



# Report From the Investment Department

Feb. 15, 2024

- **Matters requiring board action:**
  - Review and approval of the Statement of Investment Objectives & Policy and Statement of Fund Governance
- **Educational or scheduled updates and reviews requiring no action today:**
  - Summary of Investment Activity Report, December 2023 and January 2024
  - Initial review of the Proxy Voting Policy
  - Proxy Voting Summary for six months ending Dec. 31, 2023
  - Meketa quarterly performance review as of Dec. 31, 2023
  - Semiannual derivatives exposure as of Dec. 31, 2023
  - Meketa comments
  - Review of December 2023 and January 2024 investment transactions
- **Summary of requests**

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# The Adoption of the Statement of Investment Objectives and Policy and Statement of Fund Governance



- **Initial review in October 2023 meeting**
- **Board recently approved changes December 2022**
- **Most changes proposed are updates and fiduciary audit recommendations**

# Expected 10-Year Policy Returns

	Prior	Updated
Equity		
Domestic Equity	6.60%	6.90%
International	6.80%	7.70%
Alternatives	7.38%	9.10%
Private Equity	8.00%	9.90%
Opportunistic/Div	5.73%	7.90%
Fixed Income	1.75%	4.50%
Real Estate	5.75%	5.10%
Liquidity Reserve	1.00%	2.40%
Total Fund	6.03%	7.04%

# Update Capital Market Assumptions

**Exhibit 2: Asset Mix Policy and Return Expectations for STRS Ohio Total Fund**

<b>Asset Class</b>	<b>Target Allocation<sup>5</sup> (%)</b>	<b>Rebalancing Range (%)</b>	<b>Expected 10-Year Policy Returns<sup>1</sup> (%)</b>	<b>Expected Management Net Returns<sup>2</sup> (%)</b>	<b>Expected Total Return (%)</b>
Equity					
Domestic	26	21-31	<u>6.90</u> <del>6.60</del>	0.25	<u>7.15</u> <del>6.85</del>
International	22	17-27	<u>7.70</u> <del>6.80</del>	1.00	<u>8.70</u> <del>7.80</del>
Alternatives	19 <sup>4</sup>	12-25 <sup>4</sup>	<u>9.10</u> <del>7.38</del>		<u>9.10</u> <del>7.38</del>
-Private Equity	9 <sup>4</sup>	6-14 <sup>4</sup>	<u>9.90</u> <del>8.00</del>		<u>9.90</u> <del>8.00</del>
-Opportunistic/Div	10 <sup>4</sup>	6-14 <sup>4</sup>	<u>7.90</u> <del>5.73</del>		<u>7.90</u> <del>5.73</del>
Fixed Income	22	13-29	<u>4.50</u> <del>1.75</del>	0.35	<u>4.85</u> <del>2.10</del>
-Core	17	13-22			
-Liquid Treasury	5	0-7			
Real Estate	10	6-13	<u>5.10</u> <del>5.75</del>	1.00	<u>6.10</u> <del>6.75</del>
Liquidity Reserve	1	0-5	<u>2.40</u> <del>1.00</del>		<u>2.40</u> <del>1.00</del>
<b>Total Fund</b>	<b>100</b>		<u>7.04</u> <del>6.03</del>	0.40	<u>7.44</u> <del>6.43</del> <sup>3</sup>

- 4.5 From the 2022 Asset Liability Study, the 6.03% expected asset mix 10-year policy return was developed with reference to the observed long-term relationships among major asset classes. The Board believes this return expectation is reasonable but recognizes that the actual ten-year asset mix policy return can deviate significantly from this expectation – both positively and negatively. The volatility level associated with this asset mix is approximately 12.90%. **The Board's investment consultant updates capital market assumptions on an annual basis. The most recent updated capital market assumption results in a 7.04% expected asset mix 10-year policy return and associated volatility level for the asset mix of approximately 11.76%.**

**Revised/Approved Dates (current and past five years):**

**February 15, 2024**

**December 15, 2022**

**May 19, 2022**

**March 18, 2021**

**December 19, 2019**

**December 13, 2018**



## 4.0 Investment Decisions Delegated to Investment Staff

4.1 The Board, through the Executive Director, has delegated to qualified STRS Ohio investment staff the following investment management and implementation decisions:

**(e) Investment staff will determine the most suitable fund management approach, internal or external, by assessing internal capabilities, comparing costs and benefits, and considering potential external collaborations.**

4.2 In making these decisions, STRS Ohio investment staff seeks the advice, guidance, and recommendations of Board-retained investment consultants, external investment managers and other experts and sources as considered prudent by STRS Ohio staff.

*established parameters and risk levels, and,*

(d) Preparing, negotiating, and executing external investment manager mandates, guidelines and fee agreements.

**(e) Investment staff will determine the most suitable fund management approach, internal or external, by assessing internal capabilities, comparing costs and benefits, and considering potential external collaborations.**

4.2 In making these decisions, STRS Ohio investment staff seeks the advice, guidance, and recommendations of Board-retained investment consultants, external investment managers and other experts and sources as considered prudent by STRS Ohio staff.

## 5.0 Board Oversight

- 5.1 The Board requires investment staff to prepare and deliver an Annual Investment Plan that explains how STRS Ohio assets will be managed in order to achieve the Board-established investment objectives. This provides the Board a focused opportunity to:
- (a) Question and comment on staff's investment management plans;
  - (b) Request additional information and support about staff's investment intentions; and
  - (c) Express its confidence in the Annual Investment Plan.

## **5.4 External management fees are reviewed annually by the board. To facilitate this review staff and consultants prepare and deliver an annual review.**

different investment decisions have on total fund, asset class, and manager level performance. Performance is monitored and evaluated with respect to risk and return objectives established by the Board.

- (a) Investment risks are monitored and evaluated quarterly by comparing total fund and asset class risk characteristics relative to suitable *benchmarks*.
- (b) Investment returns are monitored monthly and evaluated quarterly by comparing total fund and asset class returns relative to suitable benchmarks.

## **5.4 External management fees are reviewed annually by the board. To facilitate this review staff and consultants prepare and deliver an annual review.**

- ~~5.5~~4 Before approving or amending the criteria for monitoring and evaluating investment decisions, the Board seeks advice, guidance, and recommendations from STRS Ohio investment staff, Board-retained investment consultants, and other experts and sources as considered prudent by the Board.

## MEMORANDUM

**TO:** Mr. Dale Price, Chair  
State Teachers Retirement Board of Ohio  
275 East Broad Street  
Columbus, OH 43215

**FROM:** Meketa Investment Group ("Meketa")

**DATE:** February 6, 2024

**RE:** Approval of modifications to:  
Statement of Investment Objectives and Policy ("SIOP")  
Statement of Fund Governance ("SFG")

Dear Mr. Price,

The purpose of this memorandum is to provide Meketa's comments regarding proposed modifications to the STRS Ohio Statement of Investment Objectives and Policy ("SIOP") and the STRS Ohio Statement of Fund Governance ("SFG") documents. These items were recently prepared by STRS Ohio Staff and provided to Meketa for review, comment, and if appropriate, concurrence.

The SIOP is a critical document that forms the investment foundation of the STRS Ohio investment portfolio. This document contains the overarching policies and approaches by which the STRS Ohio investment portfolio is managed, while also expressing broad investment objectives, constraints, and methodologies that ensure the prudent investment of assets. There are 19 sections within this document, beginning with the overall purpose and objectives of the portfolio, followed by broad portfolio management parameters as well as high-level guidelines for individual asset classes. From Meketa's perspective, the most salient details pertain to the investment goals of STRS Ohio, strategic asset allocation details, risk budgets, and benchmarking.

The proposed changes to the SIOP reflect updated capital market assumptions from the STRS Ohio Board's investment consultant, Meketa, and how these assumptions impact asset class and total portfolio expected return and volatility estimates. While these updates are straight-forward in nature, we do believe that it is appropriate for Meketa to highlight that the overall structure and content of the SIOP is aligned with industry best practices. This is a document that Meketa and the STRS Ohio Board should be reviewing on a continual basis, and it should be expected that Meketa may propose more material modifications to the document over time. Meketa recommends the Board approve the Statement of Investment Objectives and Policy.

The SFG is evaluated in parallel with the SIOP, as it establishes the critical governance functions for overseeing and implementing the STRS Ohio investment portfolio. Proper governance is paramount

for a public retirement system to ensure that there are high degrees of transparency, accountability, and investment efficiencies in place.

The proposed changes to the SFG focus on two changes: 1) explicit delegation of authority to STRS Ohio Staff in choosing internal vs. external fund management, and 2) addition of an annual external management fee review by the Board. These changes reflect existing and sensible practices at STRS Ohio that should be reflected in policy. Furthermore, Meketa believes that these modifications are aligned with best practices given the delegated authority implementation model and portfolio risk budgets that naturally provide additional guardrails. Over time, Meketa will continue to assist the Board in evaluating the existing practices and policies at STRS Ohio. Meketa recommends the Board approve the Statement of Fund Governance.

The operational efficiencies and investment outcomes of a public retirement system are heavily dependent on the governance design and documentation that guide it. From Meketa's review of the various policies and procedures documents that outline the operations of STRS Ohio, we believe that STRS Ohio is in a good position to continue to provide sustainable benefits to beneficiaries.

Regards,

Colin Bebee, CFA  
Managing Principal

LaRoy Brantley  
Managing Principal



February 6, 2024

Mr. Dale Price, Chair  
State Teachers Retirement Board of Ohio  
275 East Broad Street  
Columbus, OH 43215-3771

Dear Mr. Price,

Callan has reviewed the revised Statement of Investment Objectives and Policy, with particular attention to subsection 11.0 Alternative Investments (Private Equity & Opportunistic/Diversified). Callan believes the proposed changes to the capital market assumptions for Alternative Investments and its subcomponents are reasonable.

Callan recommends updating the Phase-In Target Weights Table in Section 4.5 since these have passed and the new target Alternative Investment target allocations approved in 2022 have been achieved.

Regards,

Pete Keliuotis  
Executive Vice President



STATE TEACHERS  
RETIREMENT SYSTEM  
OF OHIO

275 East Broad Street  
Columbus, OH 43215-3771  
614-227-4090  
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**PROPOSED MOTION**

***Approval of the Statement of Investment Objectives  
and Policy and  
Statement of Fund Governance***

February 15, 2024

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\_\_\_\_\_ moved, and \_\_\_\_\_ seconded, that the Board approve the amended Statement of Investment Objectives and Policy and Statement of Fund Governance.

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- **Highlights**
- **December/January returns and activity**
- **STRS Ohio midyear economic update**

- **The total fund return for December was 3.00% net of cost, finishing the first half of fiscal 2023 at 4.14%**
  - Domestic equity returns 5.1%, international equity returns 3.8%, fixed income returns 3.6%
- **Rebalancing activity**
  - Removed about \$720 million from domestic equities
  - Added about \$500 million to fixed income
- **The calendar year 2023 total fund return was 11.51% net of estimated costs; this is relative to a benchmark return of 12.39%**



- **The preliminary total fund return for January was +0.35% net of cost**
- **The preliminary total fund return for fiscal year to date is +4.50% net of cost**
  - Domestic equity returns +1.6%, international equity +0.8%, fixed income -0.2%
- **Rebalancing activity**
  - Removed \$690 million from domestic and international equities
  - Added \$1 billion to fixed income
- **Total investment assets ended January at approximately \$91.7 billion; higher by \$1.6 billion in fiscal year 2024**



