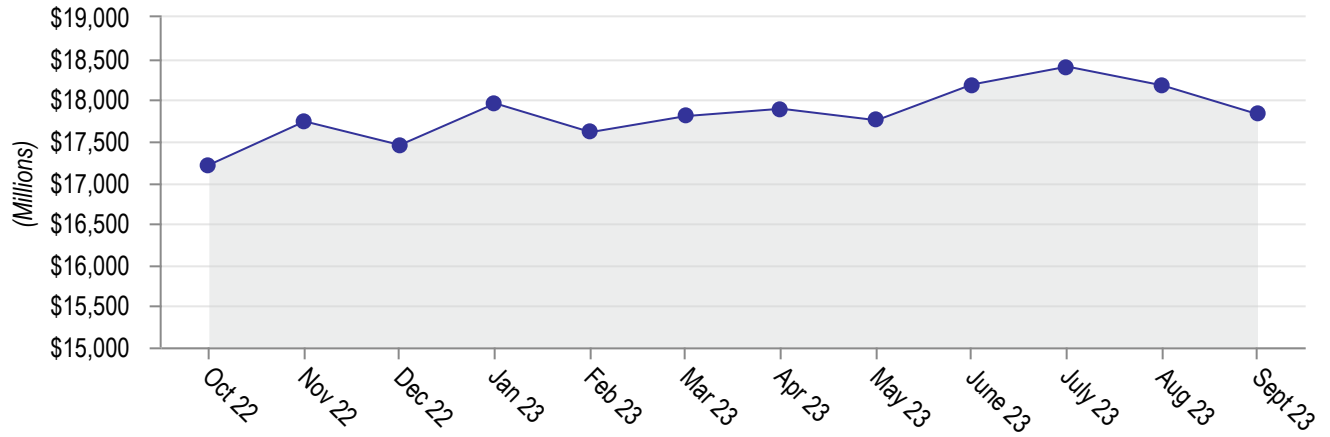
HEALTH CARE ADDITIONS

Employer Contributions	\$14,125,834	\$13,198,296	\$927,538	7%
Health Care Premiums	14,843,737	15,414,364	(570,627)	(4)
Medicare Subsidies & Other Income	37,657,404	11,655,153	26,002,251	223
Total Investment Loss, Net	(9,603,949)	(16,891,691)	7,287,742	(43)
TOTAL HEALTH CARE ADDITIONS	57,023,026	23,376,122	33,646,904	144
TOTAL HEALTH CARE DEDUCTIONS	56,811,165	50,741,859	6,069,306	12
Changes in Net Position	211,861	(27,365,737)	27,577,598	101
Net Position - Beginning	706,785,561	611,574,409	95,211,152	16
SERS Health Care Fund Net Position - Ending	\$706,997,422	\$584,208,672	\$122,788,750	21%

