



Risk Committee Meeting

April 23, 2025

Committee Members

Ruth Mahoney, Chair

Paul Farfaglia, Oliver Robinson, Nicholas Smirensky

Call to Order by Chair

AGENDA p. 1

- A. Approval of Minutes of January 29, 2025 Risk Committee meeting pp. 2-3
- B. Enterprise Risk and Compliance Update pp. 4-5
- C. Investment Risk Key Risk Indicators and Investment Risk Report pp. 6-17
- D. NYSTRS Security Key Risk Indicators and Semi-Annual Information Security Update pp. (motion for **Executive Session** pursuant to Open Meetings Law §108 (3), and §105(1) (f) to discuss IT security and personnel matters) pp. 18-28
- E. Results of the Vulnerability Assessment and Penetration Testing - Linea Secure (motion for **Executive Session** pursuant to Open Meetings Law §108 (3), and §105(1) (f) to discuss IT security and personnel matters) pp. 29-37
- F. Quarterly Review of Risk Management Team – (motion for **Executive Session** pursuant to Open Meetings Law §105 (1) (f) to discuss personnel matters)

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
10 CORPORATE WOODS DRIVE, ALBANY NY

Risk Committee Meeting

A meeting of the Risk Committee of the Retirement Board of the New York State Teachers' Retirement System was held on January 29, 2025. The meeting was called to order at 8:30 a.m. by Ruth Mahoney, Chair.

The following individuals were in attendance:

Committee Members: Paul Farfaglia, Ruth Mahoney, Oliver Robinson, Nicholas Smirensky

Board Members: Juliet Benaquisto, Phyllis Harrington, Eric Iberger, David Keefe, Donald A. Little III (via WebEx), Jennifer Longtin

NYSTRS' Staff: Thomas Lee, Don Ampansiri, Matt Albano, John Rosenburg, Ryan Warren, Ryan Ranado, Rick Jensen, Olivia Castle, Christia Edwards

Risk Committee Advisors: Sean Atkinson (via WebEx), Steve Huber (via WebEx), Peter Cosgrove (via WebEx)

Visitors via WebEx: Tom Cosmer, PineBridge

The following items were discussed:

1. Approval of the minutes of October 30, 2024

Upon motion of N. Smirensky, seconded by O. Robinson and unanimously carried, the meeting minutes of the October 30, 2024 were approved.

2. Risk Management and Key Deliverables

M. Albano reviewed key deliverables from the Risk Department (Appendix A, pp, 3-6)

3. Enterprise Risk and Compliance Update

M. Albano reviewed the Enterprise Risk and Compliance Update reports (Appendix B, pp. 7-8)

4. Annual Risk Assessment Update

M. Albano reviewed the risk management key risk indicators dashboard (Appendix C, pp. 9-19).

5. DFS and Grant Thornton Update

M. Albano provided an update on 2017 DFS Examination follow up item and the Grant Thornton recommendations for Risk Management (Appendix D, pp. 20-27)

6. Annual Office of Foreign Asset Control Risk Review Update

M. Albano and R. Ranado reviewed the results of the annual OFAC review and the proposed updates to the AML/OFAC Compliance section of the Investment Policy Manual (Appendix E, pp. 28-69)

7. Investment Risk Key Risk Indicators and Investment Risk Report

M. Albano and R. Ranado reviewed the key risk indicators report (Appendix F, pp. 70-81)

8. Quarterly Review of Risk Management Team

Upon motion of O. Robinson, seconded by P. Farfaglia and unanimously carried, the Committee went into Executive Session at 9:06 p.m. to discuss personnel matters.

There being no further business, and with unanimous consent, the Committee came out of Executive Session and adjourned at 9:14 a.m.

Respectfully submitted,

A large black rectangular redaction box covering the signature of Thomas K. Lee.

Thomas K. Lee



New York State
Teachers'
Retirement
System

Enterprise Risk and Compliance Update

Risk Committee: April 23, 2025

Matthew Albano, CFA, Chief Risk Officer

Matthew Tice, Director of Enterprise Risk

Regulatory Items Requiring Board Action

April Meeting	Regulatory Item	Owner
	Approve the OPEB Contribution	Actuary
	Business Continuity & Disaster Recovery Plan	Administration
	Approve the Annual Operating Budget	Administration
July Meeting	Regulatory Item	Owner
	Adopt the ECR	Actuary
	Approve the Signatory Authority List	Finance
	Adopt the Annual Investment Asset Allocation	Executive

Period of **January** through **March**: **82** required regulatory items were due and all were completed by departments.

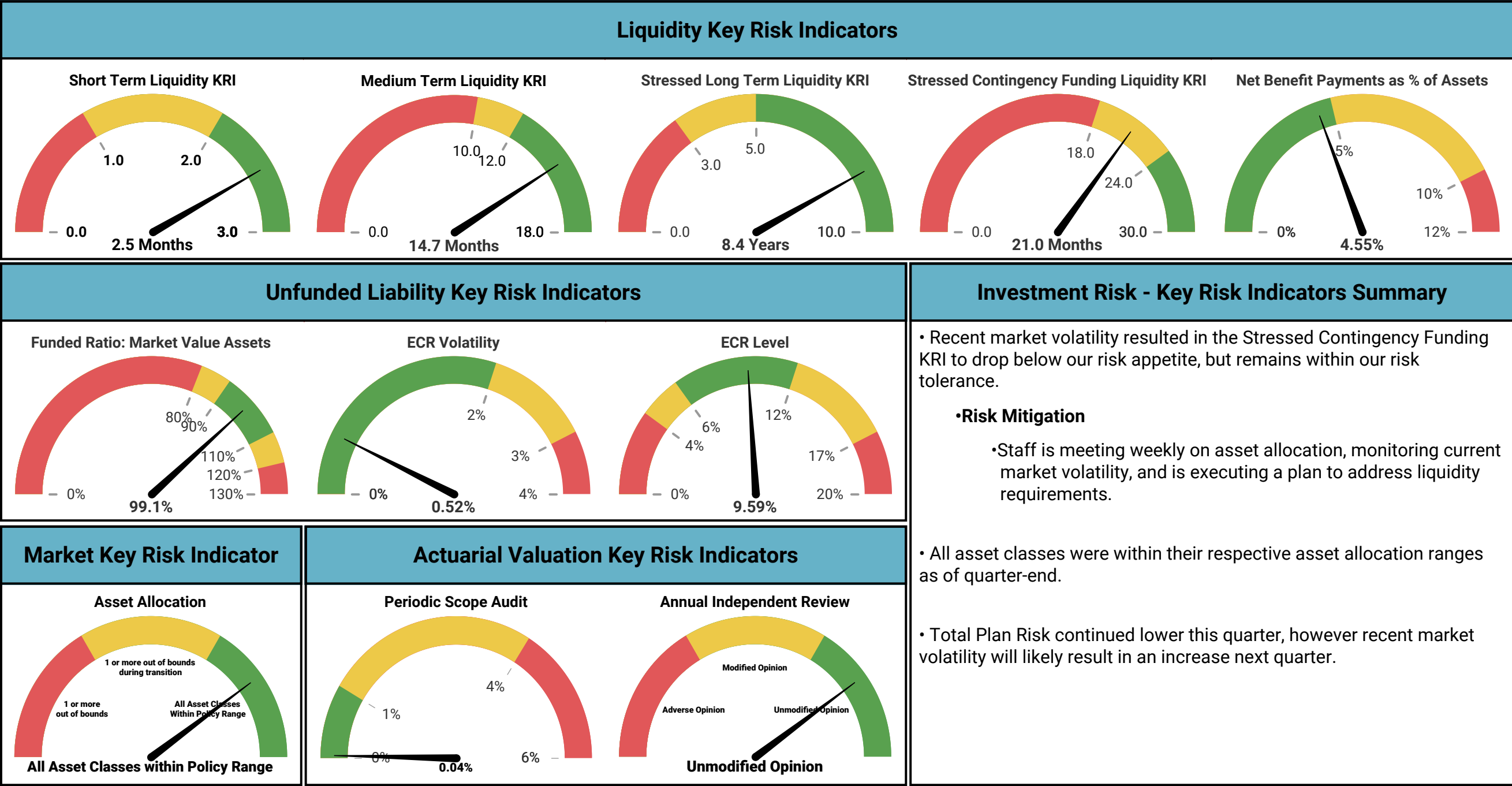
Investment Risk Update

Risk Management

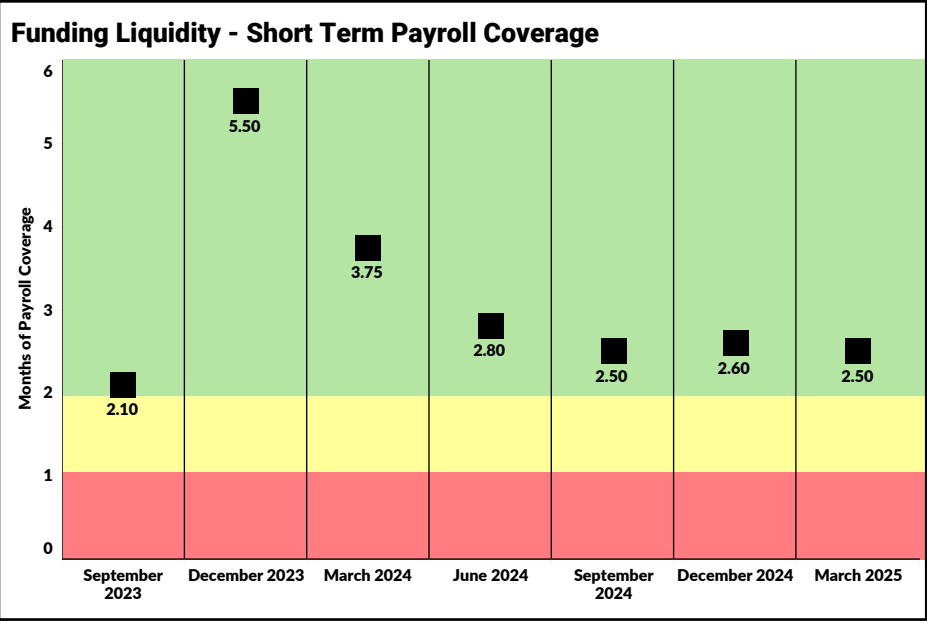
Risk Committee: April 23, 2025

Matthew Albano, CFA, Chief Risk Officer

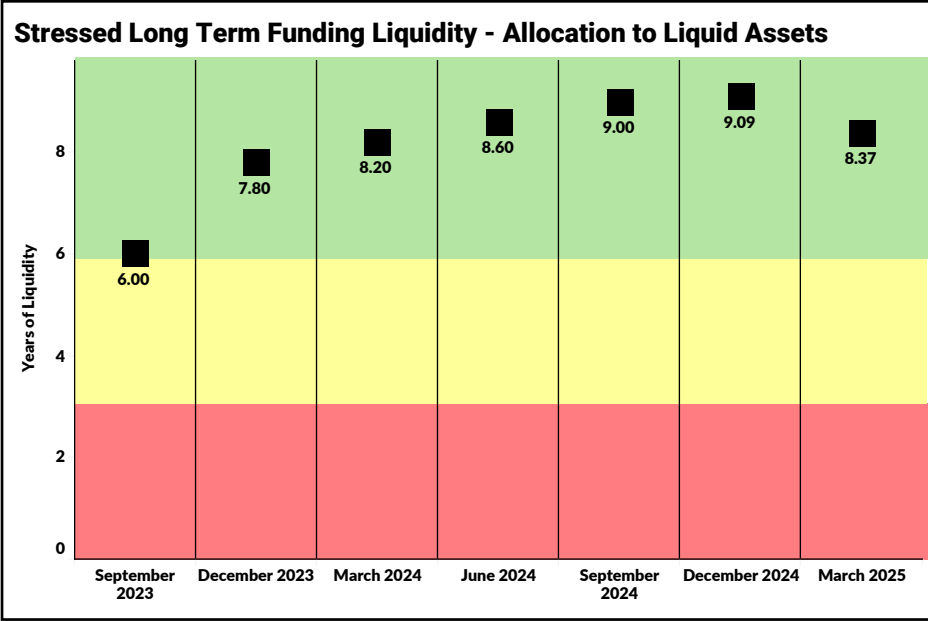
Ryan Ranado, CFA, Assistant Director of Investment Risk Management



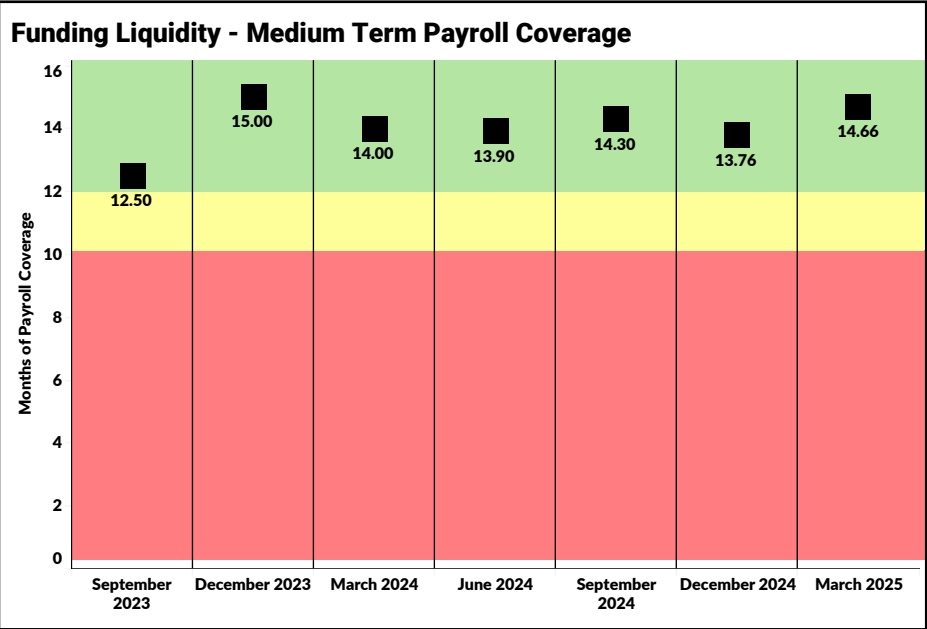
Liquidity Key Risk Indicators



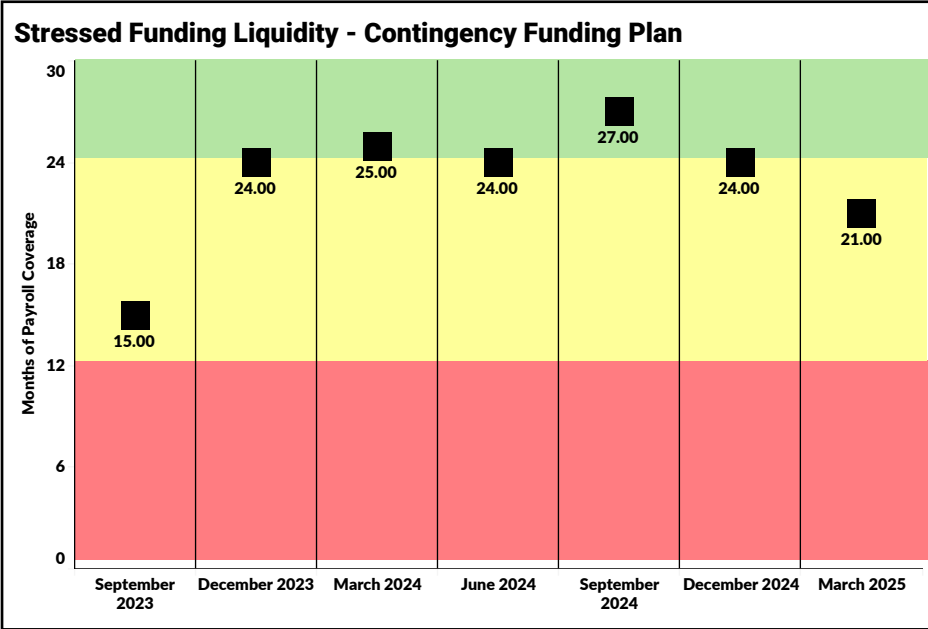
Short Term Payroll coverage calculates how many months of payroll we are carrying in cash.



The Stressed Long Term Liquidity KRI assumes a hypothetical 40% portfolio loss then calculates years of required cash flow coverage from remaining public market assets and 12 months *estimated net cash flows (*includes stressed projections for: portfolio income, employer contributions and unfunded capital calls).



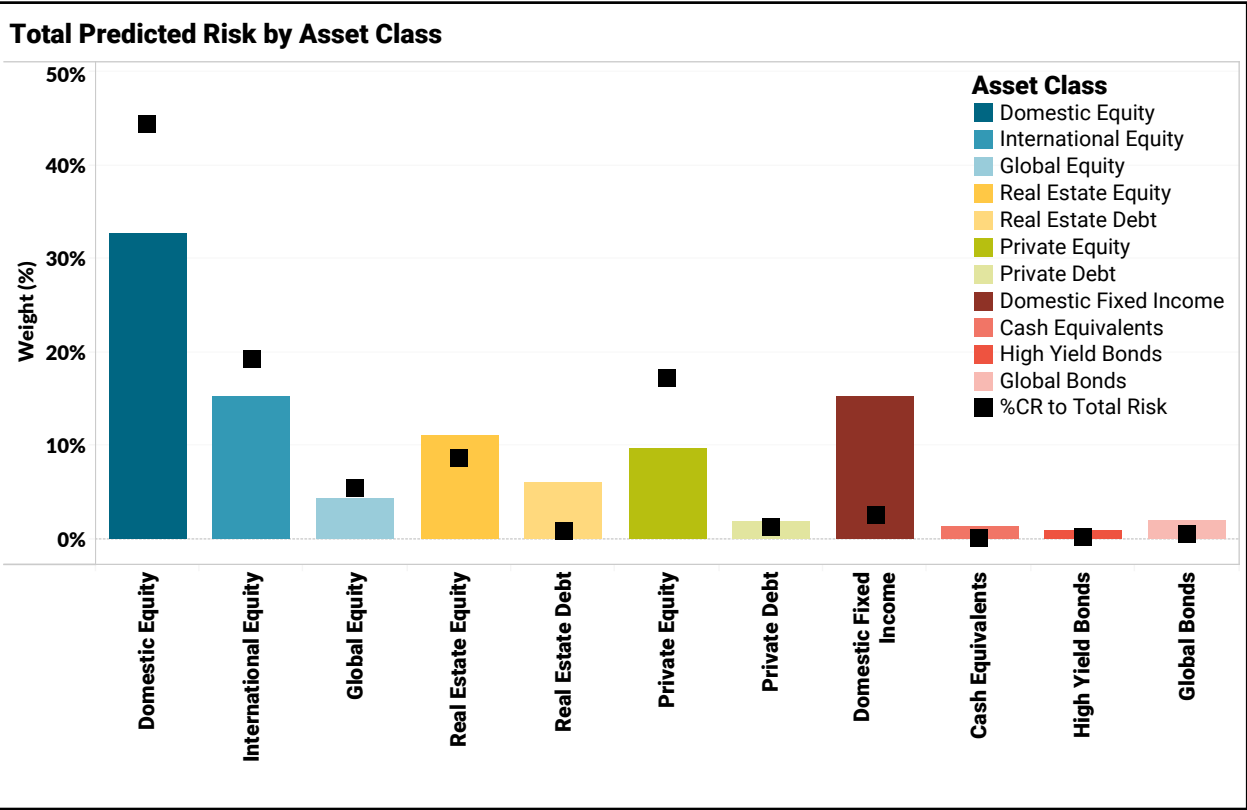
The Medium Term Payroll Coverage KRI seeks to evaluate how many months of payroll can be made using Cash and Domestic Fixed Income above it's minimum allocation bound. It also takes into account the projected income and ECR contributions over the next 12 months, offset by 25% of capital calls on unfunded commitments. Capital calls of 25% are indicative of a "non-stressed" market environment.



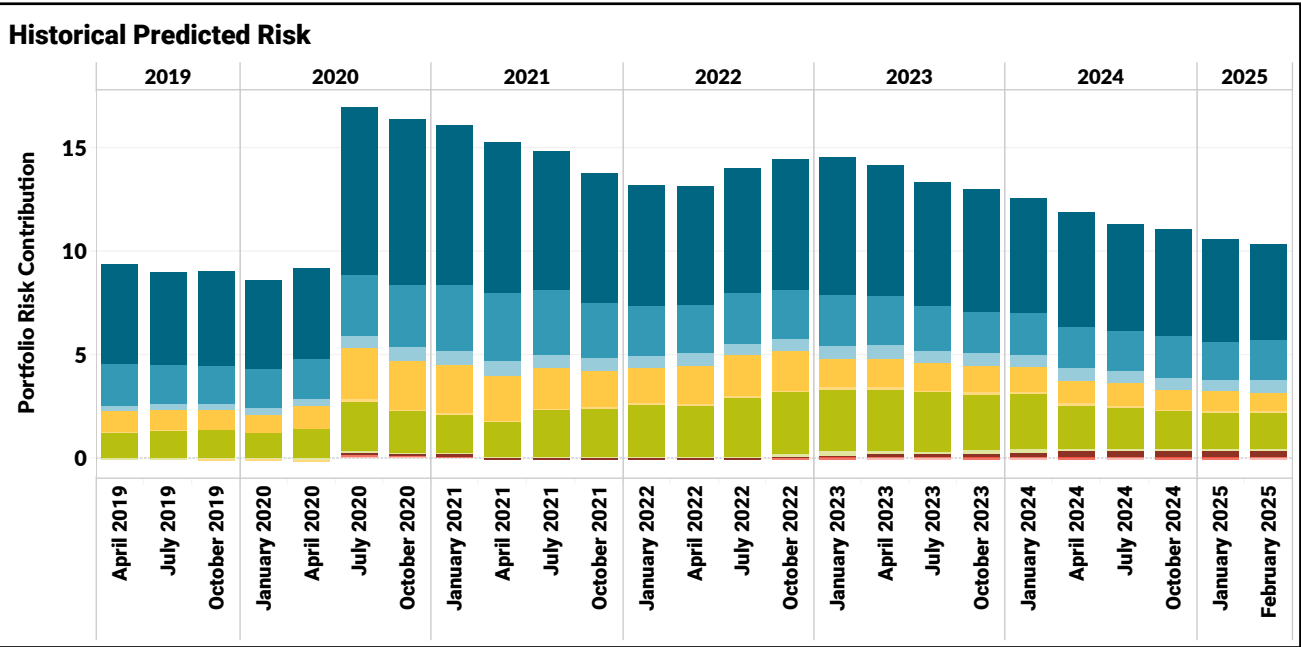
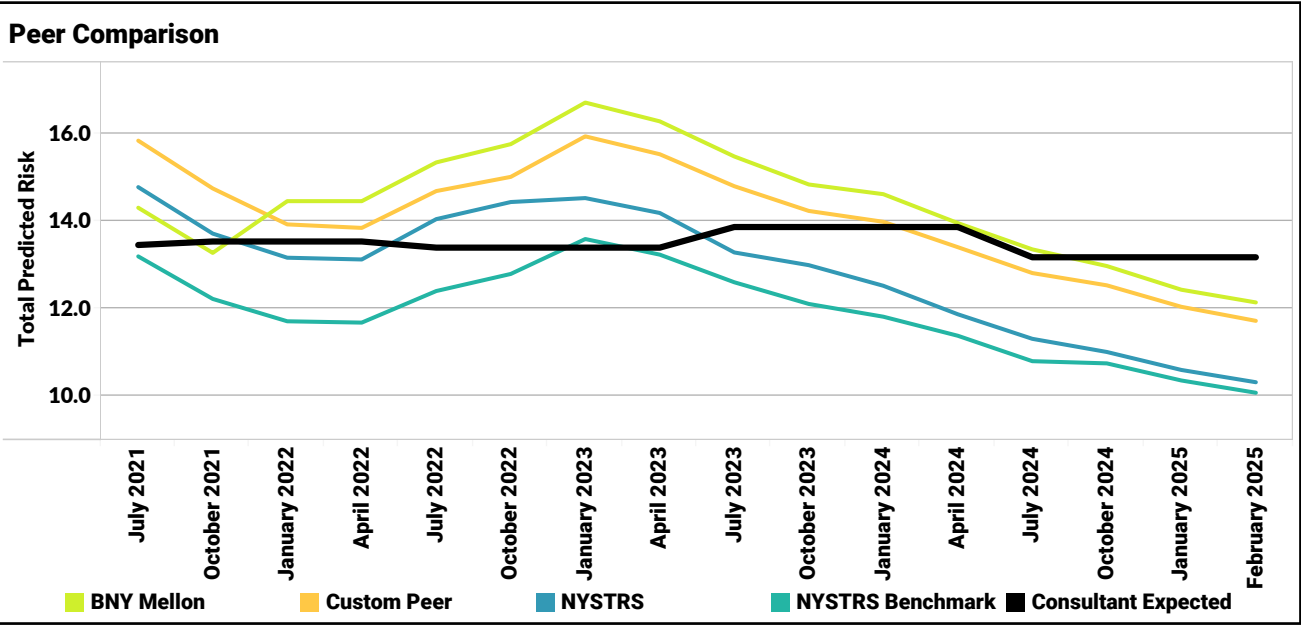
The Stressed Contingency Funding Liquidity KRI seeks to evaluate how many months of payroll can be made during a GFC like scenario before NYSTRS' CFP is triggered. GFC loss is experienced over 12 months with asset classes returning capital market assumptions years 2-5. Employer contributions are capped at 17%.

Investment Risk Board Report April 2025

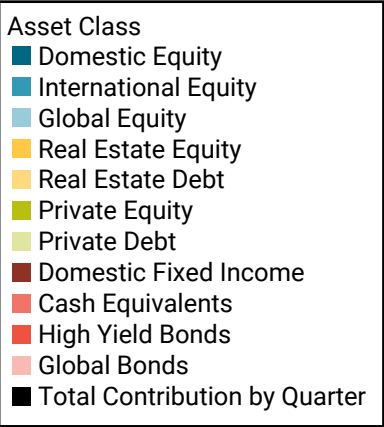
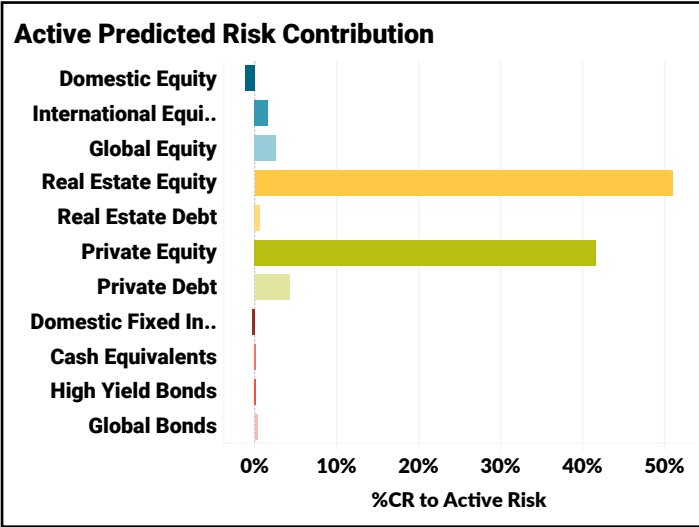
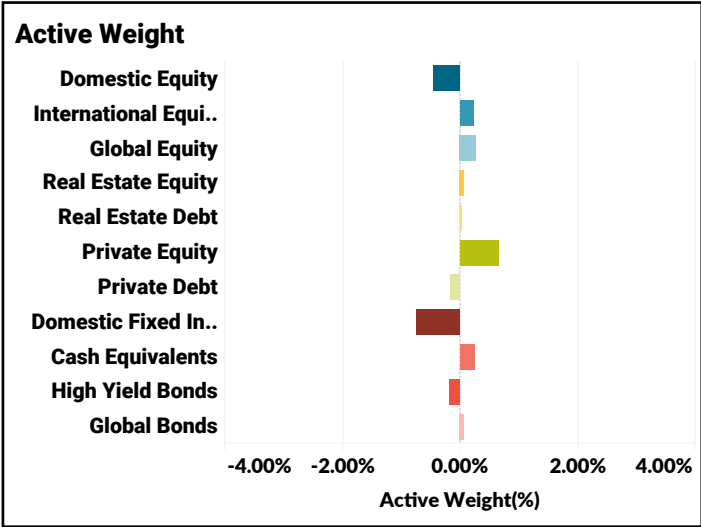
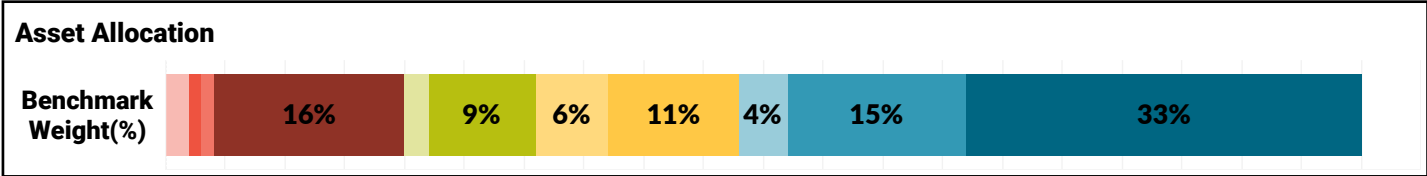
Observations:
Total plan risk continued lower as it dropped to 10.32 from 10.60 last quarter. Recent market volatility will begin to get picked up in the risk models next quarter, and total plan risk will likely increase. As expected, equity investments continue to contribute the majority of total plan risk.



Asset Class	Mkt Value(\$M)	Weight (%)	%CR to Total Risk	Portfolio Risk Contribution	Total Risk
Total Plan	\$148,991	100.00%	100.00%	10.32	10.32
Domestic Equity	\$48,482	32.54%	44.38%	4.58	14.80
International Equity	\$22,696	15.23%	19.11%	1.97	14.55
Global Equity	\$6,352	4.26%	5.44%	0.56	13.63
Real Estate Equity	\$16,492	11.07%	8.63%	0.89	11.05
Real Estate Debt	\$8,929	5.99%	0.85%	0.09	3.38
Private Debt	\$2,727	1.83%	1.21%	0.12	7.95
Private Equity	\$14,399	9.66%	17.16%	1.77	22.74
Cash Equivalents	\$1,877	1.26%	0.00%	0.00	0.06
Domestic Fixed Income	\$22,759	15.28%	2.53%	0.26	5.96
High Yield Bonds	\$1,206	0.81%	0.25%	0.03	4.48
Global Bonds	\$3,072	2.06%	0.43%	0.04	5.16



Investment Risk Board Report April 2025

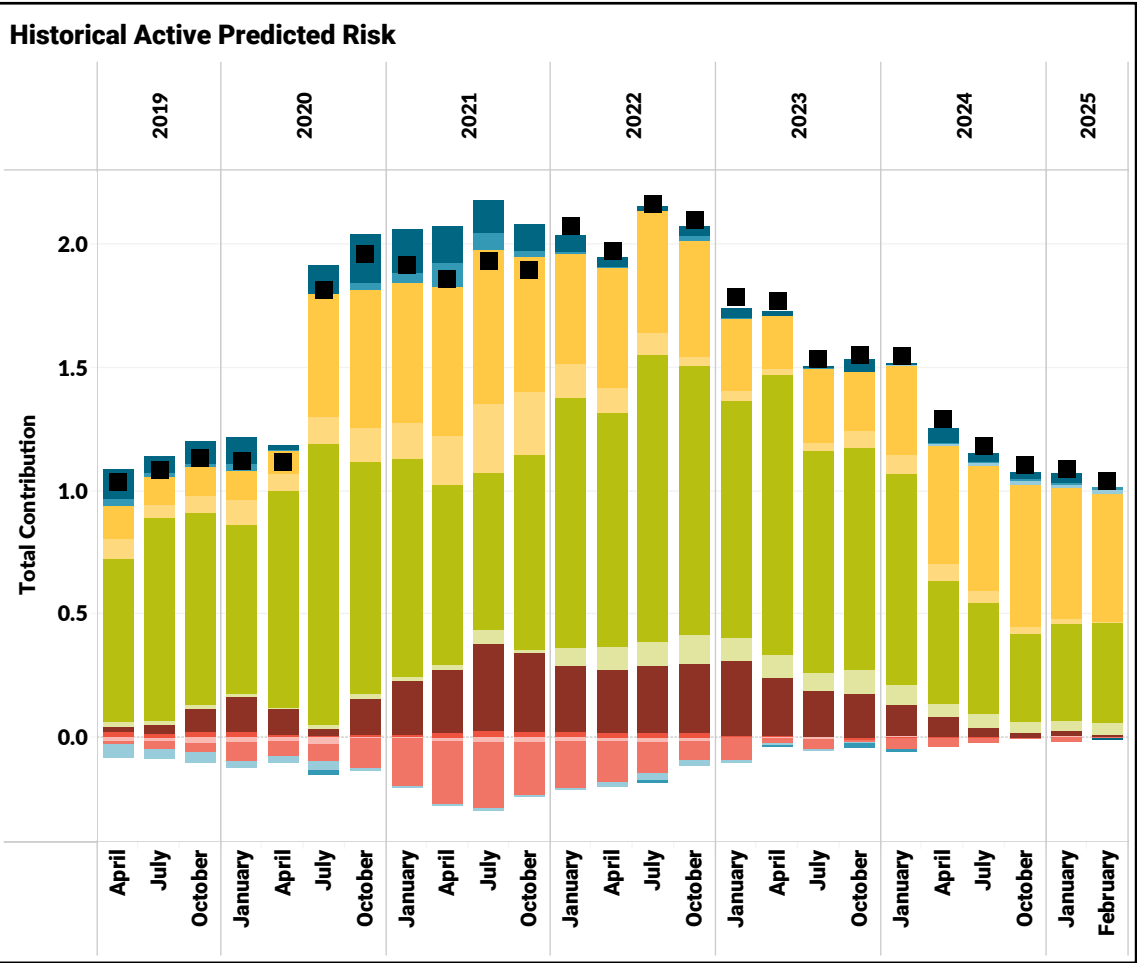


Active Predicted Risk:
Active Predicted Risk is defined as the expected volatility of excess returns, and results from differences between actual portfolio weights and holdings vs. policy weights and holdings. Excess returns may be positive or negative.

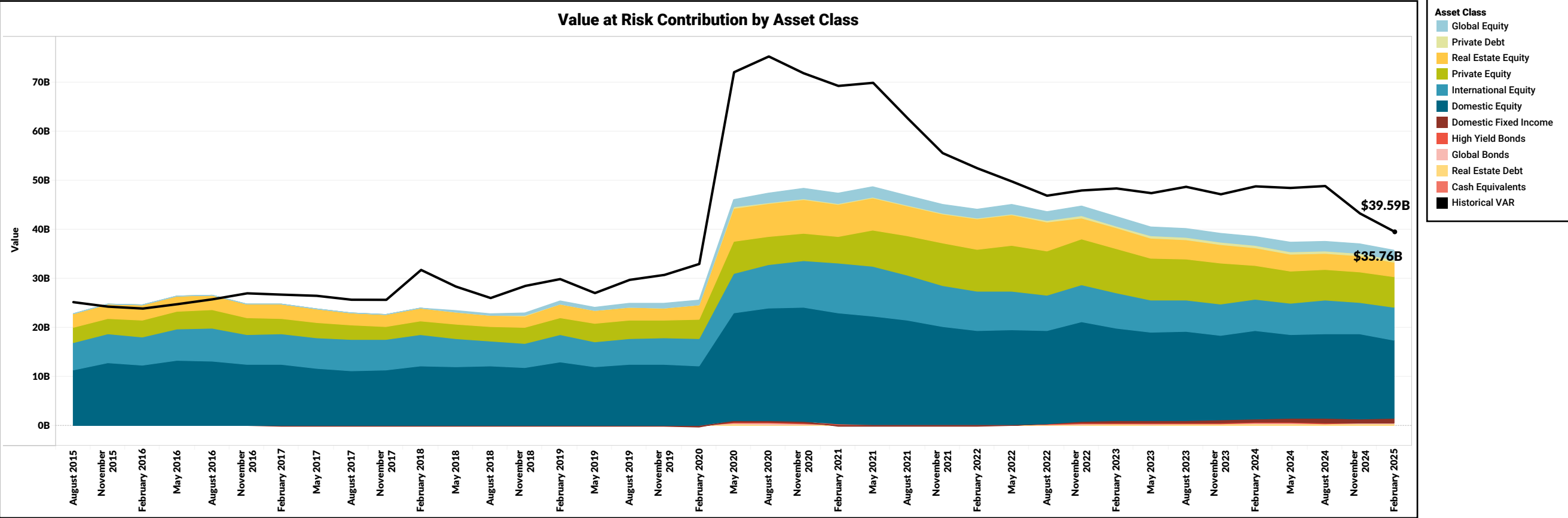
Active Risk for the Fund is largely controlled by limiting the difference between the actual and policy benchmark (target) weights for each asset class.