# STRS Ohio Midyear Economic Update

Suchit Arora

Feb. 15, 2024

# Better Economic Prospects Lower Recession Probability

## Annual Plan Fiscal 2024: Below-Trend Growth

Real GDP Growth	Probability
> 3.0%	20%
0.5% - 3.0%	50%
< 0.5%	30%



## Midyear Update Fiscal 2024: Above-Trend Growth

Real GDP Growth	Probability
> 3.0%	30%
0.5% - 3.0%	55%
< 0.5%	15%

**Recession Probability: 25%**

**Inflation: Heading towards 2.0% target**

**Monetary Policy: Restrictive stance**

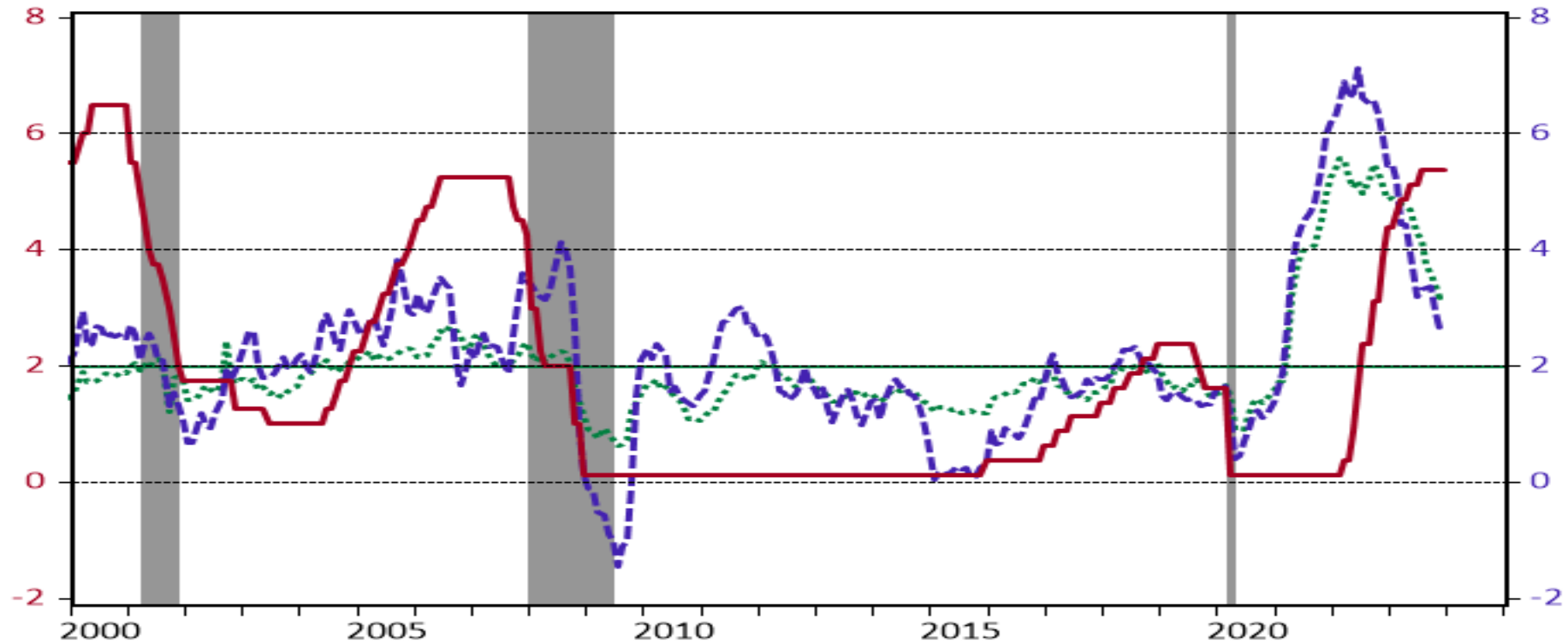
**Recession Probability: 10%**

**Inflation: Close to 2.0% target**

**Monetary Policy: Heading towards neutral stance**

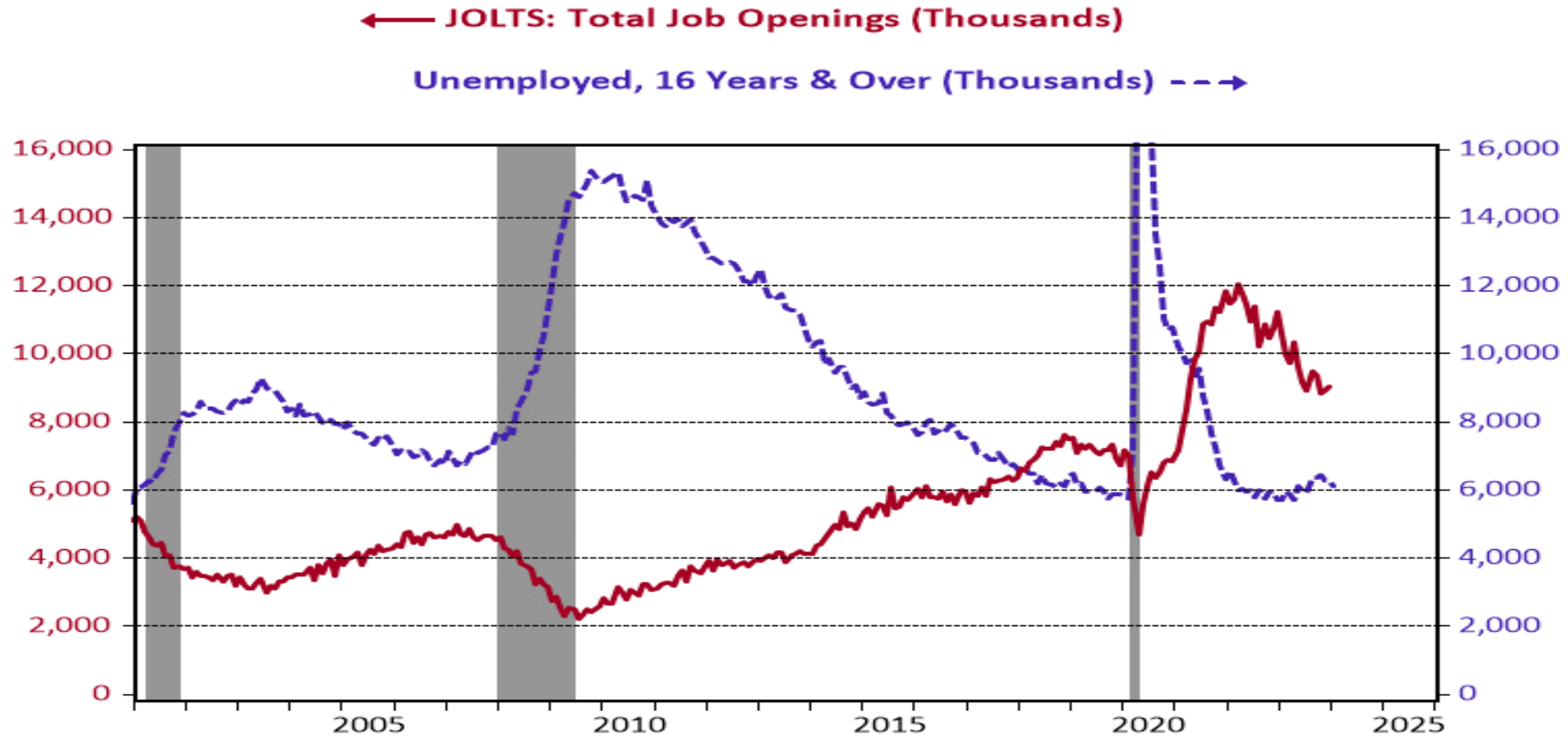
# Inflation Is Near 2.0%; The Fed To Cut Policy Interest Rate

**Federal Open Market Committee: Fed Funds Target Rate (EOP, %)**  
**Personal Consumption Expenditure Inflation (% Chg. Year-to-Year)**  
**Core Personal Consumption Expenditure Inflation (% Chg. Year-to-Year)**



Sources: Federal Reserve Board, Bureau of Economic Analysis

# Strong Labor Demand Has Kept Unemployment Low

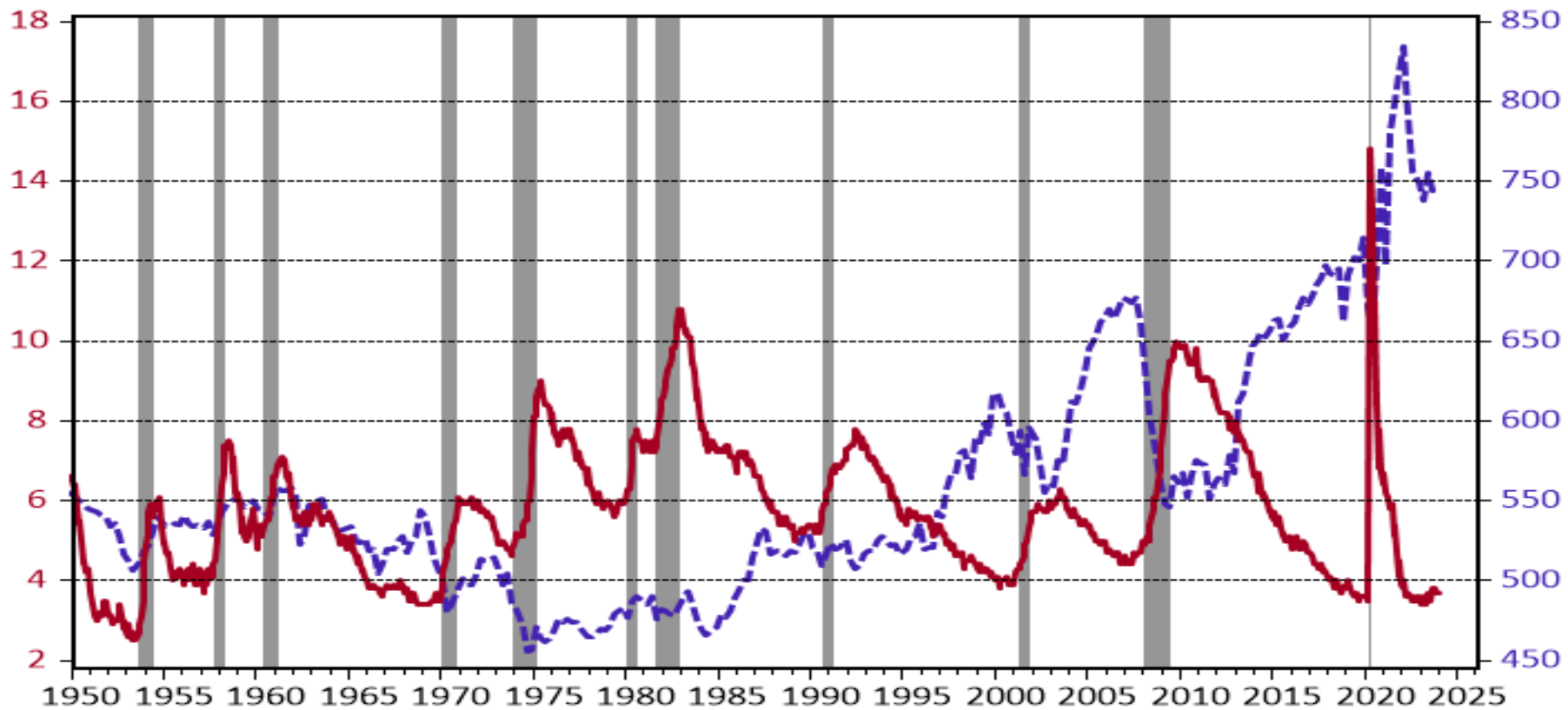


Source: Bureau of Labor Statistics

# The Fundamentals For Consumer Spending Are Strong

← Civilian Unemployment Rate: 16 yr + (%)

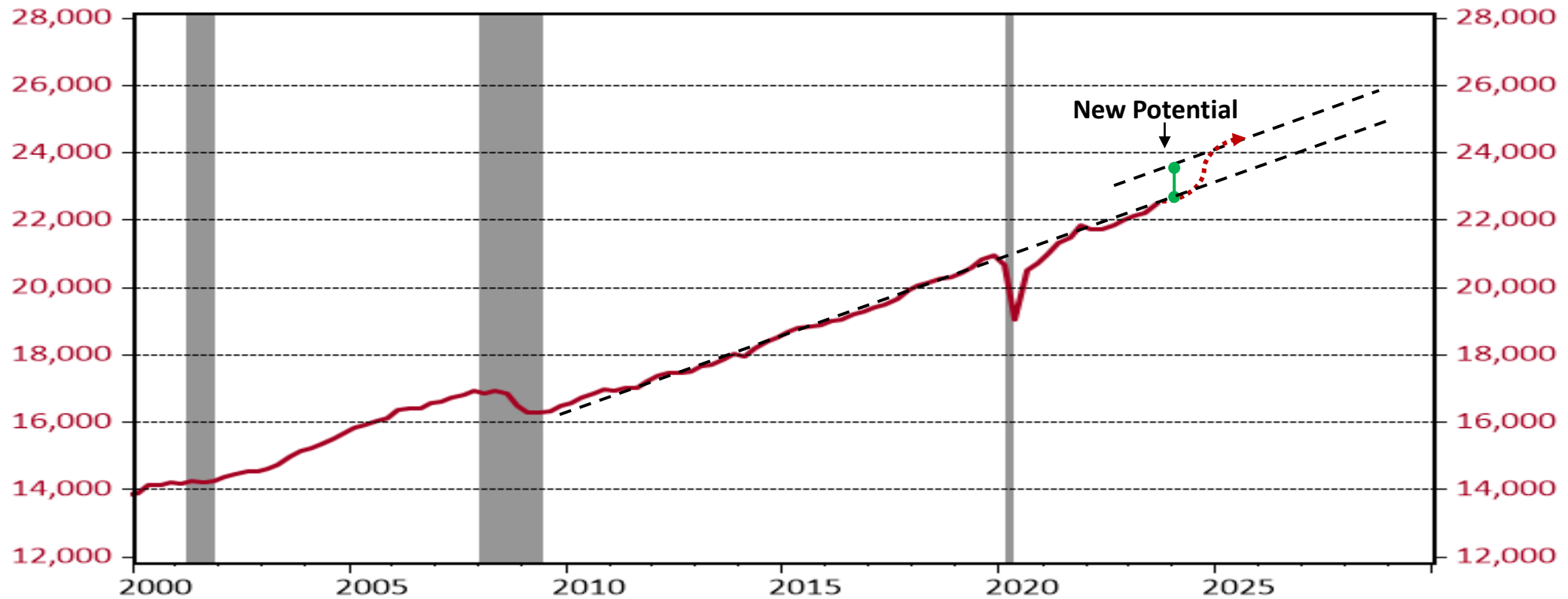
Household Net Worth as Percent of Disposable Personal Income (%) -->



Sources: Bureau of Labor Statistics, Federal Reserve Board

# Real GDP Growing Towards Higher Potential Level

**Real Gross Domestic Product**  
SAAR, Bil.Chn.2017\$



Source: Bureau of Economic Analysis

- **Real GDP growth**
  - Fiscal 2024: 3.4% annual rate, 10% probability of recession
- **Inflation**
  - Near 2.0% policy target
- **Monetary policy**
  - The Federal Reserve to balance price stability and maximum employment



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# Annual Review of the Stock Proxy Voting Policy



- **Last update and approval: June 2023**
- **Annual policy review**
  - Identify important proposals for upcoming proxy season
  - Update policy to address new issues encountered in the prior year
  - Steps and information resources:
    - Prior year proposals not addressed by current policy (“refer items”)
    - Comparison of STRS Ohio Proxy Voting Policy against policies used by other funds
      - California State Teachers Retirement System – Public Pension Fund
      - Office of Illinois State Treasurer – Public Pension Fund
      - Calvert Research and Management – Private Fund
      - The standard policy used by Institutional Shareholder Services
    - Ongoing review:
      - Newsletters, conference calls, webinars, etc. provided by CII (Counsel of Institutional Investors), ISS
      - Informational resources such as *Wall Street Journal*

- **One proposed addition**
  - Update guideline: Board Representation
  - Original Policy Language:
    - ~~*“STRS Ohio will vote for resolutions asking for a company to make a greater effort to review women and minority candidates for nomination to the board of directors.”*~~
    - Proposed update:
      - *“STRS Ohio will vote for resolutions asking a company to make a greater effort to review potential board candidates with a diverse mix of skills that are most appropriate to the company’s long-term needs, including candidates that provide gender, racial and cultural diversity.”*



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# Voting Summary July 1, 2023-Dec. 31, 2023