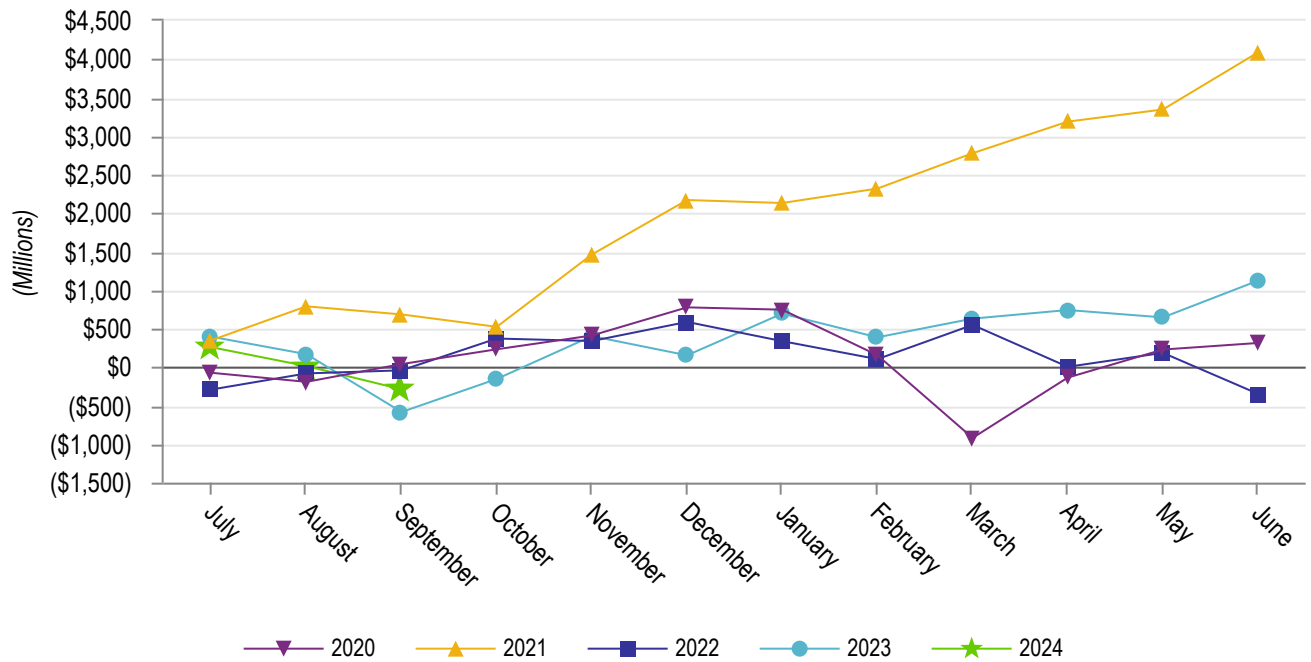
ADMINISTRATIVE EXPENSES

	9/30/23 YTD	Fiscal Year Annual Budget	% of Annual Budget
Personnel	\$6,531,694	\$25,471,425	26%
Professional Services	1,543,575	6,456,305	24
Communications	243,762	1,015,710	24
Other Operating Expenses	968,038	4,108,942	24
TOTAL ADMINISTRATIVE EXPENSES	\$9,287,069	\$37,052,382	25%

Total SERS Fund Balance for Previous 12 Months



Investment Income (includes realized and unrealized gains & losses)



Health Care Fund Balance Trend



Memo

To: Retirement Board
From: SERS Legal
CC: Richard Stensrud and Karen Roggenkamp
Date: November 8, 2023
Re: Definition of Compensation/Other System Comparisons

Per the Board's request at its October Board meeting, SERS Legal researched compensation definitions of other public retirement systems. Staff will review with the Board how STRS and four pension systems in other states whose members include non-teaching school employees handle pensionable compensation. The presentation materials include a chart comparing what SERS considers pensionable under its current definition of compensation to the other systems. Please note that some Louisiana non-teaching school employees are members of the Louisiana School Employees Retirement System while others are in the Teachers Retirement System of Louisiana. Staff will also discuss curbs on pensionable compensation at other systems, as well as overall trends. If you have any questions in advance of the Board meeting, please contact Joe Marotta [REDACTED] or Susan Russell [REDACTED].



COMPENSATION

November 2023

Pensionable Compensation Survey

Serving the People Who Serve Our Schools®

SERS' Compensation



**Compensation
is defined in
R.C.3309.01(V) and
O.A.C. 3309-1-02
and includes:**

- Salary, wages, and other earnings as set forth in rule by the retirement board (statute)
- Payments to an eligible retirement plan (deferred compensation) (rule)
- Back wages (rule)
- Differential wage payments (school earnings v. military pay) (rule)
- Longevity payments (rule)
- One time or lump sum payment to all persons in a class of employees in lieu of salary or wage increase per a written contract (rule)
- One time or lump sum payment for additional services (rule)