Benchmarking issues associated with private market portfolios also affect the measurement of 'active' risk. We see this most significantly with NYSTRS' private equity portfolio.

Asset Class	Weight(%)	Benchmark Weight(%)	Active Weight(%)	%CR to Active Risk	Total Contribution	Active Risk
Total Risk	100.00%	100.00%	0.00%	100.00%	1.01	1.01
Domestic Equity	32.54%	33.00%	-0.46%	-1.25%	0.00	0.10
International Equity	15.23%	15.00%	0.23%	1.59%	0.01	0.45
Global Equity	4.26%	4.00%	0.26%	2.51%	0.02	2.11
Real Estate Equity	11.07%	11.00%	0.07%	51.01%	0.51	6.86
Real Estate Debt	5.99%	6.00%	-0.01%	0.57%	0.01	0.80
Private Equity	9.66%	9.00%	0.66%	41.68%	0.41	5.87
Private Debt	1.83%	2.00%	-0.17%	4.23%	0.05	4.58
Domestic Fixed Income	15.28%	16.00%	-0.72%	-0.43%	0.01	0.27
Cash Equivalents	1.26%	1.00%	0.26%	0.00%	-0.01	0.06
High Yield Bonds	0.81%	1.00%	-0.19%	-0.13%	0.00	0.34
Global Bonds	2.06%	2.00%	0.06%	0.21%	0.00	0.62

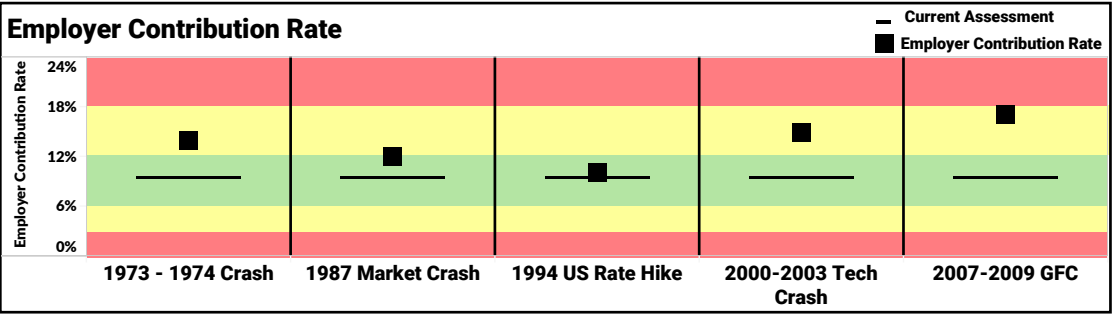
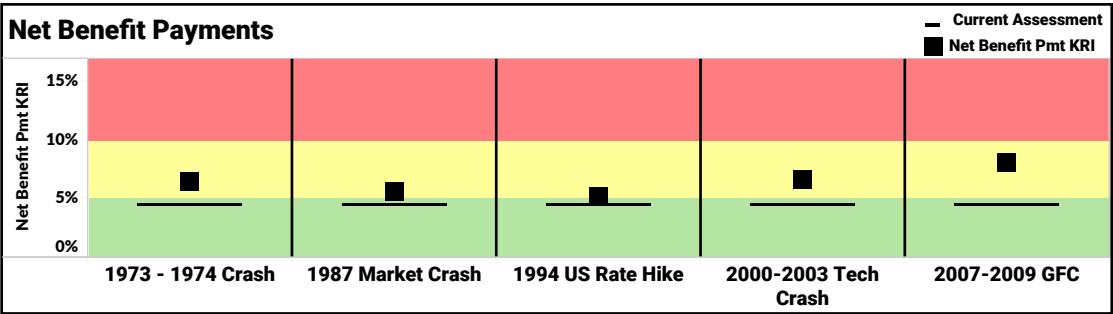
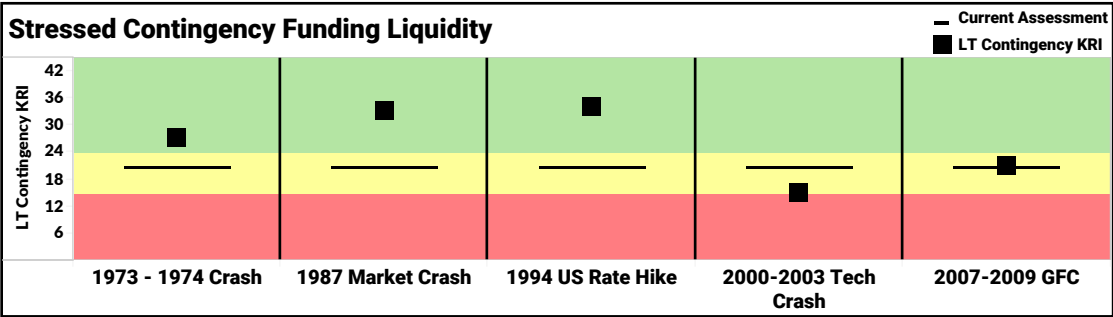
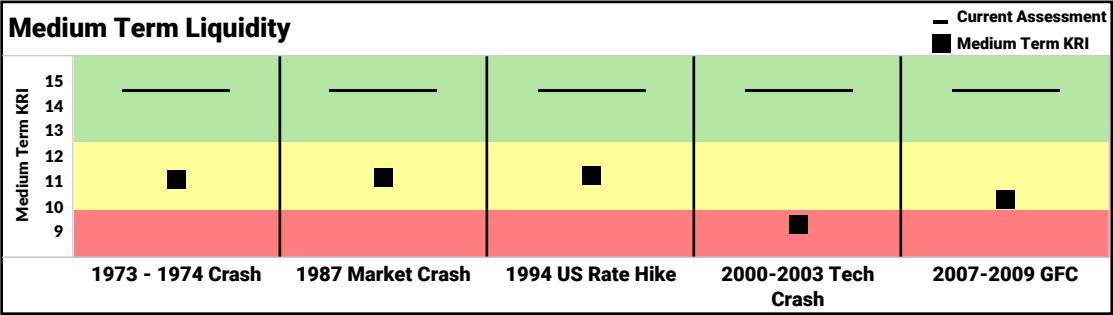


Investment Risk Board Report April 2025



Portfolio Name	Total Portfolio VAR (\$M)	Diversification Benefit	Contribution to VAR (\$M)	(%)Contribution to VAR
Total Portfolio	\$43,103	(\$7,336)	\$35,762	100.00%
Domestic Equity	\$16,688		\$15,872	44.38%
Private Equity	\$7,616		\$6,138	17.16%
International Equity	\$7,684		\$6,833	19.11%
Real Estate Equity	\$4,241		\$3,087	8.63%
Domestic Fixed Income	\$3,158		\$905	2.53%
Global Equity	\$2,014		\$1,946	5.44%
Real Estate Debt	\$702		\$305	0.85%
Private Debt	\$504		\$433	1.21%
Global Bonds	\$368		\$152	0.43%
High Yield Bonds	\$126		\$91	0.25%
Cash Equivalents	\$3		\$0	0.00%

Historical Scenario Analysis - Liquidity KRI



Scenario Analysis:

A scenario analysis seeks to determine how a portfolio may be affected by subjecting it to various historical or hypothetical market conditions. The charts to the left estimate how some of our liquidity KRI’s would be impacted by the various historical scenarios.

Historical Scenarios:

The following historical scenarios apply market conditions experienced during their respective timeframes to NYSTRS' current portfolio over the course of a 1-year period. High level scenario inputs are provided below for context:

Historical Scenario	Date	Domestic Equity	UST Yields: 2y5y10y (bps)	Credit Spreads: AA/BB/CCC (bps)	Total Plan Loss
1987 Stock Market Crash	8/3/87 - 11/30/87	-26%	Unchanged	Unchanged	-11.88%
1973-1974 Stagflation & Rate Hikes	1/1/73 - 8/31/74	-34%	347	LIBOR 334	-22.58%
Tech Crash & Recession	1/9/00 - 3/12/03	-46%	-488/-387/-281	-13/244/1151	-23.05%
1994 US Rate Hike	1/31/94 - 12/13/94	-5%	162/152/131	2/36/0	-3.99%
Global Financial Crisis	9/30/07 - 3/4/09	-52%	-308/-226/-115	234/849/3779	-35.95%

Medium Term Liquidity KRI:

The top chart depicts how each historical scenario would impact funding liquidity after a one-time rebalance to target policy weights. Cash and Domestic Fixed Income coverage represents how much of each asset class could be used to make payroll before lower asset allocation bounds were breached and additional rebalancing was required.

Stressed Contingency Funding Liquidity KRI :

The second chart depicts how each historical scenario would impact the Stressed Contingency Funding Liquidity KRI. This KRI is a measure which seeks to evaluate how many months of payroll can be made during one of these scenarios before NYSTRS’ Contingency Funding Plan is triggered.

Net Benefit Payments as % of Assets:

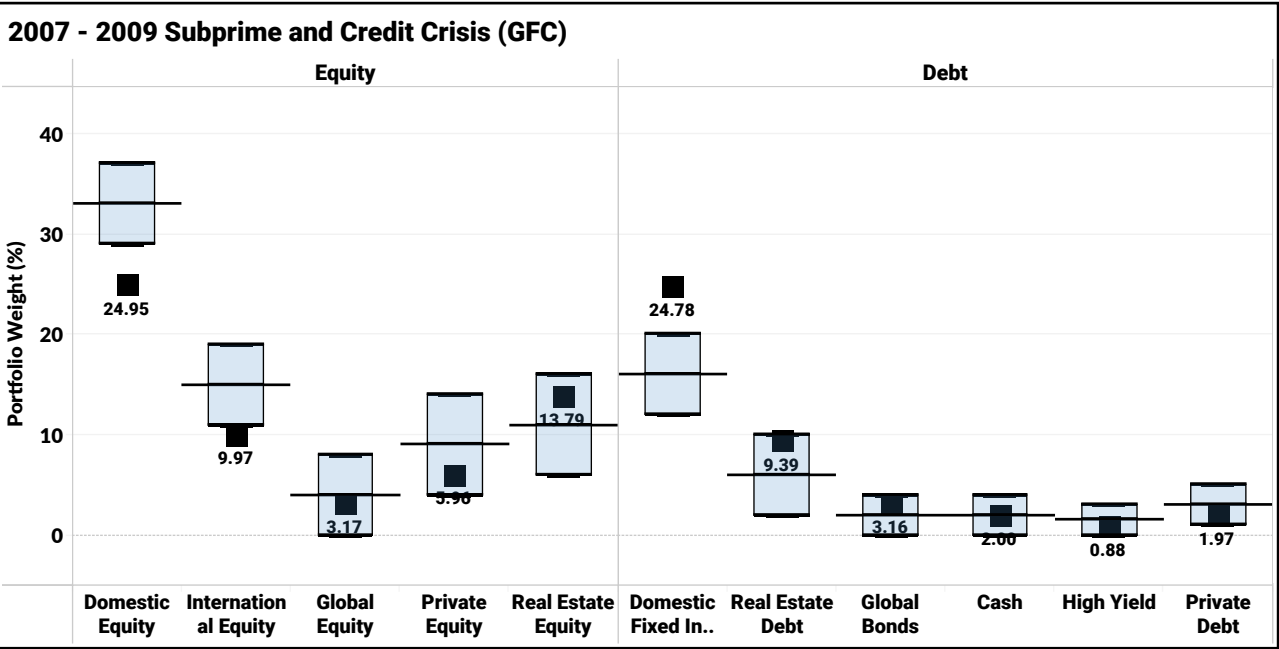
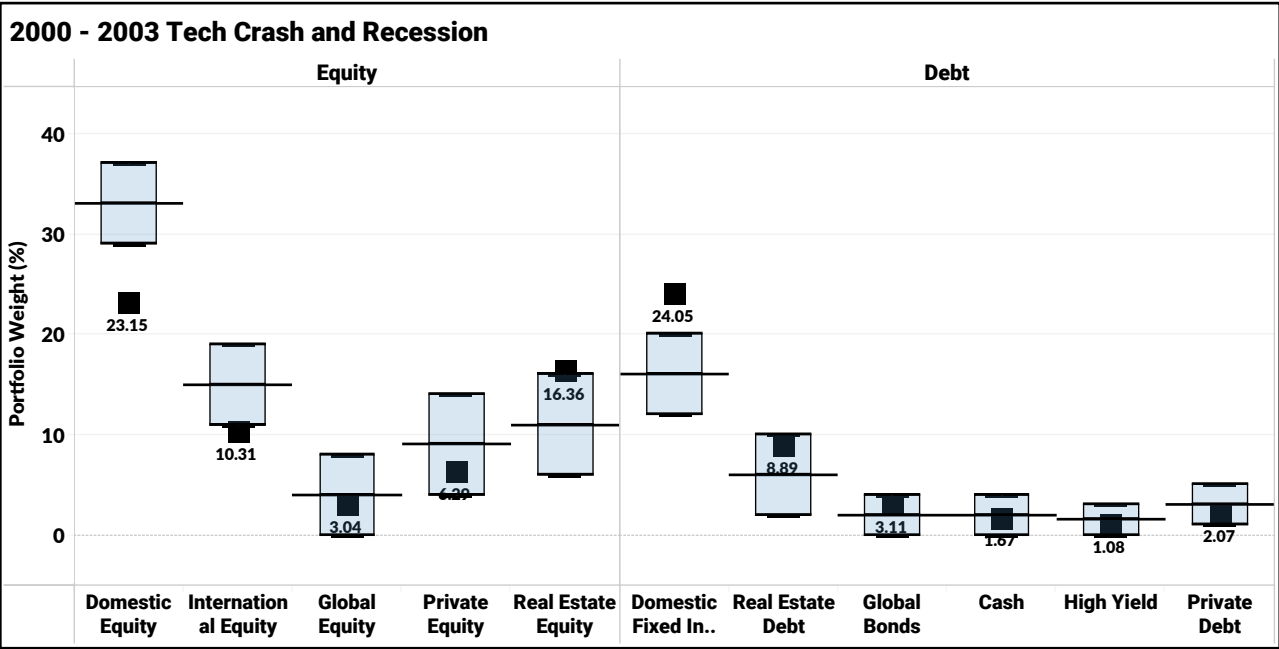
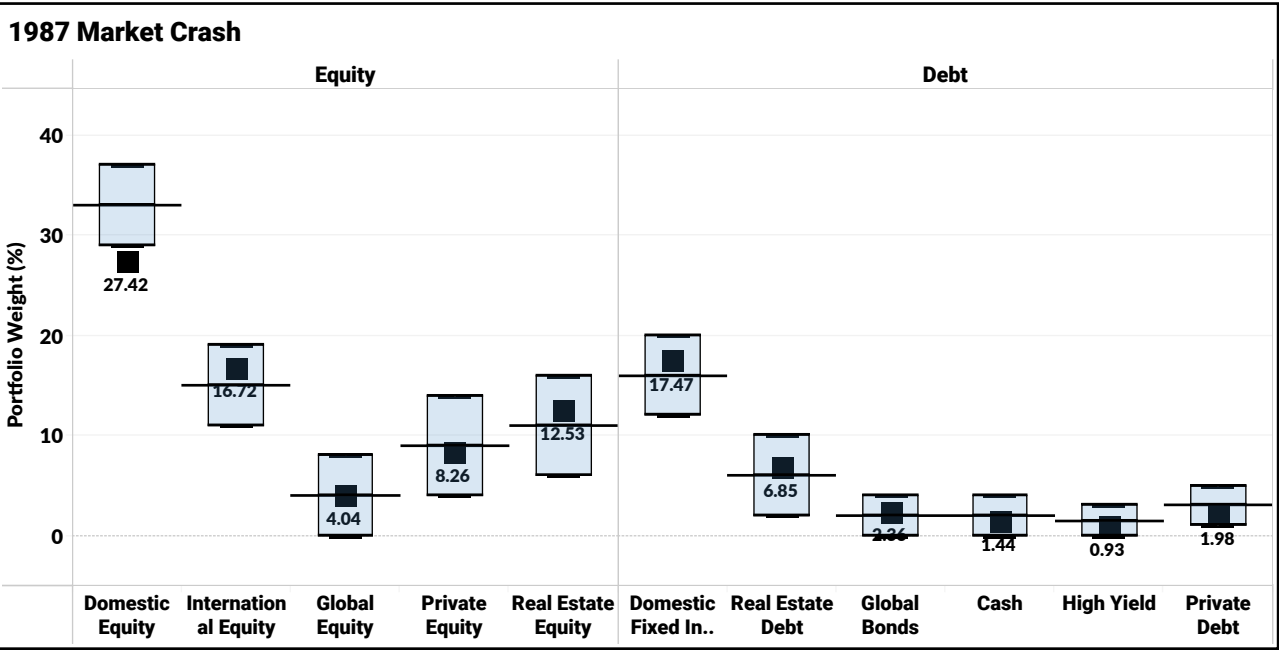
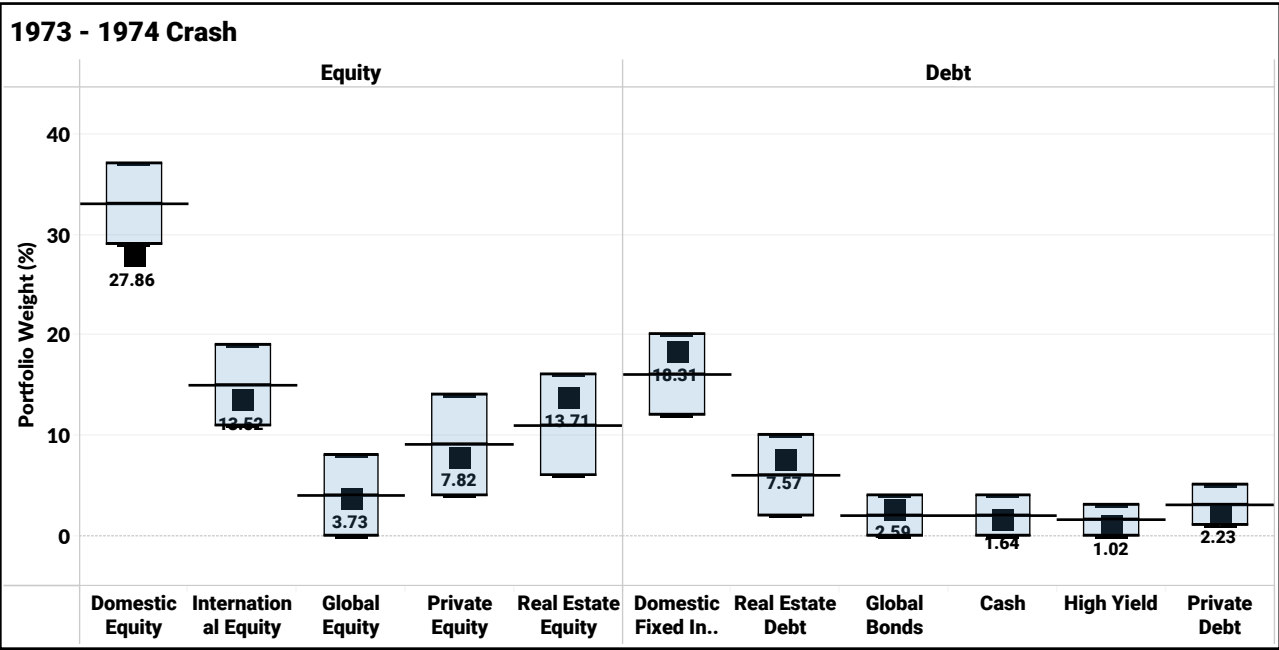
The third chart depicts how each historical scenario would impact net benefit payments as a percentage of assets. Figures are representative of each scenarios market bottom and do not incorporate expected cash flows or market recovery. (Net Benefit Payments=Annual Benefit Payments-Employer & Employee Contributions)

Employer Contribution Rate:

The bottom chart depicts how each historical scenario would immediately impact the Employer Contribution Rate (ECR) as a percentage of pay. Figures are representative of each scenario’s market bottom and do not incorporate a market recovery. Note that absent a market recovery, the ECR would continue to increase in future years as the major asset loss continues to be smoothed in over the remainder of the five year smoothing period.

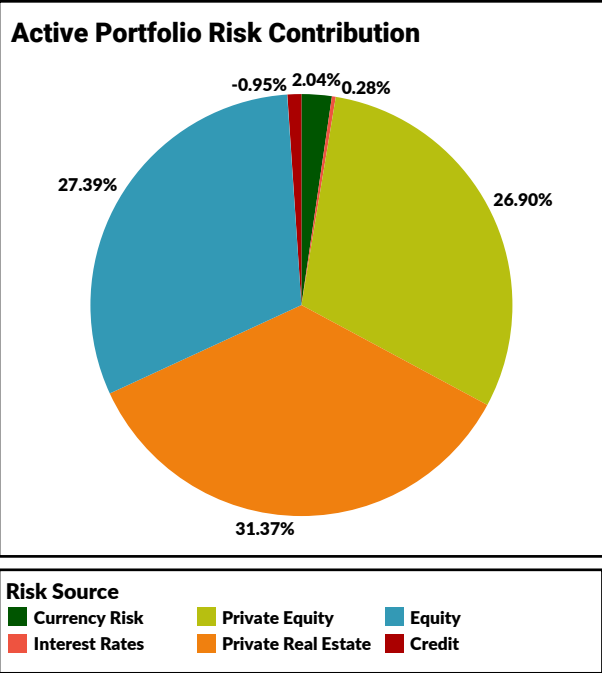
Scenario Analysis – Impact to Asset Allocation KRI

Data as of 02/28/2025



Predicted Risk by Risk Factor

Top 20 - Currency Total Exposure	
US Dollar	79.44%
Euro	4.50%
British Pound Sterling	2.68%
Japanese Yen	2.52%
Hong Kong Dollar	1.60%
Canadian Dollar	1.52%
Swiss Franc	1.06%
Indian Rupee	1.02%
Australian Dollar	0.99%
New Taiwan Dollar	0.91%
Chinese Yuan	0.78%
Swedish Krona	0.51%
Korean Won	0.48%
Brazilian Real	0.28%
Danish Krone	0.25%
Singapore Dollar	0.23%
Norwegian Krone	0.22%
Mexican Peso	0.13%
South African Rand	0.12%
New Israeli Sheqel	0.10%



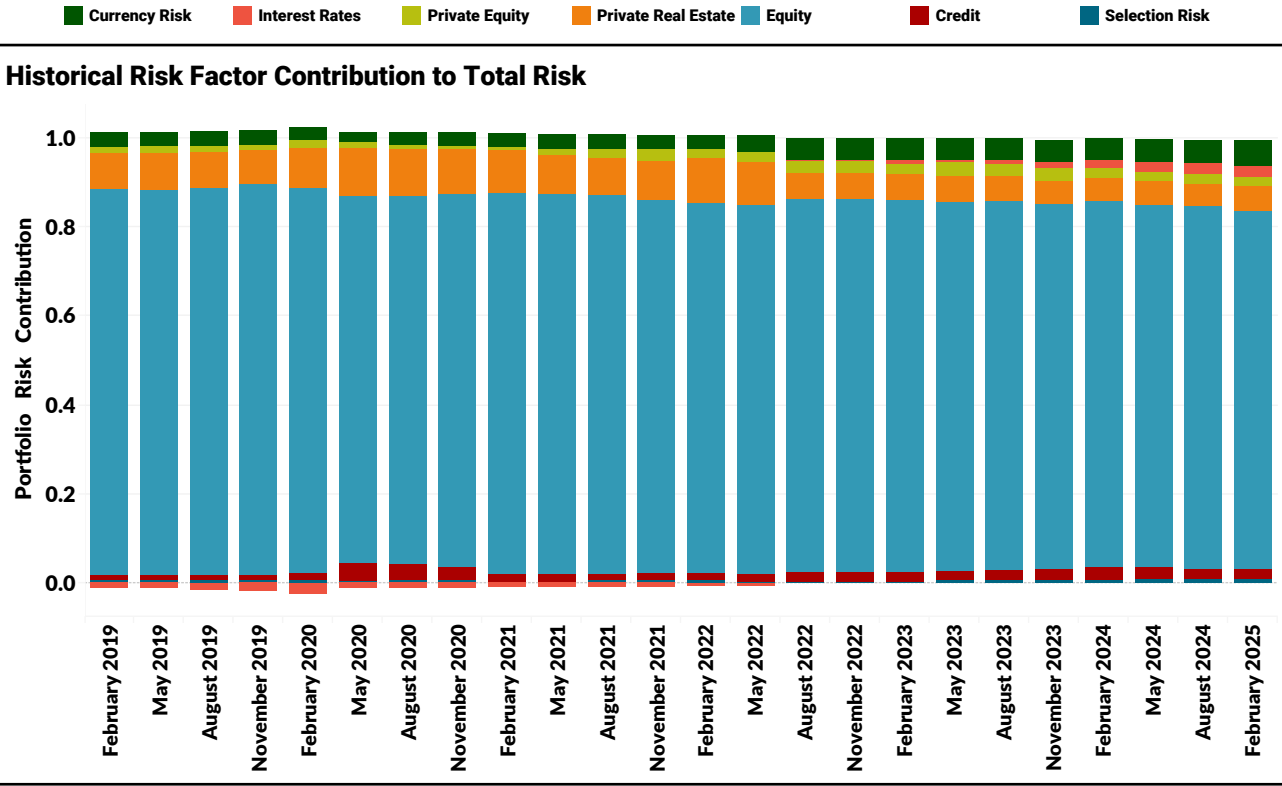
Risk Factors:

Risk factors are characteristics shared by a group of securities that influence their risk and return as well as their correlations. The five risk factor groups used for this analysis (equity, interest rates, credit, private equity, and private real estate) can be further decomposed into underlying factors such as industry, style, interest rate term structure, and geography. Each factor has an expected volatility and correlation with the other risk factors. All of NYSTRS holdings are modeled according to their exposures to individual risk factors.

Observations:

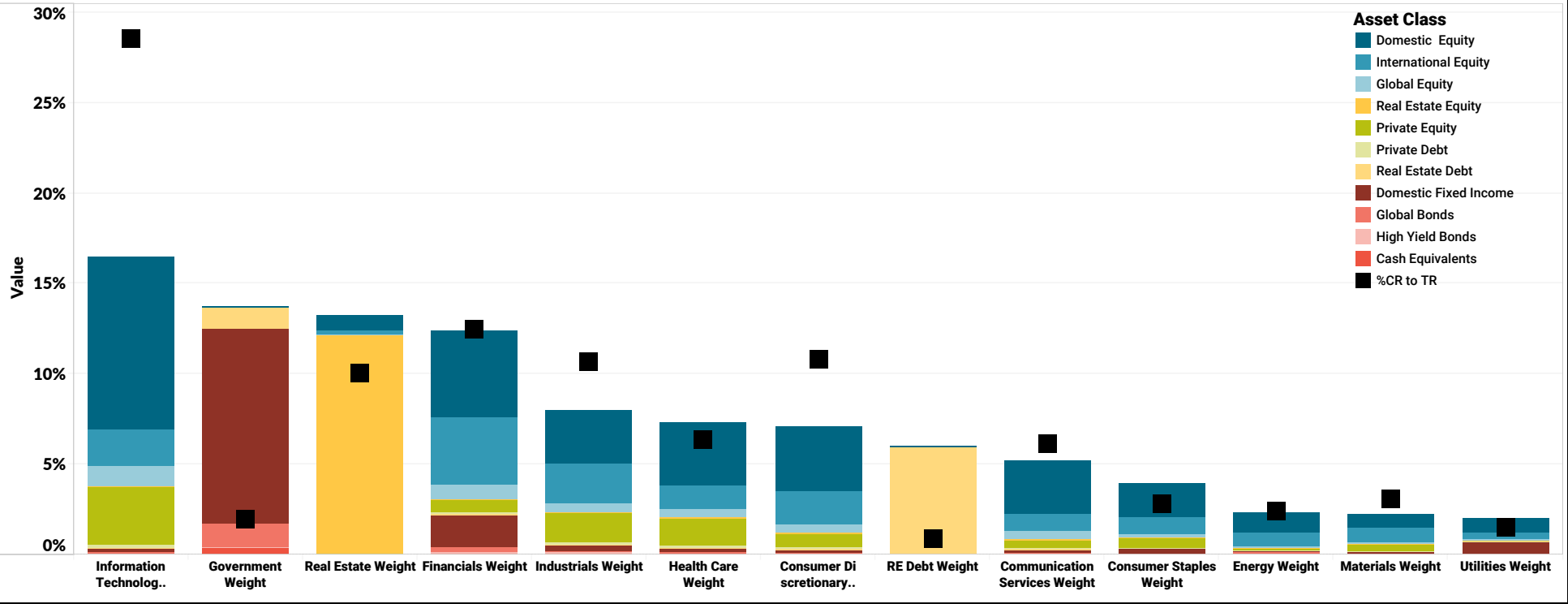
As expected, Total Risk and Active Risk for the portfolio are both driven primarily by equity risk factors.

Risk Source	Portfolio Risk Contribution	Portfolio Risk Contribution (%)	Benchmark Risk Contribution	Benchmark Portfolio Risk Contribution (%)	Active Portfolio Risk Contribution (%)
Total Risk	10.32	100.00%	10.08	100.00%	100.00%
Local Market Risk	9.74	94.34%	9.56	94.90%	97.96%
Common Factor Risk	9.64	93.45%	9.46	93.82%	85.62%
Equity	8.33	80.75%	7.67	76.08%	27.39%
Interest Rates	0.26	2.49%	0.28	2.77%	0.28%
Credit	0.21	2.00%	0.24	2.37%	-0.95%
Private Equity	0.23	2.25%	0.11	1.07%	26.90%
Private Real Estate	0.56	5.47%	1.13	11.20%	31.37%
Selection Risk	0.09	0.89%	0.11	1.08%	12.34%
Currency Risk	0.58	5.66%	0.51	5.10%	2.04%



Investment Risk Board Report April 2025

Sector Concentration Weight By Asset Class



NYSTRS Sector	Market Value (\$M)	Weight (%)	Portfolio Risk Contribution	(%)CR to Total Risk	Total Risk
Total Plan	\$148,991	100.00%	10.32	100.00%	10.32
Information Technology	\$24,656	16.55%	2.94	28.53%	20.14
Real Estate Equity	\$18,299	12.28%	1.04	10.05%	11.16
Government	\$18,629	12.50%	0.20	1.94%	5.77
Financials	\$18,403	12.35%	1.28	12.45%	11.80
Industrials	\$12,168	8.17%	1.10	10.68%	14.48
Health Care	\$11,076	7.43%	0.66	6.35%	11.90
Consumer Discretionary	\$10,820	7.26%	1.11	10.78%	16.84
Real Estate Debt	\$8,929	5.99%	0.09	0.85%	3.38
Communication Services	\$7,616	5.11%	0.63	6.14%	15.39
Consumer Staples	\$5,972	4.01%	0.29	2.79%	9.88
Energy	\$3,756	2.52%	0.24	2.37%	16.69
Materials	\$3,501	2.35%	0.31	3.03%	15.28
Utilities	\$2,983	2.00%	0.15	1.45%	10.66

Observations:

Sector contribution to risk is in line with expectations. Information Technology continues to drive an outsized contribution to total risk relative to its weight in the portfolio.

Sectors:

In developing the sector schedule, NYSTRS began with industry recognized sectors used by MSCI and S&P. Five custom sectors were added to this base to accommodate the Fund’s allocation to Government, Real Estate Debt, Real Estate Equity, Cash and “Other” investments.

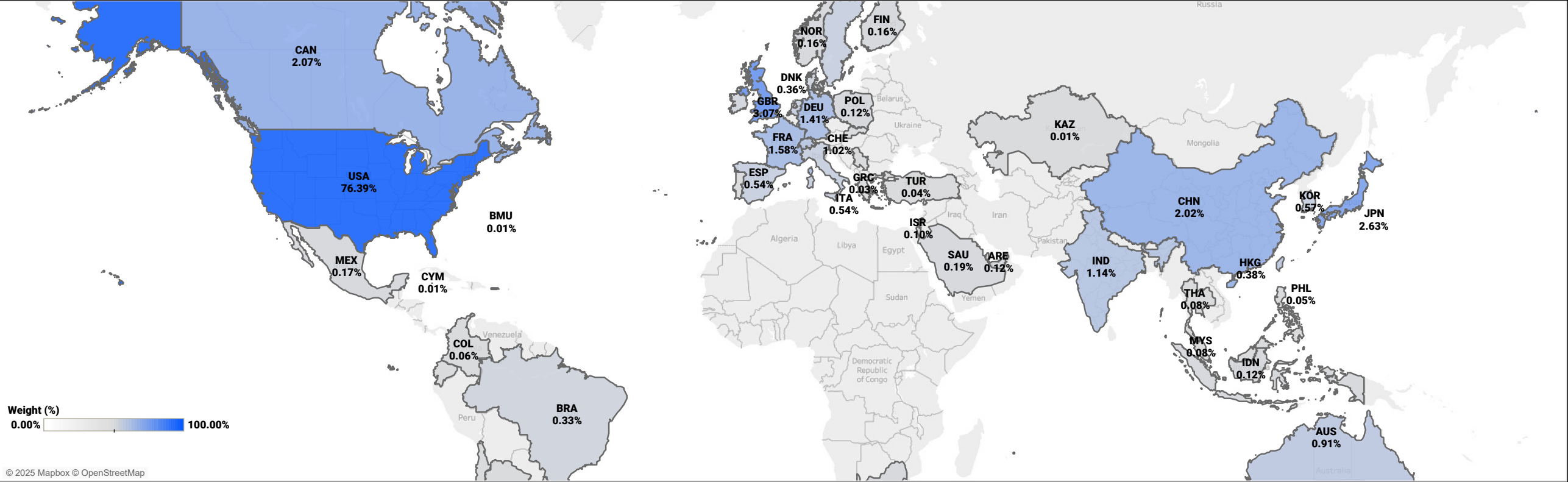
The bar chart representing weight for each sector was then further divided by asset class; with shades of blue denoting public equity asset classes, red denoting public fixed income asset classes, green denoting private equity and debt, and orange denoting real estate equity and debt.

Defensive sectors such as Utilities, and Consumer Staples tend to be more stable and less volatile regardless of the condition of the overall financial markets. Because these sectors are not highly correlated with the business cycle, they are also known as "non-cyclical". Cyclical sectors such as Consumer Discretionary and Materials tend to be correlated with the business cycle and can be more volatile than defensive sectors.

These characteristics can be seen in the chart. The risk contribution by the defensive sectors is less than their market value allocation and the risk contribution by the cyclical sectors is higher than their market value allocation.

Investment Risk Board Report April 2025

Observations:
Total Developed and Emerging market regions remain within 1% of the benchmark. Note: Country of exposure is generally determined by the country of incorporation of the issuing company.