NUMBER OF MEETINGS:	1,279
BALLOTS VOTED:	1,800

MANAGEMENT PROPOSALS	Number of Times Issues Appeared on a Ballot	STRS Ohio Voted "FOR"	STRS Ohio Voted "AGAINST"	STRS Ohio Voted "ABSTAIN"	STRS Ohio Voted "WITHHOLD"	STRS Ohio Voted "DO NOT VOTE"	STRS Ohio Voted "OTHER"	STRS Ohio Voted "WITH MGMT"	Percentage (%) of Voting "WITH MGMT"	STRS Ohio Voted "AGAINST MGMT"	Percentage (%) of Voting "AGAINST MGMT"
Audit	519	491	26	0	0	2	0	491	95%	26	5%
Capitalization	876	787	89	0	0	0	0	787	90%	89	10%
Company Articles	264	207	57	0	0	0	0	207	78%	57	22%
Compensation	1499	1107	271	0	0	1	120	1218	81%	280	19%
Corporate Governance	0	0	0	0	0	0	0	0	0%	0	0%
Director Election	3662	3021	268	22	350	1	0	3039	83%	622	17%
Director Related	552	451	97	0	0	4	0	453	82%	95	17%
Environmental/Social (blended)	2	2	0	0	0	0	0	2	100%	0	0%
Environmental	4	4	0	0	0	0	0	4	100%	0	0%
Miscellaneous	75	61	14	0	0	0	0	63	84%	12	16%
Non Research	98	38	60	0	0	0	0	98	100%	0	0%
Non-Routine Business	246	228	18	0	0	0	0	228	93%	18	7%
Routine Business	708	653	50	0	0	5	0	655	93%	48	7%
Social	40	39	1	0	0	0	0	39	98%	1	3%
Strategic Transactions	280	196	82	0	0	2	0	196	70%	82	29%
Takeover Related	109	99	10	0	0	0	0	99	91%	10	9%
<b>Total</b>	<b>8934</b>	<b>7384</b>	<b>1043</b>	<b>22</b>	<b>350</b>	<b>15</b>	<b>120</b>	<b>7579</b>	<b>85%</b>	<b>1340</b>	<b>15%</b>

SHAREHOLDER PROPOSALS	Number of Times Issues Appeared on a Ballot	STRS Ohio Voted "FOR"	STRS Ohio Voted "AGAINST"	STRS Ohio Voted "ABSTAIN"	STRS Ohio Voted "WITHHOLD"	STRS Ohio Voted "DO NOT VOTE"	STRS Ohio Voted "OTHER"	STRS Ohio Voted "WITH MGMT"	Percentage (%) of Voting "WITH MGMT"	STRS Ohio Voted "AGAINST MGMT"	Percentage (%) of Voting "AGAINST MGMT"
Audit	29	28	1	0	0	0	0	29	100%	0	0%
Capitalization	1	1	0	0	0	0	0	1	100%	0	0%
Company Articles	8	2	6	0	0	0	0	7	88%	1	13%
Compensation	11	4	7	0	0	0	0	5	45%	6	55%
Corporate Governance	3	3	0	0	0	0	0	1	33%	2	67%
Director Election	97	69	18	0	0	10	0	87	90%	0	0%
Director Related	10	1	5	0	0	4	0	4	40%	2	20%
Environmental/Social (blended)	5	4	1	0	0	0	0	1	20%	4	80%
Environmental	13	5	8	0	0	0	0	8	62%	5	38%
Miscellaneous	22	15	7	0	0	0	0	20	91%	2	9%
Non Research	0	0	0	0	0	0	0	0	0%	0	0%
Non-Routine Business	4	1	1	0	0	2	0	2	50%	0	0%
Routine Business	0	0	0	0	0	0	0	0	0%	0	0%
Social	15	7	8	0	0	0	0	8	53%	7	47%
Strategic Transactions	0	0	0	0	0	0	0	0	0%	0	0%
Takeover Related	0	0	0	0	0	0	0	0	0%	0	0%
<b>Total</b>	<b>218</b>	<b>140</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>173</b>	<b>79%</b>	<b>29</b>	<b>13%</b>

<b>GRAND TOTAL</b>	<b>9152</b>	<b>7524</b>	<b>1105</b>	<b>22</b>	<b>350</b>	<b>31</b>	<b>120</b>	<b>7752</b>	<b>85%</b>	<b>1369</b>	<b>15%</b>
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- Complete listing of votes by company is available (Phone Book)

- **Vote totals this period**

- 1,279 shareholder meetings
- 1,800 ballots
- 9,152 proposals

- **All proposals voted, except countries with share blocking**

Argentina

Curacao

Egypt

Iceland

Kazakhstan

Lebanon

Luxembourg

Mauritius

Morocco

Norway

Switzerland

- **To the best of our knowledge all proxies have been voted in accordance with the STRS Ohio proxy voting policy**

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State Teachers Retirement System of Ohio

February 15, 2024

4Q23 Performance Report

## Agenda

1. Trustee Summary Report
2. Economic & Market Update
3. STRS Ohio Investment Performance
4. Additional Trustee Summary Reports
5. Investment Manager Performance

## Trustee Summary Report

#### STRS Ohio Total Fund Report Fiscal YTD, 1, 3, 5, 10, & 20 Years

Periods Ending December, 2023  
Annualized Rates of Return

	Fiscal YTD	1 Year	3 Years	5 Years	10 Years	20 Years
<b>Experienced Returns</b>						
<b>Have returns affected funded ratio?</b>						
1. Total fund return *	4.20%	11.64%	6.43%	9.89%	8.12%	7.94%
2. Actuarial discount rate ***	3.50%	7.00%	7.00%	7.18%	7.41%	7.68%
3. Relative Performance (1-2)	0.70%	4.64%	-0.57%	2.71%	0.72%	0.26%
<b>Has plan been rewarded for capital market risk?</b>						
4. Total fund benchmark return	4.51%	12.40%	5.53%	9.24%	7.65%	7.58%
5. Minimum risk/high cost policy of 91-Day T-Bills	2.70%	5.02%	2.15%	1.88%	1.25%	1.41%
6. Impact of asset mix policy (4-5)	1.81%	7.38%	3.38%	7.36%	6.40%	6.17%
<b>Has plan been rewarded for active management risk?</b>						
7. Active management effect (1-4) *	-0.31%	-0.76%	0.90%	0.65%	0.47%	0.36%
8. Net active management return estimated **	-0.38%	-0.89%	0.78%	0.53%	0.34%	0.24%

\*Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of all external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding.

\*\*Net returns are net of all internal and external investment management fees and costs, including carried interest and other fund expenses.

\*\*\*The actuarial rate of return assumption was decreased from 7.45% to 7.00%, effective as of 6/30/2021.

The STRS real estate return includes the use of leverage.

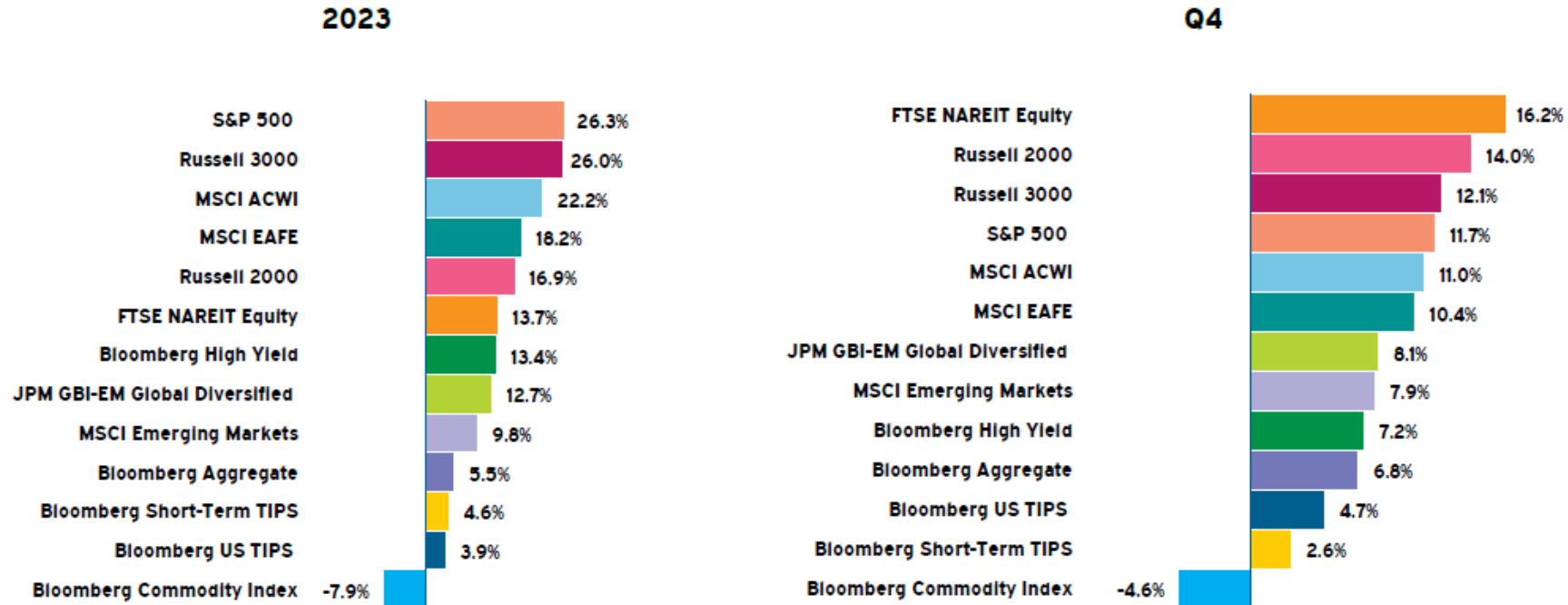
# **Economic and Market Update**

Data as of December 31, 2023

### Commentary

- Most markets rallied in the fourth quarter in anticipation that policy rates cuts were ahead in 2024.
- Major central banks have largely paused interest rates hikes. Markets are now largely expecting the FOMC to maintain interest rates at the current levels and begin cutting rates as soon as Q1 2024.
  - Inflation rose in December in the US and Europe, but both finished the year much lower than where they started. China remained in deflationary territory (-0.3%) at year-end.
  - US equity markets (Russell 3000 index) posted strong gains for the quarter (12.1%), raising full year results to +26.0%. Most sectors rallied, with more defensive sectors lagging.
  - Non-US developed equity markets also rallied in the fourth quarter (MSCI EAFE 10.4%), with the weakening of the US dollar contributing meaningfully (10.4% versus 5.0% ex.-US dollar influence). The performance difference between US and international developed equities for the year remained wide (26.0% versus 18.2%).
  - Emerging market equities were up 7.9% in the fourth quarter and 9.8% for calendar 2023 but trailed developed markets due to lagging returns in China (-4.2% Q4/-11.2% one-year). Emerging market equities ex.-China returned 20% in 2023.
  - Interest rates generally fell in the fourth quarter, particularly for longer-dated maturities. The broad US bond market rallied (6.8%) for the quarter, lifting 2023 returns into positive territory (5.5%).
- Looking to 2024, the paths of inflation and monetary policy, China's economic disorder and slowing economic growth, and the wars in Ukraine and Israel, will be key.

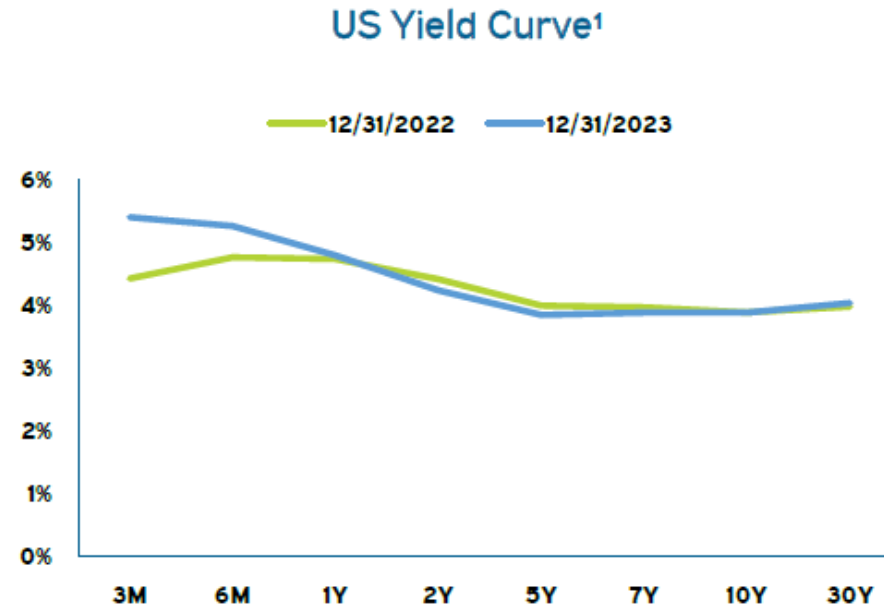
### Index Returns<sup>1</sup>



→ After a tough start to the quarter on lingering fears that the Federal Reserve might keep interest rates “higher for longer”, markets rallied in November and December. Economic data generally coming in below expectations sparked expectations that the Federal Reserve might really be done raising policy rates for this cycle.

→ Strong results for the quarter built on gains for the year with all asset classes finishing in positive territory in 2023, except commodities.

<sup>1</sup> Source: Bloomberg. Data is as of December 31, 2023.