SERS' Compensation



**Compensation
does not include:**

- Unused leave pay (statute)
- Concurrent vacation pay (statute)
- Unused compensatory time (rule)
- Amounts paid by employer for insurance (statute)
- Incidentals (lodging, food, parking, laundry, use of employer's property or equipment, reimbursement of expenses) (statute)
- Payments in excess of IRC 401(a)(17) annual limits (statute)
- Leave of absence pay for military service (statute)
- Payments paid in consideration of retirement (statute and rule)
- One-time or lump sum payment not based on rate of pay (rule)

Compensation Subcategories



YES

- Salary, Wages, Base Pay
- Deferred Compensation Plan Payments
- Supplemental Program Pay (coaching, extracurricular activities)



YES/NO

- Bonus/Incentive Pay



NO

- Cash-out of Accumulated Leave
- Fringe Benefits

Research Overview



Legal reviewed compensation definitions of retirement systems in 20 states plus Ohio.



Legal conducted in-depth review of retirement systems whose members are school employees.

System Comparison Chart



	SERS	STRS Ohio	LSERS	TRSL	MPSERS	PSERS
Base Pay	Yes	Yes	Yes	Yes	Yes	Yes
Overtime	Yes	Not applicable	Yes	Yes	Yes	Yes
Supplemental programs	Yes	Yes	Yes	Yes	Yes	Yes
Cash out sick, vacation and personal leave	No	No	No	No	No	No
Lump sum amounts in collective bargaining agreement to class of employees	No Yes, if in lieu of an existing contractual right to an increase in base pay.	Yes	Yes	Case by case basis	Case by case basis	Case by case basis
Bonuses (discretionary payments not connected to performance standard)	Yes, if based on rate of pay. No, if flat dollar amount.	Yes, so long as they are earned by reason of employment. If the bonus is attributable to retirement, paid in lieu of items not considered STRS compensation or retroactive, the answer is no.	Yes	Yes	No	No

SERS – School Employees Retirement System of Ohio, **STRS Ohio** – State Teachers Retirement System of Ohio, **LSERS** - Louisiana School Employees Retirement System, **TRSL** - Teachers Retirement System of Louisiana, **MPSERS** - Michigan Public School Employees Retirement System, **PSERS** - Pennsylvania Public School Employees Retirement System

System Comparison Chart



	SERS	STRS Ohio	LSERS	TRSL	MPSERS	PSERS
Performance Incentive: lump sum, per objective terms	Yes , if based on rate of pay. No , if flat dollar amount.	Yes	Yes	Yes	Yes , if (1) specific objective established, (2) measurable, and (3) available to all employees in the reporting unit.	Yes , if tied to objective standard and contractual obligation.
Education incentive	Yes , if based on rate of pay. No , if flat dollar amount.	Yes , usually built into teacher salary schedule, but STRS also accepts payments made to teachers to attend educational programs.	Yes	Yes	Yes	Yes , if tied to objective standard and contractual obligation.
Attendance Incentive	Yes , if based on rate of pay. No , if flat dollar amount.	No	Yes	Yes	No	No

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System Comparison Chart



	SERS	STRS Ohio	LSERS	TRSL	MPSERS	PSERS
Signing Bonus	Yes, if based on rate of pay. No, if flat dollar amount.	Yes	Yes	Yes	No	No
Retention Incentive	Yes, if based on rate of pay. No, if flat dollar amount.	Yes	Yes	Yes	No	No
Wellness Incentive	Yes, if based on rate of pay. No, if a flat dollar amount.	Yes, but not in all instances.	Yes	Yes	No	No
Longevity	Yes	Yes	Yes	Yes	Yes	Yes, if added to base salary following year.
Deferred comp payments into retirement plans	Yes	Yes	Yes	Yes	Yes	Yes, if paid from member's base salary. No, if paid in addition to base salary.