Geographic Region	Market Value (\$M)	Weight(%)	BMK Weight (%)	Active Weight (%)	Portfolio Risk Contribution	(%)CR to Total Risk	Total Risk
Total Plan	\$148,991	100.00%	100.00%	0.00%	10.32	100.00%	10.32
Total Developed	\$138,906	93.23%	93.57%	-0.34%	9.58	92.81%	10.30
United States	\$113,821	76.39%	79.23%	-2.84%	7.38	71.56%	9.86
Europe and Middle East	\$15,796	10.60%	8.97%	1.63%	1.41	13.63%	15.30
Japan	\$3,911	2.63%	2.44%	0.19%	0.33	3.15%	19.08
Pacific ex Japan	\$2,291	1.54%	1.30%	0.24%	0.23	2.23%	18.20
Canada	\$3,088	2.07%	1.64%	0.43%	0.23	2.25%	13.02
Total Emerging	\$9,224	6.19%	5.82%	0.37%	0.71	6.92%	15.29
Asia	\$7,425	4.98%	4.94%	0.05%	0.55	5.37%	15.99
EMEA	\$849	0.57%	0.48%	0.09%	0.08	0.74%	18.88
Latin America	\$951	0.64%	0.40%	0.24%	0.08	0.81%	19.60
Total Other	\$858	0.58%	0.61%	-0.03%	0.02	0.22%	6.39
Rest of the World	\$525	0.35%	0.34%	0.01%	0.00	0.04%	3.45
Frontier	\$333	0.22%	0.27%	-0.04%	0.02	0.18%	14.18

Investment Risk Board Report April 2025

Appendix:

MSCI ACWI & FRONTIER MARKETS INDEX									
MSCI ACWI INDEX					MSCI EMERGING & FRONTIER MARKETS INDEX				
MSCI WORLD INDEX			MSCI EMERGING MARKETS INDEX			MSCI FRONTIER MARKETS INDEX			
DEVELOPED MARKETS			EMERGING MARKETS			FRONTIER MARKETS			
Americas	Europe & Middle East	Pacific	Americas	Europe, Middle East & Africa	Asia	Europe	Africa	Middle East	Asia
Canada	Austria	Australia	Brazil	Czech Republic	China	Croatia	Kenya	Bahrain	Bangladesh
United States	Belgium	Hong Kong	Chile	Egypt	India	Estonia	Mauritius	Jordan	Pakistan
	Denmark	Japan	Colombia	Greece	Indonesia	Iceland	Morocco	Oman	Sri Lanka
	Finland	New Zealand	Mexico	Hungary	Korea	Lithuania	Nigeria		Vietnam
	France	Singapore	Peru	Kuwait	Malaysia	Kazakhstan	Tunisia		
	Germany			Poland	Philippines	Romania	WAEMU ²		
	Ireland			Qatar	Taiwan	Serbia			
	Israel			Saudi Arabia	Thailand	Slovenia			
	Italy			South Africa					
	Netherlands			Turkey					
	Norway			United Arab Emirates					
	Portugal								
	Spain								
	Sweden								
	Switzerland								
	United Kingdom								
MSCI STANDALONE MARKET INDEXES ¹									
						Americas	Europe	Africa	Middle East
						Argentina	Bosnia Herzegovina	Botswana	Lebanon
						Jamaica	Bulgaria	Zimbabwe	Palestine
						Panama	Malta		
						Trinidad & Tobago	Ukraine		

*MSCI.com/market-classification



Investment Committee Meeting

April 23, 2025

COMMITTEE MEMBERS

Nicholas Smirensky, Chair

Juliet Benaquisto, Eric Iberger, David Keefe, Jennifer Longtin, Ruth Mahoney

AGENDA pp. 38-39

- A. Approval of Minutes of January 29, 2025 pp. 40-47

PRESENTATIONS

- A. Current Market Perspectives with David Kostin, Goldman Sachs via Webex
- B. Asset Allocation Review – Tom Shingler, Jay Kloepper – Callan pp. 48-71
- C. Private Debt Recommendation (motion for **Executive Session** pursuant to Open Meetings Law Section 105 (1) (f) to discuss financial history and matters leading to the appointment/employment of a particular person or corporation) pp. 72-142
- D. Real Estate Manager Recommendation (motion for **Executive Session** pursuant to Open Meetings Law Section 105 (1) (f) to discuss financial history and matters leading to the appointment/employment of a particular person or corporation) pp. 143-223

STAFF UPDATES

- A. Investment Committee Executive Summary – M. Andriola pp. 224-232
- B. Managing Director Updates
 - Public Equities Update – B. Unni p. 233-234
 - Fixed Income Update – M. Federici p. 235
 - Long Term Bond Update – Aaron Vanderwiel pp. 236-275
 - Real Estate Update – D. Gillan pp. 276-279
 - Private Equity/Debt Update – G. Yahoudy pp. 280-281

INVESTMENT COMMITTEE ACTION REQUIRED

- A. **Consent Agenda Recommendation Item #1** pp. 282-286
1. Renew Agreements
 - Adelante Capital Management LLC p. 282
 - Goldman Sachs Asset Mgt India Equity Strategy p. 283
 - J.P. Morgan Chase Bank NA (Securities Lending) p. 284
 - LSV Asset Management p. 285
 - Wellington Management Company LLP p. 286
 2. Resolution on [REDACTED]
 3. Resolution on [REDACTED]

Informational Reports

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2. Mail Vote Quarterly Board Report p. 292
3. REAC Quarterly Transactions Board Report p. 293

**NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
INVESTMENT COMMITTEE MEETING
January 29, 2025**

INVESTMENT COMMITTEE MEETING
NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
10 Corporate Woods Drive, Albany NY

A meeting of the Investment Committee of the Retirement Board was held at the System on January 29, 2025. Nicholas Smirensky, Chair, called the meeting to order at 9:14 a.m.

The following individuals were in attendance:

Investment Committee Members

Juliet Benaquisto, Eric Iberger, David Keefe, Jennifer Longtin, Ruth Mahoney, Nicholas Smirensky

Board Members

Paul Farfaglia, Phyllis Harrington, Donald A. Little III (via WebEx), Oliver Robinson

Staff

Thomas Lee, Don Ampansiri, Dave Gillan, Kathy Ebert, Gerald Yahoudy, Miriam Dixon, Richard Young, Vijay Madala, Beth Dellea, Michael Federici, Danny Malavé, Matt Albano, Margaret Andriola, Emily Ekland, Han Yik, Chris Brown, Kevin Maloney, Heidi Brennan, Aaron VanDerwiell, Sarah Garrand, Matt Pinchinat, Binoop Unni, Joe Wood, Melody Prangle, Heather Marks, Tom King, Ben Keezer, Wanette Alston, Sheilish Hylton, Stacey Lesser Meehan

System Consultants

Callan: Tom Shingler, Lauren Mathias, Greg Allen, Carlo Stadlinger

StepStone: Scott Schwind

Visitors

Via WebEx: Tom Cosmer, PineBridge

Approval of Minutes

A. Approval of Minutes of October 30, 2024 Investment Committee Meeting

There being no additions or corrections to the minutes of the October 30, 2024 meeting, the minutes were approved with a motion made by D. Keefe, seconded by J. Longtin and unanimously carried.

Presentations

Upon motion of D. Keefe, seconded by J. Longtin and unanimously carried, the Committee went into Executive Session at 9:15 a.m. to hear a staff recommendation for General Investment Consultant. Upon motion of J. Benaquisto, seconded by R. Mahoney and unanimously carried, the Committee came out of Executive Session at 10:12 a.m.

The Committee heard reports and updates from staff and reviewed the following information regarding the System's investments and performance:

Review of Investments

1. Investment Committee Executive Summary (Appendix A, pp. 8-79)
 - a. Proposed Updates to Responsible Stewardship Policy – Appendix A: Stock Proxy Voting
2. Public Equities Update (Appendix B, p. 80-81)
3. Fixed Income Update (Appendix C, p. 82)
4. Real Estate Update (Appendix D, pp. 83-86)
5. Private Equity/Debt Update (Appendix E, pp. 87-88)

Policy Review and Action

A. Consent Agenda Recommendation Items (Appendix F, pp. 89-90)

N. Smirensky asked the Committee members if any of the consent agenda items should be moved to regular discussion items. Hearing no objections, the Committee proceeded to move the Consent Agenda Recommendation items (#1) together with one motion.

Upon motion of R. Mahoney, seconded by D. Keefe and unanimously carried by the Committee, the following consent agenda item resolutions were moved and unanimously recommended to the Retirement Board:

1. Renew Managers

- AEW Capital Management

RESOLVED, That the System's Executive Director and Chief Investment Officer is authorized to renew the agreement with AEW Capital Management, LP to manage a portion of the System's portfolio to be actively invested in the securities of real estate investment trusts ("REITs") and real estate operating companies ("REOCs") for a period of one year, effective April 15, 2025.

- Ariel Investments LLC

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Ariel Investments LLC to manage a portion of the System's assets as an MSCI ACWI ex-US international equity manager for a period of one year, effective April 10, 2025.

- Arrowstreet

WHEREAS, Arrowstreet Capital LP was hired as an international equity manager on July 18, 2017 and as a global equity manager on March 26, 2019; now be it therefore

RESOLVED, That, the Executive Director and Chief Investment Officer is authorized to renew the agreement with Arrowstreet Capital LP for a period of one year, effective March 26, 2025, to manage (i) a portion of the System's assets as an international equity manager benchmarked to the

MSCI ACWI ex-US index, and (ii) a portion of the System's assets as a global equity manager benchmarked to the MSCI ACWI index.

- Bank of NY Mellon (Securities Lending)

RESOLVED, the Executive Director and Chief Investment Officer is authorized to renew the agreement with The Bank of New York Mellon to act as an agency securities lender for a portion of the System's public securities assets for a period of one year, effective March 17, 2025.

- Black Rock Financial Management, Inc. (CMBS)

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Black Rock Financial Management, Inc. to manage a portion of the System's assets in Commercial Mortgage Backed Securities ("CMBS"), for a period of one year, effective April 3, 2025.

- Cohen & Steers Capital Mgt – Multi Strategy

RESOLVED, That the System's Executive Director and Chief Investment Officer is authorized to renew the agreement with Cohen & Steers Capital Management, Inc. to manage a portion of the System's portfolio to be actively invested in the securities of real estate investment trusts ("REITs") and real estate operating companies ("REOCs") for a period of one year, effective February 12, 2025.

- PGIM, Inc.

RESOLVED, That the Executive Director and Chief Investment Officer, or designee, is authorized to renew the agreement with PGIM, INC. to manage a portion of the System's assets as an active U.S. high yield manager benchmarked to the Bloomberg US High Yield 1% Issuer Capped Index (I09038US) for a period of one year, effective February 21, 2025.

- J.P. Morgan Investment Management Inc.

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with J.P. Morgan Investment Management Inc. to manage a portion of the System's assets as an active U.S. high yield manager benchmarked to the ICE BofAML BB-B US High Yield Constrained Index (HUC4) (f/k/a Bank of America Merrill Lynch BB-B U.S. High Yield Constrained Index) for a period of one year, effective March 5, 2025.

- Principal Real Estate Investors

RESOLVED, That the System's Executive Director and Chief Investment Officer is authorized to renew the agreement with Principal Real Estate Investors, LLC to manage a portion of the System's portfolio to be actively invested in the securities of real estate investment trusts ("REITs") and real estate operating companies ("REOCs") for a period of one year, effective February 11, 2025

- Raith Capital Partners

RESOLVED, That the System's Executive Director and Chief Investment Officer is authorized to renew the agreement with Raith Capital Partners, LLC to act as a Debt separate account advisor and in such role to advise on the acquisition, management and exit of public and private opportunistic commercial real estate debt opportunities for a period of one year, effective February 7, 2025.

- RhumbLine Advisors

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with RhumbLine Advisors LP to manage a portion of the System's assets as a passive international equity manager, benchmarked to the MSCI ACWI ex-US Index, for a period of one year commencing March 30, 2025.

- Xponance (f/k/a FIS Group)

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Xponance (formerly known as FIS Group, Inc. with a name change to Xponance effective 4/1/20) to manage a portion of the System's assets as a manager of international equity managers, benchmarked to the ACWI ex-US Index, for a period of one year commencing April 25, 2025.

2. New Agreement

a. Resolution on General Investment Consultant

Upon motion of J. Longtin, seconded by J. Benaquisto and unanimously carried by the Committee, the following resolution was unanimously recommended to the Retirement Board:

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to contract with Callan LLC to act as a general investment consultant, to review the System's asset allocation and recommend any

changes therein, if necessary, and to monitor the performance of the System's external investment managers, for a period of one year, commencing May 1, 2025, at an annual cost of \$523,362 which includes the fee for an asset liability study.

3. Appointment to Investment Advisory Committee

a. Dhvani Shah

Upon motion of J. Longtin, seconded by R. Mahoney and unanimously carried by the Committee, the following resolution was unanimously recommended to the Retirement Board:

WHEREAS, Dhvani Shah has appropriate experience and background to serve as a member of the Investment Advisory Committee; be it

RESOLVED, That the Retirement Board hereby appoints Ms. Shah as a member of the Investment Advisory Committee, effective immediately and ending December 31, 2028.

4. Updates to the System Investment Policy Manual

a. Resolution on Updates to Responsible Stewardship Policy-Appendix A: Stock Proxy Voting

Upon motion of J. Longtin, seconded by R. Mahoney and unanimously carried by the Committee, the following resolution was unanimously recommended to the Retirement Board:

RESOLVED, That the updated Responsible Stewardship Policy—Appendix A: Stock Proxy Voting, as presented to the Retirement Board, reflecting clarifications to the stock proxy voting guidelines for U.S., Canada and other markets, is approved and accepted; and be it further

RESOLVED, That the updated sections of the Investment Policy Manual, under “International Equity Securities—VIII. Responsibilities & Controls” and “Global Equity Securities—VIII. Responsibilities & Controls,” as presented to the Retirement Board, removing the responsibility of external public equities managers to vote proxies on NYSTRS’ behalf for directly held securities, is approved and accepted.

b. Resolution on Update to AML/OFAC Compliance Policy

Upon motion of J. Longtin, seconded by R. Mahoney and unanimously carried by the Committee, the following resolution was unanimously recommended to the Retirement Board:

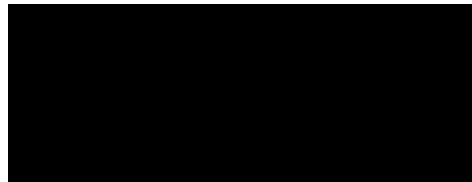
RESOLVED, That the AML/OFAC Compliance Policy and Appendix B: AML/OFAC Compliance Certification, as presented to the Investment Committee, reflecting the clarification and inclusion of the Office of Investment Security of the US Department of the Treasury, is approved and accepted.

Informational reports

- The Committee reviewed the following informational reports: EDCIO Investment Discretion Report (Appendix G, pp. 91-93) and Mail Vote Quarterly Board Report (Appendix H, p. 94) and REAC Quarterly Transactions Board Report (Appendix I p. 95).

Upon motion of J. Longtin, seconded by R. Mahoney and unanimously carried, the Committee went into Executive Session at 11:18 a.m. to discuss personnel matters. Upon motion of J. Longtin, seconded by R. Mahoney and unanimously carried, the Committee came out of Executive Session at 11:31 a.m. and adjourned.

Respectfully submitted,

A large black rectangular box redacting the signature of Thomas K. Lee.

Thomas K. Lee

April 23, 2025



New York State Teachers' Retirement System

2025 Asset Allocation Review

Thomas Shingler
Fund Sponsor Consulting

Jay Kloepper
Capital Market Research

Kevin Machiz, CFA, FRM
Capital Market Research

Carlo Stadlinger, CFA
Fund Sponsor Consulting

Important Disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

Setting Strategic Asset Allocation Policy

The cornerstone of a prudent process for pension plan fiduciaries is a careful and thorough examination of their long-term strategic plan

- Asset allocation (AA) is the single most important decision fiduciaries make with regard to investment policy
 - AA is the primary determinant of the expected level of return, and AA defines the range of potential results or volatility of the investment program. This evaluation of volatility includes the potential to experience drawdowns in the capital markets
- Asset allocation policy acknowledges the goals and risk tolerance for the investor and aligns these goals to potential outcomes for both the policy target and potential alternative asset mixes

AA process:

- Explicitly acknowledge change and uncertainty in the capital markets
- Establish reasonable rate-of-return and risk expectations for asset classes and investment portfolios
- Confirm an investment policy to meet return and risk objectives in relation to goals

NYSTRS' IPM States:

NYSTRS' asset allocation and underlying asset class policy benchmarks are reviewed and recommended by the Executive Director and Chief Investment Officer to the Retirement Board for approval annually.

No Changes Recommended For the Current Target after AA Review

Recommendation:

Callan and NYSTRS Staff do not recommend any strategic asset allocation changes

Rationale:

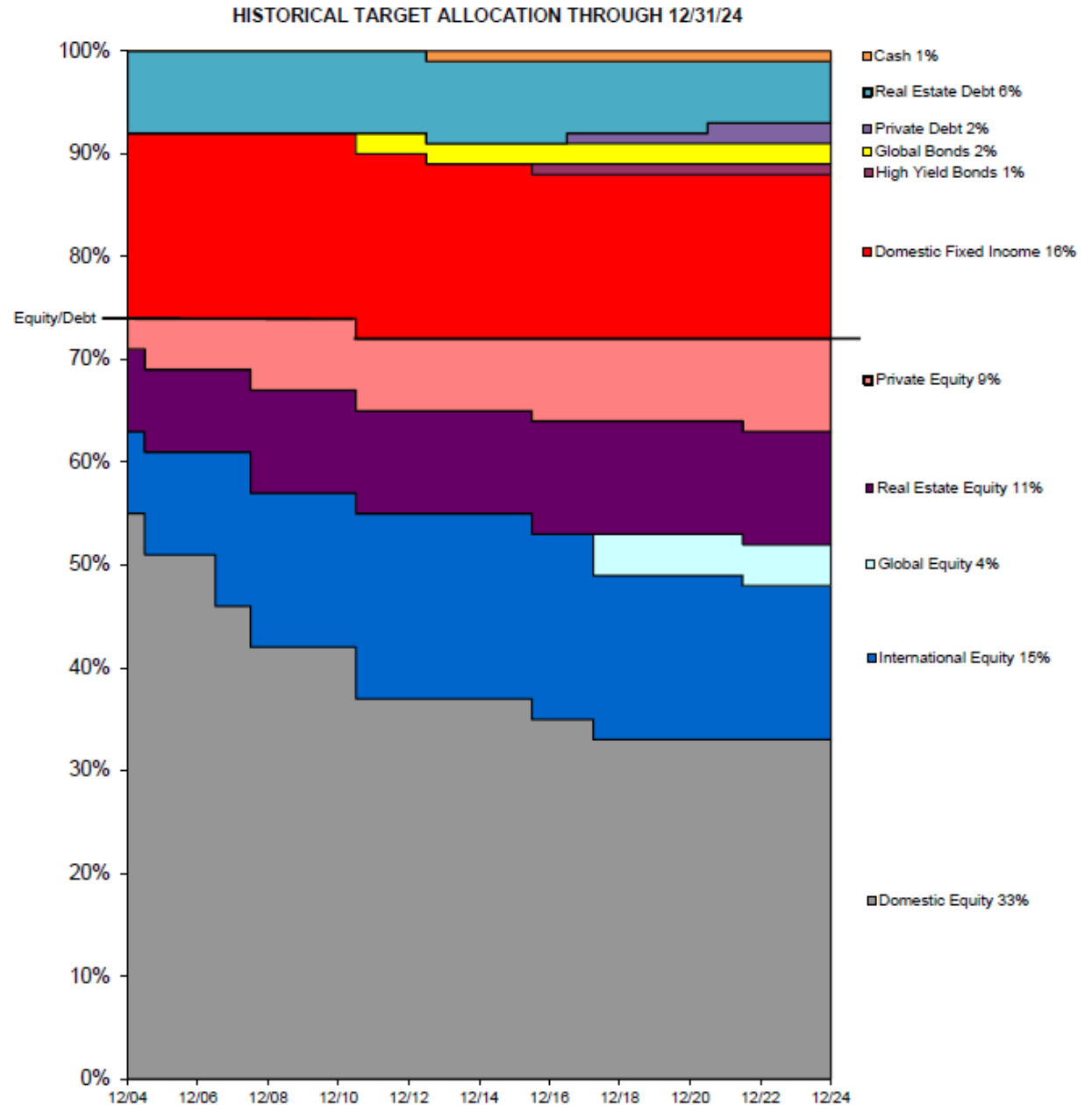
After exploring a number of scenarios and conducting analysis, we believe that NYSTRS should maintain its well-diversified strategic asset allocation that has attractive expected long-term risk-adjusted returns

NYSTRS Asset Allocation Target Over Time

NYSTRS' target asset allocation has evolved steadily over the past two decades

- Diversifying strategies have been added or increased, funded primarily from domestic equity
 - International equity
 - Private equity
 - Real estate equity
 - Global equity
 - Global fixed income
 - Private credit
 - High Yield bonds

NYSTRS has maintained a deliberate allocation to high-quality fixed income over time



Source: Office of the CFO/Investment Operations Department

2025-2034 Risk and Returns (Compared to Prior Year)

Asset Class	Index	PROJECTED RETURN			PROJECTED RISK		2024 - 2033			vs 2024	
		1-Year Arithmetic	10-Year Geometric*	Real	Standard Deviation	Projected Yield**	1-Year Arith	10-Year Geo*	Standard Deviation	Geometric* Delta	Std Dev Delta
Equities											
Broad U.S. Equity	Russell 3000	8.70%	7.35%	4.85%	17.35%	1.70%	8.85%	7.65%	17.40%	-0.30%	-0.05%
Large Cap U.S. Equity	S&P 500	8.50%	7.25%	4.75%	17.00%	1.75%	8.70%	7.50%	17.00%	-0.25%	0.00%
Small/Mid Cap U.S. Equity	Russell 2500	9.60%	7.45%	4.95%	22.00%	1.50%	9.80%	7.70%	22.00%	-0.25%	0.00%
Global ex-U.S. Equity	MSCI ACWI ex USA	9.45%	7.45%	4.95%	21.25%	3.45%	9.65%	7.65%	21.40%	-0.20%	-0.15%
Developed ex-U.S. Equity	MSCI World ex USA	9.05%	7.25%	4.75%	20.15%	3.50%	9.25%	7.50%	20.15%	-0.25%	0.00%
Emerging Market Equity	MSCI Emerging Markets	10.30%	7.45%	4.95%	25.65%	3.30%	10.65%	7.70%	25.60%	-0.25%	0.05%
Fixed Income											
Short Duration Gov't/Credit	Bloomberg 1-3 Yr G/C	4.05%	4.00%	1.50%	2.40%	3.65%	4.25%	4.25%	2.40%	-0.25%	0.00%
Core U.S. Fixed	Bloomberg Aggregate	4.85%	4.75%	2.25%	4.40%	4.60%	5.25%	5.25%	4.25%	-0.50%	0.15%
Long Government	Bloomberg Long Gov	5.65%	4.80%	2.30%	13.75%	4.60%	6.20%	5.40%	13.75%	-0.60%	0.00%
Long Credit	Bloomberg Long Cred	6.05%	5.40%	2.90%	11.90%	5.90%	6.85%	6.30%	11.90%	-0.90%	0.00%
Long Government/Credit	Bloomberg Long G/C	5.85%	5.20%	2.70%	11.75%	5.30%	6.55%	6.00%	11.70%	-0.80%	0.05%
TIPS	Bloomberg TIPS	4.70%	4.55%	2.05%	5.40%	4.30%	5.10%	5.05%	5.40%	-0.50%	0.00%
High Yield	Bloomberg High Yield	6.65%	6.00%	3.50%	11.75%	8.15%	7.30%	6.80%	11.75%	-0.80%	0.00%
Global ex-U.S. Fixed	Bloomberg Gl Agg xUSD	3.30%	2.85%	0.35%	9.80%	2.80%	3.60%	3.15%	9.80%	-0.30%	0.00%
Emerging Market	EMBI Global Diversified	5.85%	5.35%	2.85%	10.65%	7.40%	6.75%	6.35%	10.65%	-1.00%	0.00%
Sovereign Debt											
Alternatives											
Core Real Estate	NCREIF ODCE	7.15%	6.25%	3.75%	14.00%	4.00%	6.85%	6.00%	14.00%	0.25%	0.00%
Private Infrastructure	MSCI Glb Infra/FTSE Dev Core 50/50	7.40%	6.35%	3.85%	15.20%	4.90%	7.30%	6.35%	15.20%	0.00%	0.00%
Private Equity	Cambridge Private Equity	11.80%	8.50%	6.00%	27.60%	0.00%	12.15%	8.75%	27.60%	-0.25%	0.00%
Private Credit	Cambridge Senior Debt Index	8.35%	7.25%	4.75%	15.70%	7.25%	8.40%	7.40%	15.70%	-0.15%	0.00%
Hedge Funds	Callan Hedge FoF Database	6.00%	5.70%	3.20%	8.20%	0.00%	6.25%	6.05%	8.20%	-0.35%	0.00%
Commodities	Bloomberg Commodity	5.40%	3.90%	1.40%	18.05%	3.00%	5.45%	3.90%	18.05%	0.00%	0.00%
Cash Equivalents	90-Day T-Bill	3.00%	3.00%	0.50%	0.90%	3.00%	3.00%	3.00%	0.90%	0.00%	0.00%
Inflation	CPI-U		2.50%		1.60%			2.50%	1.60%	0.00%	0.00%

* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

** Projected Yields represent the expected 10-year average yield

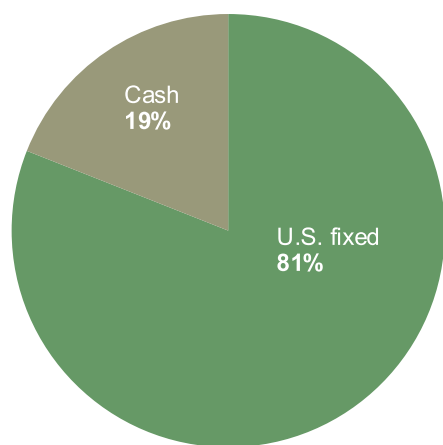
2025-2034 Callan Capital Markets Assumptions Correlations

Large Cap U.S. Equity	1.00																					
Smid Cap U.S. Equity	0.86	1.00																				
Dev ex-U.S. Equity	0.70	0.81	1.00																			
Emerging Market Equity	0.74	0.81	0.90	1.00																		
Short Dur Gov/Credit	0.05	0.01	0.04	-0.01	1.00																	
Core U.S. Fixed	0.09	0.03	0.06	0.01	0.80	1.00																
Long Government	0.01	0.00	0.03	0.00	0.65	0.82	1.00															
Long Credit	0.40	0.35	0.35	0.35	0.62	0.80	0.71	1.00														
TIPS	-0.04	-0.05	-0.04	-0.07	0.55	0.75	0.54	0.52	1.00													
High Yield	0.74	0.74	0.71	0.74	0.13	0.15	0.02	0.45	0.06	1.00												
Global ex-U.S. Fixed	0.12	0.11	0.14	0.10	0.50	0.50	0.42	0.53	0.40	0.16	1.00											
EM Sovereign Debt	0.59	0.60	0.61	0.65	0.17	0.23	0.11	0.47	0.11	0.62	0.17	1.00										
Core Real Estate	0.38	0.32	0.33	0.30	0.17	0.20	0.08	0.31	0.12	0.30	0.14	0.22	1.00									
Private Infrastructure	0.47	0.45	0.45	0.43	0.14	0.18	0.10	0.33	0.08	0.34	0.18	0.32	0.65	1.00								
Private Equity	0.79	0.76	0.75	0.73	-0.04	-0.04	-0.08	0.27	-0.12	0.55	0.07	0.44	0.46	0.52	1.00							
Private Credit	0.65	0.64	0.62	0.63	0.04	0.00	-0.02	0.32	-0.05	0.55	0.11	0.47	0.26	0.27	0.65	1.00						
Hedge Funds	0.60	0.56	0.53	0.53	0.28	0.39	0.25	0.52	0.23	0.50	0.24	0.47	0.20	0.31	0.40	0.47	1.00					
Commodities	0.20	0.20	0.20	0.20	-0.04	-0.05	-0.10	0.04	0.00	0.18	0.05	0.15	0.16	0.15	0.16	0.14	0.17	1.00				
Cash Equivalents	-0.02	-0.07	-0.08	-0.08	0.27	0.16	0.12	0.04	0.14	-0.03	0.10	-0.02	0.02	-0.04	-0.04	-0.04	0.00	-0.02	1.00			
Inflation	0.00	0.02	0.00	0.02	-0.20	-0.22	-0.30	-0.20	0.25	-0.03	-0.12	-0.04	0.20	0.10	0.04	-0.04	-0.01	0.35	0.02	1.00		
	Large Cap	Smid Cap	Dev ex-US	EM Equity	Short Dur	Core Fix	Long Gov	Long Credit	TIPS	High Yield	Gl ex-US Fixed	EMD	Core RE	Pvt Infra	Pvt Equity	Pvt Credit	Hedge Fund	Comm	Cash Eq	Inflation		

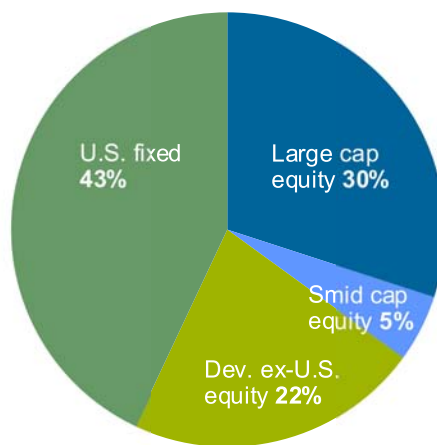
Source: Callan

7% Expected Returns Over Past 30 Years

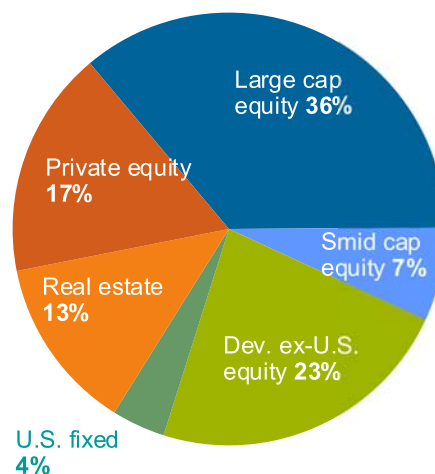
Increasing Complexity →



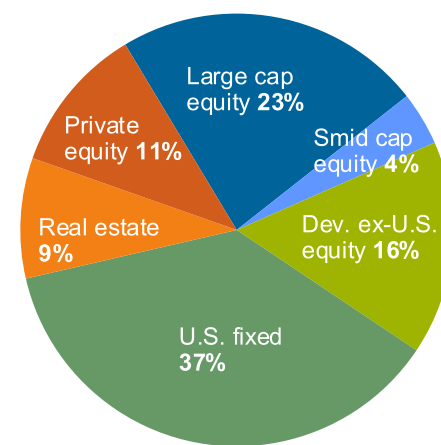
1995
Return: 7.0%
Risk: 4.9%



2010
Return: 7.0%
Risk: 9.9%



2022
Return: 7.0%
Risk: 16.8%



2025
Return: 7.0%
Risk: 10.9%

Increasing Risk →

In 1995, our expectations for cash and broad U.S. fixed income were 4.8% and 7.5%, respectively.

Return-seeking assets were not required to earn a 7% projected return.

15 years later, an investor would have needed over half of the portfolio in public equities to achieve a 7% projected return, with double the portfolio volatility of 1995.

In 2022 an investor was required to include 96% in return-seeking assets (including 30% in private markets investments) to earn a 7% projected return at over 3x the volatility compared to 1995.

Today's 7% expected return portfolio is much more reasonable than it was just three years ago. The allocation to fixed income jumps to 37%, while risk is just two-thirds what it was in 2022.

NYSTRS Asset Allocation – 10-Year Time Horizon

Asset Class	Target Weight	Actual (12/31/24)	PROJECTED RETURN		PROJECTED RISK		
			Single-Period Arithmetic Return	10-Year Geometric Return	Annualized Standard Deviation	Projected Yield	Projected Real Rtn
Public Equity	52.0%	52.0%					
Broad US Equity (1)	33.0%	33.7%	8.68%	7.34%	17.36%	1.71%	4.85%
Global Ex-US Equity (2)	15.0%	14.2%	9.38%	7.43%	21.05%	3.45%	4.94%
Global Equity (3)	4.0%	4.2%	8.96%	7.57%	17.69%	2.41%	5.09%
Private Market Equity	20.0%	21.0%					
Real Estate Equity (4)	11.0%	11.2%	8.34%	7.21%	15.97%	2.87%	4.72%
Private Equity	9.0%	9.8%	11.79%	8.52%	27.60%	0.00%	6.03%
Private Debt	2.0%	1.7%					
Private Debt	2.0%	1.7%	8.35%	7.25%	15.70%	7.25%	4.76%
Fixed Income	25.0%	23.9%					
Core US Fixed Income	16.0%	15.1%	4.85%	4.76%	4.40%	4.60%	2.27%
Global Fixed Income (5)	2.0%	2.0%	4.27%	4.09%	6.25%	4.10%	1.60%
Real Estate Debt (6)	6.0%	5.8%	6.06%	5.93%	5.03%	3.89%	3.44%
High Yield	1.0%	1.1%	6.65%	6.02%	11.75%	8.15%	3.53%
Cash Equivalents	1.0%	1.3%					
Cash Equivalents	1.0%	1.3%	2.99%	2.99%	0.90%	3.00%	0.50%
Inflation				2.49%	1.60%		
Total Equity (% of Portfolio)	72.0%	73.0%					
Total Debt (% of Portfolio)	28.0%	27.0%					
US Equity (% of Global Equity)	68.1%	69.6%					
Total Fund	100.0%	100.0%					
Single-Period Arithmetic Return	8.10%	8.14%					
10-Year Geometric Return	7.33%	7.35%					
Annualized Standard Deviation	13.12%	13.29%					
Projected Yield	2.80%	2.74%					
Sharpe Ratio	0.33	0.33					

(1) Broad US equity = 85% large cap, 15% mid and small cap

(2) Global ex-US equity = 75% developed markets, 25% emerging markets

(3) Global Equity = 60% broad US, 40% global ex-US

(4) RE Equity = 55% core, 30% non-core, 15% REITs

(5) Global fixed income = 70% global, 10% global corporate, 20% emerging debt USD IG

(6) Real estate debt = 80% commercial mortgages/20% private mezzanine debt

Non-US dollar fixed income currency exposure hedged to US dollar in Callan assumption.

Source: Callan LLC

NYSTRS Asset Allocation – 20-Year Time Horizon

Asset Class	Target Weight	Actual (12/31/24)	PROJECTED RETURN		PROJECTED RISK		
			Single-Period Arithmetic Return	20-Year Geometric Return	Annualized Standard Deviation	Projected Yield	Projected Real Rtn
Public Equity	52.0%	52.0%					
Broad US Equity (1)	33.0%	33.7%	8.91%	7.55%	17.36%	1.71%	5.12%
Global Ex-US Equity (2)	15.0%	14.2%	9.59%	7.61%	21.05%	3.45%	5.18%
Global Equity (3)	4.0%	4.2%	9.18%	7.78%	17.69%	2.41%	5.35%
Private Market Equity	20.0%	21.0%					
Real Estate Equity (4)	11.0%	11.2%	8.62%	7.47%	15.97%	2.87%	5.05%
Private Equity	9.0%	9.8%	11.98%	8.67%	27.60%	0.00%	6.24%
Private Debt	2.0%	1.7%					
Private Debt	2.0%	1.7%	8.39%	7.27%	15.70%	7.25%	4.84%
Fixed Income	25.0%	23.9%					
Core US Fixed Income	16.0%	15.1%	4.92%	4.83%	4.40%	4.60%	2.40%
Global Fixed Income (5)	2.0%	2.0%	4.53%	4.34%	6.25%	4.10%	1.92%
Real Estate Debt (6)	6.0%	5.8%	6.14%	6.01%	5.03%	3.89%	3.58%
High Yield	1.0%	1.1%	6.86%	6.22%	11.75%	8.15%	3.80%
Cash Equivalents	1.0%	1.3%					
Cash Equivalents	1.0%	1.3%	2.99%	2.99%	0.90%	3.00%	0.56%
Inflation				2.43%	1.60%		
Total Equity (% of Portfolio)	72.0%	73.0%					
Total Debt (% of Portfolio)	28.0%	27.0%					
US Equity (% of Global Equity)	68.1%	69.6%					
Total Fund	100.0%	100.0%					
Single-Period Arithmetic Return	8.28%	8.33%					
20-Year Geometric Return	7.51%	7.53%					
Annualized Standard Deviation	13.12%	13.29%					
Projected Yield	2.80%	2.74%					
Sharpe Ratio	0.34	0.34					

(1) Broad US equity = 85% large cap, 15% mid and small cap

(2) Global ex-US equity = 75% developed markets, 25% emerging markets

(3) Global Equity = 60% broad US, 40% global ex-US

(4) RE Equity = 55% core, 30% non-core, 15% REITs

(5) Global fixed income = 70% global, 10% global corporate, 20% emerging debt USD IG

(6) Real estate debt = 80% commercial mortgages/20% private mezzanine debt

Non-US dollar fixed income currency exposure hedged to US dollar in Callan assumption.