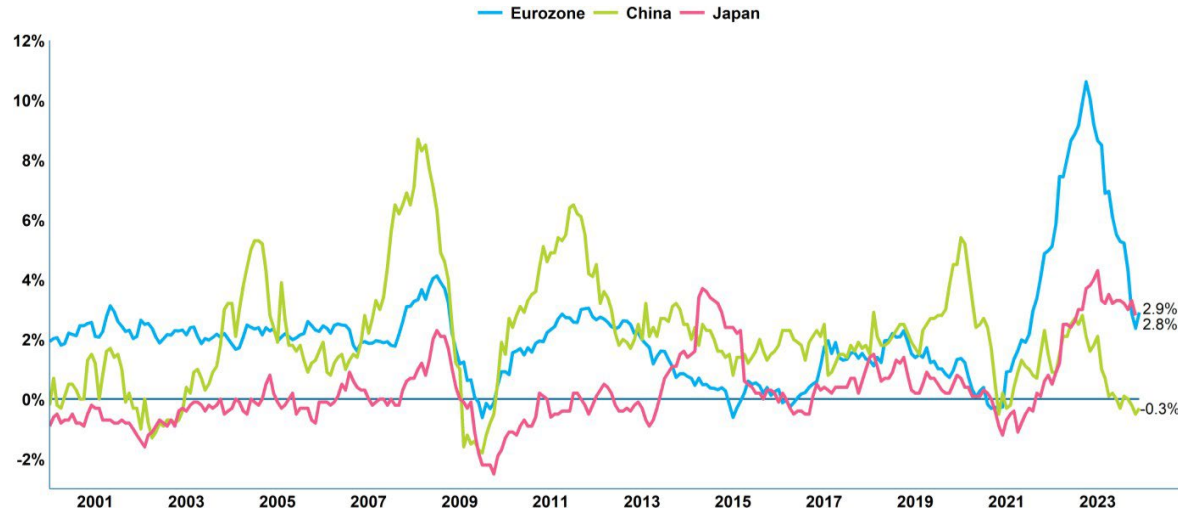


- The more policy sensitive short-term maturities were higher this year while longer-term maturities finished the year where they started.
- Still, rates declined sharply over the quarter, particularly at the longer end of the yield curve on continued easing of inflation-related risks and speculation that the Federal Reserve is done with their policy rate increases for this cycle.
- For the quarter, two-year Treasury yields fell from 5.05% to 4.24% while ten-year Treasury yields declined from 4.56% to 3.88%.
- The yield curve remained inverted at year-end despite a recent flattening trend. The spread between the 2-year and 10-year Treasury was -0.37% at the end of December.

<sup>1</sup> Source: Bloomberg. Data is as of December 31, 2023.



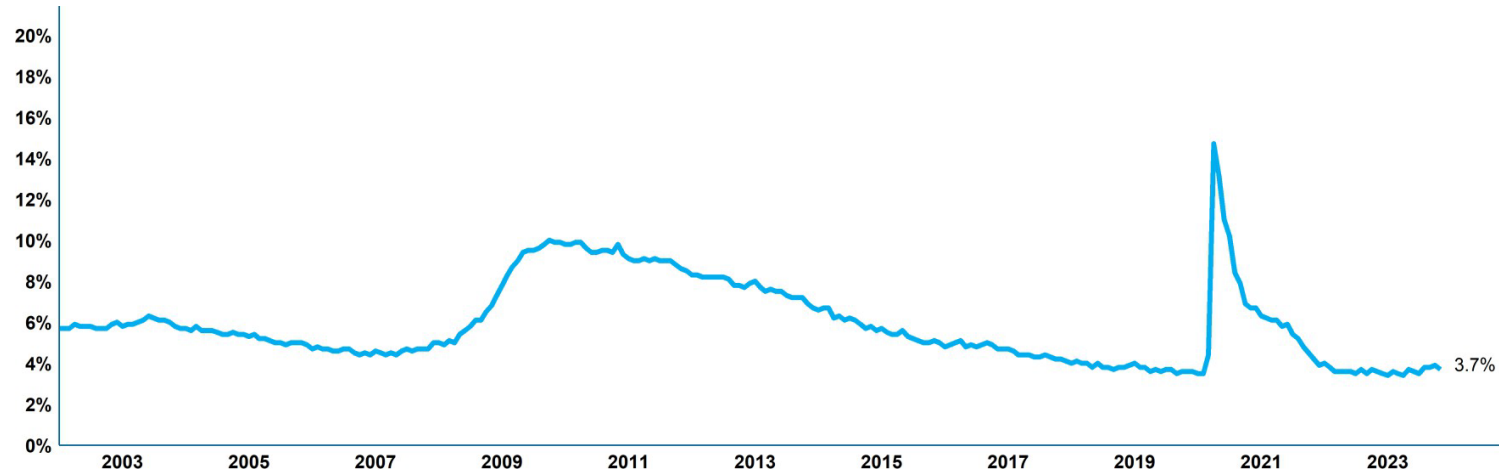
### Global Inflation (CPI Trailing Twelve Months)<sup>1</sup>



- Outside the US, inflation is also falling across major economies with China slipping into deflation.
- In the eurozone, inflation experienced a dramatic decline last year. Despite a small increase in December (2.9% versus 2.4%) it finished the year below the 3.4% year-over-year reading in the US.
- Inflation in Japan remains near levels not seen in almost a decade, driven by food and home related items.

<sup>1</sup> Source: FRED for United States CPI and Eurozone CPI. Source: Bloomberg for Japan CPI, China CPI, and Eurozone December flash estimate. Data is as December 31, 2023, except Japan which is as of November 30, 2023.

US Unemployment<sup>1</sup>



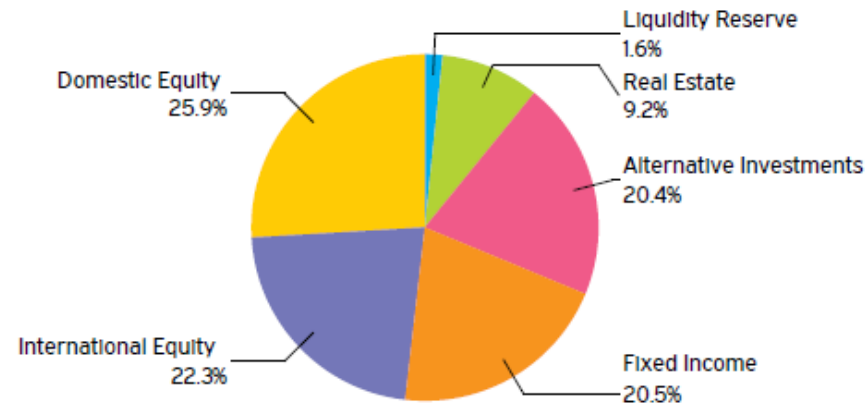
- Overall, the US labor market remains healthy with the unemployment rate relatively low, wage growth now positive in real terms, and initial claims for unemployment staying subdued.
- In December, US unemployment remained unchanged (3.7%) and came in slightly below expectations of an increase to 3.8%. The number of jobs added did come in above expectations (216k versus 175k) though with the most jobs added in the government, leisure and hospitality, and health care sectors.
- The labor force participation remained relatively stable at 62.5%, well off the lows of the pandemic (60.1%) but not back to pre-pandemic levels (63.3%).
- The pace of hourly wage growth has declined from its peak of close to 6.0% finishing 2023 at 4.1% yoy. Wage growth remains positive in real terms though.

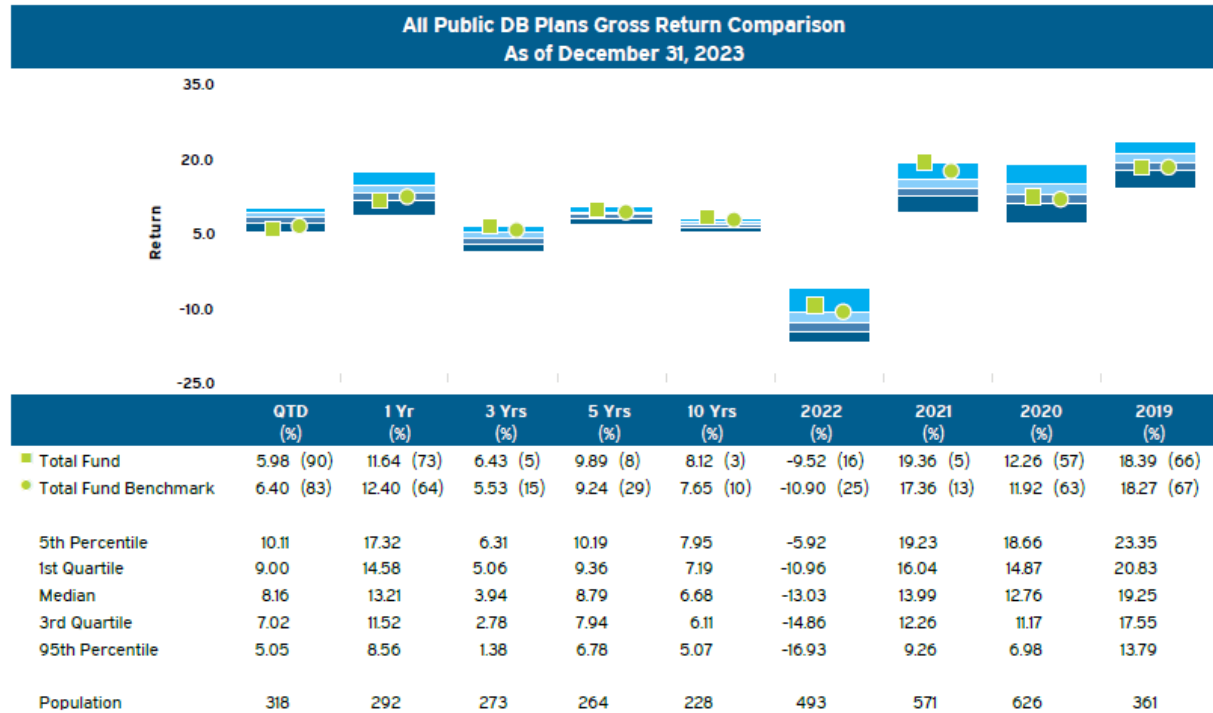
Source: FRED. Data is as December 31, 2023.

## **STRS Ohio Investment Performance**

Asset Allocation vs. Target As of December 31, 2023				
Asset Class	Current Balance (\$M)	Current Allocation (%)	Policy (%)	Difference (%)
Domestic Equity	\$23,755	25.9	26.0	-0.1
International Equity	\$20,407	22.3	22.0	0.3
Fixed Income	\$18,824	20.5	22.0	-1.5
Liquidity Reserve	\$1,507	1.6	1.0	0.6
Real Estate	\$8,434	9.2	10.0	-0.8
Alternative Investments	\$18,703	20.4	19.0	1.4
<b>Total</b>	<b>\$91,631</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

### Actual Asset Allocation



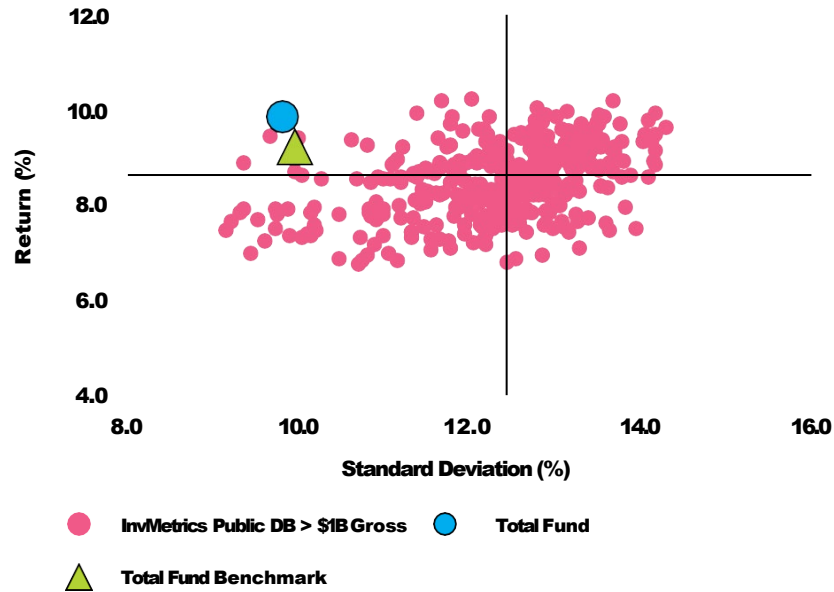


- For the one-year period as of 12/31/2023, STRS Ohio underperformed the benchmark by 76 basis points and ranked in the 73rd percentile of the eVestment All Public DB Plans universe.
- For the five-year period as of 12/31/2023, STRS Ohio outpaced the benchmark by 65 basis points and ranked in the 8th percentile of the eVestment All Public DB Plans universe.
- For the ten-year period as of 12/31/2023, STRS Ohio outpaced the benchmark by 47 basis points and ranked in the 3rd percentile of the eVestment All Public DB Plans universe.

Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of all external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding. Parentheses contain percentile rankings. Calculation based on monthly periodicity. Universe is All Public DB Plans.

### Plan Sponsor Peer Group Analysis | As of December 31, 2023

#### Annualized Return vs. Annualized Standard Deviation 5 Years Ending December 31, 2023

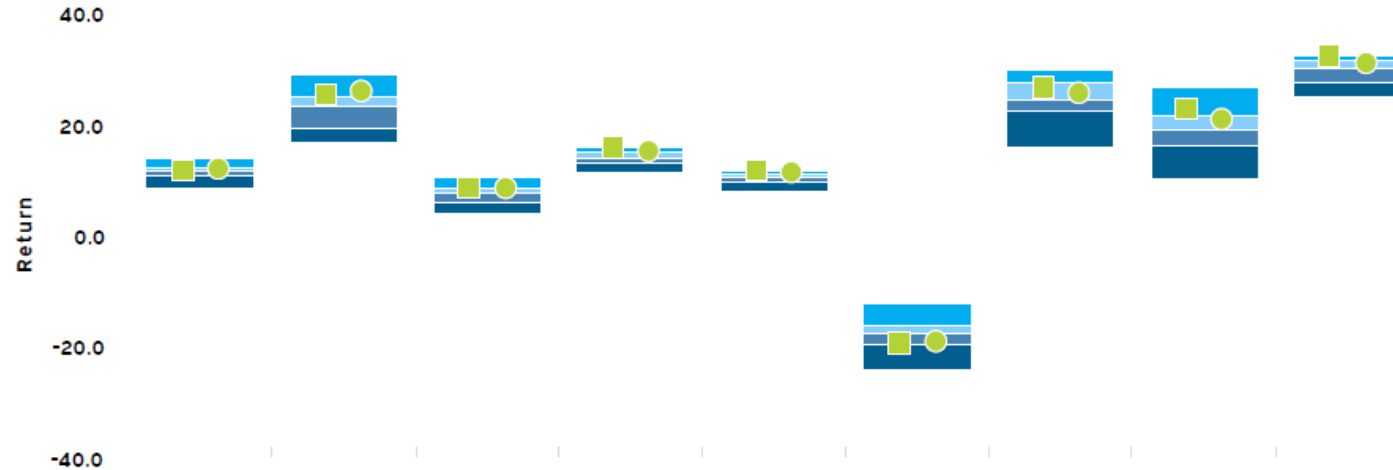


- For the five-year period as of December 31st, 2023, STRS Ohio posted an annualized return of 9.89%, versus the 9.24% return of the total fund benchmark.
- STRS Ohio's trailing five-year return ranked at the 8th percentile, while exhibiting less risk than the median of the eVestment All Public DB Plans ("risk" as measured by Standard Deviation).