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Guardrails: Percentage caps and FAS



- Louisiana
 - For members beginning membership after 2006 (LSERS) or 2011 (TRSL) FAS is 60 highest consecutive months
 - Caps on annual increases during FAS years
- STRS Ohio
 - Five-year FAS
 - Caps on increases during two highest FAS years
- MPSERS
 - FAS is highest five consecutive years

Guardrails: Percentage caps and FAS



- PSERS
 - Individuals who qualify for membership on or after 7/1/19 are in hybrid plan with a 5-year FAS
 - Individuals in the defined benefit plan have a 3-year FAS
- Kentucky County Employees Retirement System
 - Lump sum bonus and severance payments over \$1,000 a fiscal year are averaged over member's total service credit
- Alabama Teachers Retirement System
 - Tier1: Earnable compensation capped at 120% of annual base compensation, 3-year FAS
 - Tier 2 : Earnable compensation capped at 125% annual base compensation, 5-year FAS

Take Aways

- Many systems include performance-based incentive payments when based on contract terms setting forth objective standards.
- Majority of systems do not include unused vacation, sick, or personal leave cash outs.
- Range of pensionable compensation definitions

CALENDAR DATES FOR SERS BOARD MEETINGS FOR 2023 **

AUDIT COMMITTEE MEETINGS

December 20, 2023 – 2:30 p.m. (Weds.)

COMPENSATION COMMITTEE MEETINGS

December 21, 2023 – 7:30 a.m. (Thurs.)

TECHNOLOGY COMMITTEE MEETINGS

December 21, 2023 – 12:30 p.m. (Thurs.)

BOARD MEETINGS

December 21 – 22, 2023 - 8:30 a.m. (Thurs. and Fri.)

**** NOTE: The above dates are *tentative*.**

CALENDAR DATES FOR SERS BOARD AND COMMITTEE MEETINGS FOR 2024 **

AUDIT COMMITTEE MEETINGS

March 20, 2024 – 2:30 p.m. (Weds.)
June 19, 2024 – 2:30 p.m. (Weds.)
September 18, 2024 - 2:30 p.m. (Weds.)
December 18, 2024 – 2:30 p.m. (Weds.)

COMPENSATION COMMITTEE MEETINGS

March 21, 2024 – 7:30 a.m. (Thurs.)
June 20, 2024 – 7:30 a.m. (Thurs.)
July 18, 2024 – 7:30 a.m. (Thurs.) * ***Special Meeting*** *
September 19, 2024 – 7:30 a.m. (Thurs.)
December 19, 2024 – 7:30 a.m. (Thurs.)

TECHNOLOGY COMMITTEE MEETINGS

March 21, 2024 – 12:30 p.m. (Thurs.)
June 20, 2024 – 12:30 p.m. (Thurs.)
September 19, 2024 – 12:30 p.m. (Thurs.)
December 19, 2024 – 12:30 p.m. (Thurs.)

BOARD MEETINGS

February 15 - 16, 2024 - 8:30 a.m (Thurs. and Fri.)
March 21 - 22, 2024 – 8:30 a.m (Thurs. and Fri.)
April 18 – 19, 2024 - 8:30 a.m. (Thurs. and Fri.)
May 16 – 17, 2024 – 8:30 a.m (Thurs. and Fri.)
June 20 - 21, 2024 - 8:30 a.m (Thurs. and Fri.)
July 18 – 19, 2024 – 8:30 a.m. (Thurs. and Fri.)
September 19 – 20, 2024 – 8:30 a.m. (Thurs. and Fri.) ***** Board Picture Day *****
October 17 – 18, 2024 – 8:30 a.m. (Thurs. and Fri.)
November 21 – 22, 2024 – 8:30 a.m (Thurs. and Fri.)
December 19 – 20, 2024 – 8:30 a.m (Thurs. and Fri.)

**** Please note that these dates and times are tentative.**

CONTINUED OR NEW BUSINESS

Board Information Requested

BOARD INFORMATION REQUESTS AND FOLLOW-UP ITEMS

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ADJOURNMENT(R)

_____ moved that the SERS Retirement board adjourn to meet on Thursday, December 21, 2023, for their next regularly scheduled meeting.

The meeting adjourned at _____ a.m./p.m.

Frank Weglarz – Chair

Richard Stensrud, Secretary