Source: Callan LLC

NYSTRS Asset Allocation – 30-Year Time Horizon

Asset Class	Target Weight	Actual (12/31/24)	PROJECTED RETURN		PROJECTED RISK		
			Single-Period Arithmetic Return	30-Year Geometric Return	Annualized Standard Deviation	Projected Yield	Projected Real Rtn
Public Equity	52.0%	52.0%					
Broad US Equity (1)	33.0%	33.7%	9.09%	7.73%	17.36%	1.71%	5.36%
Global Ex-US Equity (2)	15.0%	14.2%	9.76%	7.78%	21.05%	3.45%	5.41%
Global Equity (3)	4.0%	4.2%	9.36%	7.95%	17.69%	2.41%	5.58%
Private Market Equity	20.0%	21.0%					
Real Estate Equity (4)	11.0%	11.2%	8.84%	7.68%	15.97%	2.87%	5.32%
Private Equity	9.0%	9.8%	12.15%	8.83%	27.60%	0.00%	6.46%
Private Debt	2.0%	1.7%					
Private Debt	2.0%	1.7%	8.42%	7.30%	15.70%	7.25%	4.93%
Fixed Income	25.0%	23.9%					
Core US Fixed Income	16.0%	15.1%	4.97%	4.88%	4.40%	4.60%	2.51%
Global Fixed Income (5)	2.0%	2.0%	4.75%	4.57%	6.25%	4.10%	2.20%
Real Estate Debt (6)	6.0%	5.8%	6.21%	6.08%	5.03%	3.89%	3.72%
High Yield	1.0%	1.1%	7.04%	6.40%	11.75%	8.15%	4.03%
Cash Equivalents	1.0%	1.3%					
Cash Equivalents	1.0%	1.3%	3.00%	3.00%	0.90%	3.00%	0.63%
Inflation				2.37%	1.60%		
Total Equity (% of Portfolio)	72.0%	73.0%					
Total Debt (% of Portfolio)	28.0%	27.0%					
US Equity (% of Global Equity)	68.1%	69.6%					
Total Fund	100.0%	100.0%					
Single-Period Arithmetic Return	8.43%	8.48%					
30-Year Geometric Return	7.65%	7.68%					
Annualized Standard Deviation	13.12%	13.29%					
Projected Yield	2.80%	2.74%					
Sharpe Ratio	0.35	0.35					

(1) Broad US equity = 85% large cap, 15% mid and small cap

(2) Global ex-US equity = 75% developed markets, 25% emerging markets

(3) Global Equity = 60% broad US, 40% global ex-US

(4) RE Equity = 55% core, 30% non-core, 15% REITs

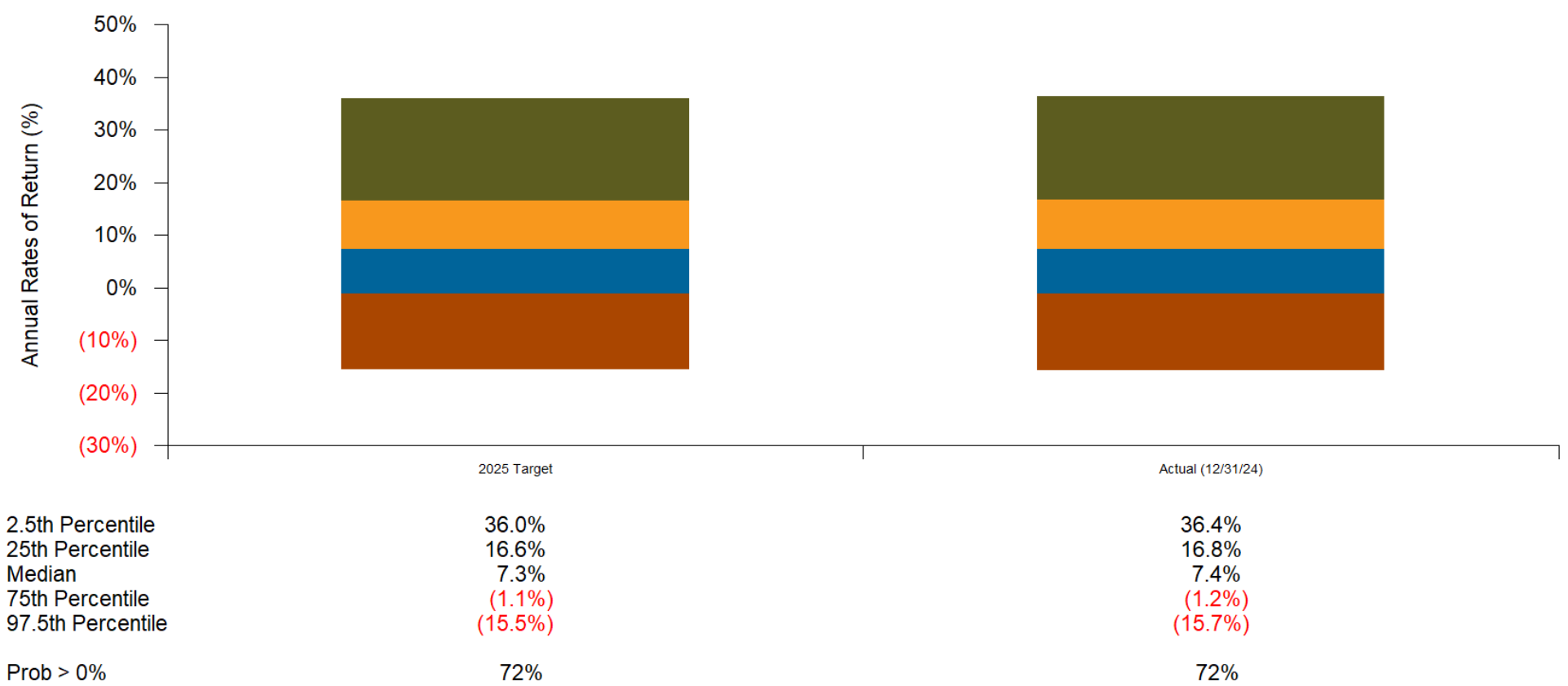
(5) Global fixed income = 70% global, 10% global corporate, 20% emerging debt USD IG

(6) Real estate debt = 80% commercial mortgages/20% private mezzanine debt

Non-US dollar fixed income currency exposure hedged to US dollar in Callan assumption.

Source: Callan LLC

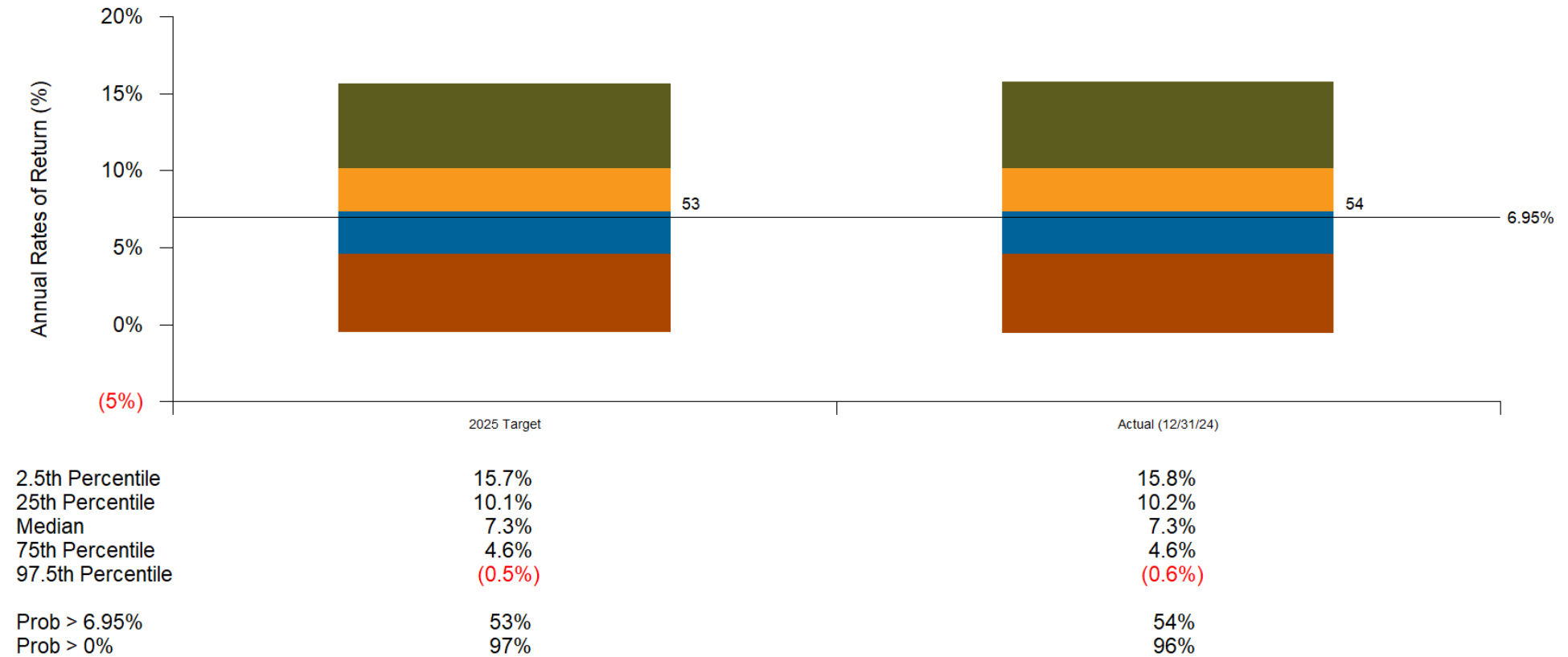
Range of Return Comparison – 1-Year Time Horizon



● Drawdowns in one-year scenarios could reach -15.5% or worse

Source: Callan LLC

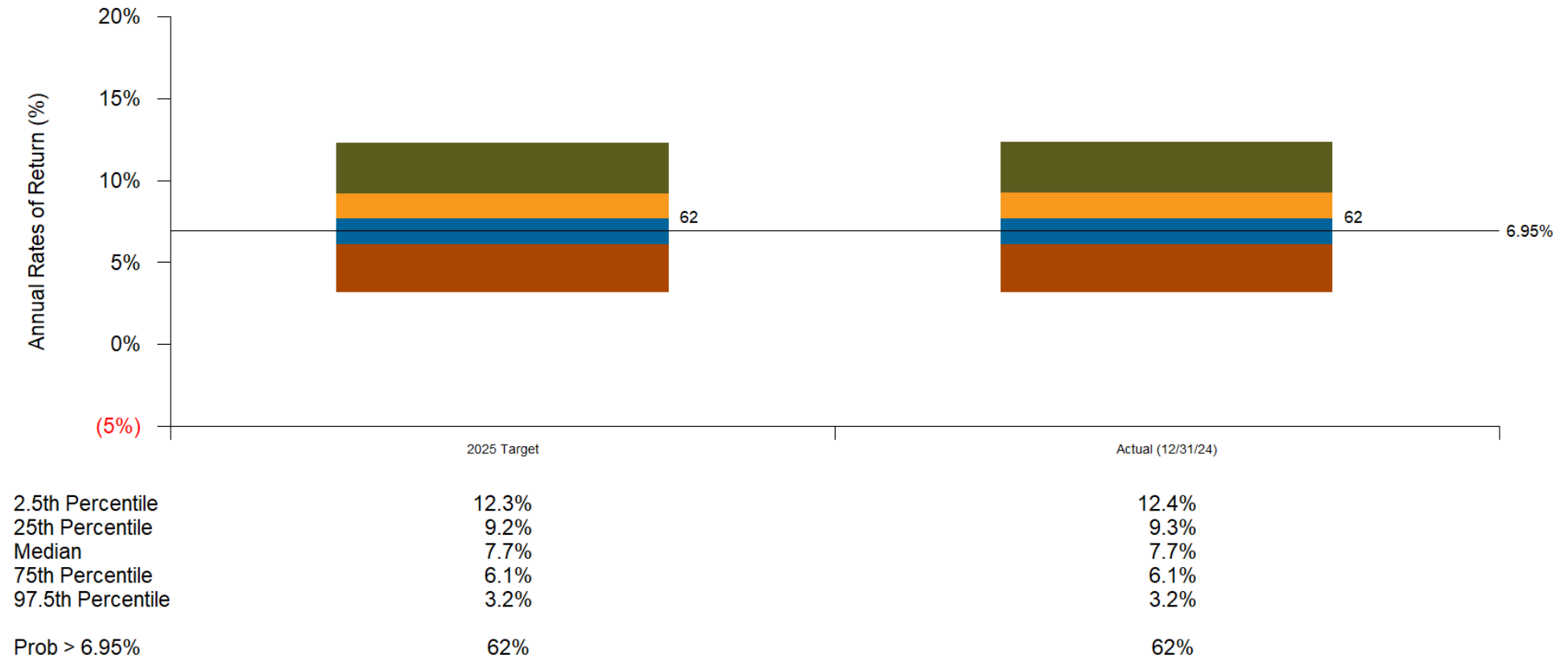
Range of Return Comparison – 10-Year Time Horizon



- The Current Target has a 53% chance of exceeding the discount rate over the next 10 years

Source: Callan LLC

Range of Return Comparison – 30-Year Time Horizon



- The Current Target has a 62% chance of exceeding the discount rate over the next 30 years
- The probability of exceeding the discount rate increases over 30 years relative to 10 years

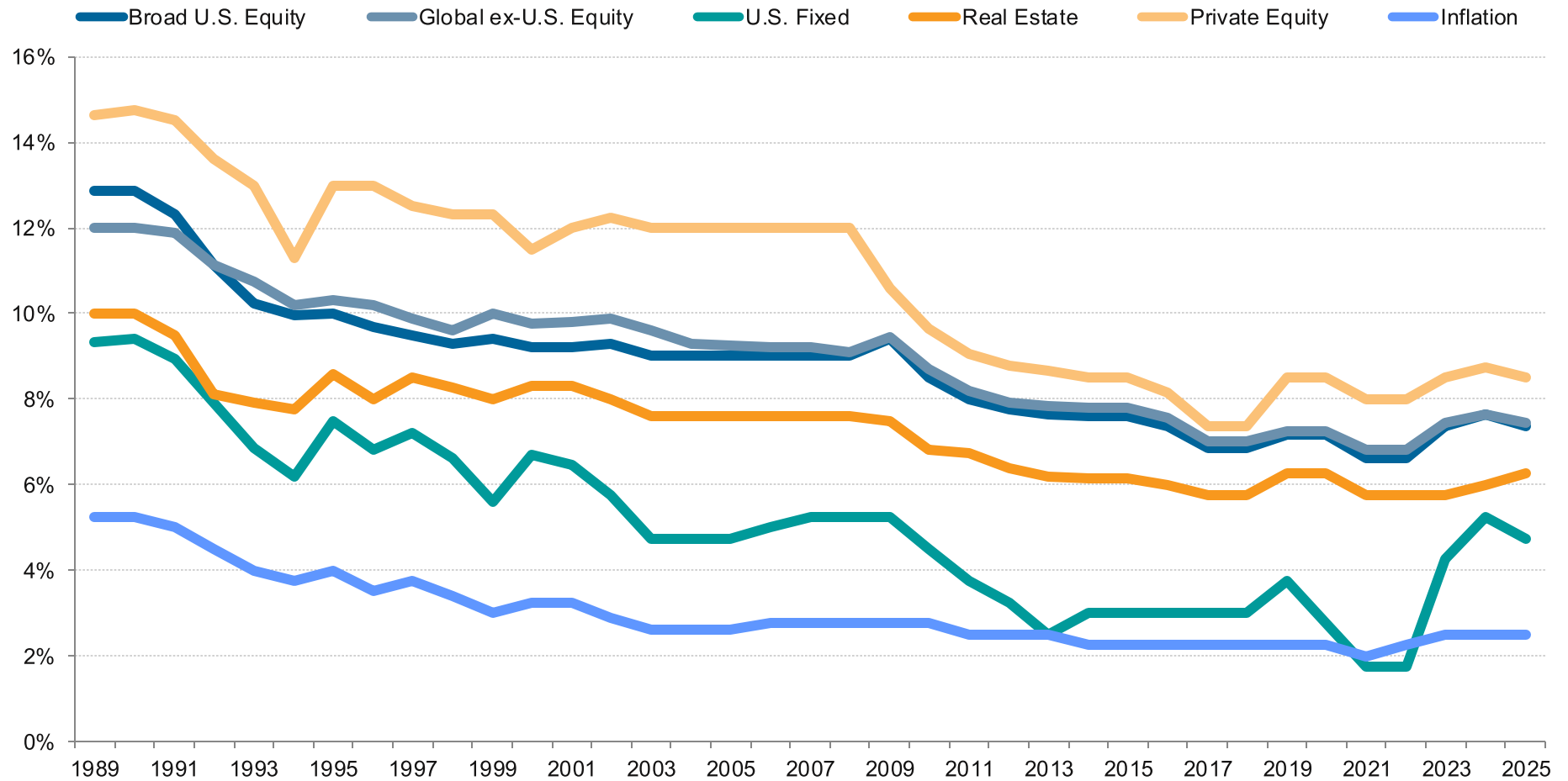
Source: Callan LLC

Callan

Appendix

Return Projections: Major Asset Classes

1989–2025



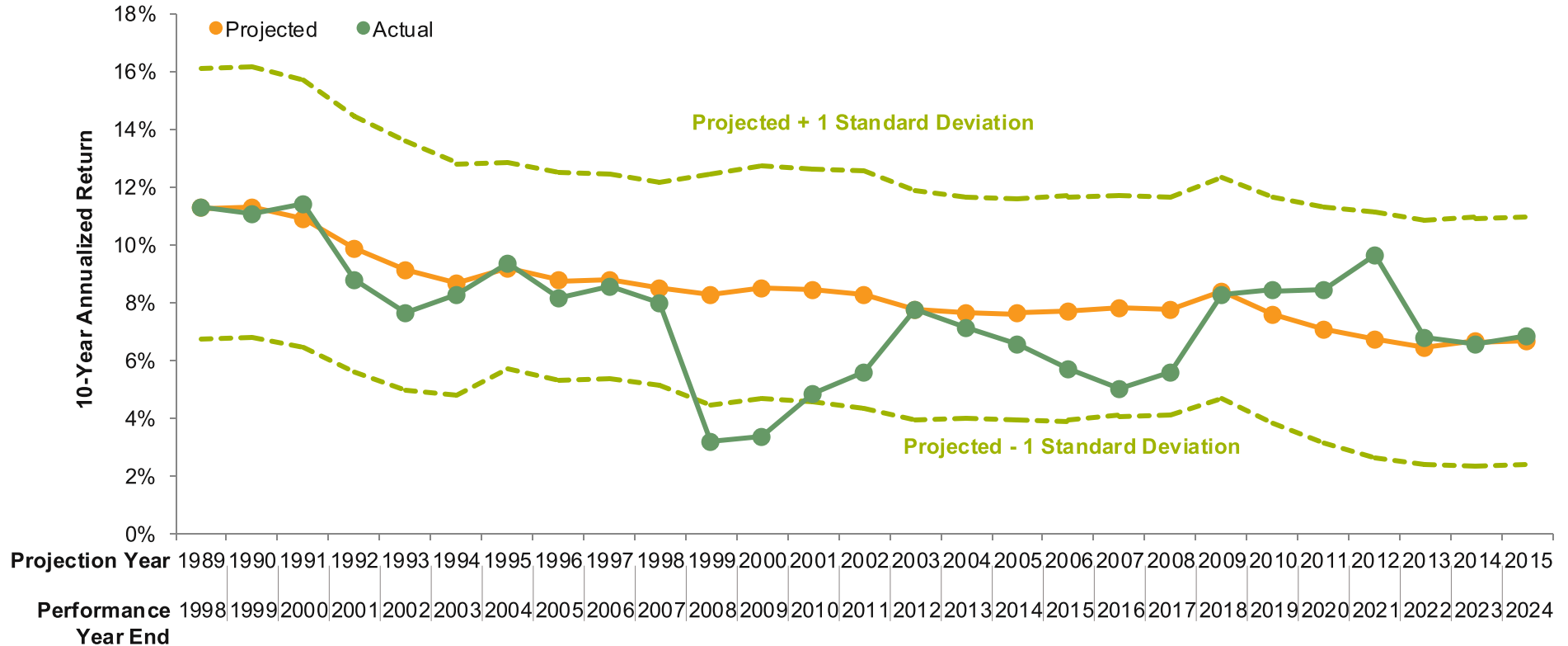
Source: Callan

Actual Returns vs. Callan Projections

Projection Years 1989–2015

Historical Comparison: Actual Returns vs. Callan Capital Markets Projections

Portfolio (60% Equity, 30% Fixed, 10% Real Estate)

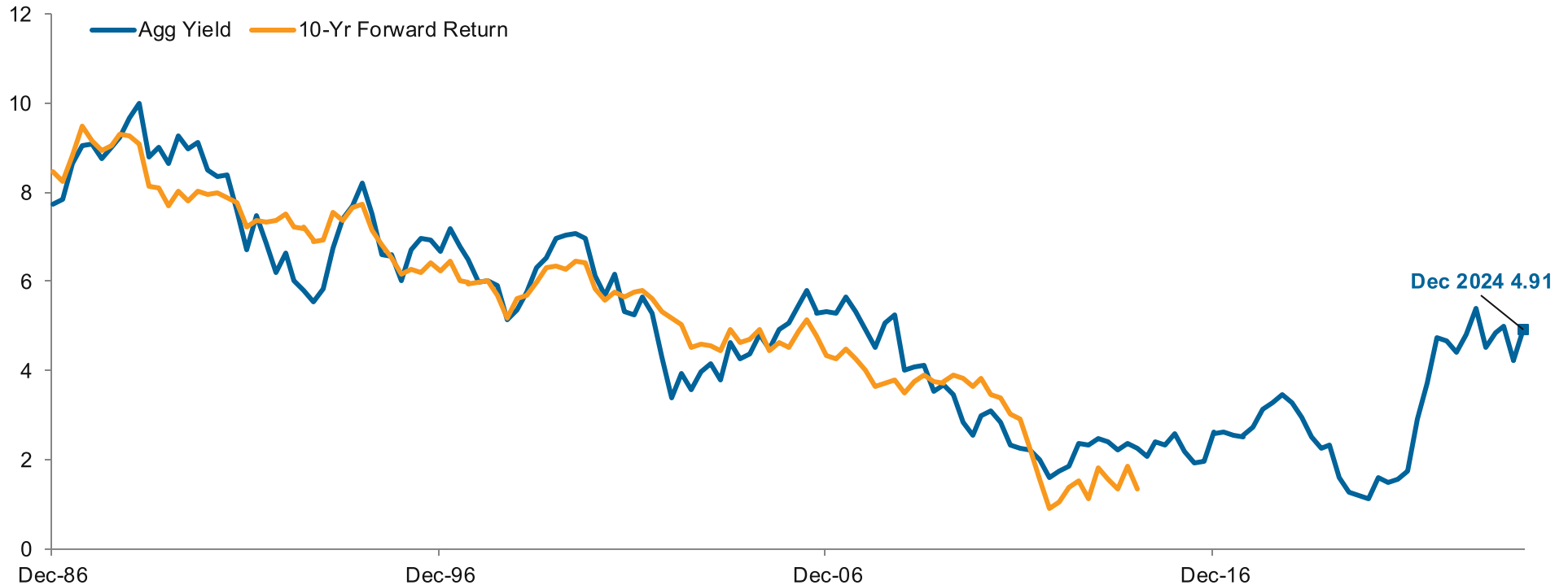


- Our projections are generally within one standard deviation of the actual return experienced
- The glaring exceptions are the 10-year periods ended in 2008 and 2009 which contained not one but two major collapses in the equity market: the Dot-Com Bubble in 2001-02 and the Global Financial Crisis in 2008

Source: Callan LLC

Starting U.S. Aggregate Fixed Income Yield Strongly Predicts Forward Returns

Bloomberg U.S. Aggregate Index Starting Yield vs. 10-Year Forward Return



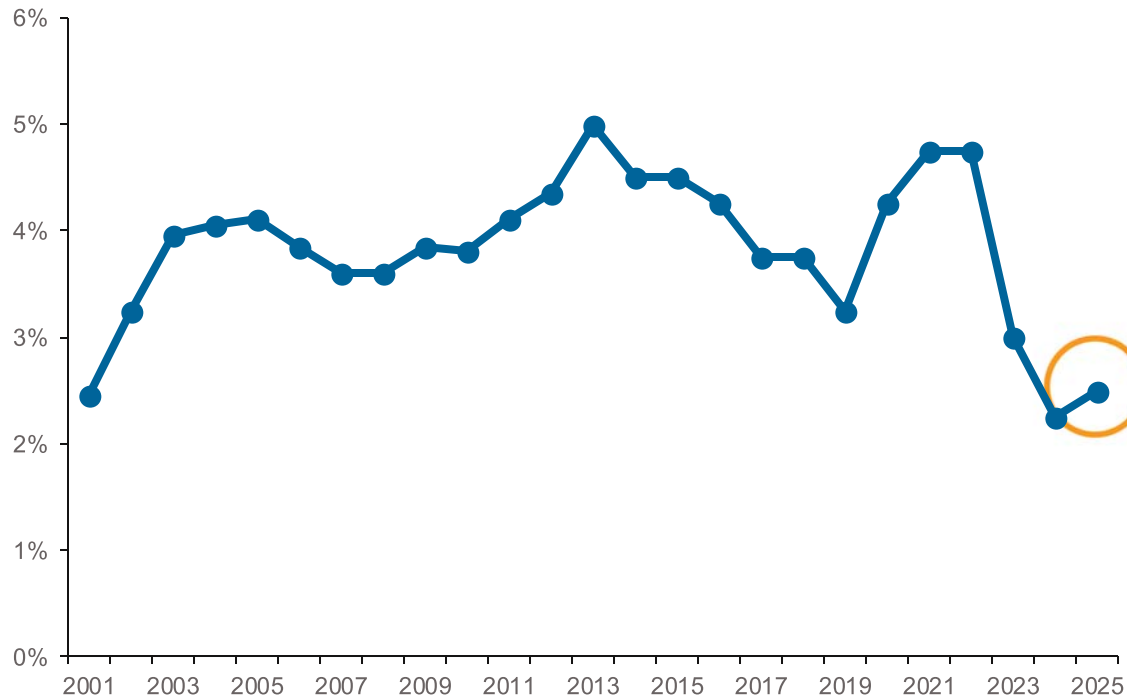
- There is a strong relationship between starting yields and subsequent 10-Year returns
- Yield on the Bloomberg U.S. Aggregate Index was 4.91% as of December 31, 2024

Source: Bloomberg

Callan's Equity Risk Premia Forecasts Over Time

S&P 500 forecast minus U.S. Bloomberg Aggregate forecast

Forecasted Equity Risk Premium vs. Bonds



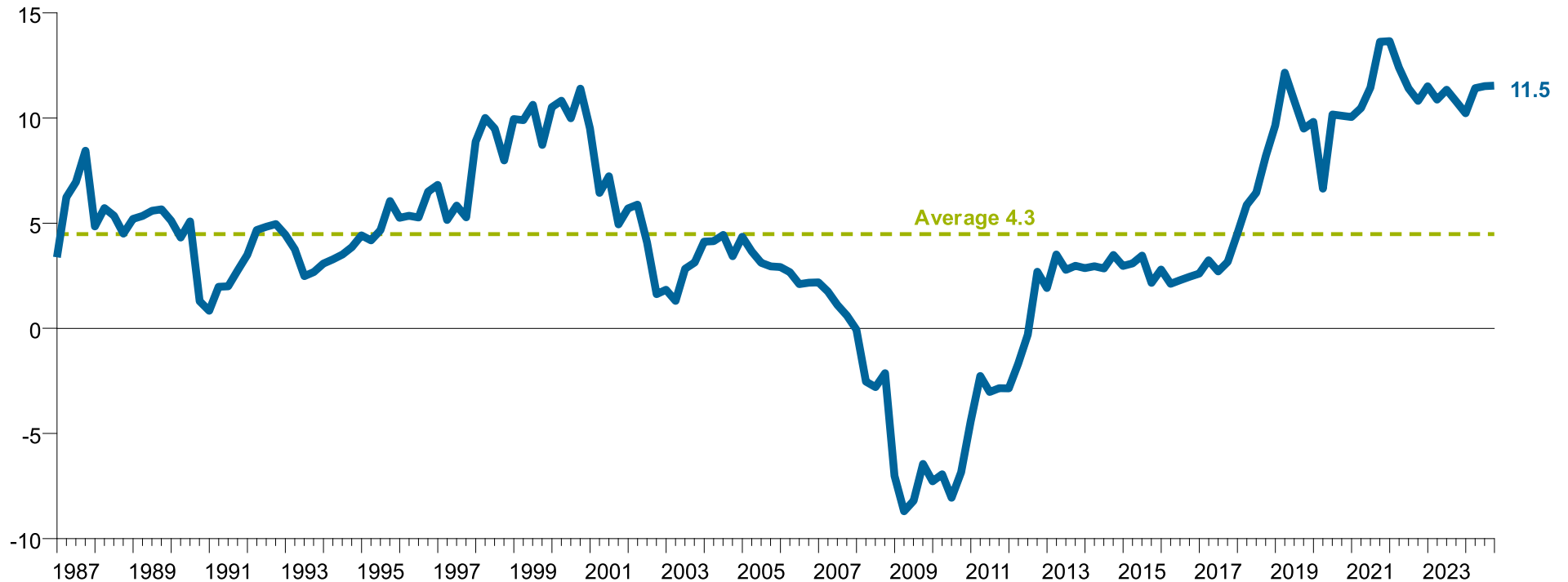
Callan's forecasted return spread between the S&P 500 and the Bloomberg Aggregate (2.50%) remains narrow.

Forecasts are annualized over 10 years.

Historical Equity Risk Premium Over Bonds

S&P 500 versus the U.S. Bloomberg Aggregate

S&P 500 Rolling 40 Quarter Excess Return Relative to Bloomberg Aggregate



- Our 2.5% equity risk premium over core bonds is low relative to the historical average of 4.3%, but the premium has been volatile and 2.5% is within the historical range

Sources: Bloomberg, S&P Dow Jones Indices

Scenario Analysis: Short Term Horizon

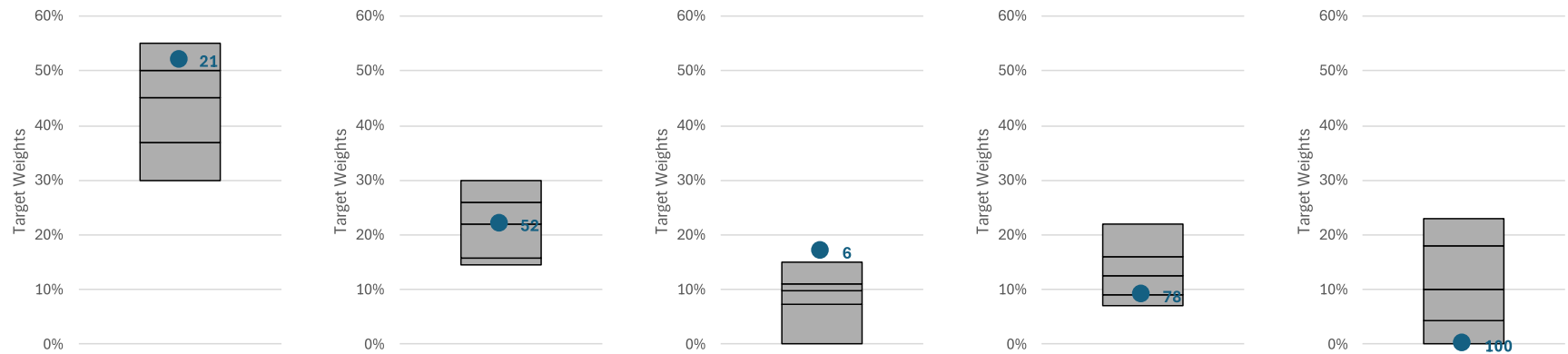
Broad U.S. Equities Decline 20% Scenario

	Scenario Contribution to Return	
	Target	Actual (12/31/24)
Broad US Equity	-6.60%	-6.74%
Global ex-US Equity	-2.78%	-2.62%
Global Equity	-0.78%	-0.81%
Real Estate Equity	-1.18%	-1.21%
Private Equity	-2.28%	-2.48%
Private Credit	-0.24%	-0.21%
Global FI	-0.04%	-0.04%
Real Estate Debt	-0.27%	-0.26%
High Yield	-0.10%	-0.11%
Cash Equivalents	0.00%	0.00%
Total Fund Return	-14.33%	-14.53%

- In a scenario where Broad U.S. Equities decline 20%, the portfolio could decline by over 14%

Broad US Equities represents 85% Large Cap US Equity and 15% Small/Mid Cap US Equity
Source: Callan LLC

Peer Group Target Asset Allocations



Percentile	Equity Target	FI Target	RE Target	PE Target	Other Targets
10%	55.0%	30.0%	15.0%	22.1%	23.0%
25%	50.0%	25.9%	11.0%	16.0%	18.0%
50%	45.0%	22.0%	9.9%	12.5%	10.0%
75%	37.0%	15.8%	7.4%	9.0%	4.4%
90%	30.0%	14.6%	0.0%	7.0%	0.0%
NYSTRS Target	52%	22%	17%	9%	0%
Percent Rank	21%	52%	6%	78%	100%

- The above floating bar charts indicate target asset allocations for large public pension plans in 2023
- NYSTRS targets are represented by blue dots on the charts

Note Real Estate Debt was categorized as Real Estate. Private Debt is categorized as "Fixed Income" for NYSTRS, though this may not be the case for all peers.

Source: Center for Retirement Research at Boston College, Public Plans Data, as of 2023. 148 plans that reported Private Equity (plans not reporting PE and instead reporting a Miscellaneous Alternatives category were excluded)

Leeway Clause Estimate

Current Policy Target	Allocation	Estimated Leeway
Domestic Equity	33%	0.00%
International Equity	15%	6.00%
Global Equity (1)	4%	0.67%
Real Estate Equity (2)	11%	0.85%
Private Equity	9%	9.00%
	72%	16.52%
Domestic Fixed Income	16%	0.00%
High Yield Bonds (3)	1%	1.00%
Global Bonds (4)	2%	1.50%
Real Estate Debt (2)	6%	0.20%
Private Debt	2%	2.00%
Cash Equivalents	1%	0.00%
	28%	4.70%
	100%	21.22%
Other (5)		2.41%
Leeway Assets (6)		23.63%
Available Leeway		11.37%
Leeway at 12/31/24		23.32%

Notes:

(1) Assumes Global Equity is split 58% domestic 42% international.

(2) Only a portion of the Real Estate Equity and Debt asset classes --- Directly Owned Properties and Real Estate Funds --- contribute to the 10% limit for Real Estate. Estimated Leeway was calculated with 81% of the Real Estate Equity asset class and 35% of the Real Estate Debt asset class contributing to the 10% limit based on actual amounts as of 12/31/2024.

(3) Assumes 100% of High Yield Bonds are below investment grade.

(4) Assumes 75% of Global Bonds are foreign or below investment grade.

(5) Includes securities with a market capitalization less than \$1B, foreign securities held in domestic portfolios, equity holdings more than 2% of fund assets, domestic fixed income securities below investment grade, and applicable securities lending collateral as of 12/31/2024.

(6) Estimated Leeway percentages are based on assumptions and historical data, and are not intended to precisely predict future percentages.