	Return	Standard Deviation
Total Fund	9.89 (8)	9.81 (11)
Total Fund Benchmark	9.24 (29)	9.95 (12)
All Public DB Plans Median	8.79	12.08

Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of all external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding.

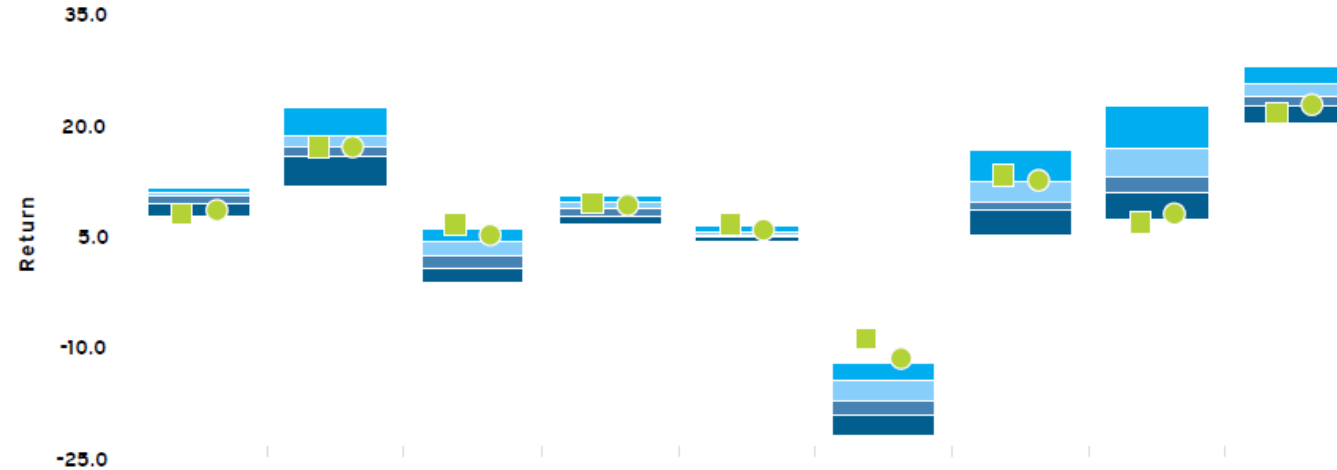
#### All Public Plans > \$1B-US Equity Segment Gross Return Comparison As of December 31, 2023



	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)
■ Total Domestic Equity	11.62 (52)	25.25 (23)	8.45 (33)	15.75 (10)	11.65 (10)	-19.50 (75)	26.53 (32)	23.00 (16)	32.43 (6)
● Domestic Equity Benchmark	12.07 (34)	25.96 (21)	8.54 (31)	15.16 (20)	11.48 (13)	-19.21 (65)	25.66 (39)	20.89 (29)	31.02 (30)
5th Percentile	13.86	28.93	10.49	15.90	11.74	-12.54	29.97	26.62	32.50
1st Quartile	12.22	25.16	8.71	14.99	11.05	-16.16	27.55	21.45	31.32
Median	11.67	23.03	7.77	14.03	10.37	-17.92	24.35	18.92	30.14
3rd Quartile	10.89	19.28	6.08	12.88	9.57	-19.56	22.62	16.14	27.70
95th Percentile	8.56	16.95	3.78	11.41	8.08	-24.06	15.73	10.00	24.99
Population	53	51	49	43	37	52	56	55	52

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity. Universe is All Public Plans > \$1B-US Equity Segment.

#### All Public Plans > \$1B-Intl. Equity Segment Gross Return Comparison As of December 31, 2023

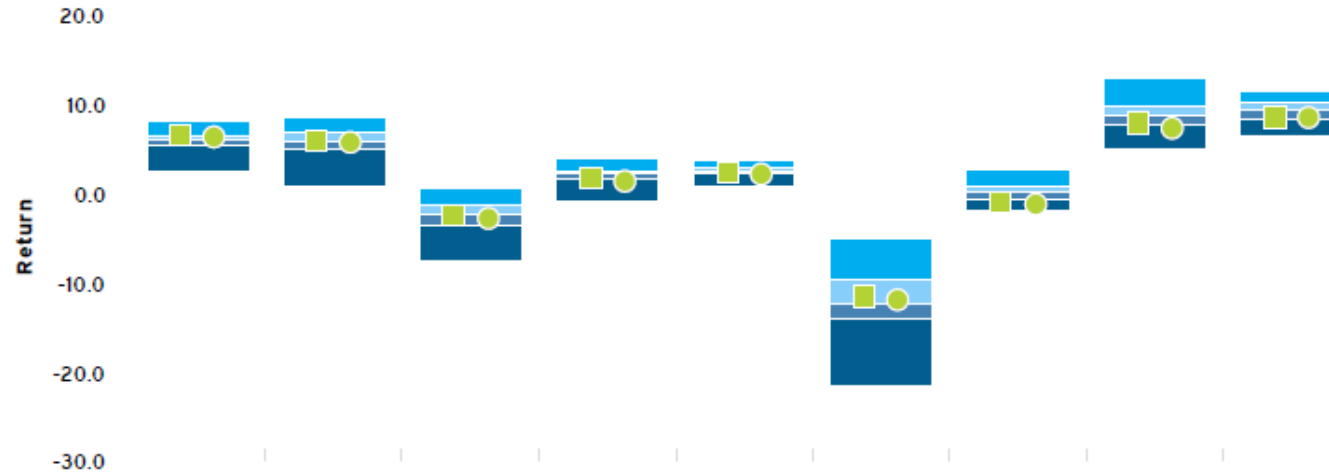


	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)
■ Total International Equity	7.82 (94)	16.83 (54)	6.33 (4)	9.30 (28)	6.35 (3)	-9.11 (1)	13.20 (19)	6.78 (97)	21.54 (85)
● International Blended Benchmark	8.30 (91)	16.93 (53)	5.10 (13)	8.94 (40)	5.61 (19)	-11.64 (2)	12.36 (23)	7.88 (92)	22.51 (71)
5th Percentile	11.49	22.08	5.60	10.31	6.28	-12.37	16.48	22.44	27.87
1st Quartile	10.73	18.43	4.06	9.52	5.48	-14.65	12.17	16.75	25.54
Median	10.17	17.02	2.15	8.68	5.09	-17.26	9.61	12.76	23.71
3rd Quartile	9.29	15.70	0.41	7.60	4.68	-19.23	8.34	10.72	22.38
95th Percentile	7.51	11.76	-1.33	6.40	4.12	-22.22	4.92	7.12	19.97
Population	52	51	50	46	41	54	56	58	53

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity. Universe is All Public Plans > \$1B-Intl. Equity Segment.



#### All Public Plans > \$1B-US Fixed Income Segment Gross Return Comparison As of December 31, 2023



	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)
■ Total Fixed Income	6.58 (26)	5.95 (43)	-2.46 (52)	1.68 (69)	2.28 (68)	-11.51 (42)	-1.02 (86)	7.95 (67)	8.51 (73)
● Fixed Income Blended Benchmark	6.23 (43)	5.81 (46)	-2.74 (62)	1.40 (78)	2.07 (78)	-11.91 (46)	-1.28 (91)	7.39 (78)	8.51 (74)
5th Percentile	8.08	8.44	0.64	3.94	3.76	-4.93	2.81	12.86	11.44
1st Quartile	6.59	6.98	-1.25	2.60	2.90	-9.77	0.84	9.66	10.31
Median	5.99	5.62	-2.40	2.05	2.49	-12.28	0.15	8.60	9.30
3rd Quartile	5.32	4.92	-3.62	1.49	2.15	-14.10	-0.57	7.69	8.38
95th Percentile	2.43	0.73	-7.52	-0.74	0.82	-21.69	-2.02	4.94	6.54
Population	55	53	51	45	40	57	58	59	53

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity. Universe is All Public Plans > \$1B-US Fixed Income Segment.

#### All Public Plans > \$1B-Real Estate Segment Gross Return Comparison As of December 31, 2023



	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2022 (%)	2021 (%)	2020 (%)	2019 (%)
■ Total Real Estate	-1.63 (61)	-7.32 (71)	5.68 (90)	5.22 (88)	7.68 (85)	5.56 (97)	20.64 (57)	-1.27 (88)	10.65 (21)
● Real Estate Blended Benchmark	-0.14 (24)	-4.72 (47)	5.26 (93)	5.16 (89)	7.17 (94)	0.85 (100)	21.38 (45)	0.89 (72)	9.31 (26)
5th Percentile	0.67	2.33	12.93	10.00	11.38	22.96	25.39	5.06	14.48
1st Quartile	-0.18	-1.32	11.33	8.53	10.14	17.06	23.46	2.84	9.40
Median	-1.42	-5.51	9.62	7.56	9.70	14.22	20.83	1.66	7.68
3rd Quartile	-2.67	-9.03	7.89	6.27	8.03	11.48	17.66	0.53	6.15
95th Percentile	-3.85	-12.56	4.84	4.26	7.10	5.92	15.20	-2.58	3.95
Population	43	38	33	25	14	39	38	36	34

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity. Universe is All Public Plans > \$1B-Real Estate Segment.

## **Additional Trustee Summary Reports**

#### Gross and Net Total Fund Returns

Periods Ending December, 2023  
Annualized Rates of Return

**Gross and net total fund return**

1. Total fund return \*
2. External alternative & real estate mgmt. fees reflected in line 1 \*\*
3. Gross total fund return (1 + 2)
4. Total investment management costs
5. Net total fund return (3-4) \*\*\*

	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	20 Year
1. Total fund return *	4.20%	11.64%	6.43%	9.89%	8.12%	7.94%
2. External alternative & real estate mgmt. fees reflected in line 1 **	0.11%	0.22%	0.22%	0.23%	0.22%	0.18%
3. Gross total fund return (1 + 2)	4.31%	11.86%	6.65%	10.12%	8.34%	8.12%
4. Total investment management costs	0.17%	0.35%	0.34%	0.35%	0.35%	0.30%
5. Net total fund return (3-4) ***	4.13%	11.51%	6.31%	9.77%	7.99%	7.82%

\*Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of all external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding.

\*\*Includes management fees net of fee waivers/rebates and does not include carried interest of other fund expenses.

\*\*\*Net returns are net of all internal and external investment management fees and costs, including carried interest and other fund expenses.

#### Total Investment Management Costs

	2022 Investment Management Costs *			Dec. 2022 Assets (Billions)
	Fees to Assets Managed (bps)	Fees to Total Fund (bps)	Fees (\$000's)	
<b>Total Investment Management Costs *</b>				
Externally Managed:				
Alternative Investments	104	20	\$ 187,035	\$ 18.4
Real Estate	153	2	\$ 19,363	\$ 1.3
All Other External Managers **	39	6	\$ 52,583	\$ 12.1
Internal Managers	13	7	\$ 63,833	\$ 54.1
<b>Total Investment Management Costs *</b>	35	35	\$ 322,814	\$ 85.9

\*Annual fees are based upon the preliminary CEM investment report for calendar year 2022. Investment management costs include internal investment department salaries, incentive compensation, benefits, external manager fees, the allocation of ITS costs, overhead expenses, oversight, custodial & other costs. Investment management costs exclude carried interest and other fund expenses.

\*\* Includes fixed income, domestic equity, and international equity external manager fees.