Customized NYSTRS Capital Market Projections

NYSTRS Correlation Matrix

Correlation Matrix	Broad US	Glb ex US	Gbl Eq	RE Eq	Priv Eq	Priv Cred	Core Fix	Gbl Fix	RE Debt	HY	Cash
Broad US Equity	1.00										
Global ex-US Equity (NYSTRS)	0.76	1.00									
Global Equity	0.95	0.92	1.00								
Real Estate Equity	0.58	0.57	0.62	1.00							
Private Equity	0.80	0.76	0.83	0.69	1.00						
Private Credit	0.66	0.64	0.69	0.46	0.65	1.00					
Core US Fixed	0.08	0.04	0.07	0.08	-0.04	0.00	1.00				
Global FI	0.27	0.26	0.28	0.19	0.15	0.20	0.71	1.00			
Real Estate Debt	0.76	0.73	0.79	0.69	0.86	0.60	0.39	0.48	1.00		
High Yield	0.76	0.74	0.79	0.49	0.55	0.55	0.15	0.32	0.63	1.00	
Cash Equivalents	-0.03	-0.08	-0.06	-0.03	-0.04	-0.04	0.16	0.11	0.04	-0.03	1.00

Projection set customized to reflect specific NYSTRS strategies:

- Real estate equity, real estate debt, global fixed income

Global fixed income = 70% global, 10% global corporate, 20% emerging debt USD IG

Source: Callan LLC

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New York State
Teachers'
Retirement
System

Investment Committee Executive Summary

Investment Committee April 23, 2025

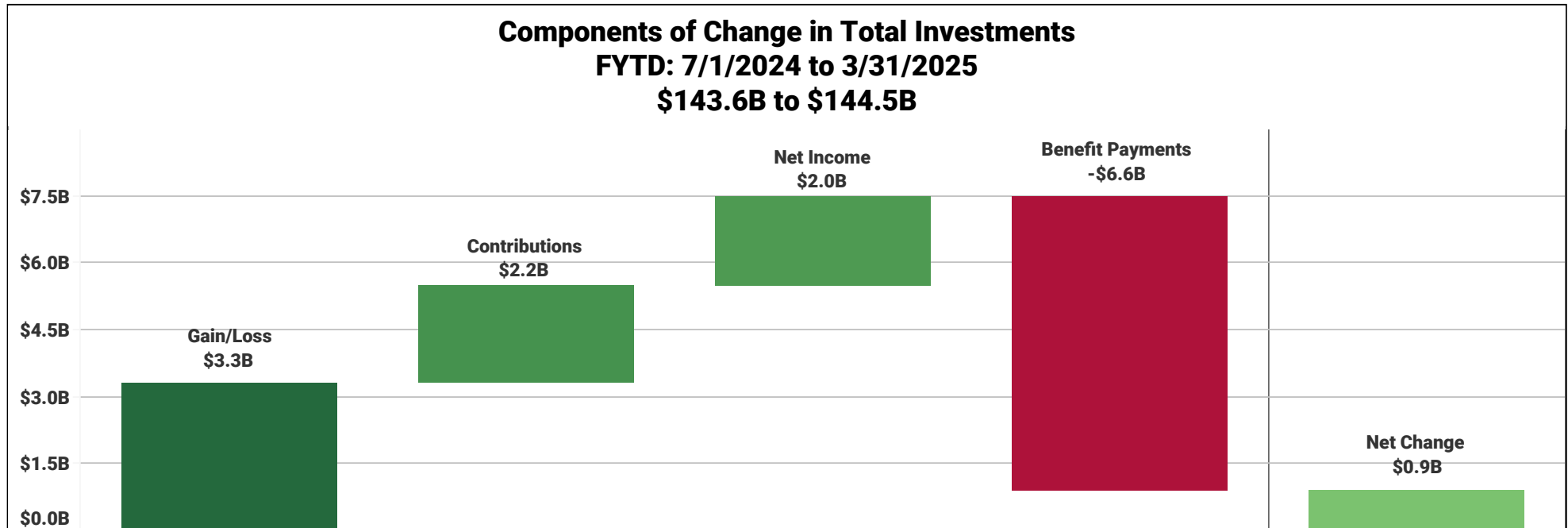
Margaret Andriola, CIPM, CPA
Chief Financial Officer

Investment Committee Executive Summary

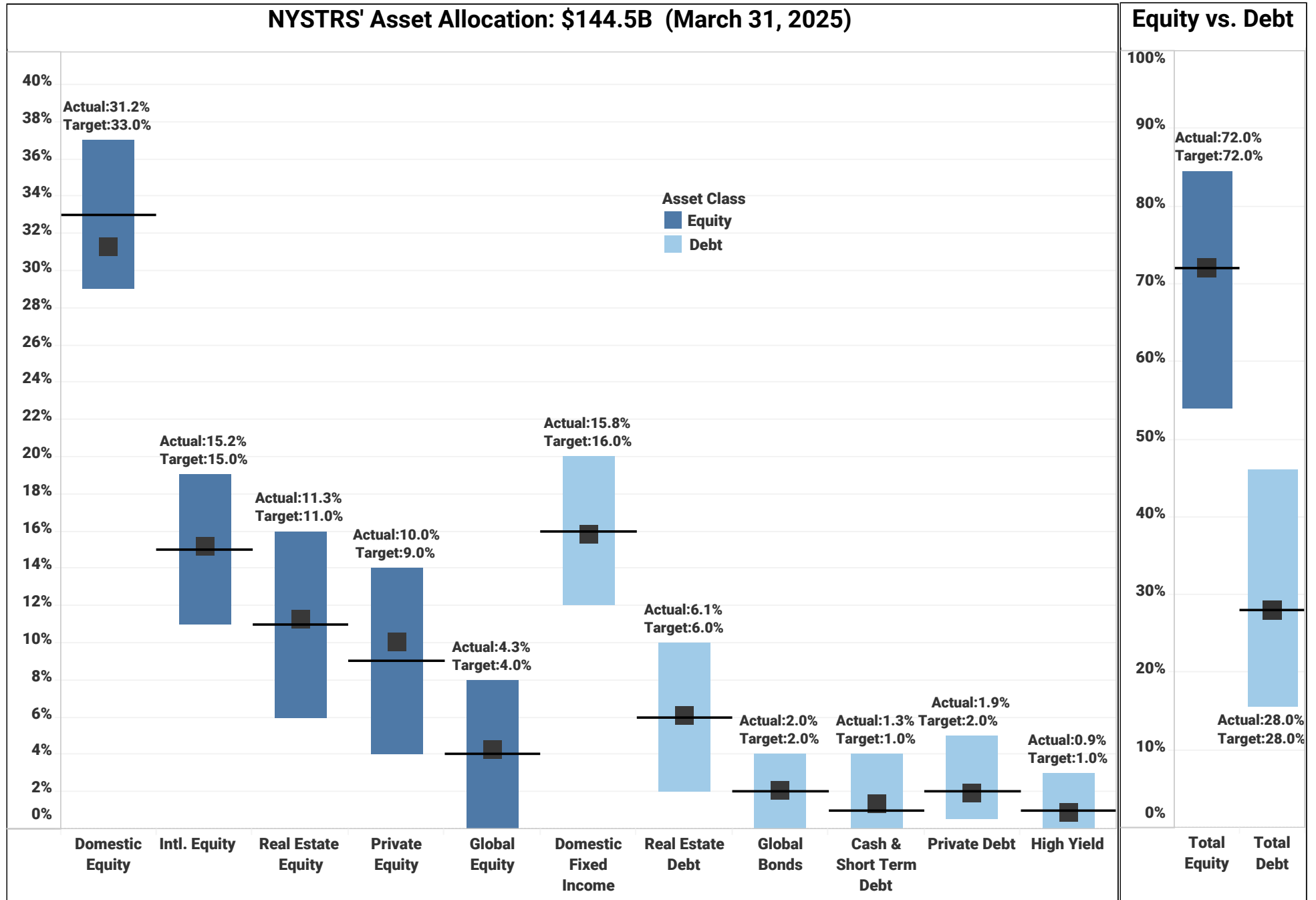
Market Value Summary ('000s)

Asset Category	Asset Class	March 31, 2025		December 31, 2024		March 31, 2024	
		Net Asset Value	% Net Asset Value	Net Asset Value	% Net Asset Value	Net Asset Value	% Net Asset Value
Equity	Domestic Equity	\$45,141,790	31.2%	\$49,463,616	33.7%	\$49,670,401	34.7%
	International Equity	\$21,947,545	15.2%	\$20,789,187	14.2%	\$20,437,198	14.3%
	Global Equity	\$6,183,712	4.3%	\$6,171,432	4.2%	\$5,790,704	4.0%
	Real Estate Equity	\$16,306,295	11.3%	\$16,468,362	11.2%	\$16,170,578	11.3%
	Private Equity	\$14,486,168	10.0%	\$14,335,588	9.8%	\$13,739,987	9.6%
	Asset Category Subtotal	\$104,065,509	72.0%	\$107,228,185	73.0%	\$105,808,868	73.9%
Debt	Domestic Fixed Income	\$22,808,966	15.8%	\$22,120,623	15.1%	\$20,612,335	14.4%
	Global Bonds	\$2,948,569	2.0%	\$2,887,884	2.0%	\$2,807,653	2.0%
	High Yield	\$1,273,614	0.9%	\$1,594,531	1.1%	\$1,502,090	1.0%
	Real Estate Debt	\$8,770,996	6.1%	\$8,511,505	5.8%	\$7,465,361	5.2%
	Private Debt	\$2,737,645	1.9%	\$2,557,413	1.7%	\$2,273,279	1.6%
	Cash & Short Term Debt	\$1,888,114	1.3%	\$1,947,249	1.3%	\$2,634,037	1.8%
	Asset Category Subtotal	\$40,427,905	28.0%	\$39,619,205	27.0%	\$37,294,755	26.1%
	Total Plan	\$144,493,414	100.0%	\$146,847,391	100.0%	\$143,103,623	100.0%

Due to rounding, numbers may not sum to 100%.



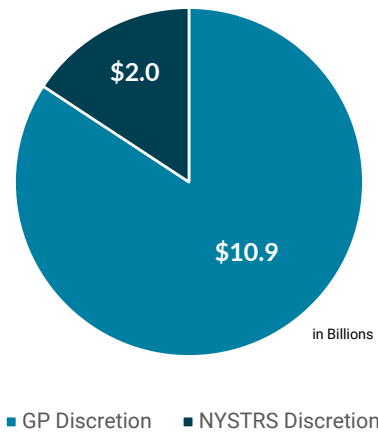
Investment Committee Executive Summary



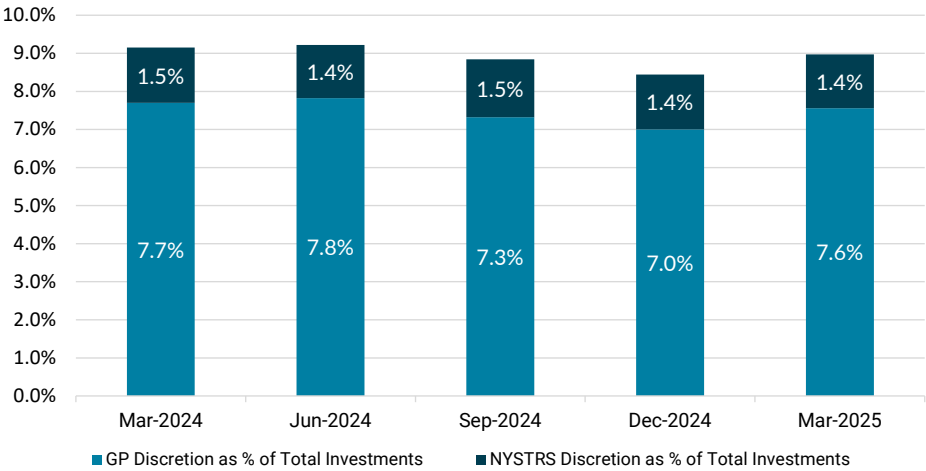
Investment Committee Executive Summary

Unfunded Commitments - Private Assets

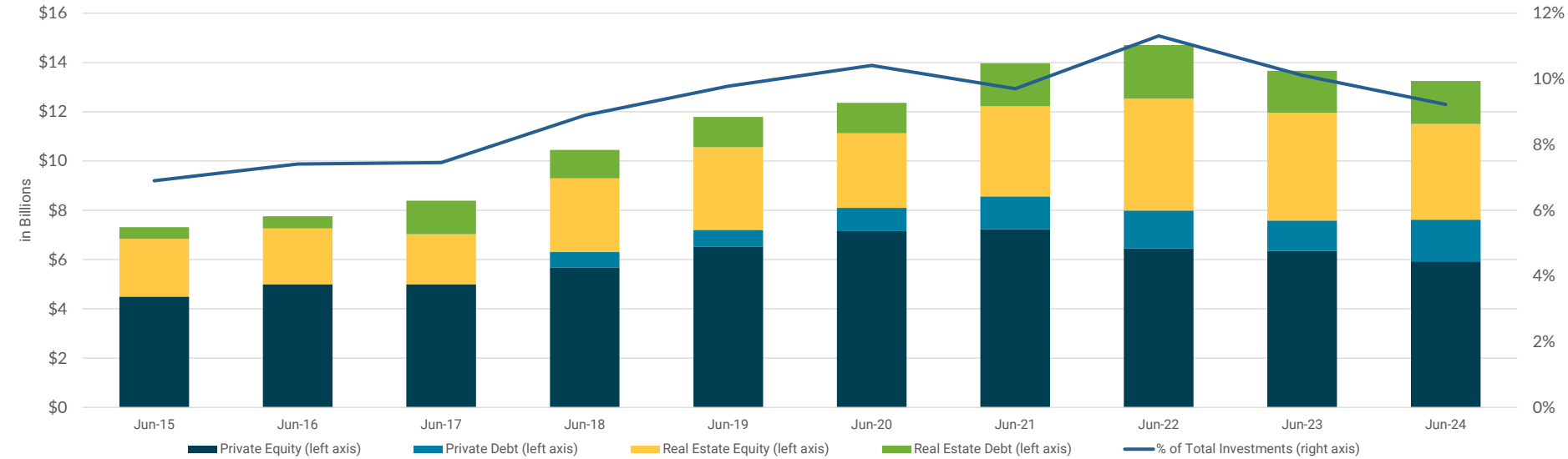
Total Unfunded Commitments at 3/31/2025 \$12.9B



Unfunded Commitments - GP vs. NYSTRS Discretion

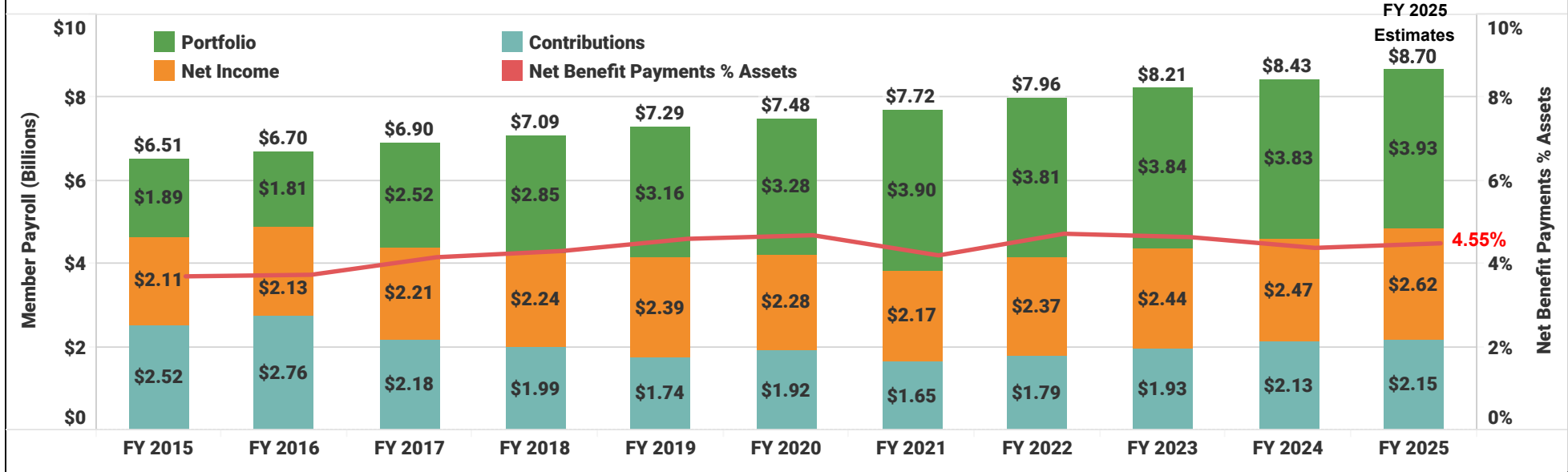


Unfunded Commitments - by Asset Class and % of Total Investments

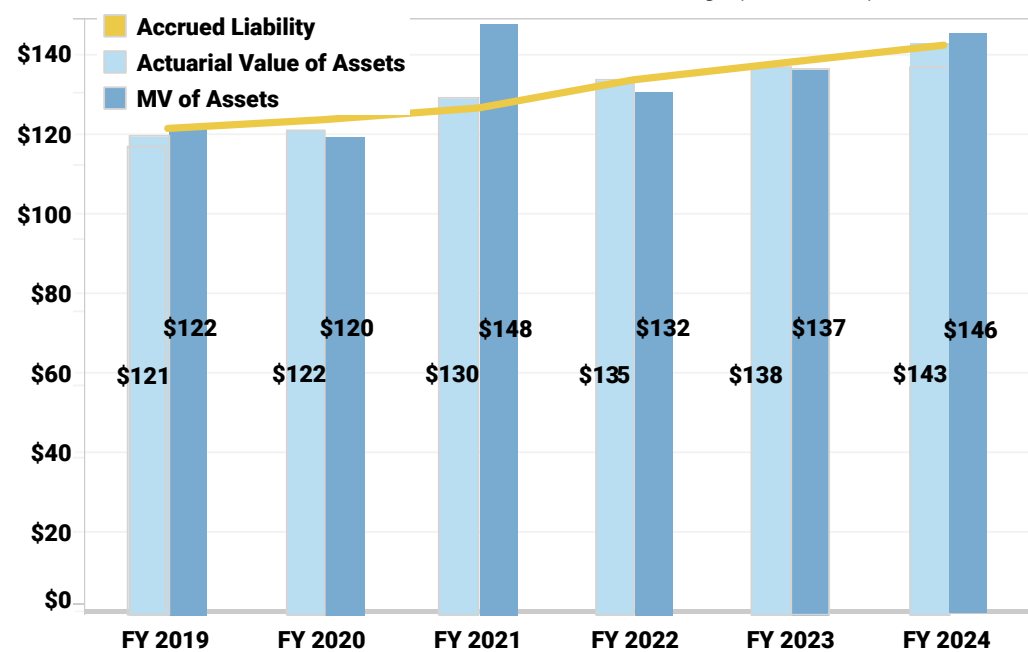


Investment Committee Executive Summary

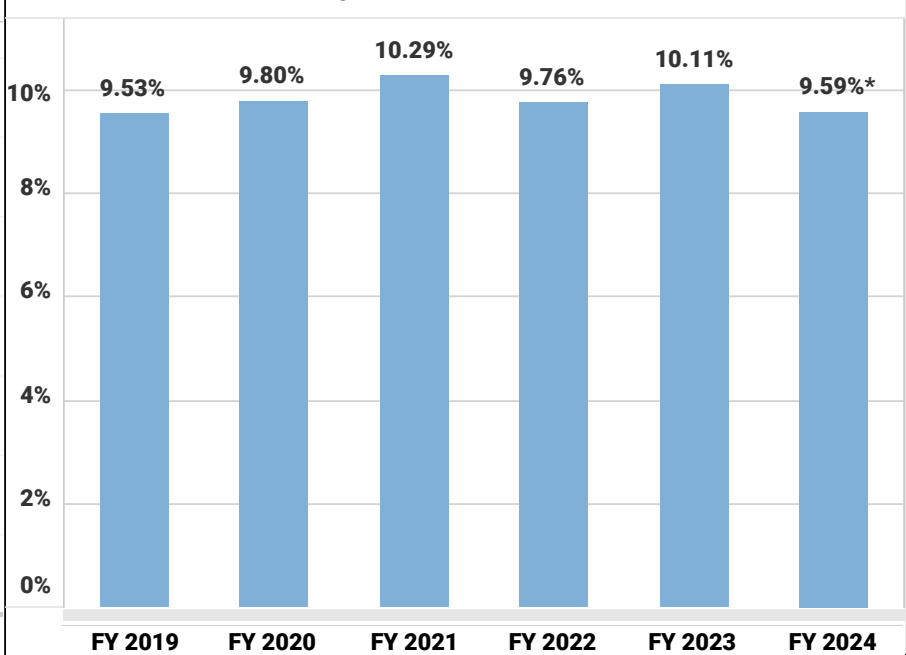
Member Payroll Funding Sources



Assets & Actuarial Accrued Liability (Billions)



Employer Contribution Rate



* FY 2024 estimated rate of 9.59% is pending Board approval in July 2025.

Investment Committee Executive Summary

Public Market Performance as of March 31, 2025

Asset Class	Current QTR	
	Net Return	Excess Return
Domestic Equity	-4.6%	-0.1%
International Equity	5.5%	0.3%
Global Equity	0.1%	1.4%
Private Equity	N/A	N/A
Real Estate Equity	1.2%	0.0%
Domestic Fixed Income	3.0%	0.2%
Global Bonds	1.7%	0.3%
High Yield Bonds	1.0%	-0.1%
Private Debt	N/A	N/A
Real Estate Debt	2.5%	0.2%
Short Term	1.1%	0.1%
Total Public Markets	-0.2%	0.1%

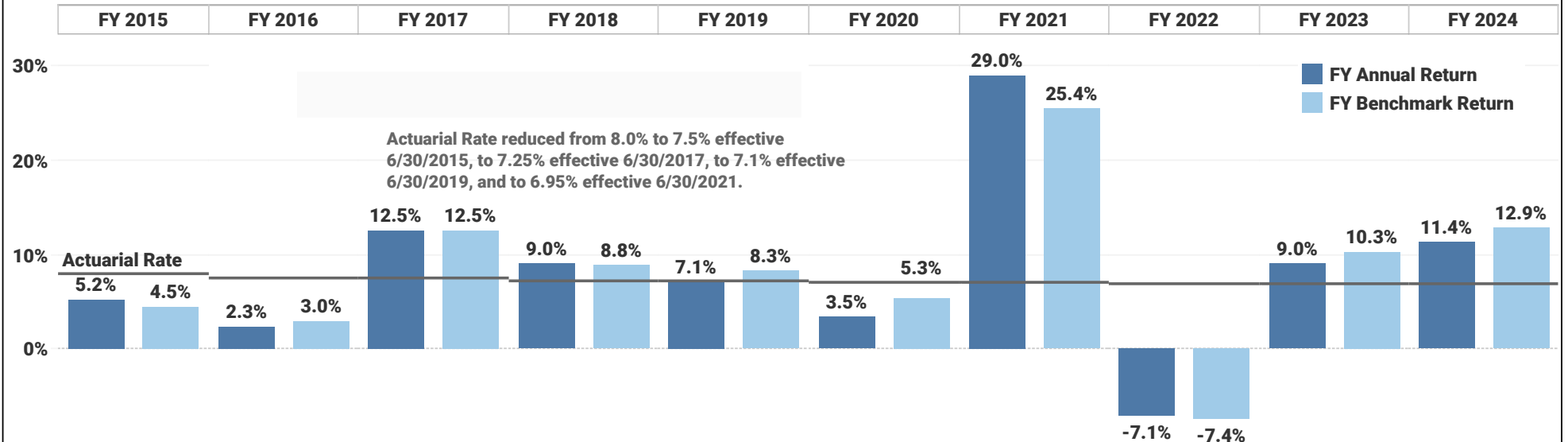
RE Equity is REITs only and RE Debt is CMBS only.

For additional performance information see Supplemental Materials.

Total Fund Performance as of December 31, 2024

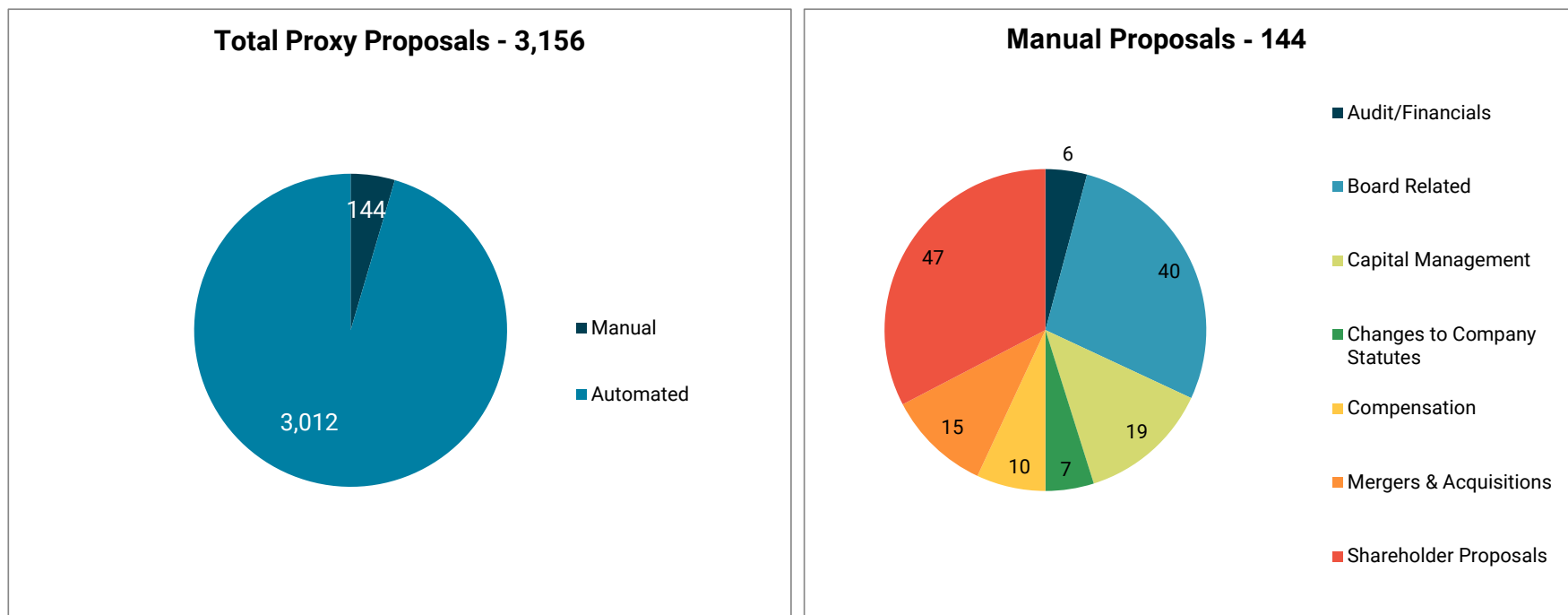
Asset Class	QTR		FYTD		10YR	
	Net Return	Excess Return	Net Return	Excess Return	Net Return	Excess Return
Domestic Equity	2.3%	0.0%	8.4%	0.0%	12.7%	-0.1%
International Equity	-7.2%	0.4%	-0.2%	-0.1%	5.3%	0.5%
Global Equity	-1.4%	-0.4%	4.2%	-1.4%	N/A	N/A
Private Equity	1.6%	-2.0%	3.5%	-7.4%	13.9%	-4.2%
Real Estate Equity	-3.3%	-4.2%	-1.5%	-2.5%	5.9%	0.9%
Domestic Fixed Income	-3.1%	-0.1%	2.0%	0.0%	1.4%	0.1%
Global Bonds	-1.9%	-0.5%	2.8%	-0.3%	2.1%	0.3%
High Yield Bonds	0.0%	0.1%	4.6%	0.4%	N/A	N/A
Private Debt	1.9%	-1.1%	4.0%	-1.9%	N/A	N/A
Real Estate Debt	0.5%	1.6%	3.4%	-0.2%	3.7%	0.6%
Short Term	1.2%	0.1%	2.6%	0.2%	1.9%	0.4%
Total Fund	-1.0%	-0.5%	3.8%	-1.0%	8.0%	-0.3%

Annual Performance



Investment Committee Executive Summary

Proxy Voting Summary: 1/1/2025 - 3/31/2025



The System has implemented automated voting for those issues that can reliably be voted according to NYSTRS' Stock Proxy Voting policy without review in the U.S. and Canada and has implemented automated voting for a majority of issues in all other international markets. Those requiring review are voted manually utilizing research provided by our proxy advisory service to support the decision. In general, the System supports corporate management if management's position appears reasonable, is not detrimental to the long range economic prospects of the company, and does not tend to diminish shareholder rights. Should a complex issue arise which is not included in the Stock Proxy Voting policy, the Executive Director and Chief Investment Officer or his designee is authorized to exercise best judgment in voting such issue.

The statistics presented above include the voting of proposals in NYSTRS' externally managed international and global equity and REIT accounts for meetings with record dates on or after March 1, 2025.

Audit/Financials - The System may oppose auditor selection if there are concerns about objectivity.

Board Related - The System supports independent and diverse directors.

Capital Management - The System generally supports proposals that provide the company with flexibility provided they do not limit shareholder rights.

Changes to Company Statutes - The System generally supports proposals relating to bylaw or organizational changes provided they do not limit shareholder rights.

Compensation - The System generally supports reasonable compensation plans which are tied to objective performance measures. Stock option plans should be used to motivate corporate personnel.

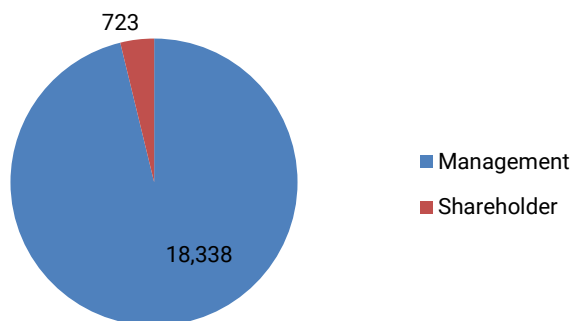
Mergers & Acquisitions - Proposals are reviewed on a case by case basis.

Shareholder Proposals (type & number) - Environment: 4, Governance: 18, Social: 14, and Other: 11.

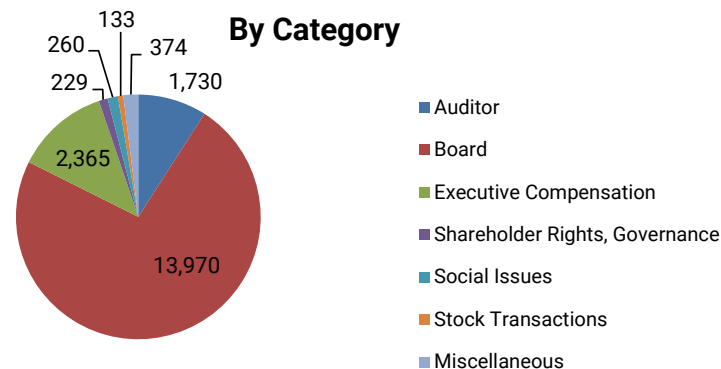
Investment Committee Executive Summary

Annual Proxy Voting Report: 1/1/2024 - 12/31/2024 Domestic and Canadian Portfolios

Total Proxy Proposals - 19,061



By Category



	Proposals	For	% For	Against	% Against	Abstain	% Abstain
Management	18,338	16,926	92.3%	1,398	7.6%	14	0.1%
Shareholder Proposals	723	378	52.3%	202	27.9%	143	19.8%
	19,061	17,304	90.8%	1,600	8.4%	157	0.8%

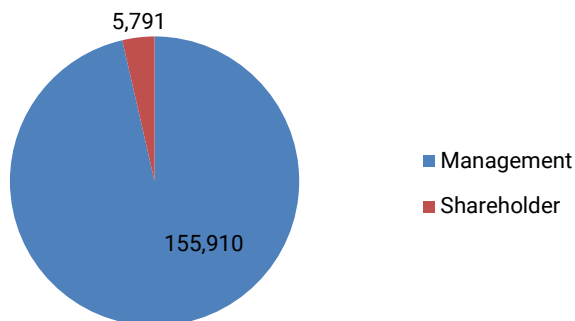
Auditor	1,730	1,724	99.6%	3	0.2%	3	0.2%
Board	13,970	12,857	92.0%	1,110	8.0%	3	0.0%
Executive Compensation	2,365	2,060	87.1%	298	12.6%	7	0.3%
Shareholder Rights, Governance	229	140	61.1%	79	34.5%	10	4.4%
Social Issues	260	131	50.4%	20	7.7%	109	41.9%
Stock Transactions	133	121	90.9%	7	5.3%	5	3.8%
Miscellaneous	374	271	72.4%	83	22.2%	20	5.4%
	19,061	17,304	90.8%	1,600	8.4%	157	0.8%

The Statistics above represent proposals presented at 1,765 meetings for the companies in the System's domestic equity and Canadian portfolios. Meetings and proposals at companies held in multiple portfolios are counted once.

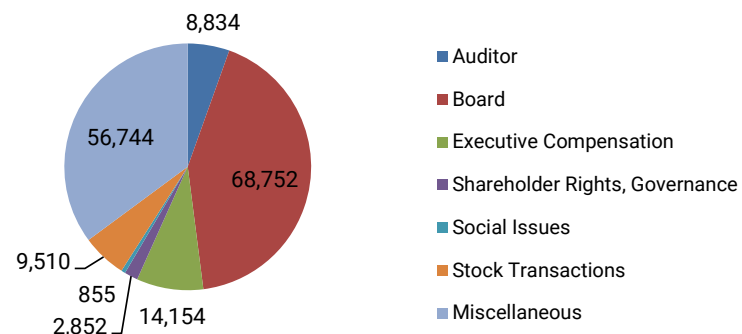
Investment Committee Executive Summary

Annual Proxy Voting Report: 1/1/2024 - 12/31/2024 External Managers - International and Global Equities

Total Proxy Proposals - 161,701



By Category



	Proposals	For	% For	Against	% Against	Abstain	% Abstain
Management	155,910	136,327	87.4%	17,311	11.1%	2,272	1.5%
Shareholder Proposals	5,791	3,662	63.3%	1,959	33.8%	170	2.9%
	161,701	139,989	86.6%	19,270	11.9%	2,442	1.5%

Auditor	8,834	8,706	98.6%	98	1.1%	30	0.3%
Board	68,752	58,849	85.6%	7,843	11.4%	2,060	3.0%
Executive Compensation	14,154	11,584	81.8%	2,545	18.0%	25	0.2%
Shareholder Rights, Governance	2,852	2,153	75.5%	673	23.6%	26	0.9%
Social Issues	855	421	49.2%	419	49.0%	15	1.8%
Stock Transactions	9,510	7,831	82.4%	1,667	17.5%	12	0.1%
Miscellaneous	56,744	50,445	88.9%	6,025	10.6%	274	0.5%
	161,701	139,989	86.6%	19,270	11.9%	2,442	1.5%

The statistics above represent proposals presented at 14,512 meetings for the companies in the System's externally managed, international and global equity portfolios. Meetings and proposals at companies held in multiple portfolios are counted for each portfolio.



New York State
Teachers'
Retirement
System

Public Equities Managing Director Update

Investment Committee April 23, 2025

Binoop Unni, CFA, CAIA
Public Equities

Public Equity MD Update

	Mkt Val	Asset Allocation %			Portfolio Net Returns %					Excess Returns %				
	\$B*	Actual	Target	Range	Qtr	FYTD	1Y	3Y Ann	5Y Ann	Qtr	FYTD	1Y	3Y Ann	5Y Ann
Public Equities	\$ 73.3				-1.42	4.12	7.09	7.68	16.32	0.07	-0.02	0.00	0.30	0.31
Domestic Equities	\$ 45.1	31.24	33	29-37	-4.62	3.40	7.24	8.69	18.49	-0.13	-0.14	-0.09	0.09	0.07
Domestic Passive	\$ 38.7				-4.60	3.44	7.25	8.61	18.41	-0.11	-0.09	-0.08	0.01	-0.01
Domestic Active	\$ 6.4				-4.73	3.12	7.18	9.34	19.19	-0.24	-0.42	-0.14	0.75	0.77
International Equities	\$ 21.9	15.19	15	11-19	5.53	5.29	6.47	5.16	11.63	0.30	0.21	0.38	0.68	0.71
International Passive	\$ 14.7				5.43	5.30	6.54	4.72	11.19	0.20	0.23	0.46	0.23	0.27
International Active	\$ 7.3				5.73	5.26	6.30	6.16	12.71	0.50	0.18	0.22	1.67	1.79
Global Equities	\$ 6.2	4.28	4	0-8	0.10	4.30	6.37	7.45	16.33	1.43	0.14	-0.78	0.54	1.15

* Due to rounding, market values may not sum.

Market Commentary

- Tariff concerns dampened business and consumer sentiment.
- Global equity markets (MSCI ACWI) lost 1.32% during the quarter.
- US equities (S&P 1500) dropped 4.49%, with growth stocks hit particularly hard. Higher inflationary and interest rate expectations continued to pressure equities.
- International markets (MSCI ACWI ex-USA) were up 5.23%, with Europe gaining on expectations of beneficial fiscal policy and increased defense spending. Release of DeepSeek R1 AI model fueled optimism in China's Tech sector.

Portfolio Performance & Activity

- The Public Equities portfolio posted a negative return for the quarter, though it outperformed the benchmark.
- The portfolio ended the quarter at \$73.3B, a decrease of \$2.63B from a year prior.
- \$1.97B was raised from domestic equities during the quarter.
- International Equities delivered positive returns, with contributions from the market as well as active strategies.
- Global strategies delivered positive results during the quarter, both on an absolute and relative basis.
- Transitioned passive CAN and UK portfolios from BlackRock in January.
- Completed the first portfolio rebalancing and trading of the UK portfolio in February.

Fixed Income MD Update

	Mkt Val	Asset Allocation %			Portfolio Net Returns %					Excess Returns %				
	\$B	Actual	Target	Range	Qtr	FYTD	1Y	3Y Ann	5Y Ann	Qtr	FYTD	1Y	3Y Ann	5Y Ann
Internally Managed	\$25.1	17.4	17	12-24										
Domestic Fixed Income	\$22.8	15.8	16	12-20	2.97	4.98	5.24	1.56	0.35	0.22	0.19	0.38	1.00	0.70
Short-Term Bond	\$1.9	1.3	1	0-4	1.08	3.68	5.07	4.45	2.73	0.09	0.30	0.39	0.41	0.31
Emerging Market Debt	\$0.4	0.3			3.12					0.34				
Externally Managed	\$3.8	2.6	3	0-7										
Global Aggregate Bonds	\$2.2	1.5	2	0-4	1.42	4.47	4.37	0.92	0.69	0.04	0.01	0.05	-0.03	0.70
Global Carbon Transition	\$0.3	0.2			1.99	5.32	5.64			0.23	0.11	0.22		
High Yield	\$1.3	0.9	1	0-3	1.05	5.69	7.01	4.74	6.38	-0.11	0.28	0.32	0.27	-0.18

Market Commentary:

- **US:** 3% returns in qtr. as long-term Treasuries & securitized outperformed corporates. 10-year yields declined 36 basis points to 4.21%.
- **Global:** currency hedging detracted; Asian markets underperformed US and Europe.
- **Credit:** Inv grade and high yield spreads now higher after hitting record lows, but still well below other crisis periods.
- **EM:** Spreads began to widen at quarter end ahead of tariffs. Latin America outperformed vs. Asia and Middle East.

Positioning and Performance:

- **Domestic FI:** Added \$244 million weighted to Treasuries and securitized vs. Corporates
 - Outperformed with duration underweight, curve, and security/sector selection
- **EM Debt:** Added \$164 million; outperformed with curve, duration, and selection
- **Short-Term:** Running near 4.5% annual return
- **Global Agg:** Flat on FY with difficult macro trading environment
- **Carbon Transition:** First 1-year plus going well
- **High Yield:** underperformed; well positioned for April volatility

Outlook and Team Updates:

- **Policy:** Market volatility from tariff uncertainty continues; tax cut bill still undefined
- **Macro:** added inflation/lower growth from tariffs, but degree and timing are unclear; lower immigration likely to hit job creation
- **Credit:** Corporate and EM financials generally strong, but spreads subject to outflows
- April US dollar and Treasury sell-off from a mix of factors and not loss of confidence in US
- 1 Investment Fellow joining team in July



New York State
Teachers'
Retirement
System

Long Term Bond Portfolio Update

*NYSTRS Investment Committee Meeting
April 23, 2025*

*Presented by Aaron VanDerwiel, CFA
Deputy Managing Director of Fixed Income*

The Concept of Duration

- An estimate of a bond or portfolio's price sensitivity to interest rates
- Percentage change in a bond or portfolio's price for a 100 basis point (1%) parallel change in interest rates
- *Example: A duration of 6 means a 6% change in price with a 1% change in rates*
- Also expresses the cashflow weighted maturity of a bond, expressed in years

Relationship with Duration	
Maturity ↑	Increases
Coupon ↑	Decreases
Rates ↑	Decreases

Maturity versus Duration	
5-year bond	~4.5 Years
10-year Bond	~8 Years
30-year Bond	~20 Years
50-year Bond	~30 Years
100-year Bond	~45 Years

From June 2023 PIMCO publication, "How we talk about bonds"

Duration Example Low versus High Coupon

1.125% Coupon		08/15/2040 Maturity	US Treasury Bond	
Yield Shift (bps)	Yield (%)	Price (\$)	Duration	Price Change (%)
-100	3.48%	\$72.10	13.67	+14.7%
0	4.48%	\$62.89	13.46	-
+100	5.48%	\$55.02	13.25	-12.5%

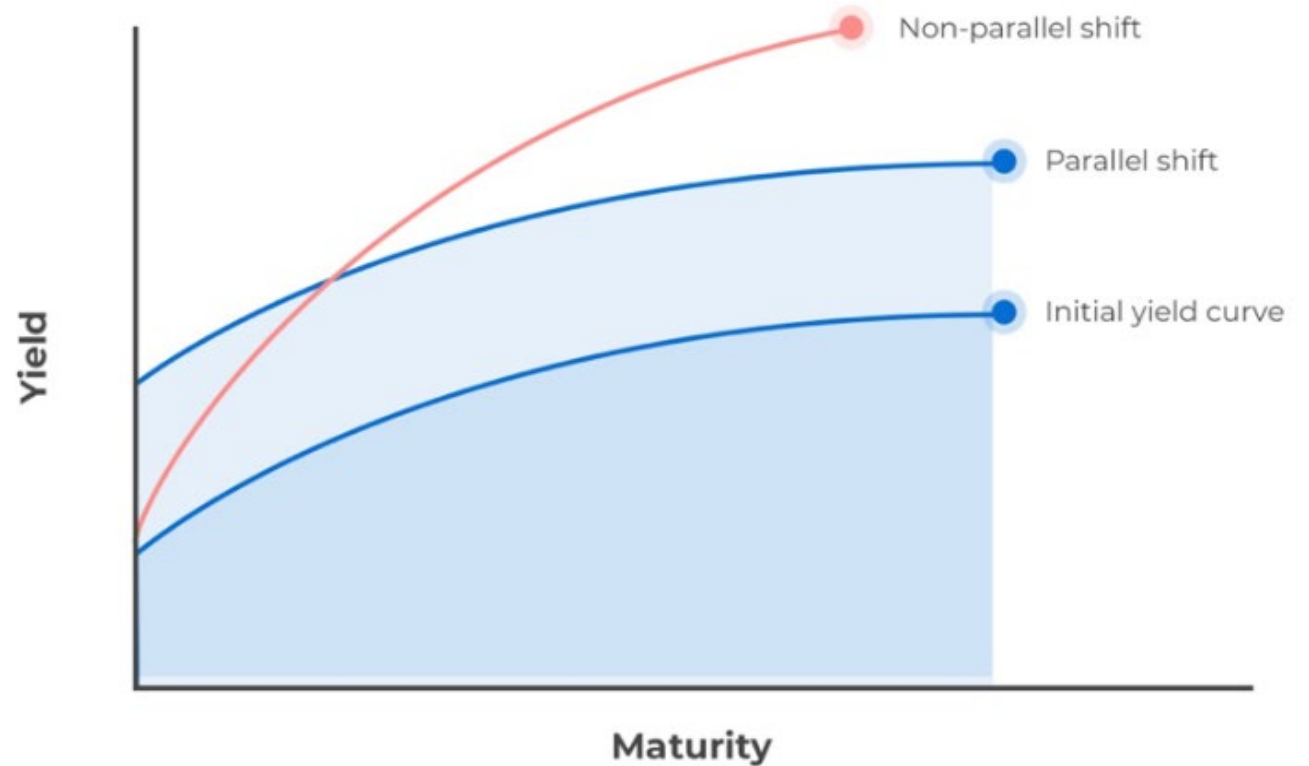
3.875% Coupon		08/15/2040 Maturity	US Treasury Bond	
Yield Shift (bps)	Yield (%)	Price (\$)	Duration	Price Change (%)
-100	3.42%	\$105.36	11.64	+12.1%
0	4.42%	\$93.95	11.34	-
+100	5.42%	\$84.01	11.03	-10.6%

Key Rate Duration

Price sensitivity of a bond or portfolio to changes in rates at specific maturities
(2yr, 10yr, 30yr, etc.)

The overall duration measure applies to parallel shifts in rates, whereas key rate duration accounts for non-parallel yield curve changes (steeper, flatter, twist)

Key Rate Duration



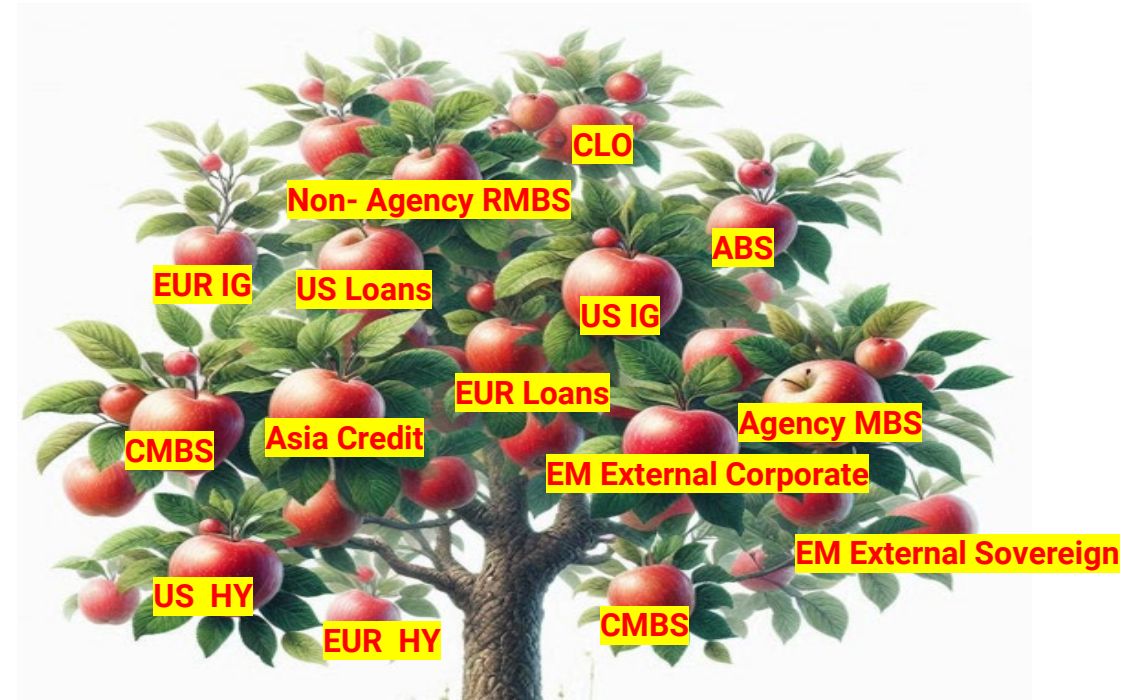
analystprep.com

Fixed Income is Different

- Equities & Fixed Income are not apples to apples but an apple versus an apple tree
- Only one equity instrument while debt markets have significant variety
- Vast, complex universe of >20 distinct asset classes & >70,000 securities
- Almost daily, bonds are issued in the primary market while older bonds mature



VERSUS

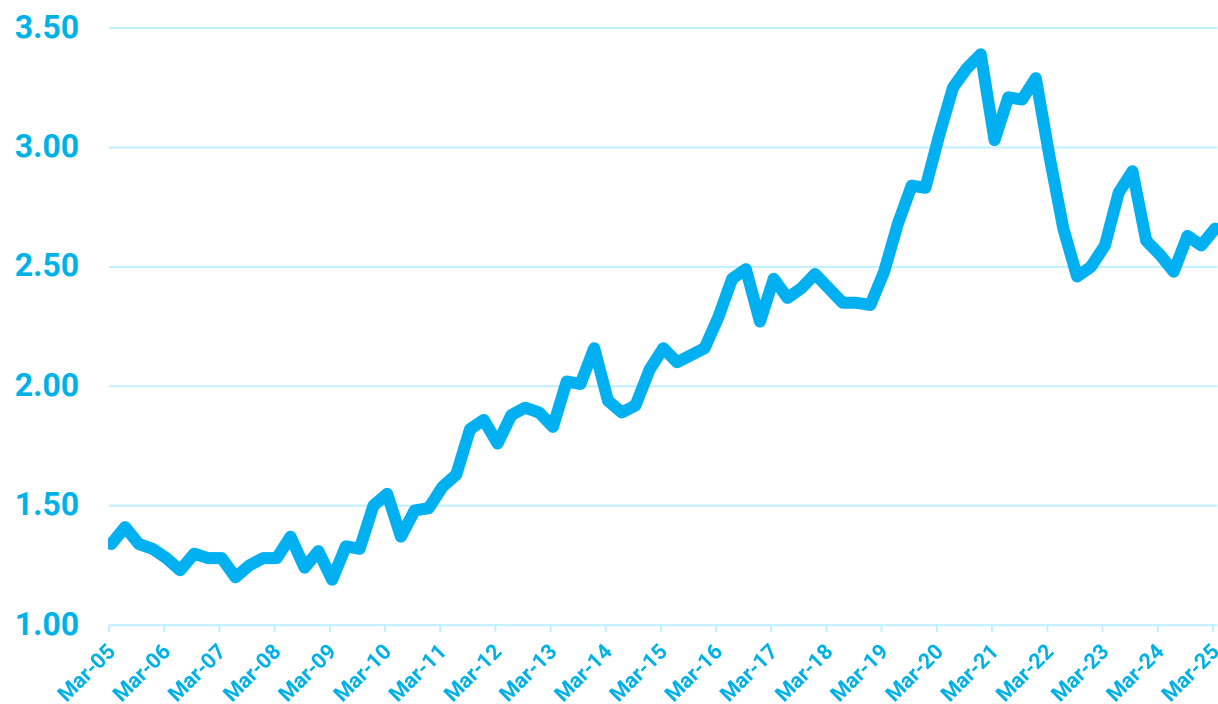


BlackRock's Rick Rieder February Monthly Call

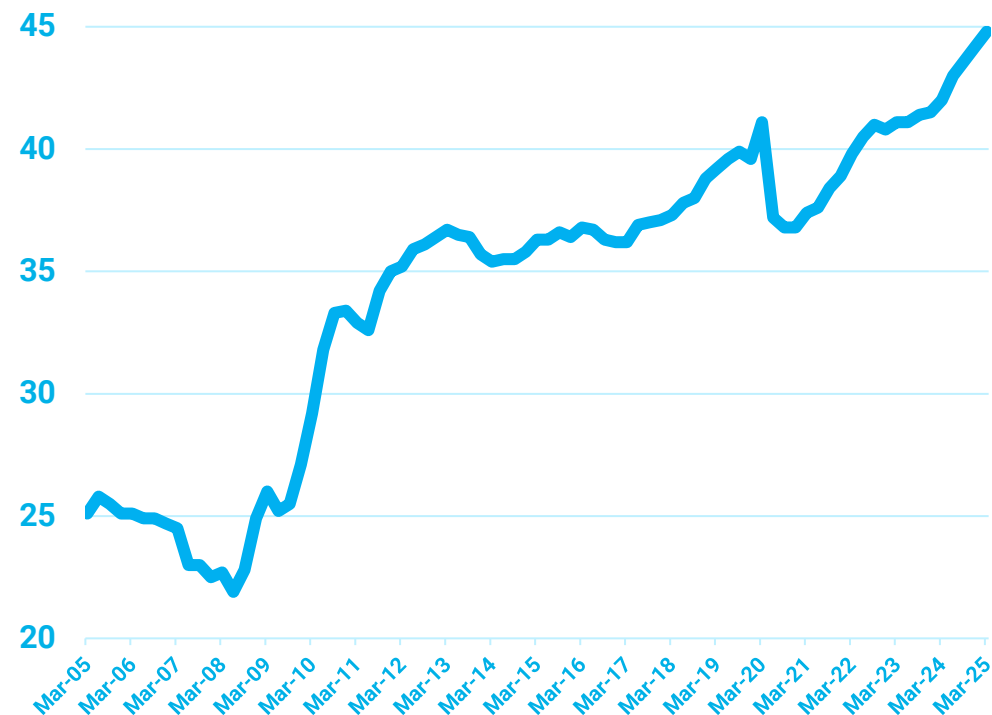
Fixed Income is Different

- Market-Cap Weighted indices are structurally different
- For Equity it means the most successful companies have the highest weight
- For Fixed Income it can skew exposure to the most indebted entities and on inefficient parts of the interest rate curve

10yr+ Maturities Contribution to Duration to US Agg



US Treasury Market Value % US Agg



LTBP Benchmark & Active Management

- **The Bloomberg US Aggregate Bond Float Adjusted Index (US Agg) includes investment grade, USD-denominated, fixed-rate taxable bonds with >1yr until maturity**
- **“Float Adjusted” indices exclude bonds held by the US Federal Reserve**
- **As of March 31st, the US Agg contained 13,696 securities**
- **Passive investing systematically lends to the most indebted entities**
- **Callan’s research confirms active investing can beat the U.S. Agg**
- **Active managers should set reasonable excess return and tracking error targets to ensure the “core fixed income” role within broader asset allocation**

Long Term Bond Portfolio Team

Function as Analysts, Portfolio Managers, & Traders

US TREASURY, SECURITIZED, GOVERNMENT-RELATED

Dawn Sherman	Investment Officer 3	25 years
Mark Wood	Investment Officer 3	18 years

CORPORATE BONDS

Joe Wood	Director	4 years
Mike Wollner	Investment Officer 2	7 years
Richa Dhungana	Investment Officer 1	<1 year

LTBP Objectives

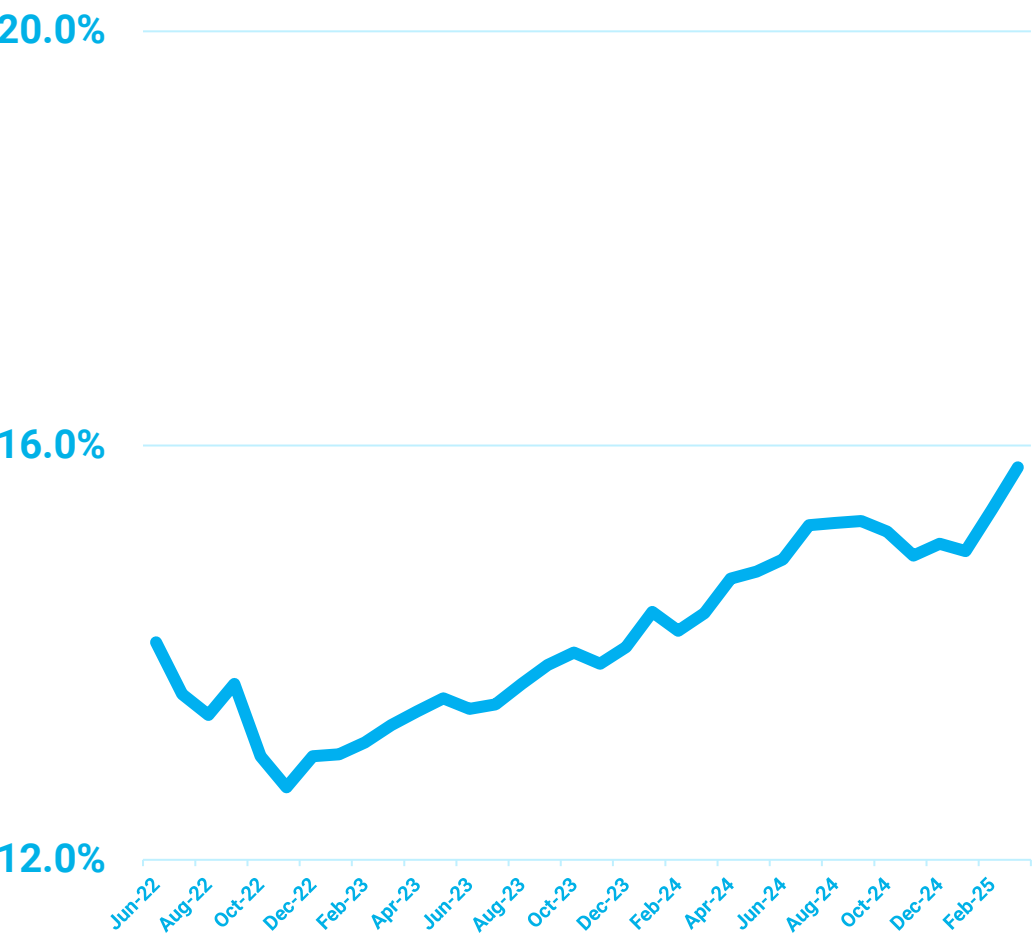
- **Generate cash flow while preserving capital**
- **Provide NYSTRS with liquidity if/when needed**
- **Augment diversification and stability to overall investment portfolio**
- **Return that meets/exceeds the benchmark over a market cycle**
- **To achieve these objectives, the portfolio is:**
 - **Diversified with high-quality securities across fixed income sectors**
 - **Managed for capital preservation, income and liquidity while responsive to yield and/or spread opportunities**

LTBP Process

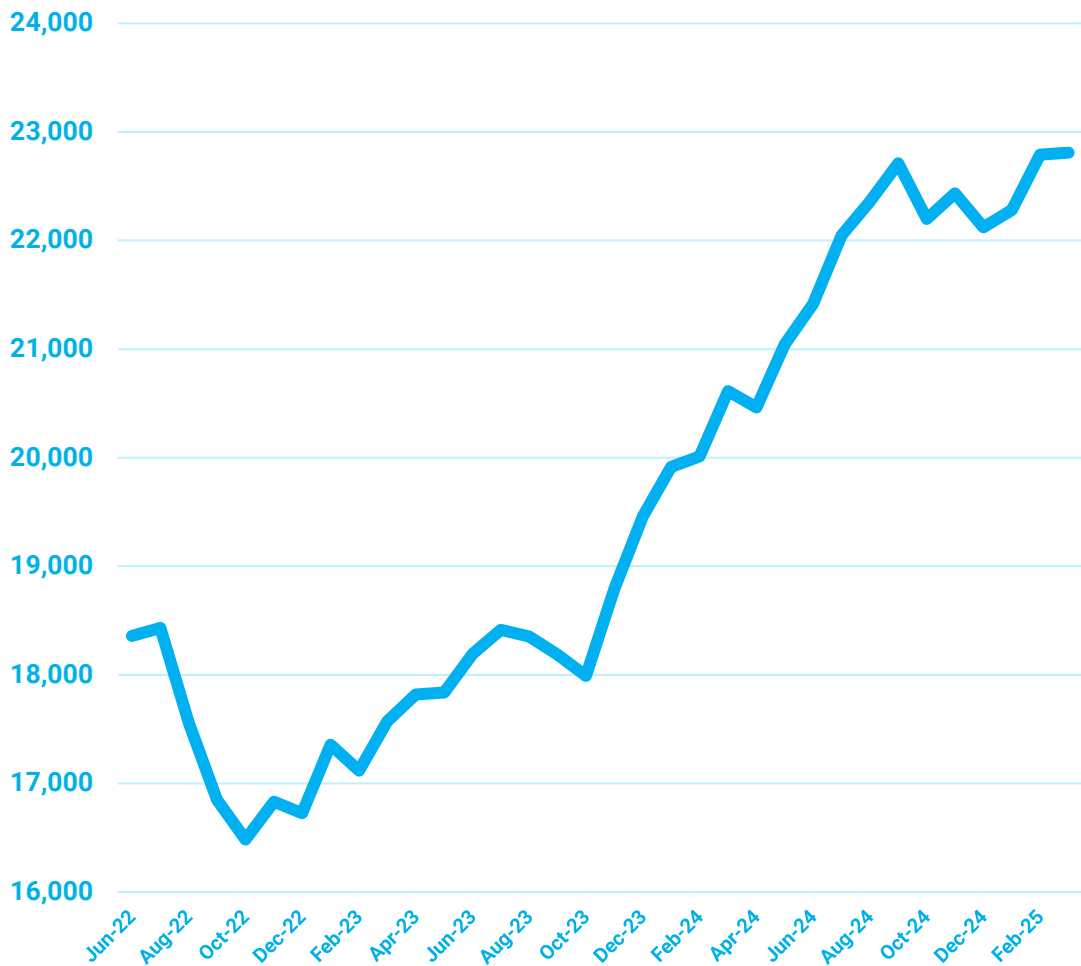
- **Actively manage duration/key rate durations, maturity, credit quality, sector, industry, issuer and security**
- **NYSTRS weekly internal asset allocation and cash flow meetings**
- **Manage inflows/outflows according to asset allocation rebalancing**
- **Fixed Income Team holds monthly meetings to review:**
 - **Portfolio characteristics on absolute basis and relative to benchmark**
 - **Sub-sector weights, duration, yield, spread, coupon**
 - **Assess relative value opportunities to determine what is trading rich/cheap**
 - **How to best spend/raise cash given current holdings and relative value outlook**
 - **Communicate throughout the month to monitor progress and discuss market opportunities**

LTBP Asset Allocation

Allocation % Versus Target & Range

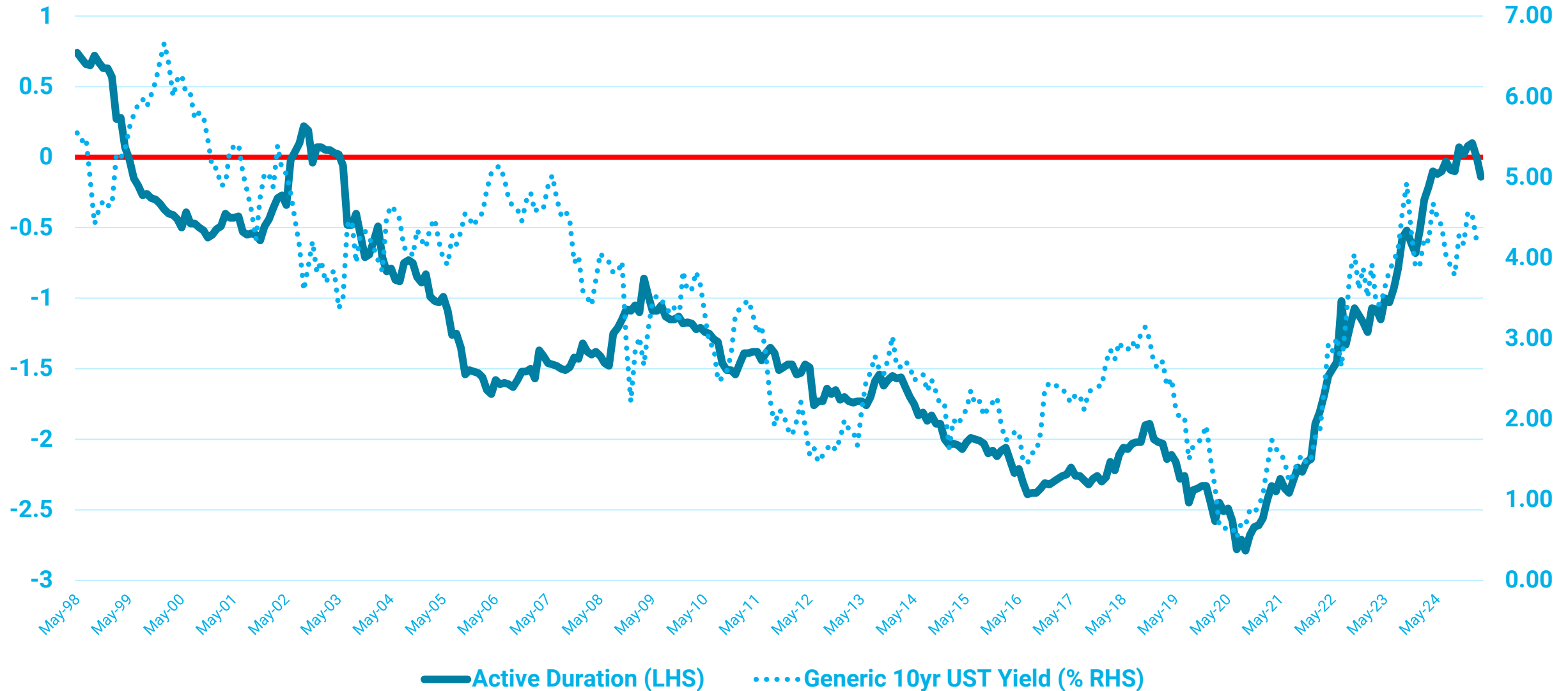


LTBP \$ Market Value (millions)