Trailing Asset Class Performance								
	Market Yrs Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 (%)
<b>Total Fund</b>	<b>91,630,549,529</b>	<b>100.00</b>	<b>5.98</b>	<b>4.20</b>	<b>11.64</b>	<b>6.43</b>	<b>9.89</b>	<b>8.12</b>
<i>Total Fund Benchmark</i>			<i>6.40</i>	<i>4.51</i>	<i>12.40</i>	<i>5.53</i>	<i>9.24</i>	<i>7.65</i>
<b>Total Domestic Equity</b>	<b>23,649,213,146</b>	<b>25.81</b>	<b>11.62</b>	<b>8.52</b>	<b>25.25</b>	<b>8.45</b>	<b>15.75</b>	<b>11.65</b>
<i>Domestic Equity Benchmark</i>			<i>12.07</i>	<i>8.43</i>	<i>25.96</i>	<i>8.54</i>	<i>15.16</i>	<i>11.48</i>
<b>Total Fund Allocation Portfolio</b>	<b>106,113,965</b>	<b>0.12</b>	<b>11.39</b>	<b>7.02</b>	<b>21.94</b>	<b>2.78</b>	<b>10.99</b>	<b>7.08</b>
<b>Total International Equity</b>	<b>20,407,118,513</b>	<b>22.27</b>	<b>7.82</b>	<b>4.93</b>	<b>16.83</b>	<b>6.33</b>	<b>9.30</b>	<b>6.35</b>
<i>International Blended Benchmark</i>			<i>8.30</i>	<i>5.62</i>	<i>16.93</i>	<i>5.10</i>	<i>8.94</i>	<i>5.61</i>
<b>Total Fixed Income</b>	<b>18,824,361,796</b>	<b>20.54</b>	<b>6.58</b>	<b>3.78</b>	<b>5.95</b>	<b>-2.46</b>	<b>1.68</b>	<b>2.28</b>
<i>Fixed Income Blended Benchmark</i>			<i>6.23</i>	<i>3.68</i>	<i>5.81</i>	<i>-2.74</i>	<i>1.40</i>	<i>2.07</i>
<b>Total Real Estate</b>	<b>8,433,929,576</b>	<b>9.20</b>	<b>-1.63</b>	<b>-4.75</b>	<b>-7.32</b>	<b>5.68</b>	<b>5.22</b>	<b>7.68</b>
<i>Real Estate Blended Benchmark</i>			<i>-0.14</i>	<i>-2.36</i>	<i>-4.72</i>	<i>5.26</i>	<i>5.16</i>	<i>7.17</i>
<b>Total Alternative Investments</b>	<b>18,702,971,460</b>	<b>20.41</b>	<b>0.42</b>	<b>2.58</b>	<b>5.44</b>	<b>13.26</b>	<b>12.22</b>	<b>10.98</b>
<i>Alternative Investments Blended Benchmark</i>			<i>0.38</i>	<i>2.09</i>	<i>6.52</i>	<i>--</i>	<i>--</i>	<i>--</i>
<b>Liquidity Reserve</b>	<b>1,506,841,073</b>	<b>1.64</b>	<b>1.43</b>	<b>2.81</b>	<b>5.30</b>	<b>2.28</b>	<b>1.93</b>	<b>1.30</b>
<i>Liquidity Reserve Index</i>			<i>1.37</i>	<i>2.70</i>	<i>5.02</i>	<i>2.15</i>	<i>1.88</i>	<i>1.25</i>

Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of all external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding. Fiscal year begins July 1.

## Investment Manager Performance

Trailing Investment Manager Performance								
	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>91,630,549,529</b>	<b>100.00</b>	<b>5.98</b>	<b>4.20</b>	<b>11.64</b>	<b>6.43</b>	<b>9.89</b>	<b>8.12</b>
<i>Total Fund Benchmark</i>			6.40	4.51	12.40	5.53	9.24	7.65
<b>Total Domestic Equity</b>	<b>23,649,213,146</b>	<b>25.81</b>	<b>11.62</b>	<b>8.52</b>	<b>25.25</b>	<b>8.45</b>	<b>15.75</b>	<b>11.65</b>
<i>Domestic Equity Benchmark</i>			12.07	8.43	25.96	8.54	15.16	11.48
<i>eV All US Equity Median</i>			11.93	8.07	19.02	8.71	13.87	10.09
<b>Total 1000 Equity</b>	<b>21,240,537,745</b>	<b>23.18</b>	<b>11.52</b>	<b>8.60</b>	<b>26.23</b>	<b>8.97</b>	<b>16.15</b>	<b>11.94</b>
<i>Russell 1000 Index</i>			11.96	8.44	26.53	8.97	15.52	11.80
<i>eV US Large Cap Equity Median</i>			11.53	8.42	20.75	9.56	14.72	11.24
<b>Total Internal 1000 Equity</b>	<b>21,240,537,745</b>	<b>23.18</b>	<b>11.52</b>	<b>8.60</b>	<b>26.23</b>	<b>9.05</b>	<b>16.20</b>	<b>11.96</b>
<i>eV US Large Cap Equity Median</i>			11.53	8.42	20.75	9.56	14.72	11.24
STRS Analyst Select Fund	3,134,285,968	3.42	11.33	8.65	23.52	9.95	16.33	10.95
<i>Russell 1000 Index</i>			11.96	8.44	26.53	8.97	15.52	11.80
<i>eV US Large Cap Core Equity Median</i>			11.66	8.16	22.29	9.56	14.97	11.63
STRS Concentrated Select Fund	905,157,101	0.99	7.02	7.10	13.15	9.09	13.12	--
<i>Russell 1000 Index</i>			11.96	8.44	26.53	8.97	15.52	--
<i>eV US Large Cap Equity Median</i>			11.53	8.42	20.75	9.56	14.72	--
STRS Large Cap Passive Quantitative	8,733,808,791	9.53	11.74	8.78	29.90	10.06	16.54	12.71
<i>Russell Top 200 Index</i>			11.70	8.73	29.85	10.04	16.53	12.70
<i>eV US Large Cap Equity Median</i>			11.53	8.42	20.75	9.56	14.72	11.24
STRS Integrated Factor Index	979,269,704	1.07	11.73	7.09	12.37	7.58	12.86	--
<i>Russell 1000 Index</i>			11.96	8.44	26.53	8.97	15.52	--
<i>eV US Large Cap Equity Median</i>			11.53	8.42	20.75	9.56	14.72	--



### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
STRS Large Cap Value	1,567,252,275	1.71	9.56	6.31	13.49	9.46	12.24	9.31
<i>Large Cap Value Custom Index</i>			9.50	6.03	11.46	8.86	10.91	8.30
<i>eV US Large Cap Value Equity Median</i>			10.06	7.63	12.99	10.70	12.67	9.51
STRS Large Cap Growth	2,856,745,260	3.12	14.91	13.09	48.97	7.88	19.81	14.86
<i>Large Cap Growth Blended Index</i>			14.16	10.59	42.68	8.86	19.50	14.86
<i>eV US Large Cap Growth Equity Median</i>			13.85	10.08	38.88	7.04	17.15	13.46
STRS Mid Cap Value	2,194,942,915	2.40	8.43	4.09	10.93	9.44	12.06	7.96
<i>Russell Midcap Value Index</i>			12.11	7.11	12.71	8.36	11.16	8.26
<i>eV US Mid Cap Value Equity Median</i>			11.54	7.83	13.71	10.91	13.04	9.05
STRS Mid Cap Growth	869,075,731	0.95	15.08	11.23	30.88	1.12	14.18	10.77
<i>Russell Midcap Growth Index</i>			14.55	8.56	25.87	1.31	13.81	10.57
<i>eV US Mid Cap Growth Equity Median</i>			13.24	6.73	23.46	1.07	14.05	10.88
<b>Total 2000 Equity</b>	<b>2,408,675,401</b>	<b>2.63</b>	<b>12.42</b>	<b>7.77</b>	<b>16.54</b>	<b>4.19</b>	<b>12.04</b>	<b>8.82</b>
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	9.02
<b>Total Internal 2000 Equity</b>	<b>891,708,255</b>	<b>0.97</b>	<b>12.95</b>	<b>8.73</b>	<b>16.42</b>	<b>5.14</b>	<b>9.84</b>	<b>7.56</b>
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	9.02
STRS Small Cap Select	381,152,478	0.42	11.74	6.91	16.18	6.20	10.07	--
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	--
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	--

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
STRS Quantitative 2000	510,555,777	0.56	13.86	10.08	16.64	4.52	9.66	7.93
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	9.02
<b>Total External 2000 Equity</b>	<b>1,516,967,146</b>	<b>1.66</b>	<b>12.12</b>	<b>7.22</b>	<b>16.62</b>	<b>3.60</b>	<b>13.31</b>	<b>9.55</b>
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Equity Median</i>			12.35	7.34	17.49	7.49	12.54	8.93
<b>Small Cap Core</b>	<b>480,363,743</b>	<b>0.52</b>	<b>13.34</b>	<b>10.95</b>	<b>22.75</b>	<b>9.84</b>	<b>15.13</b>	<b>10.41</b>
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	9.02
Fuller & Thaler Core	352,783,041	0.39	14.82	13.10	25.44	12.01	17.32	12.82
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	9.02
Fuller & Thaler Micro-Cap	127,580,702	0.14	8.92	4.69	15.04	4.20	9.58	4.87
<i>Russell 2000 Index</i>			14.03	8.18	16.93	2.22	9.97	7.16
<i>eV US Small Cap Core Equity Median</i>			12.53	7.49	17.63	7.50	12.66	9.02
<b>Small Cap Value</b>	<b>684,778,275</b>	<b>0.75</b>	<b>11.31</b>	<b>6.97</b>	<b>14.34</b>	<b>7.37</b>	<b>11.54</b>	<b>8.29</b>
<i>Russell 2000 Value Index</i>			15.26	11.85	14.65	7.94	10.00	6.76
<i>eV US Small Cap Value Equity Median</i>			12.94	9.78	17.34	10.78	12.53	8.31
Chartwell	322,842,448	0.35	13.75	9.02	14.09	9.51	9.51	7.14
<i>Russell 2000 Value Index</i>			15.26	11.85	14.65	7.94	10.00	6.76
<i>eV US Small Cap Value Equity Median</i>			12.94	9.78	17.34	10.78	12.53	8.31

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Neuberger Berman	361,935,827	0.39	9.25	5.15	14.66	5.50	13.42	9.34
<i>Russell 2000 Value Index</i>			15.26	11.85	14.65	7.94	10.00	6.76
<i>eV US Small Cap Value Equity Median</i>			12.94	9.78	17.34	10.78	12.53	8.31
<b>Small Cap Growth</b>	<b>351,825,128</b>	<b>0.38</b>	<b>11.98</b>	<b>2.66</b>	<b>12.99</b>	<b>-8.48</b>	<b>11.90</b>	<b>9.68</b>
<i>Russell 2000 Growth Index</i>			12.75	4.50	18.66	-3.50	9.22	7.16
<i>eV US Small Cap Growth Equity Median</i>			11.17	3.99	17.61	-1.53	12.41	9.55
Weatherbie Capital 2000 Growth	351,825,128	0.38	11.98	2.66	12.99	-8.48	11.90	10.77
<i>Russell 2000 Growth Index</i>			12.75	4.50	18.66	-3.50	9.22	7.16
<i>eV US Small Cap Growth Equity Median</i>			11.17	3.99	17.61	-1.53	12.41	9.55
<b>Total Fund Allocation Portfolio</b>	<b>106,113,965</b>	<b>0.12</b>	<b>11.39</b>	<b>7.02</b>	<b>21.94</b>	<b>2.78</b>	<b>10.99</b>	<b>7.08</b>
<b>Total International Equity</b>	<b>20,407,118,513</b>	<b>22.27</b>	<b>7.82</b>	<b>4.93</b>	<b>16.83</b>	<b>6.33</b>	<b>9.30</b>	<b>6.35</b>
<i>International Blended Benchmark</i>			8.30	5.62	16.93	5.10	8.94	5.61
<i>eV ACWI ex-US All Cap Equity Median</i>			10.18	4.73	16.70	1.39	8.10	4.62
<b>Total EAFE</b>	<b>10,477,083,859</b>	<b>11.43</b>	<b>7.69</b>	<b>5.52</b>	<b>19.21</b>	<b>8.89</b>	<b>10.61</b>	<b>7.02</b>
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
<b>Total Internal EAFE</b>	<b>4,414,849,034</b>	<b>4.82</b>	<b>8.39</b>	<b>6.17</b>	<b>19.50</b>	<b>8.61</b>	<b>9.45</b>	<b>5.97</b>
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
STRS Structured EAFE	2,100,760,464	2.29	8.25	6.00	18.87	7.95	10.46	6.59
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
STRS EAFE Quantitative	2,314,088,570	2.53	8.52	6.32	19.85	9.20	8.43	5.37
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
<b>Total External EAFE</b>	<b>6,062,234,825</b>	<b>6.62</b>	<b>7.18</b>	<b>5.05</b>	<b>19.00</b>	<b>9.11</b>	<b>11.65</b>	<b>8.02</b>
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
Arrowstreet Capital	1,962,536,814	2.14	5.77	8.06	21.96	11.73	13.63	9.48
<i>MSCI ACWI ex USA IMI 50% Hedged</i>			8.43	5.94	18.05	7.03	9.99	6.08
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
AllianceBernstein EAFE Value	1,410,357,860	1.54	4.60	4.99	18.70	10.12	9.51	5.97
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
MFS	2,689,340,151	2.93	9.67	3.03	17.17	6.15	11.24	8.31
<i>MSCI World ex USA 50% Hedged</i>			8.41	5.82	18.68	7.67	10.15	6.23
<i>eV Non-US Diversified All Cap Eq Median</i>			10.22	5.41	17.76	3.26	8.82	5.29
<b>Total Emerging</b>	<b>2,699,114,081</b>	<b>2.95</b>	<b>8.30</b>	<b>5.59</b>	<b>13.59</b>	<b>-1.88</b>	<b>4.34</b>	<b>3.54</b>
<i>MSCI Emerging Markets (Net)</i>			7.86	4.71	9.83	-5.08	3.68	2.66
<i>eV Emg Mkts All Cap Equity Median</i>			7.93	4.10	12.00	-3.97	5.59	4.12
<b>Total Internal Emerging</b>	<b>2,323,022,407</b>	<b>2.54</b>	<b>8.01</b>	<b>5.63</b>	<b>14.16</b>	<b>-0.34</b>	<b>4.98</b>	<b>4.12</b>
<i>MSCI Emerging Markets (Net)</i>			7.86	4.71	9.83	-5.08	3.68	2.66
<i>eV Emg Mkts All Cap Equity Median</i>			7.93	4.10	12.00	-3.97	5.59	4.12
STRS Active Emerging Combined	1,613,013,942	1.76	8.10	5.67	14.59	0.42	5.72	4.43
<i>MSCI Emerging Markets (Net)</i>			7.86	4.71	9.83	-5.08	3.68	2.66