LTBP Historical Active Duration

Compared Against 10YR US Treasury Yield



Active Duration Management

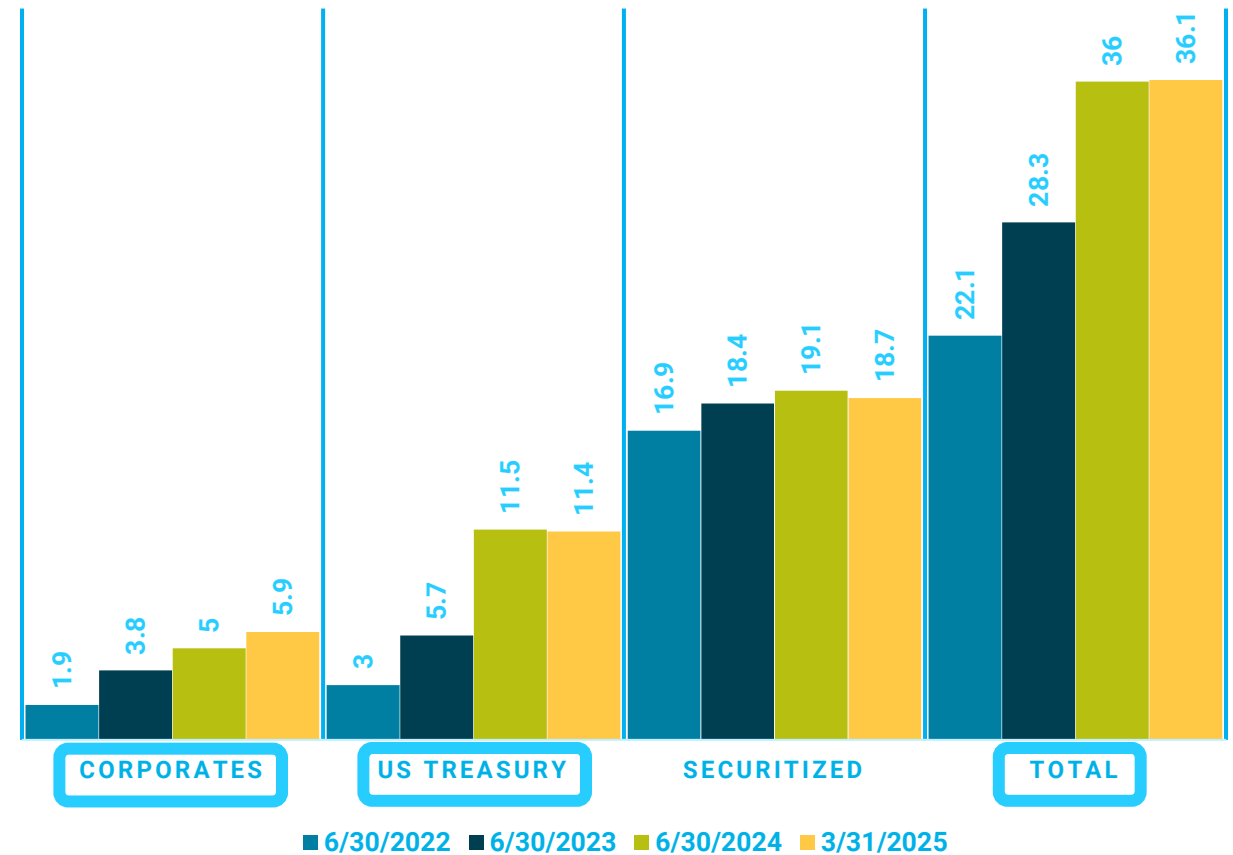
Reducing Exposure to <1yr to Maturity

Adding Long Maturity (10yr+) Bonds

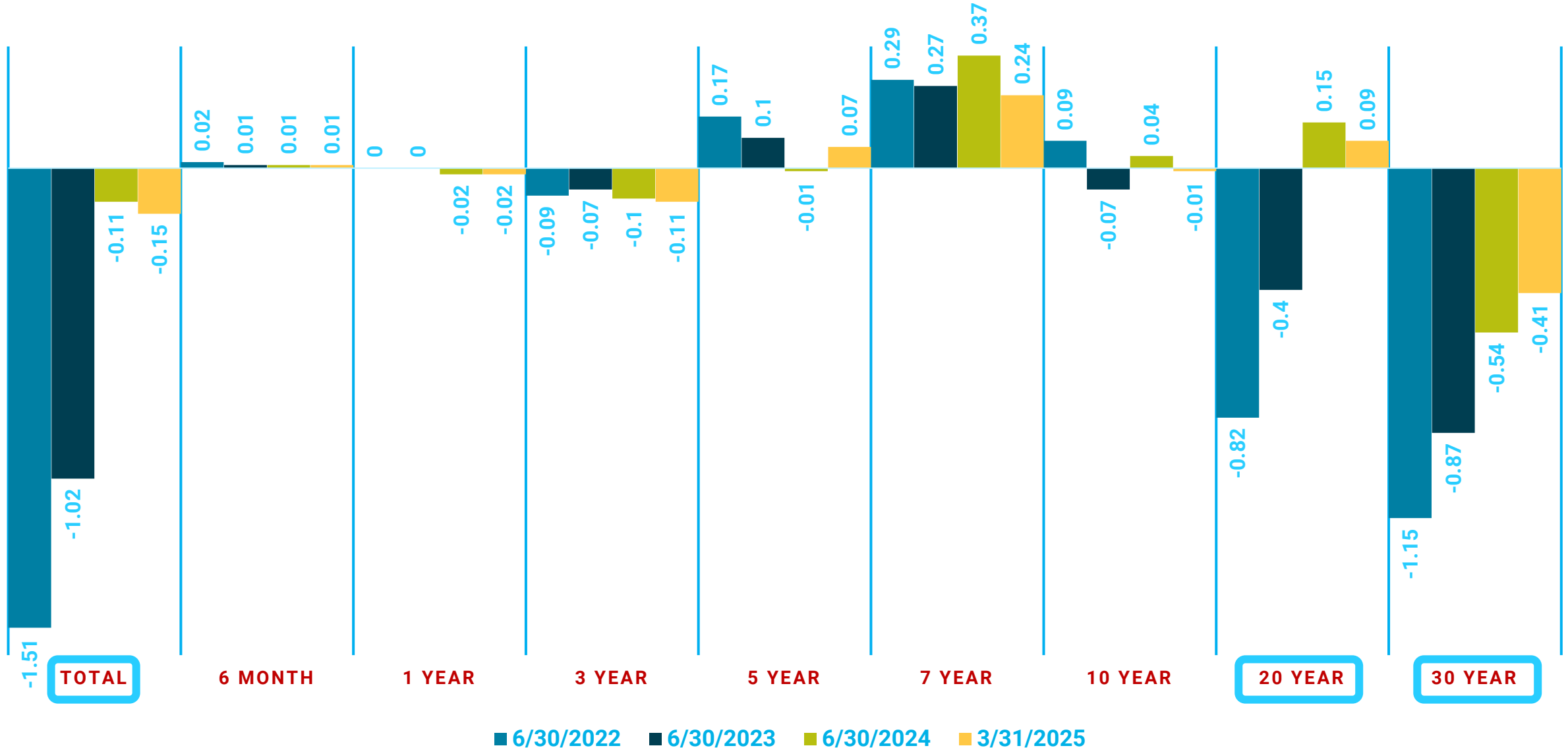
<1 YEAR SECURITIES % LTBP



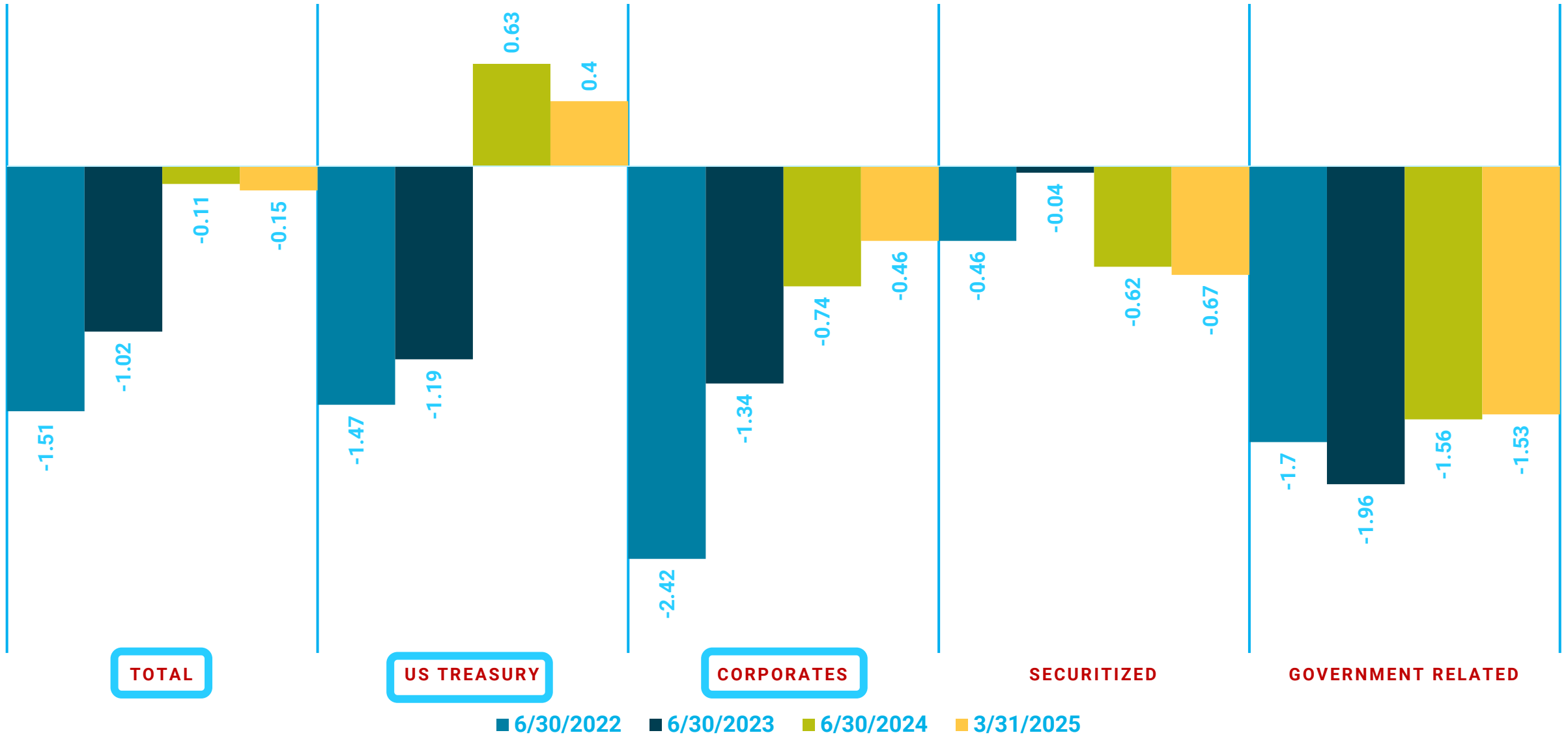
≥10YR SECURITIES % LTBP



Active Key Rate Duration

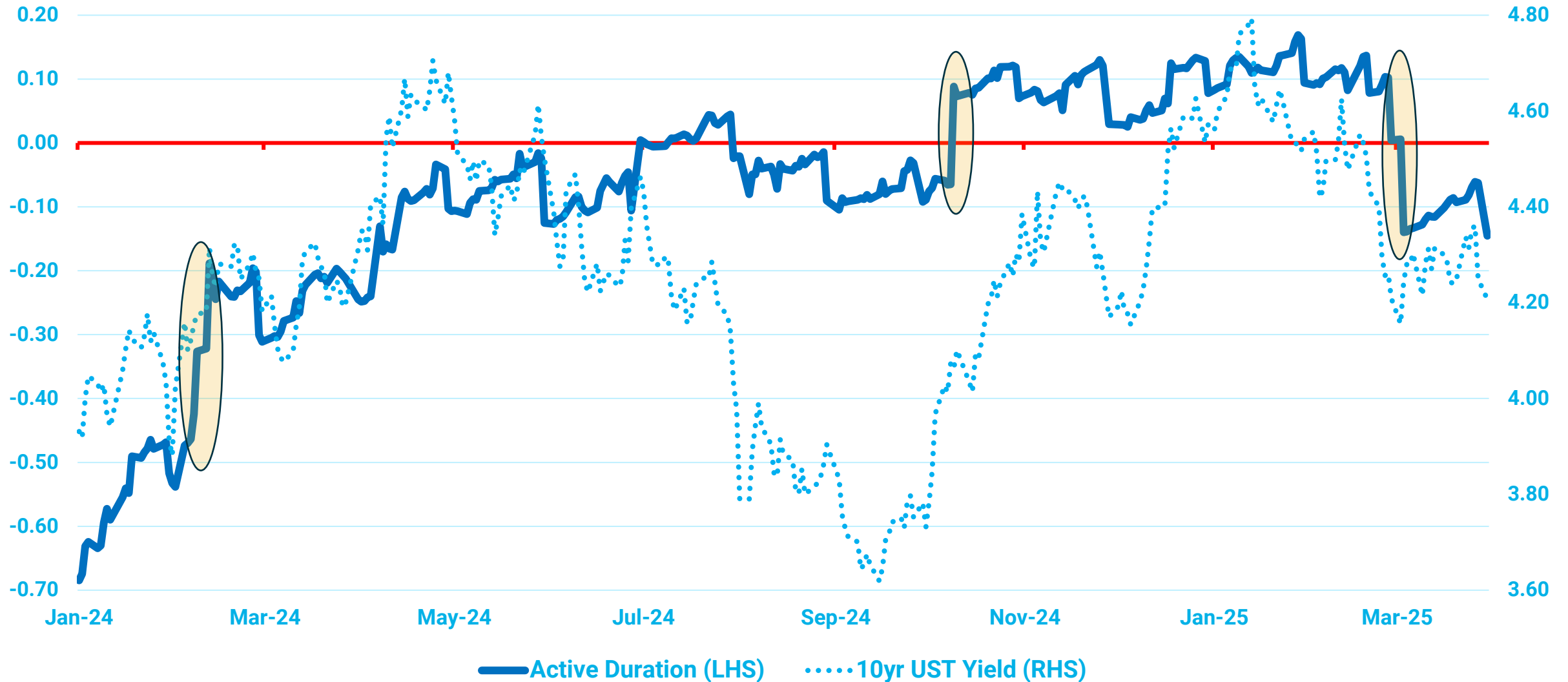


Active Sector Duration



Recent Active Duration

Compared Against 10YR US Treasury Yield



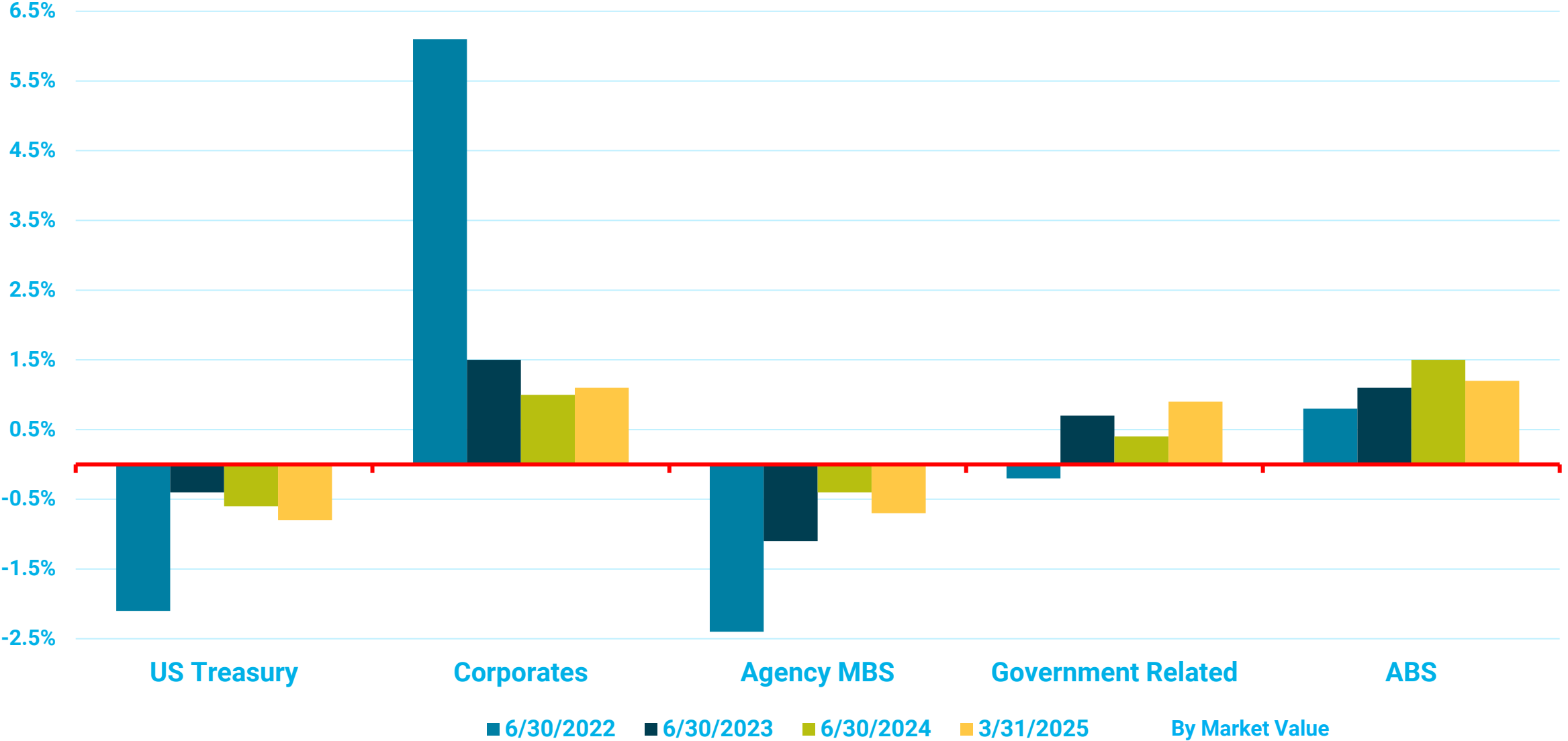
Treasury Futures

- **Implementing U.S. Treasury Futures to more easily and efficiently manage overall LTBP duration as well as specific key rate durations**
- **Low cost and faster trading alternative to cash bonds**
- **Allows for easy administration of monthly benchmark duration extensions**
- **Can separate credit spread management from Treasury duration**

LTBP Sector Exposures

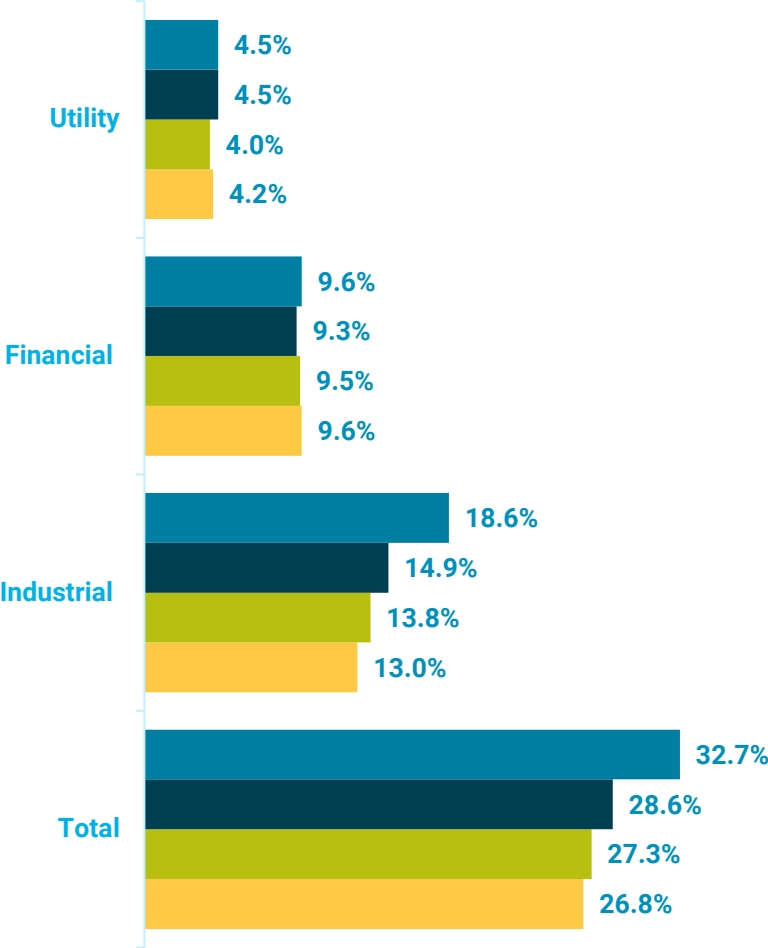
U.S. Treasuries	47.0% / \$10.7bn
Corporate Bonds	26.8% / \$6.1bn
Agency Mortgage-Backed Securities	19.1% / \$4.3bn
Government Related	5.5% / \$1.3bn
Asset Backed Securities	1.7% / \$0.4bn

LTBP Active Sector Allocation

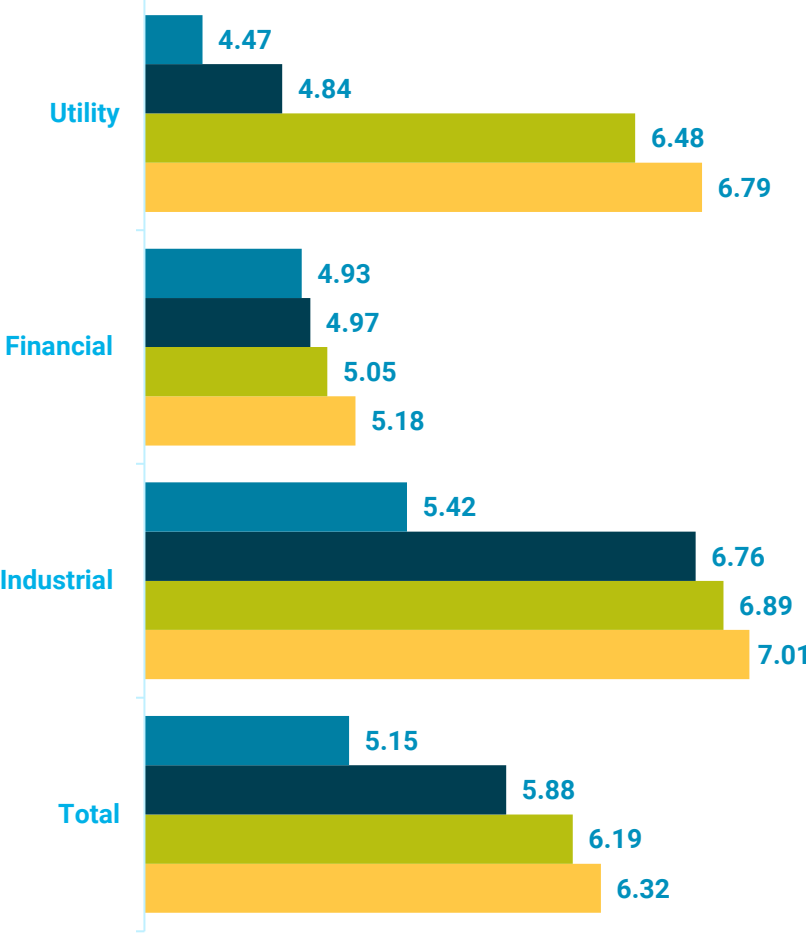


Corporate Bonds

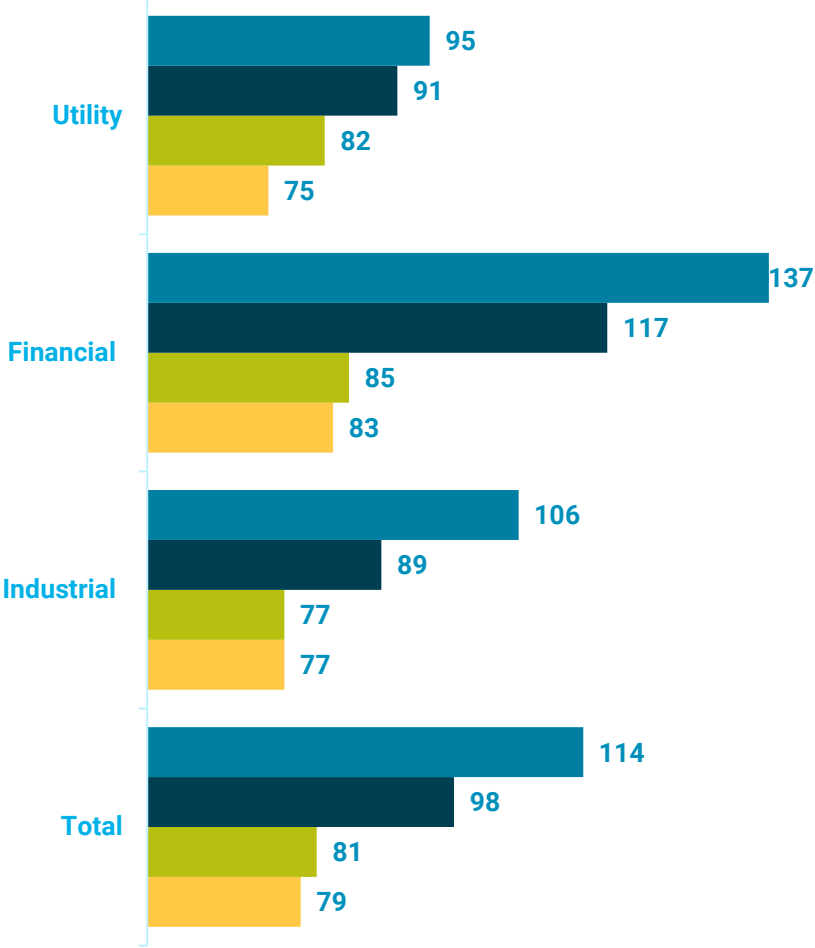
LTBP Corporate Sector Allocation



LTBP Corporate Sector Duration



LTBP Corporate Spread to Treasury



■ 6/30/2022 ■ 6/30/2023 ■ 6/30/2024 ■ 3/31/2025

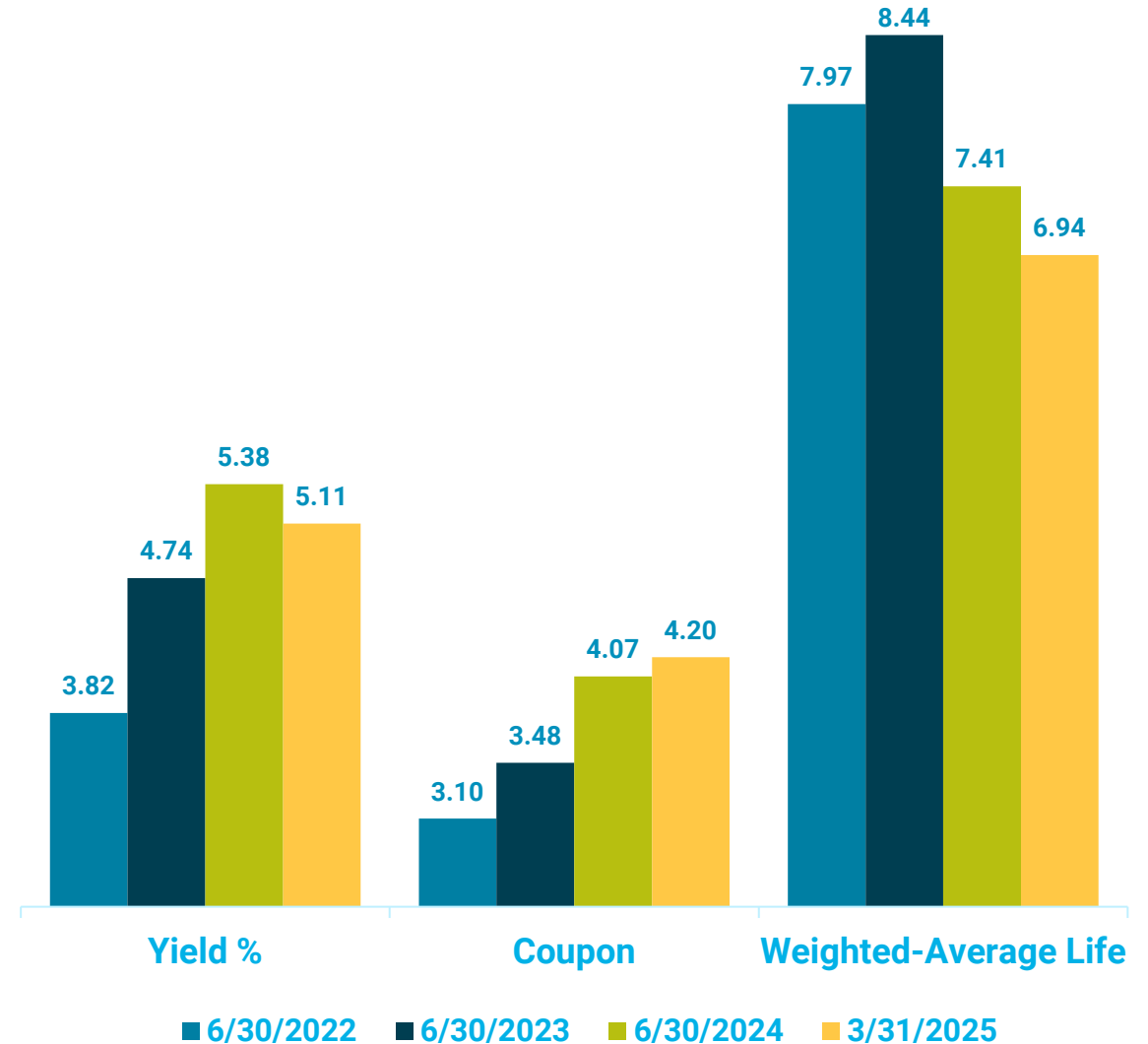
Corporate Bond Activity

- Seek relative value opportunities
- Pick up yield primarily through spread
- Add duration where appropriate
- Try to remain credit quality neutral
- Majority of purchases in new issue primary market
- Nearly all secondary trades done electronically

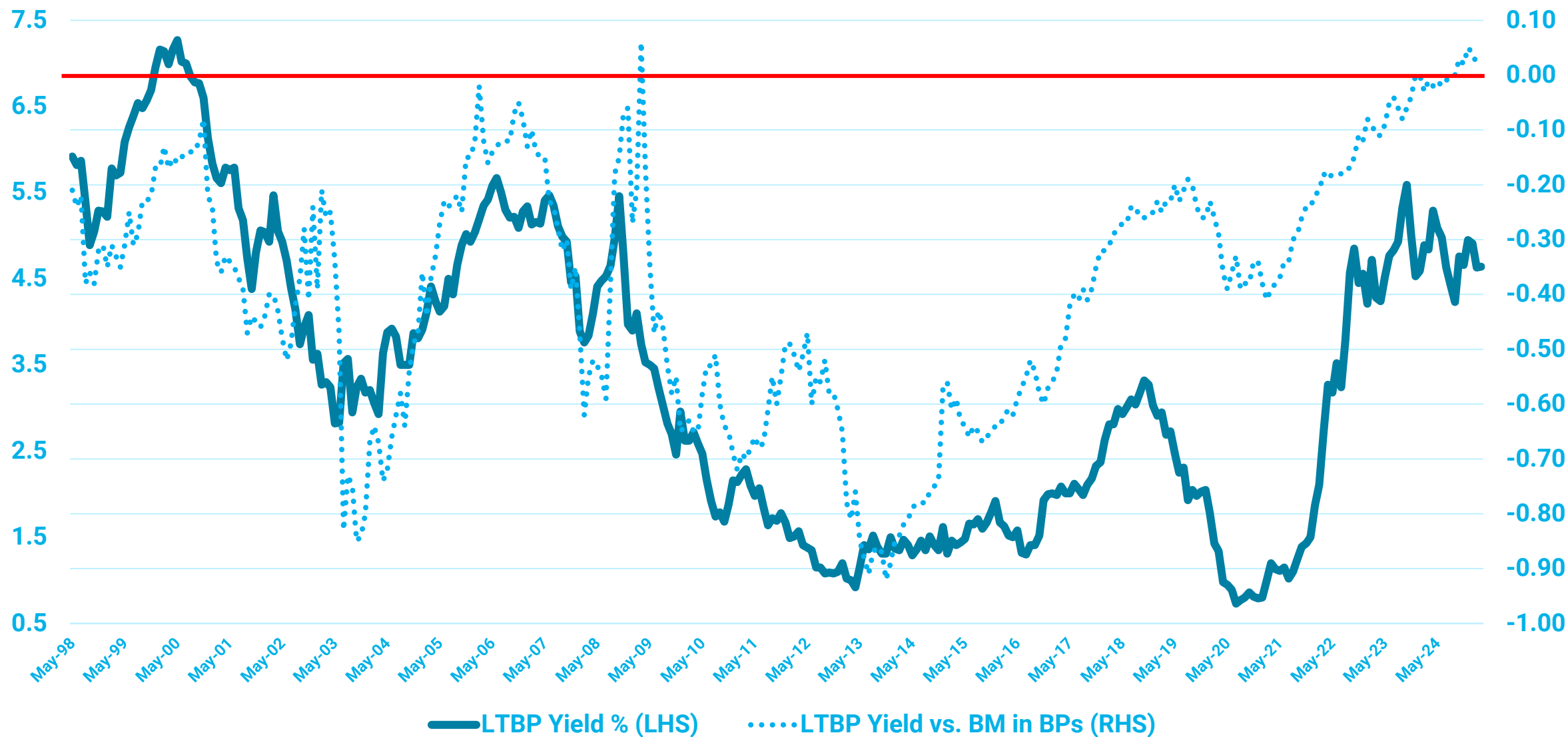
	FYTD 3/31/25	FY23-24	FY22-23
Buys	\$736mn	\$1,080mn	\$769mn
Sells	\$298mn	\$229mn	\$1,060mn
Net	\$439mn	\$851mn	-\$291mn
Yield Buys	5.44%	5.67%	5.33%
Yield Sells	4.93%	5.24%	4.37%
Maturity Buys	17.4 yrs	17.6 yrs	18.8 yrs
Maturity Sells	5.7 yrs	5.2 yrs	3.8 yrs
Spread Buys	124 bps	134 bps	170 bps
Spread Sells	76 bps	77 bps	58 bps
Coupon Buys	5.26%	5.33%	4.89%
Coupon Sells	4.05%	3.85%	3.29%
Rating Buys	A3	A3	A3
Rating Sells	A3	A3	A2

Agency Mortgage Backed Securities

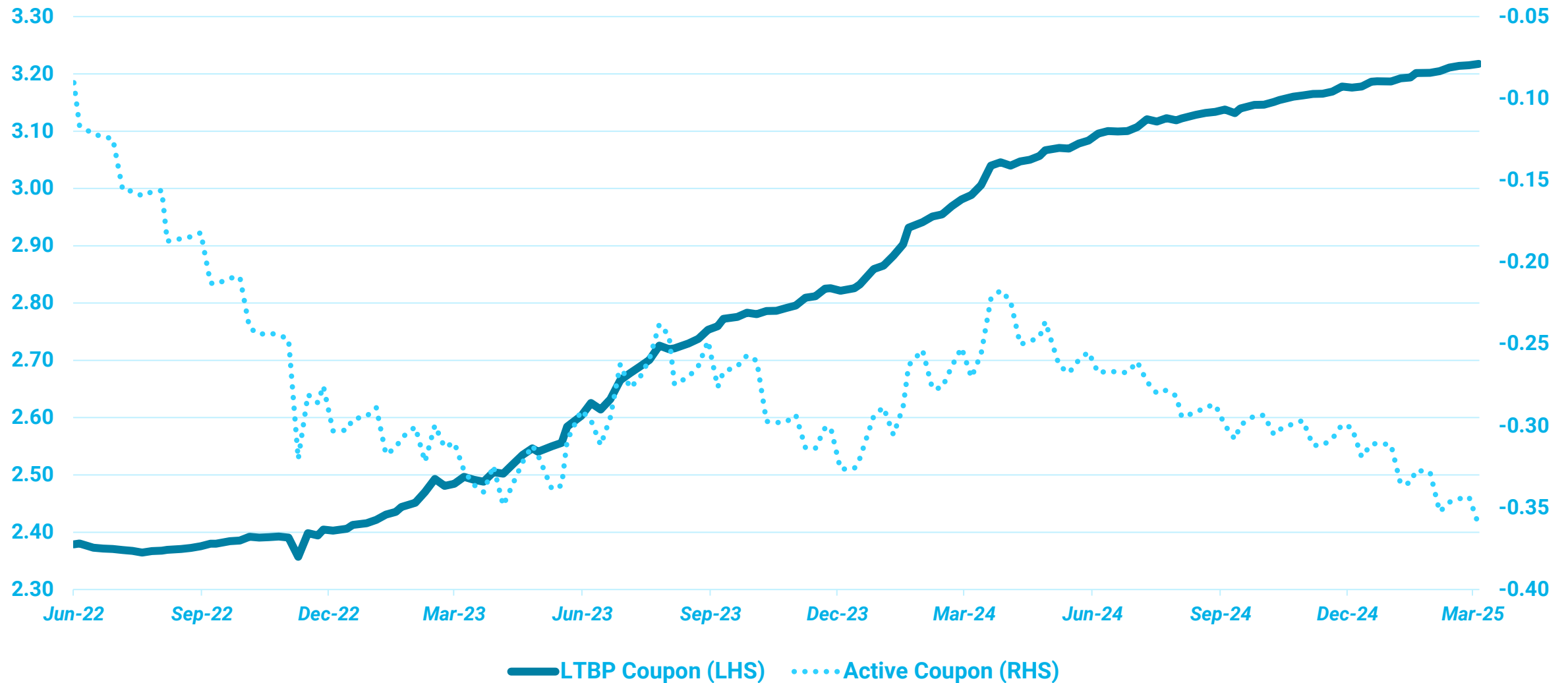
- Continued to purchase specified pools in effort to reduce relative underweight
- Shift between GNMA (explicit guarantee) and conventional pools (implicit guarantee) as spreads warrant
- Review relative value of MBS pass throughs versus high quality corporate bonds
- Prepayments have been muted as mortgage rates remain high



LTBP Yield versus Benchmark Yield

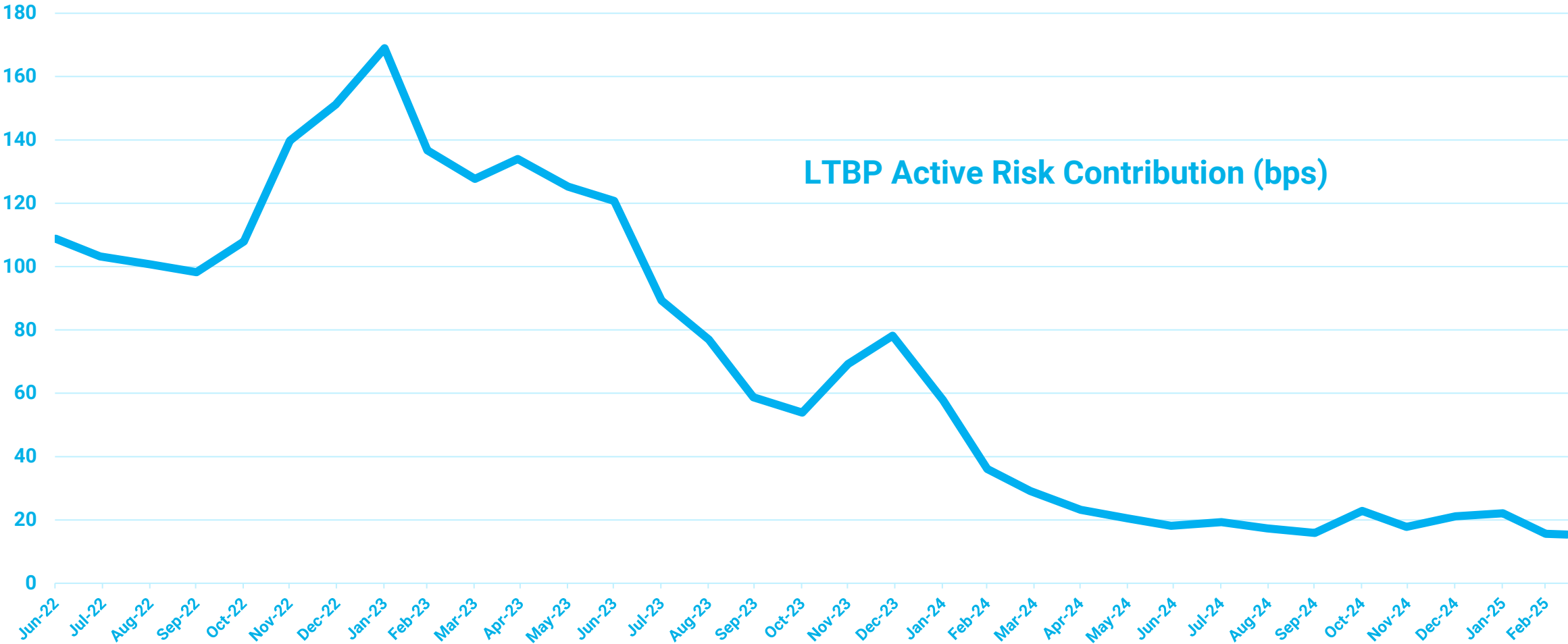


LTBP Coupon



Tracking Error

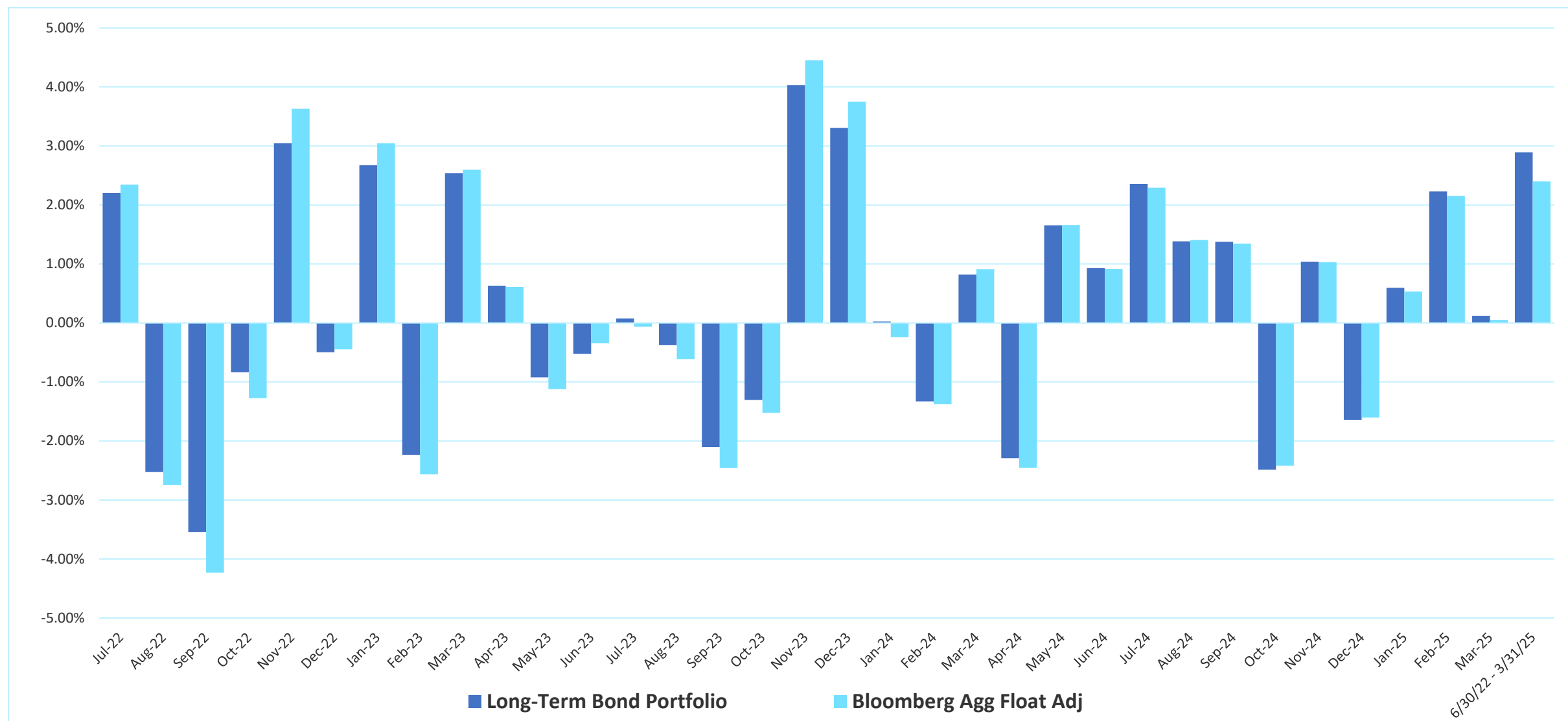
Risk in LTBP due to active management decisions



LTBP Monthly Returns

06/30/2022 to 03/31/2025

LTBP 2.89% vs. Benchmark 2.40%



Conclusion

- **Net investment into LTBP to bring allocation closer towards target**
- **Active duration positioning to take advantage of rate movements**
- **Increasing weighted average coupon and hence portfolio income**
- **Recently outyielding benchmark**
- **Outperformed the benchmark**
- **Significantly reduced tracking error risk by**
 - **Managing duration closer around benchmark**
 - **Lowering Corporate & MBS sector weight divergence, attributable in part to relative value**
- **Actively manage for yield and spread opportunities while maintaining high-quality, diversified and liquid portfolio**
- **Core fixed income allocation that acts like fixed income**

Questions?