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
STRS Emerging Market Quantitative	710,008,465	0.77	7.82	5.52	13.18	-2.09	3.31	3.27
<i>MSCI Emerging Markets (Net)</i>			<i>7.86</i>	<i>4.71</i>	<i>9.83</i>	<i>-5.08</i>	<i>3.68</i>	<i>2.66</i>
<b>Total External Emerging</b>	<b>376,091,674</b>	<b>0.41</b>	<b>8.93</b>	<b>5.06</b>	<b>11.40</b>	<b>-7.04</b>	<b>1.94</b>	<b>1.82</b>
<i>MSCI Emerging Markets (Net)</i>			<i>7.86</i>	<i>4.71</i>	<i>9.83</i>	<i>-5.08</i>	<i>3.68</i>	<i>2.66</i>
<i>eV Emg Mkts All Cap Equity Median</i>			<i>7.93</i>	<i>4.10</i>	<i>12.00</i>	<i>-3.97</i>	<i>5.59</i>	<i>4.12</i>
Genesis	376,091,674	0.41	8.93	5.06	11.41	-7.04	4.42	2.91
<i>MSCI Emerging Markets (Net)</i>			<i>7.86</i>	<i>4.71</i>	<i>9.83</i>	<i>-5.08</i>	<i>3.68</i>	<i>2.66</i>
<i>eV Emg Mkts All Cap Equity Median</i>			<i>7.93</i>	<i>4.10</i>	<i>12.00</i>	<i>-3.97</i>	<i>5.59</i>	<i>4.12</i>
<b>Total Global Ex-US</b>	<b>7,210,468,875</b>	<b>7.87</b>	<b>7.84</b>	<b>3.85</b>	<b>14.98</b>	<b>5.79</b>	<b>9.33</b>	<b>6.31</b>
<i>International Blended Benchmark</i>			<i>8.30</i>	<i>5.62</i>	<i>16.93</i>	<i>5.10</i>	<i>8.94</i>	<i>5.61</i>
<i>MSCI AC World ex USA (Net)</i>			<i>9.75</i>	<i>5.61</i>	<i>15.62</i>	<i>1.55</i>	<i>7.08</i>	<i>3.83</i>
<i>eV Non-US Diversified All Cap Eq Median</i>			<i>10.22</i>	<i>5.41</i>	<i>17.76</i>	<i>3.26</i>	<i>8.82</i>	<i>5.29</i>
<b>Total Internal Global Ex-US</b>	<b>3,635,698,582</b>	<b>3.97</b>	<b>7.02</b>	<b>4.77</b>	<b>16.69</b>	<b>8.34</b>	<b>10.13</b>	<b>6.80</b>
<i>International Blended Benchmark</i>			<i>8.30</i>	<i>5.62</i>	<i>16.93</i>	<i>5.10</i>	<i>8.94</i>	<i>5.61</i>
<i>MSCI AC World ex USA (Net)</i>			<i>9.75</i>	<i>5.61</i>	<i>15.62</i>	<i>1.55</i>	<i>7.08</i>	<i>3.83</i>
<i>eV Non-US Diversified All Cap Eq Median</i>			<i>10.22</i>	<i>5.41</i>	<i>17.76</i>	<i>3.26</i>	<i>8.82</i>	<i>5.29</i>
STRS International Value	3,512,488,435	3.83	6.98	4.73	16.69	8.36	10.14	6.80
<i>International Blended Benchmark</i>			<i>8.30</i>	<i>5.62</i>	<i>16.93</i>	<i>5.10</i>	<i>8.94</i>	<i>5.61</i>
<i>MSCI AC World ex USA (Net)</i>			<i>9.75</i>	<i>5.61</i>	<i>15.62</i>	<i>1.55</i>	<i>7.08</i>	<i>3.83</i>
<i>eV Non-US Diversified All Cap Eq Median</i>			<i>10.22</i>	<i>5.41</i>	<i>17.76</i>	<i>3.26</i>	<i>8.82</i>	<i>5.29</i>
STRS International Analyst	123,210,147	0.13	8.17	5.86	16.55	--	--	--
<i>International Blended Benchmark</i>			<i>8.30</i>	<i>5.62</i>	<i>16.93</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>MSCI AC World ex USA (Net)</i>			<i>9.75</i>	<i>5.61</i>	<i>15.62</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>eV Non-US Diversified All Cap Eq Median</i>			<i>10.22</i>	<i>5.41</i>	<i>17.76</i>	<i>--</i>	<i>--</i>	<i>--</i>

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total External Global Ex-US</b>	<b>3,574,770,294</b>	<b>3.90</b>	<b>8.69</b>	<b>2.94</b>	<b>13.31</b>	<b>2.40</b>	<b>8.83</b>	<b>--</b>
<i>International Blended Benchmark</i>			8.30	5.62	16.93	5.10	8.94	--
<i>MSCI AC World ex USA (Net)</i>			9.75	5.61	15.62	1.55	7.08	--
<b>Global Ex-US Standard</b>	<b>3,093,947,154</b>	<b>3.38</b>	<b>8.70</b>	<b>2.39</b>	<b>13.00</b>	<b>2.65</b>	<b>8.99</b>	<b>--</b>
<i>International Blended Benchmark</i>			8.30	5.62	16.93	5.10	8.94	--
<i>MSCI AC World ex USA (Net)</i>			9.75	5.61	15.62	1.55	7.08	--
Lazard	828,267,739	0.90	7.37	2.59	16.46	3.90	8.28	--
<i>International Blended Benchmark</i>			8.30	5.62	16.93	5.10	8.94	--
<i>MSCI AC World ex USA (Net)</i>			9.75	5.61	15.62	1.55	7.08	--
Wellington International Opportunities	1,238,905,221	1.35	8.36	4.09	12.57	2.44	10.28	--
<i>International Blended Benchmark</i>			8.30	5.62	16.93	5.10	8.94	--
<i>MSCI AC World ex USA (Net)</i>			9.75	5.61	15.62	1.55	7.08	--
William Blair	1,026,774,194	1.12	10.23	0.25	--	--	--	--
<i>International Blended Benchmark</i>			8.30	5.62	--	--	--	--
<i>MSCI AC World ex USA (Net)</i>			9.75	5.61	--	--	--	--
<b>Global Ex-US Small Cap</b>	<b>480,823,140</b>	<b>0.52</b>	<b>8.64</b>	<b>6.66</b>	<b>16.33</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI ex USA Small Cap 50% Hedged</i>			8.66	8.19	16.90	--	--	--
Acadian	249,122,984	0.27	8.75	9.98	19.00	--	--	--
<i>MSCI ACWI ex USA Small Cap 50% Hedged</i>			8.66	8.19	16.90	--	--	--
American Century	172,406,755	0.19	7.92	1.67	12.01	--	--	--
<i>MSCI ACWI ex USA Small Cap 50% Hedged</i>			8.66	8.19	16.90	--	--	--
Wellington Small Cap	59,293,401	0.06	10.31	8.37	18.73	--	--	--
<i>MSCI ACWI ex USA Small Cap 50% Hedged</i>			8.66	8.19	16.90	--	--	--

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fixed Income</b>	<b>18,824,361,796</b>	<b>20.54</b>	<b>6.58</b>	<b>3.78</b>	<b>5.95</b>	<b>-2.46</b>	<b>1.68</b>	<b>2.28</b>
<i>Fixed Income Blended Benchmark</i>			6.23	3.68	5.81	-2.74	1.40	2.07
<b>Liquid Treasury Portfolio</b>	<b>4,584,588,420</b>	<b>5.00</b>	<b>4.00</b>	<b>3.16</b>	<b>4.32</b>	<b>-1.81</b>	<b>1.08</b>	<b>--</b>
<i>Blmbg. U.S. Treasury: Intermediate</i>			3.99	3.15	4.28	-1.86	1.02	--
<b>Core Fixed Income</b>	<b>14,239,773,376</b>	<b>15.54</b>	<b>7.28</b>	<b>3.87</b>	<b>6.32</b>	<b>-2.63</b>	<b>1.75</b>	<b>2.31</b>
<i>Blmbg. U.S. Universal Index</i>			6.83	3.76	6.17	-2.97	1.44	2.08
<i>Global Bond Median</i>			8.72	5.06	6.94	-4.72	0.53	1.24
<b>STRS Fixed Income</b>	<b>12,488,626,924</b>	<b>13.63</b>	<b>7.17</b>	<b>3.43</b>	<b>5.60</b>	<b>-3.03</b>	<b>1.34</b>	<b>1.96</b>
<b>High-Yield</b>	<b>736,870,553</b>	<b>0.80</b>	<b>7.08</b>	<b>7.52</b>	<b>13.17</b>	<b>2.55</b>	<b>5.81</b>	<b>4.88</b>
<i>Blmbg. U.S. High Yield Index</i>			7.16	7.66	13.44	1.99	5.37	4.60
<i>High Yield Bond Median</i>			6.74	7.41	13.14	2.57	5.60	4.70
BNY Mellon	81,180,519	0.09	7.13	7.72	13.51	2.06	--	--
<i>Blmbg. U.S. High Yield Index</i>			7.16	7.66	13.44	1.99	--	--
<i>High Yield Bond Median</i>			6.74	7.41	13.14	2.57	--	--
JP Morgan	186,713,305	0.20	6.62	7.54	11.99	3.59	--	--
<i>Blmbg. U.S. High Yield Index</i>			7.16	7.66	13.44	1.99	--	--
<i>High Yield Bond Median</i>			6.74	7.41	13.14	2.57	--	--
PGIM	178,686,335	0.20	7.21	7.76	13.14	2.87	--	--
<i>Blmbg. U.S. High Yield Index</i>			7.16	7.66	13.44	1.99	--	--
<i>High Yield Bond Median</i>			6.74	7.41	13.14	2.57	--	--
PIMCO	290,290,395	0.32	7.29	7.30	13.86	2.02	5.70	5.04
<i>Blmbg. U.S. High Yield Index</i>			7.16	7.66	13.44	1.99	5.37	4.60
<i>High Yield Bond Median</i>			6.74	7.41	13.14	2.57	5.60	4.70

## State Teachers' Retirement System of Ohio

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Emerging Debt</b>	<b>1,014,275,898</b>	<b>111</b>	<b>8.79</b>	<b>6.73</b>	<b>10.37</b>	<b>-1.71</b>	<b>2.51</b>	<b>3.70</b>
<i>Emerging Debt Index</i>			<i>8.10</i>	<i>5.61</i>	<i>9.09</i>	<i>-3.13</i>	<i>1.84</i>	<i>3.03</i>
<i>Emerging Markets Bond Median</i>			<i>9.11</i>	<i>6.96</i>	<i>12.53</i>	<i>-1.68</i>	<i>3.03</i>	<i>3.30</i>
Fidelity Institutional Asset Management	372,703,807	0.41	8.84	7.44	11.05	-1.13	2.45	3.97
<i>Emerging Debt Index</i>			<i>8.10</i>	<i>5.61</i>	<i>9.09</i>	<i>-3.13</i>	<i>1.84</i>	<i>3.03</i>
<i>Emerging Markets Bond Median</i>			<i>9.11</i>	<i>6.96</i>	<i>12.53</i>	<i>-1.68</i>	<i>3.03</i>	<i>3.30</i>
MFS	475,100,861	0.52	8.81	6.21	9.88	-1.82	--	--
<i>Emerging Debt Index</i>			<i>8.10</i>	<i>5.61</i>	<i>9.09</i>	<i>-3.13</i>	<i>--</i>	<i>--</i>
<i>Emerging Markets Bond Median</i>			<i>9.11</i>	<i>6.96</i>	<i>12.53</i>	<i>-1.68</i>	<i>--</i>	<i>--</i>
Payden & Rygel	166,471,230	0.18	8.61	6.60	10.24	-2.57	--	--
<i>Emerging Debt Index</i>			<i>8.10</i>	<i>5.61</i>	<i>9.09</i>	<i>-3.13</i>	<i>--</i>	<i>--</i>
<i>Emerging Markets Bond Median</i>			<i>9.11</i>	<i>6.96</i>	<i>12.53</i>	<i>-1.68</i>	<i>--</i>	<i>--</i>
<b>Liquidity Reserve</b>	<b>1,506,841,073</b>	<b>1.64</b>	<b>1.43</b>	<b>2.81</b>	<b>5.30</b>	<b>2.28</b>	<b>1.93</b>	<b>1.30</b>
<i>Liquidity Reserve Index</i>			<i>1.37</i>	<i>2.70</i>	<i>5.02</i>	<i>2.15</i>	<i>1.88</i>	<i>1.25</i>
<i>Money Market-Tax-Free Median</i>			<i>0.91</i>	<i>1.80</i>	<i>3.36</i>	<i>1.56</i>	<i>1.36</i>	<i>0.99</i>



## State Teachers' Retirement System of Ohio

### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Real Estate</b>	<b>8,433,929,576</b>	<b>9.20</b>	<b>-1.63</b>	<b>-4.75</b>	<b>-7.32</b>	<b>5.68</b>	<b>5.22</b>	<b>7.68</b>
<i>Real Estate Blended Benchmark</i>			<i>-0.14</i>	<i>-2.36</i>	<i>-4.72</i>	<i>5.26</i>	<i>5.16</i>	<i>7.17</i>
<b>Private Real Estate</b>	<b>7,097,260,589</b>	<b>7.75</b>	<b>-4.39</b>	<b>-6.86</b>	<b>-10.89</b>	<b>5.00</b>	<b>4.37</b>	<b>7.40</b>
<b>Direct Real Estate</b>	<b>5,727,643,212</b>	<b>6.25</b>	<b>-5.13</b>	<b>-7.85</b>	<b>-12.96</b>	<b>4.11</b>	<b>3.94</b>	<b>6.98</b>
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
East Region (Private RE)	2,012,645,415	2.20	-3.12	-5.21	-8.86	2.94	1.18	2.76
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
Midwest Region (Private RE)	898,501,821	0.98	-5.73	-7.02	-15.15	-1.71	0.46	5.02
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
South Region (Private RE)	913,800,000	1.00	-1.11	0.63	0.41	12.80	10.93	12.52
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
West Region (Private RE)	1,902,695,976	2.08	-8.68	-14.33	-21.33	4.16	5.42	10.14
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
<b>Commingled Funds Real Estate</b>	<b>1,369,617,377</b>	<b>1.49</b>	<b>-1.19</b>	<b>-2.53</b>	<b>-1.02</b>	<b>9.11</b>	<b>6.24</b>	<b>9.49</b>
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
Opportunity Fund (Private RE)	404,317,754	0.44	-3.20	-4.59	-8.41	10.69	7.54	10.18
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
International (Private RE)	797,113,213	0.87	-0.02	-0.45	3.06	8.66	5.90	9.68
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>6.80</i>
Specialty Real Estate Funds (Private RE)	168,186,410	0.18	-2.22	-1.49	3.05	10.58	7.41	--
<i>NCREIF Property Index</i>			<i>-3.02</i>	<i>-4.35</i>	<i>-7.94</i>	<i>4.57</i>	<i>4.33</i>	<i>--</i>

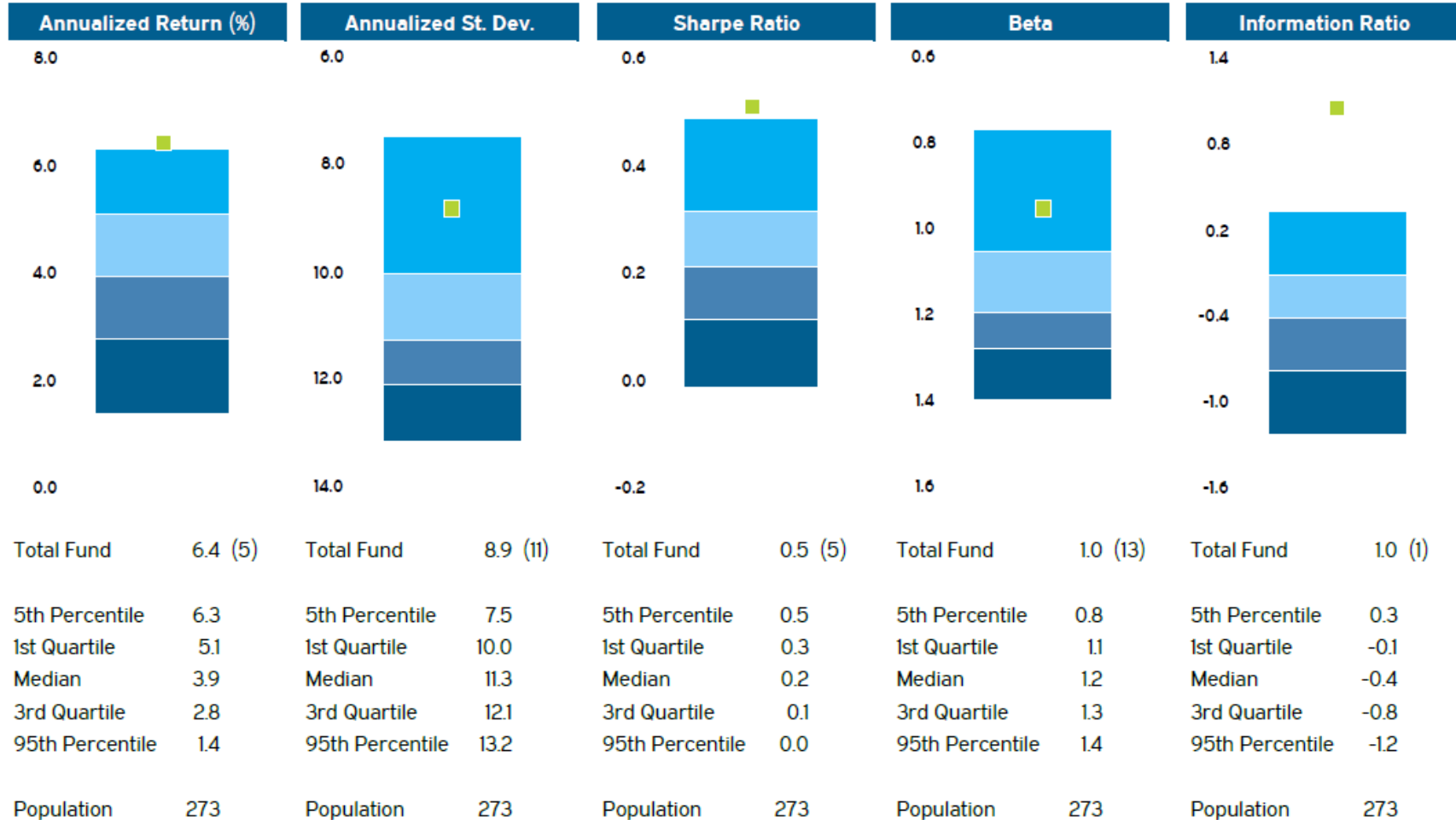
### Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Public Real Estate</b>	<b>1,336,668,987</b>	<b>1.46</b>	<b>16.02</b>	<b>7.91</b>	<b>14.60</b>	<b>7.55</b>	<b>7.58</b>	<b>7.80</b>
<i>FTSE NAREIT Equity REIT Index</i>			16.22	7.94	13.73	7.21	7.39	7.65
<b>REITs - Active (Public RE)</b>	<b>947,042,216</b>	<b>1.03</b>	<b>16.22</b>	<b>8.12</b>	<b>15.53</b>	--	--	--
<i>FTSE NAREIT Equity REIT Index</i>			16.22	7.94	13.73	--	--	--
<b>External REIT</b>	<b>389,626,771</b>	<b>0.43</b>	<b>15.52</b>	<b>7.38</b>	--	--	--	--
<i>FTSE NAREIT Equity REIT Index</i>			16.22	7.94	--	--	--	--
CenterSquare Investment Management	156,734,319	0.17	16.40	7.98	--	--	--	--
<i>FTSE NAREIT Equity REIT Index</i>			16.22	7.94	--	--	--	--
Heitman	127,120,764	0.14	14.40	6.01	--	--	--	--
<i>FTSE NAREIT Equity REIT Index</i>			16.22	7.94	--	--	--	--
Principal Asset Management	105,771,688	0.12	15.58	8.17	--	--	--	--
<i>FTSE NAREIT Equity REIT Index</i>			16.22	7.94	--	--	--	--
<b>Total Alternative Investments</b>	<b>18,702,971,460</b>	<b>20.41</b>	<b>0.42</b>	<b>2.58</b>	<b>5.44</b>	<b>13.26</b>	<b>12.22</b>	<b>10.98</b>
<i>Alternative Investments Blended Benchmark</i>			0.38	2.09	6.52	--	--	--
<b>Private Equity</b>	<b>9,516,460,356</b>	<b>10.39</b>	<b>-1.23</b>	<b>0.40</b>	<b>0.77</b>	<b>13.09</b>	<b>15.65</b>	<b>15.23</b>
<i>Private Equity Benchmark</i>			-0.60	0.99	3.67	--	--	--
Domestic Private Equity	5,141,243,215	5.61	-0.64	2.33	6.89	15.03	17.22	16.47
<i>Private Equity Benchmark</i>			-0.60	0.99	3.67	--	--	--
Domestic Venture Capital	2,780,526,783	3.03	-2.29	-2.82	-11.39	11.65	14.60	13.68
<i>Private Equity Benchmark</i>			-0.60	0.99	3.67	--	--	--
Global Private Equity	1,556,953,294	1.70	-1.96	-0.74	5.23	11.51	13.24	14.15
<i>Private Equity Benchmark</i>			-0.60	0.99	3.67	--	--	--

Asset Allocation & Performance | As of December 31, 2023

	Market Value (\$)	% of Portfolio	QTD (%)	FYTD (%)	1Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Opportunistic/Diversified</b>	<b>9,186,511,104</b>	<b>10.03</b>	<b>2.19</b>	<b>4.97</b>	<b>10.88</b>	<b>12.76</b>	<b>8.37</b>	<b>6.61</b>
<i>Opportunistic/Diversified Blended Benchmark</i>			<i>1.26</i>	<i>3.09</i>	<i>9.13</i>	<i>--</i>	<i>--</i>	<i>--</i>
Opportunistic	8,601,426,850	9.39	2.04	4.92	10.73	14.41	8.89	8.16
<i>Opportunistic/Diversified Blended Benchmark</i>			<i>1.26</i>	<i>3.09</i>	<i>9.13</i>	<i>--</i>	<i>--</i>	<i>--</i>
Diversified	585,084,254	0.64	4.45	5.70	13.13	6.40	5.33	3.78
<i>Opportunistic/Diversified Blended Benchmark</i>			<i>1.26</i>	<i>3.09</i>	<i>9.13</i>	<i>--</i>	<i>--</i>	<i>--</i>

### Universe Statistics | 3 Years Ending December 31, 2023



Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of all external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding. Universe is All Public DB Plans.

Risk Return Statistics				
	3 Yrs (%)		5 Yrs (%)	
	Total Fund	Total Fund Benchmark	Total Fund	Total Fund Benchmark
<b>RETURN SUMMARY STATISTICS</b>				
Maximum Return	4.9	5.1	7.9	7.7
Minimum Return	-5.3	-5.5	-7.7	-7.8
Return	6.4	5.5	9.9	9.2
Excess Return	4.5	3.7	8.1	7.5
Excess Performance	0.9	0.0	0.6	0.0
<b>RISK SUMMARY STATISTICS</b>				
Beta	1.0	1.0	1.0	1.0
Up Capture	99.7	100.0	100.9	100.0
Down Capture	92.2	100.0	95.9	100.0
<b>RISK/RETURN SUMMARY STATISTICS</b>				
Standard Deviation	8.9	9.3	9.8	10.0
Sortino Ratio	0.8	0.6	1.3	1.2
Alpha	1.1	0.0	0.7	0.0
Sharpe Ratio	0.5	0.4	0.8	0.7
Excess Risk	8.9	9.2	9.9	10.0
Tracking Error	0.8	0.0	0.7	0.0
Information Ratio	1.0	-	0.9	-
<b>CORRELATION STATISTICS</b>				
R-Squared	1.0	1.0	1.0	1.0
Actual Correlation	1.0	1.0	1.0	1.0

Gross returns are net of transaction costs and gross of management fees, except for alternative investments & real estate where the return is also net of an external investment management fees and costs, including carried interest and other fund expenses. Certain Meketa returns may differ from STRS due to rounding.

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM", "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

- **Matters requiring board action:**
  - Review and approval of the Statement of Investment Objectives & Policy and Statement of Fund Governance
- **Educational or scheduled updates and reviews requiring no action today:**
  - Summary of Investment Activity Report, December 2023 and January 2024
  - Initial review of the Proxy Voting Policy
  - Proxy Voting Summary for six months ending Dec. 31, 2023
  - Meketa quarterly performance review as of Dec. 31, 2023
  - **Semiannual derivatives exposure as of Dec. 31, 2023**
  - Meketa comments
  - Review of December 2023 and January 2024 investment transactions
- **Summary of requests**

# Semiannual Derivative Exposure as of Dec. 31, 2023



## STRS Ohio Derivative Exposure

As of  
December 31, 2023

Derivatives have been an efficient and cost-effective tool for managing the total STRS Ohio assets. They are used to the limited extent as provided for by the *Statement of Investment Objectives and Policy*. The staff plans to continue the effective usage of derivatives.

Derivative Investment Description	Derivative Position Exposure	% of Total Fund	Policy Investment Maximum (% of Total Fund)
<b>International</b>			
MSCI EAFE Futures	\$ 0	0.00%	
MSCI Emerging Futures	\$ 0	0.00%	
Equity Swaps	\$ 813,998,420	0.89%	
External Managers	\$ 17,001,591	0.02%	
Warrants & Rights	\$ 21,207	0.00%	
<b>Total International</b>	<b>\$ 831,021,218</b>	<b>0.91%</b>	<b>10%</b>
<b>Domestic Equities</b>			
Domestic Equity Swaps	\$ 0	0.00%	
S&P 500 Index Futures	\$ 94,954,000	0.10%	
Russell 2000 Index Futures	\$ 11,159,965	0.01%	
Call Options (bought)*	\$ 0	0.00%	
Put Options (sold)*	\$ 0	0.00%	
Warrants & Rights	\$ 0	0.00%	
<b>Total Domestic Equities</b>	<b>\$ 106,113,965</b>	<b>0.12%</b>	<b>10%</b>
<b>Real Estate</b>			
Real Estate	\$ 0	0.00%	
<b>Total Real Estate</b>	<b>\$ 0</b>	<b>0.00%</b>	<b>1%</b>
<b>Fixed Income</b>			
External Managers	\$ 93,888,915	0.10%	
<b>Total Fixed Income</b>	<b>\$ 93,888,915</b>	<b>0.10%</b>	<b>5%</b>
<b>Alternative Investments</b>			
Liquid Alt. – External Mgrs.	\$ 13,864,117	0.02%	
Liquid Alt. – OTC Swaps	\$ 30,773,272	0.03%	
<b>Total Alternative Investments</b>	<b>\$ 44,637,388</b>	<b>0.05%</b>	<b>10%</b>
<b>Total Derivative Position Exposure</b>	<b>\$ 1,075,661,487</b>	<b>1.17%</b>	
<b>TOTAL FUND</b>	<b>\$ 91,630,549,529</b>		

\* The absolute value of the option market value is used.

Footnote on hedging derivatives: Derivatives that reduce risk (hedge) are not included in the above totals. STRS Ohio has hedged \$13.2 billion of currency exposure through forward contracts. This amount essentially reflects the Investment Policy benchmark in which the neutral position for currencies is 50% hedged for developed markets. Within the opportunistic/diversified portfolio of Alternative Investments, STRS Ohio utilizes options & futures with a combined notional value of \$1.9 billion to hedge \$179 million of equity risk in the liquid alternatives theme.



## STRS Ohio Derivative Exposure by Month

	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023	Policy Limits
International	0.92%	1.21%	1.18%	1.40%	0.90%	0.91%	10%
Domestic Equities	0.00%	0.00%	0.63%	0.80%	0.11%	0.12%	10%
Real Estate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1%
Fixed Income	0.08%	0.09%	0.09%	0.08%	0.09%	0.10%	5%
Alternative Investments	0.05%	0.05%	0.05%	0.06%	0.05%	0.05%	10%
Total Fund	1.05%	1.35%	1.95%	2.34%	1.15%	1.18%	

- **2024 Meketa economic outlook and capital market review**
- **Review of the Asset-Liability study process**
- **Implementation and benchmarking**
- **Rebalancing**
- **Overview of alternative investments and quarterly performance**

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