*Long term I like bonds, medium term I like stocks,
but short term I like bon-bons and scotch*



Apologies to Mankoff

Appendix Definitions

Contribution to Duration: impact of a particular bond or sector within a portfolio on the overall portfolio's sensitivity to interest rate changes, measured by its duration

Credit Spread: the spread over the risk-free rate of return to account for credit risk (i.e. rating downgrade or default risk)

Option-Adjusted Spread: the spread over the risk-free rate of return to account for credit risk and embedded options in a security

Tracking Error: Risk in an investment portfolio that is due to active management decisions made by the portfolio manager

Securitized Fixed Income: pools of financial assets that produce cash flows which are combined to produce debt instruments

MBS Pass Through: A bundle of home loans bought from banks that originate them and structured as trusts in which mortgage payments are collected and passed through to investors

Prepayment: mortgage loans can be prepaid in whole/part at any time without penalty

Conventional: mortgage loan not insured or guaranteed but conform to guidelines of Fannie Mae and Freddie Mac

Historical Data Sources: Aladdin, Bloomberg, FactSet, CMS BondEdge, LTBP Buys & Sells Spreadsheet, LTBP Corporate Activity Spreadsheet

Appendix Fixed Income Tools

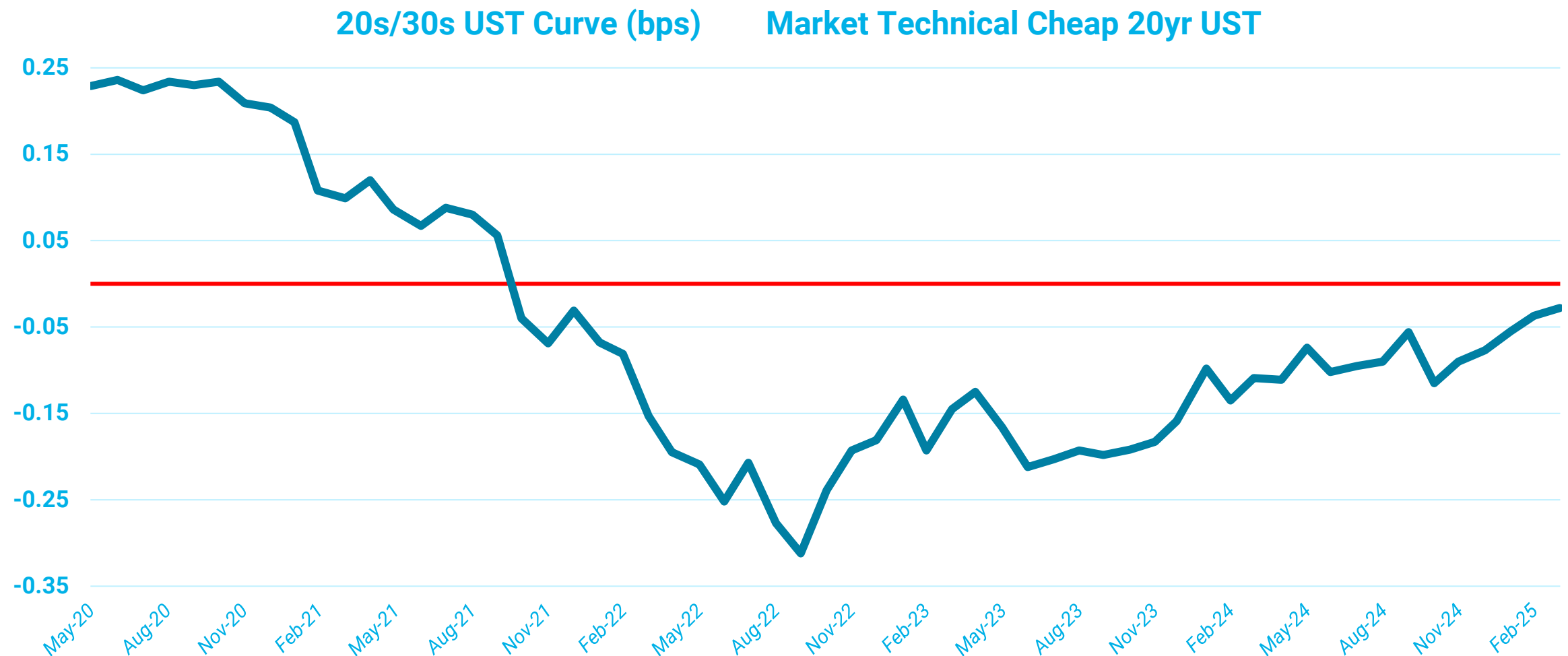
- **Bloomberg:** News, research, portfolio management, primary market research, secondary market quotes, analytics, valuation, relative value
- **Aladdin:** Order Management System, Portfolio Management & Risk Management tool
- **MacroBond:** Macroeconomic and aggregate financial time series data, analytics & charting
- **Moody's & CreditSights:** Fundamental credit research/analysis portals w/access to analysts
- **Sell Side Research:** JPM, BAC, GS, MS, CITI, BMO, NWG, BACR, TD, among others
- **External Fixed Income Manager Research and Discussions:**
 - BlackRock, PIMCO, GSAM, JP Morgan, Loomis Sayles, Nomura, PGIM, Wellington, Advent
 - Continue to meet with other external fixed income managers with no current mandate
- **Net Roadshow:** Internet roadshow presentations from bond issuers
- **DirectBooks:** Corporate bond primary issuance information, ordering and allocation
- **Electronic Trading Systems:** MarketAxess, Bloomberg, TradeWeb
- **EMSX:** Bloomberg function for trading U.S. Treasury futures contracts

Appendix US Treasury Curves

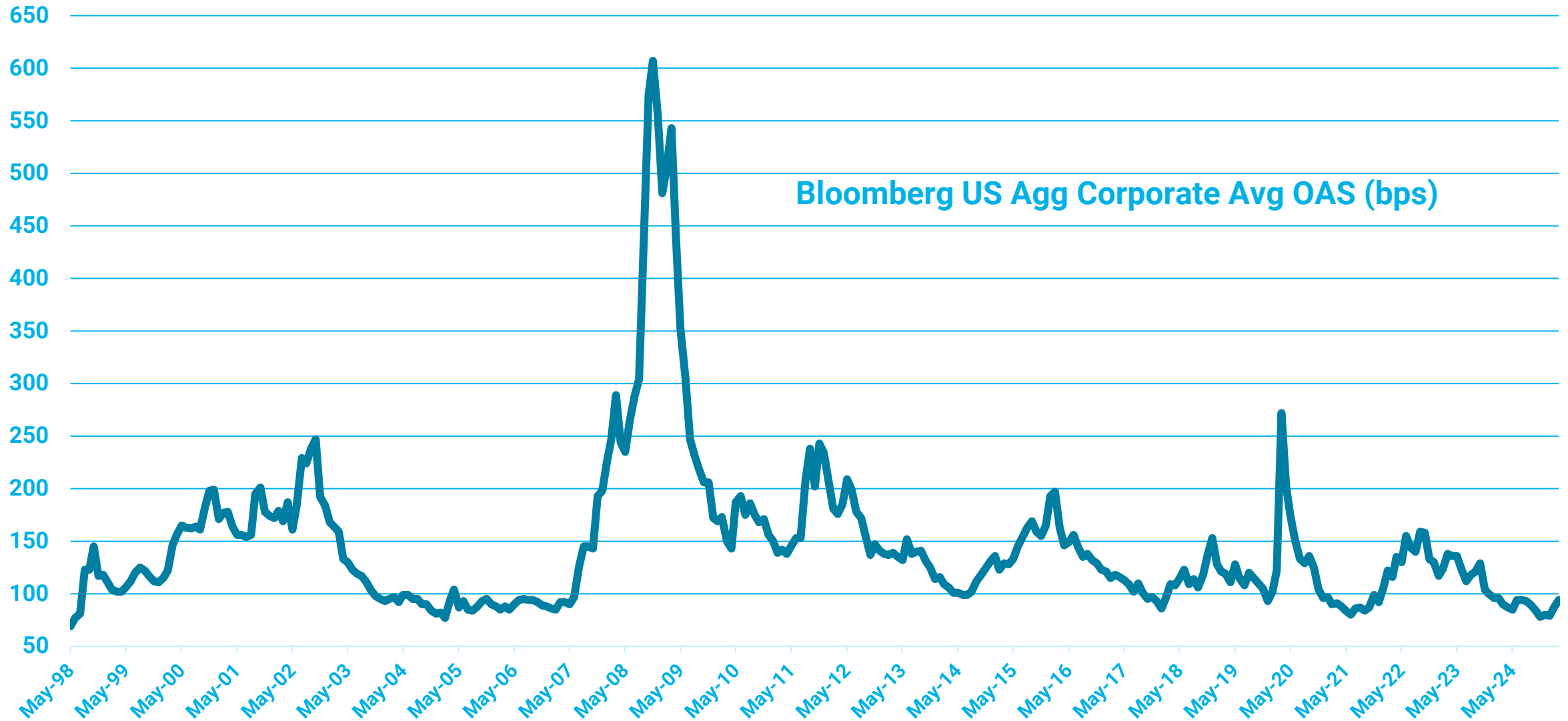
US Treasury Curves in basis points



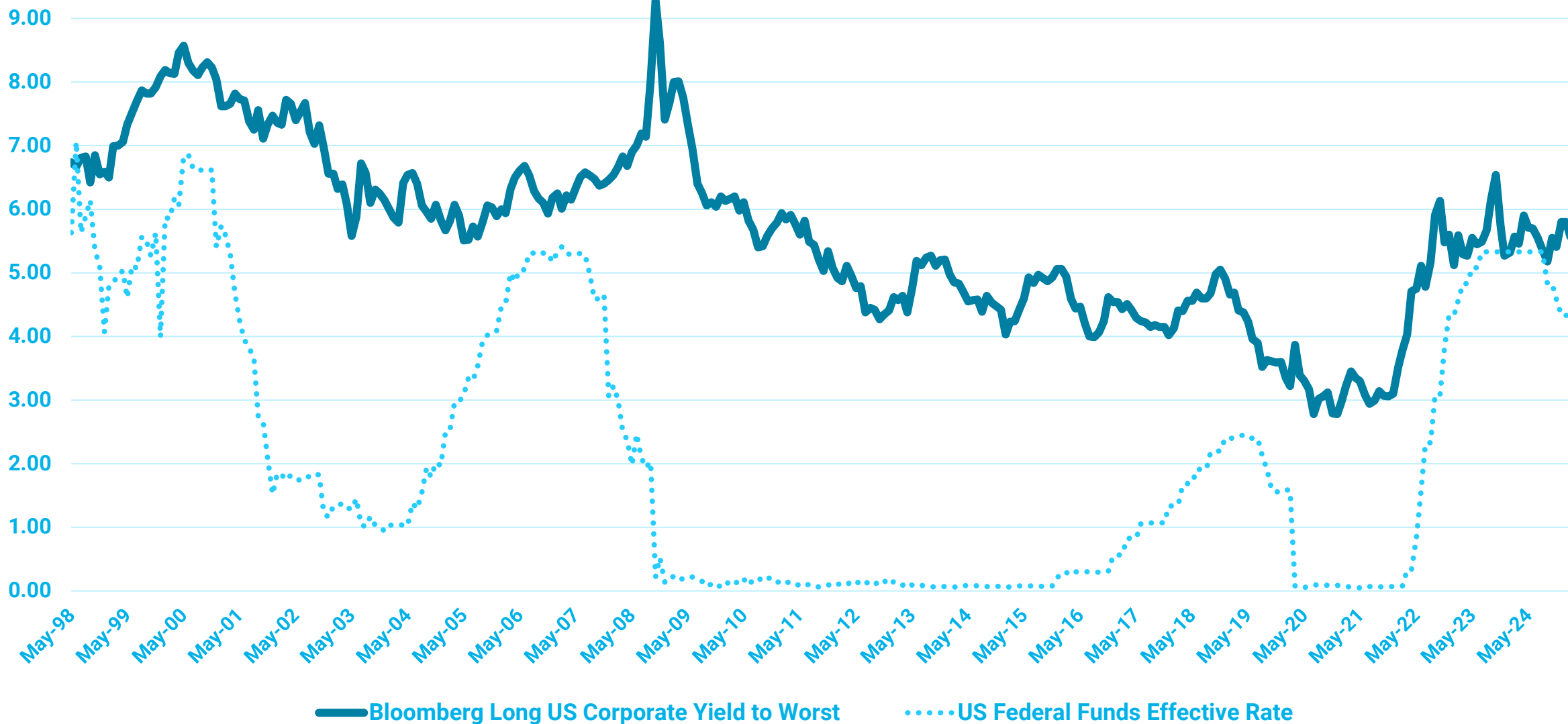
Appendix US Treasury Curves



Appendix Credit Spreads <100bps



Appendix Corporate Bond Yields vs Fed Funds



Appendix US Treasuries

- Offer safety of principal, coupon income and liquidity
- Purchase bonds that add diversification to existing holdings
- Selectively sell front-end exposure and reinvest out the curve when getting compensated for interest rate risk and/or to manage key rate durations
- Participate in U.S. Treasury Bond auctions when appropriate
- Utilize electronic trading to buy/sell in the secondary market
- Yields currently attractive versus 10-year & 20-year averages
- Treasury curves have steepened and no longer inverted

Appendix Corporate Bonds

- Add exposure predominately through primary new issue market
- Review current holdings and positioning to establish portfolio fit
- Perform fundamental credit analysis to review issuer soundness
- Analyze new issue price and concession versus secondary market
- Utilize secondary trades to divest/add to held bonds or procure new positions offering relative value and/or diversification
- Review relative value opportunities by sector, issuer, ratings, curve, etc.
- Execute on swap opportunities to pick up yield, spread and possibly improve credit quality and/or liquidity
- Monitor credit portfolio characteristics, relative issuer weights and duration, rating actions, credit events, corporate actions, and performance

Appendix Agency Mortgage Backed Securities

- Purchase government sponsored / government guaranteed specified mortgage pass-throughs
- Analyze pool characteristics in effort to mitigate prepayment risk / extension risk
 - Characteristics include geography, loan size, loan-to-value, borrower credit score, weighted average coupon, loan age, third-party mortgage origination, etc.
- Review specified pool spread to treasuries, option-adjusted spreads on a historical basis and versus high-quality corporate bonds
- Pay-ups can vary depending on current market technicals
- Portfolio holdings are diverse by vintage, term, coupon, weighted average life, geography exposure, etc.
- We do not invest in the TBA (To-Be-Announced) market due to uncertainty as the security is not designated at the time of trade

Appendix Asset Backed Securities

- Primarily purchase consumer asset-backed securities (credit card payments, auto receivables & cellular phone device payments) along with utility rate reduction bonds
- Top issuers held include: Verizon, Toyota, Ford, GM, Honda, American Express, Bank of America, Chase, Capital One
- AAA-rated with robust structural protections for additional yield pick-up without taking undue credit risk
- Rely on underlying assets for payment and not on the credit of the originator, seller or servicer to redeem bonds
- Review deal spread, weighted average life, expected maturity, servicer, collateral, credit enhancement, credit trends, etc.

Appendix Government Related

- Review supranational, sovereign and agency new issues, including government guaranteed, government owned with no guarantee and government sponsored
- Assess the relative value of high-quality issuers that offer some diversification benefits and spread over U.S. government bonds
- Overweight to government agency bonds with largest exposure to Fannie Mae debentures, Tennessee Valley Authority, Korea Development Bank and Swedish Export Credit
- Overweight to Supranational issuers which promote economic cooperation, e.g. development banks
- In Local Authority sub-sector, only own Canadian provincial debt and have no exposure to municipal issuers due to idiosyncratic issues, limited benchmark exposure and lack of liquidity in most names
- Large underweight position in Sovereign with 1 Korean & 1 Belgium issue
- Emerging market sovereign exposure held in the newly implemented internally managed Emerging Market Bond Portfolio

Appendix NYSTRS IIC 03/09/2022

- **The Fixed Income team sought to clarify and alter their management of the LTBP duration relative to the benchmark**
- **Proposed more deliberate management of LTBP key rate durations according to market conditions**
- **Reduce LTBP duration shortfall versus the benchmark while reducing active duration risk as appropriate**
- **Further expand the opportunity set beyond U.S. Treasuries by adding fundamentally strong corporate bonds with tenors >10 years**
- **Continue to manage the LTBP for liquidity, capital preservation and generation of cash flow while simultaneously responding to yield and spread opportunities further out the maturity spectrum when attractive on a risk-return / relative value basis**



New York State
Teachers'
Retirement
System

Commercial Real Estate (CRE) Equity and Debt Investments Managing Director Update

Investment Committee - April 23, 2025

David C. Gillan
Managing Director of Real Estate

Kevin P. Maloney
Deputy Managing Director of Real Estate

Investment Committee - April 23, 2025

CRE Equity Portfolio	3/31/25 Value	Target	Range	Actual	w/Commitments	
	\$16,306	11%	6%-16%	11.3%	13.2%	
Performance for Periods Ended December 31, 2024						
Strategy (Inception Date)	Net Asset Value	Current Quarter	1 Year	5 Year	10 Year	Since Inception
Direct Properties (2/90)	\$6,363	-3.6%	-8.2%	2.1%	5.4%	8.6%
Core Funds (7/85)	\$1,431	-0.5%	-4.5%	-2.0%	1.5%	5.7%
Value Added (12/89)	\$1,801	-2.7%	-3.0%	8.7%	13.1%	11.2%
Opportunistic (3/99)	\$3,337	-1.5%	-0.8%	5.7%	7.5%	10.2%
U.S. RE Securities (7/95)	\$2,174	-5.3%	9.3%	5.3%	6.6%	10.9%
Global RE Securities (9/17)	\$754	-9.8%	1.3%	0.3%	-	2.7%
Timber (12/98)	\$240	0.6%	9.0%	10.9%	7.1%	5.4%
Total CRE Equity Portfolio	\$16,100	-3.3%	-2.9%	3.0%	5.9%	7.8%
NCREIF-ODCE (Spliced)	-	1.0%	-2.3%	2.0%	4.9%	6.0%

Market Commentary:

- Green Street's CPPI (property values) reflected a 4.9% increase over the prior twelve months. The CPPI is now 17.6% below the 2022 peak. Office valuations may be near a bottom, with property values flat over the prior twelve months and down 37% from the market peak.
- Overall, the public REIT markets are trading at a discount to private asset values. At the sector level, wide dispersions remain across all property types. According to Green Street, healthcare REITS are trading at a 35.2% premium, while Cold storage REITs are trading at a 22% discount to private asset values.
- Tariffs have disrupted overall markets driving increased inflation expectations. In the case of CRE the tariffs are expected to significantly increase costs of construction materials which is expected to slow construction on multifamily assets until, and if, rents are able to move up to make new developments "pencil".

Portfolio Activity:

- Staff screen for opportunities that offer resilient cash flow in locations with durable and diverse demand such as multifamily and digital infrastructure. In addition, staff is focusing on distressed debt opportunities with just over a trillion dollars of CRE debt maturing this year, half of which is with commercial banks that are expected to continue to focus on clearing these assets off their balance sheets.
- Staff continue to monitor financing rates and will consider adding leverage when borrowing rates are accretive to property yields. This may come into play if/when rate cuts are able to decrease borrowing rates significantly.
- Property expense growth remains a concern. Especially around insurance costs in at-risk locations and most geographies across the country. Acquisitions maintains a conservative view in forecasting property expense growth over the projected hold period in underwriting.

Portfolio Performance & Positioning:

- Over the last 12 months, the CRE Equity portfolio produced a net return of -2.9%, which underperformed the NCREIF ODCE policy benchmark.
- Drivers of the lower nominal performance have primarily been the continued valuation declines in West Coast office properties and the decline in the value of our cold storage strategy that has not performed well in the public markets.
- Drivers of the positive relative performance to the benchmark include opportunistic timber sales and the performance of our public security portfolios driven by residential, retail and technology strategies.



CRE Debt Portfolio	3/31/25 Value \$8,771	Target 6%	Range 2%-10%	Actual 6.1%	w/Commitments 7.2%	
Performance for Periods Ended December 31, 2024						
Strategy (Inception Date)	Net Asset Value	Current Quarter	1 Year	5 Years	10 Years	Since Inception
First Mortgages (7/85)	\$2,330	-0.1%	7.2%	2.9%	3.5%	7.7%
Commercial MBS (4/01)	\$3,476	0.6%	9.0%	1.8%	3.0%	4.5%
Core Plus Strategies (8/04)	\$2,026	0.7%	5.9%	2.6%	4.6%	3.7%
Opportunistic Debt (9/01)	\$673	0.9%	2.7%	4.4%	6.5%	1.3%
Total CRE Debt Portfolio	\$8,505	0.5%	7.1%	2.8%	3.7%	7.6%
GL Custom Index (Spliced)	-	-1.1%	5.0%	1.9%	3.1%	7.6%

Market Commentary:

- There has been a lot of recent volatility with interest rates, the 10-year UST yield was at 4.39% at the beginning of the System's fiscal year and now 4.38% on 4/14/25.
- With that said, a significant sell off post the Trump tariff announcements moved treasury yields up 49 bps in seven days. Going forward, expectations are that increased volatility will continue at least in the near term.
- Current expectations for multiple rate cuts throughout 2025 should provide a valuation increase for our existing CRE debt portfolio as well as a potential boost to our public REIT and private real estate valuations. With that said, our main focus at this point is to continue to focus on CRE debt opportunities where base rates and spreads are relatively attractive.

Portfolio Activity:

- Generally, core CRE debt opportunities provide a risk adjusted return premium to the private core CRE equity markets.
- Within the CRE debt strategies, there's generally a premium yield for Investment grade CMBS relative to private first mortgages due to a significant increase in CMBS issuance in the beginning of 2025. Main strategies:
 - When attractive opportunities are available, We will continue to look at five-to-seven-year private mortgages on stabilized assets that are yielding (in the market) 5.00%-5.50%. These positions provide an opportunity to increase the duration of the portfolio.
 - Investment grade CMBS securities currently provide a premium risk adjusted opportunity to pick up higher yields in the 5.50%-7.75% range on single asset/single borrower bonds.
 - Senior mezzanine and bridge loans provide net yields in excess of 7.00%. They also provide a floating rate component to participate in a rising rate environment while using floors to provide minimum yield levels when rates are dropping.

Portfolio Performance & Positioning:

- Over the last 12 months, the CRE Debt Portfolio produced a total net return of 7.1% which outperformed our Giliberto-Levy benchmark.
- CMBS and first mortgages were the main drivers of positive portfolio performance. CMBS performance was driven by investment grade spread compression while mortgage performance benefitted from higher yields on loans originated in 2024.
- The existing first mortgage portfolio continues to have a large concentration of pre-covid office loans that were originated between 2014 and 2017. We continue to work with our existing borrowers to address these loans through short-term extensions, focused principal paydowns, reserves and cash sweeps.



Investment Committee - April 23, 2025

Commercial Real Estate (CRE) Investments – MD Update

Equity Real Estate Performance for Periods Ended <u>December 31, 2024</u>						
Strategy (Inception Date)	Net Asset Value	Current Quarter	1 Year	5 Year	10 Year	Since Inception
Direct Properties (2/90)	\$6,363	-3.6%	-8.2%	2.1%	5.4%	8.6%
Core Funds (7/85)	\$1,431	-0.5%	-4.5%	-2.0%	1.5%	5.7%
Value Added (12/89)	\$1,801	-2.7%	-3.0%	8.7%	13.1%	11.2%
Opportunistic (3/99)	\$3,337	-1.5%	-0.8%	5.7%	7.5%	10.2%
U.S. RE Securities (7/95)	\$2,174	-5.3%	9.3%	5.3%	6.6%	10.9%
Global RE Securities (9/17)	\$754	-9.8%	1.3%	0.3%	-	2.7%
Timber (12/98)	\$240	0.6%	9.0%	10.9%	7.1%	5.4%
Total CRE Equity Portfolio	\$16,100	-3.3%	-2.9%	3.0%	5.9%	7.8%
Blended Benchmark*	-	-0.2%	0.3%	1.3%	4.6%	5.9%

Debt Real Estate Performance for Periods Ended <u>December 31, 2024</u>						
Strategy (Inception Date)	Net Asset Value	Current Quarter	1 Year	5 Years	10 Years	Since Inception
First Mortgages (7/85)	\$2,330	-0.1%	7.2%	2.9%	3.5%	7.7%
Commercial MBS (4/01)	\$3,476	0.6%	9.0%	1.8%	3.0%	4.5%
Core Plus Strategies (8/04)	\$2,026	0.7%	5.9%	2.6%	4.6%	3.7%
Opportunistic Debt (9/01)	\$673	0.9%	2.7%	4.4%	6.5%	1.3%
Total CRE Debt Portfolio	\$8,505	0.5%	7.1%	2.8%	3.7%	7.6%
Blended Benchmark*	-	-0.9%	5.7%	1.8%	3.0%	7.6%

* The Blended Benchmarks used here represent the market-value weighted average of the underlying benchmarks for all of the public/private strategies. The System's Real Estate Policy benchmark is the NCREIF-ODCE for the Real Estate Equity Portfolio, and the Giliberto-Levy Custom Index for the Real Estate Debt Portfolio.



New York State
Teachers'
Retirement
System

Private Equity & Private Debt Managing Director Update

Investment Committee April 23, 2025

Gerald J. Yahoudy II, CAIA, FDP
Private Equity & Private Debt

Private Equity & Private Debt MD Update

	<u>Mkt Val</u>	<u>Asset Allocation %</u>			<u>Benchmark</u>	<u>Net Returns % (as of 12/31/24)</u>						<u>Excess Return % vs. Public Markets (1)</u>					
	<u>\$B</u>	<u>Actual</u>	<u>Target</u>	<u>Range</u>		<u>1Y</u>	<u>3Y</u>	<u>5Y</u>	<u>10Y</u>	<u>20Y</u>	<u>30Y</u>	<u>1Y</u>	<u>3Y</u>	<u>5Y</u>	<u>10Y</u>	<u>20Y</u>	<u>30Y</u>
Private Equity	\$14.50	10.0	9.0	4-14	S&P 500 + 5%	6.4	2.9	13.6	13.9	13.6	13.5	-18.6	-6.0	-0.9	0.8	3.2	2.6
Private Debt	\$ 2.70	1.9	2.0	0.5-5	Morningstar LSTA + 3%	8.3	7.7	8.9	-	-	-	-0.7	0.7	3.0	-	-	-

Note: Market Values and Asset Allocation %'s are estimated as of 3/31/25 based on latest valuations rolled forward for cash flows.

(1) - S&P 500 and Morningstar LSTA US Levered Loan Index.

Market Commentary:

- Although market activity increased year over year, it remains to be seen what impact current market volatility will have going forward, especially on the PE side.
- Private credit is expected to continue growing and should remain as a go to source for buyouts and M&A. Any material movements in interest rate would directly impact most of this asset class.

Portfolio Activity & Asset Allocation:

- Quarterly valuations for both private equity and private debt increased 1.6% and 1.9% respectively from 9/30/24.
- For the quarter ended 3/31, one PD fund and nine PE funds were approved by IIC, including two new GP relationships on the PE side.
- Cash flows for the first three quarters of the fiscal year were positive for PE and negative for PD.

Portfolio Performance & Positioning:

- Overall, returns are positive. PE and PD have both outperformed the public markets over the long term but underperformed in the shorter term.
- Implementation of additional strategies beyond direct lending continue in the PD portfolio focused on opportunistic and secondary strategies for diversification purposes.

Other Updates:

- Nothing to report.

Investment Committee Meeting April 23, 2025

**RESOLUTION RENEWING ADELANTE CAPITAL
MANAGEMENT LLC**

RESOLVED, That the System's Executive Director and Chief Investment Officer is authorized to renew the agreement with Adelante Capital Management LLC to manage a portion of the System's portfolio, to be actively invested in the securities of real estate investment trusts ("REITs") and real estate operating companies ("REOCs"), for a period of one year, effective July 1, 2025.

Investment Committee Meeting April 23, 2025

RESOLUTION RENEWING GOLDMAN SACHS ASSET MANAGEMENT, LP

RESOLVED, That, the Executive Director and Chief Investment Officer, or designee, is authorized to renew the agreement with Goldman Sachs Asset Management, L.P. to manage a portion of the System's assets as an active India equity manager benchmarked to the MSCI India IMI Index for a period of one year commencing July 5, 2025.

Investment Committee Meeting April 23, 2025

Resolution Renewing JPMorgan Chase Bank, N.A.

RESOLVED, the Executive Director and Chief Investment Officer is authorized to renew the agreement with JPMorgan Chase Bank, N.A., to act as an agency securities lender for a portion of the System's public securities assets for a period of one year, effective July 1, 2025.

RESOLUTION RENEWING LSV ASSET MANAGEMENT

WHEREAS, LSV Asset Management was hired as an international equity manager on July 25, 2011 and as a global equity manager on February 15, 2018; now be therefore:

RESOLVED, That, the Executive Director and Chief Investment Officer is authorized to renew the agreement with LSV Asset Management for a period of one year, effective July 25, 2025, to manage (i) a portion of the System's assets as an international equity manager benchmarked to the MSCI ACWI ex-US index, and (ii) a portion of the System's assets as a global equity manager benchmarked to the MSCI ACWI index.

Investment Committee Meeting April 23, 2025

RESOLUTION RENEWING WELLINGTON MANAGEMENT COMPANY, LLP

RESOLVED, That the Executive Director and Chief Investment Officer is authorized to renew the agreement with Wellington Management Company, LLP to manage a portion of the System's fixed income portfolio in a Global Aggregate fixed income mandate benchmarked to the Bloomberg Global Aggregate Float Adjusted ex CNY Bond Index in U.S. Dollars hedged to the U.S. Dollar for a period of one year, effective June 20, 2025.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



TO: Retirement Board

FROM: T. Lee

SUBJECT: Quarterly Report of Executive Director and Chief Investment Officer Investment Discretion Exercised January - March 2025

Fixed Income

Period	Action Taken	Amount
Q/E 3/31/25	Net cash and securities reallocated into internally managed Long-Term Bonds	\$243.8 M
Q/E 3/31/25	Net cash and securities reallocated into internally managed Emerging Market Debt	\$163.5 M
Q/E 3/31/25	Net cash withdrawn from externally managed Global Bond accounts	\$150.0 M
Q/E 3/31/25	Net cash withdrawn from externally managed High Yield accounts	\$337.3 M

Public Equities

Period	Action Taken	Amount
Q/E 3/31/2025	Net cash reallocated out of internally managed domestic equity portfolios	\$1.87B
Q/E 3/31/2025	Cash reallocated out of externally managed domestic equity portfolio (T Rowe)	\$100M



TO: Retirement Board

FROM: T. Lee

SUBJECT: Quarterly Report of Executive Director and Chief Investment Officer Investment Discretion Exercised January - March 2025

Real Estate - New Commitments

Date of Internal Inv. Comm. Approval	Investment Name	Amount	New or Renew
	NONE		

Real Estate

Period	Action Taken	Amount
Q/E 3/31/2025	Cash reallocated out of externally managed REIT portfolio (Cohen & Steers)	\$60M
Q/E 3/31/2025	Cash reallocated to externally managed CMBS portfolio (Blackrock)	\$150M



TO: Retirement Board

FROM: T. Lee

SUBJECT: Quarterly Report of Executive Director and Chief Investment Officer Investment Discretion Exercised January – March 2025

Private Equity/Debt – New Commitments

Date of Internal Inv. Comm. Approval	Investment Name	Amount	New or Renew
Jan 6 2025	Blue Torch Credit Opp Fund IV LP	\$300M	Renew
Jan 13 2025	Carlyle Asis Partners VI LP and Carlyle Bluebird	\$150M \$50M	Renew
Jan 13 2025	MBK Partners Fund VI and Oak Co-Invest	\$150M \$50M	Renew
Feb 3 2025	Integrum Cap Partn II and Integrum II Co-Inv	\$150M \$50M	New
Feb 3 2025	JLL Partners Fund IX	\$200M	New
Feb 10 2025	AMCSI Co-Inv Partnership II	\$200M	Renew
Feb 10 2025	Hg Saturn 4 A LP	\$150M	Renew



TO: Retirement Board

FROM: T. Lee

SUBJECT: Quarterly Board Report of Mail Votesⁱ for the period January – March 2025

Date	Type (Full Board Vote or Investment Committee Vote)	Transaction
	NONE	

ⁱ “...The Board may act by a unanimous vote of its members taken by mail and/or e-mail and other electronic means approved by the System, or by telephone confirmed by mail and/or other electronic means approved by the System, on occasional matters determined by the President to be non-controversial in nature so as not to require a special meeting of the Board but having circumstances which make it impractical to delay action until the next annual or stated meeting of the Board...” from NYSTRS’ Bylaws



TO: Retirement Board

FROM: T. Lee

SUBJECT: REAC Quarterly Transactions Board Report of for the period January – March 2025

Transaction	Approved by REAC	ED/CIO Discretion Exercised
	None	



Disability Review Committee Meeting

April 23, 2025

COMMITTEE MEMBERS

Eric Iberger, Chair

Juliet Benaquisto, Paul Farfaglia, David Keefe, Donald A. Little III, Ruth Mahoney, Oliver Robinson

AGENDA p. 294

Call to Order by Chair

A. Approval of Minutes from January 29, 2025 Disability Committee meetings p. 295

B. Committee recommendations to the Board at the April 24, 2025 Board meeting:

- A Disability Denial Resolution and a Disability Rescission Resolution will be brought before the Board

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
10 CORPORATE WOODS DRIVE, ALBANY NY

Disability Review Committee Meeting

A meeting of the Disability Review Committee of the Retirement Board was held at the System on January 29, 2025. The meeting was called to order at 11:32 p.m. by Eric Iberger, Chair.

The following individuals were in attendance:

Committee Members: Juliet Benaquisto, Paul Farfaglia, Eric Iberger, Donald A. Little III (via WebEx), David Keefe, Ruth Mahoney, Oliver Robinson

Board Members: Phyllis Harrington, Jennifer Longtin, Nicholas Smirensky

Upon motion of O. Robinson, seconded by R. Mahoney and unanimously carried, the meeting minutes of October 30, 2024 were approved.

E. Iberger, Chair, reported that the System's Medical Board had met monthly over the prior three months and that a disability denial resolution, a disability rescission resolution Tier 1 and a disability rescission resolution Tier 3 would be brought before the Board at its meeting on January 30, 2025.

There being no further business, the Committee unanimously adjourned at 11:35 p.m.

Respectfully submitted,

A solid black rectangular box used to redact the signature of Thomas K. Lee.

Thomas K. Lee



Ethics Committee Meeting

April 23, 2025

COMMITTEE MEMBERS

Paul Farfaglia, Chair

Oliver Robinson, Juliet Benaquisto, Thomas Lee, Don Ampansiri

AGENDA p. 296

Call to Order by Chair

- A. Approval of minutes from January 29, 2025 Ethics Committee meetings p. 297
- B. Follow-Up Report on Outstanding Annual Disclosure Statement
- C. Update on EDCIO Quarterly Disclosures (Motion to go into **Executive Session** pursuant to Open Meetings Law §105 (1)(f) as it relates to the discussion of the financial history of an individual)

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
10 Corporate Woods Drive, Albany NY

Ethics Committee Meeting

A meeting of the Ethics Committee of the Retirement Board was held at the System on January 29, 2025. The meeting was called to order by Paul Farfaglia, Chair, at 11:36 a.m.

The following individuals were in attendance:

Committee Members: Juliet Benaquisto, Paul Farfaglia, Oliver Robinson
Thomas Lee, Don Ampansiri

Board Members: Phyllis Harrington, David Keefe, Donald A. Little III (via WebEx),
Jennifer Longtin, Ruth Mahoney, Oliver Robinson, Nicholas
Smirensky

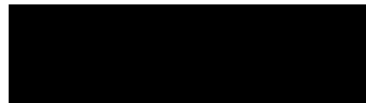
NYSTRS Staff: Miriam Dixon

Upon motion of J. Benaquisto, seconded by O. Robinson and unanimously carried, the minutes from the October 31, 2024 meeting were approved.

D. Ampansiri and M. Dixon reported that the Annual Disclosure Statements and EDCIO quarterly disclosures had been reviewed with no issues. There is one outstanding annual disclosure yet to be received and is expected shortly. A follow up report on the outstanding disclosure will be made at the next Ethics Committee meeting.

There being no further business, and with unanimous consent, the meeting adjourned at 11:37 a.m.

Respectfully submitted,

A solid black rectangular box used to redact the signature of Thomas K. Lee.

Thomas K. Lee



Executive Committee Meeting

April 23, 2025

COMMITTEE MEMBERS

David Keefe, Chair
Phyllis Harrington, Oliver Robinson, Nicholas Smirensky

AGENDA p. 298

Call to Order by Chair

- A. Approval of January 29, 2025 and March 21, 2025 Meeting Minutes pp. 299-301
- B. System's Operating Budget
 - 1. Executive Summary of Operating Budget pp. 302-316
 - 2. Operating Expense Comparison Memo pp. 317-318
 - 3. Resolution on Operating Budget Fiscal Year 2025-26 p. 319
- C. Legislative Update – D. Ampansiri pp. 320-330
- D. Discussion on Proposed Rules & Regulations Updates to Part 5021: Retired Board Member Election pp. 331-333
- E. Business Continuity Plan
 - 1. Resolution Accepting Changes to the Business Continuity Plan 2025 p. 334
- F. System Financial Statements pp. 335-339
- G. Quarterly Signatory Additions & Deletions p. 340

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
10 CORPORATE WOODS DRIVE, ALBANY NY

Executive Committee Meeting

A meeting of the Executive Committee of the Retirement Board of the New York State Teachers' Retirement System was held at the System on January 29, 2025.

The following individuals were in attendance:

Committee Members: David Keefe, Phyllis Harrington, Oliver Robinson, Nicholas Smirensky

Board Members: Juliet Benaquisto, Paul Farfaglia, Eric Iberger, Donald A. Little III (via WebEx), Jennifer Longtin, Ruth Mahoney

NYSTRS' Staff: Thomas K. Lee, Don Ampansiri, Miriam Dixon, Vijay Madala

The meeting was called to order by D. Keefe, Chair, at 12:29 p.m.

The following items were discussed:

1. Approval of minutes from October 30, 2024 meeting

Upon motion of P. Harrington, seconded by O. Robinson and unanimously carried, the minutes of the October 30, 2024 meeting were approved.

2. Legislative Update

D. Ampansiri reviewed 2024 Legislation of Interest, Program Bill 24-2 which was signed into law and the 2025 Legislative Program (Appendix A, pp. 3-13)

3. Finance Reports

The Committee members reviewed System financial reports (Appendix B, pp. 14-18).

4. Quarterly Signatory Additions and Deletions

The Committee members reviewed the quarterly signatory report (Appendix C, p. 19)

5. Business Continuity Plan Update and Disaster Response

Upon motion of O. Robinson, seconded by N. Smirensky and unanimously carried, the Committee went into Executive Session at 12:43 p.m. to hear Business Continuity Plan updates given by M. Dixon and V. Madala.

Upon motion of P. Harrington, seconded by O. Robinson and unanimously carried, the Committee came out of Executive Session at 1:13 p.m.

The Committee will review the full Business Continuity Plan before the April Board meeting and will consider a motion to accept the plan as presented at the April Board meeting.

Having no further business, the Committee unanimously adjourned the meeting at 1:15 p.m.

Respectfully submitted,

A solid black rectangular box used to redact the signature of the person submitting the document.

Thomas K. Lee

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
10 Corporate Woods Drive, Albany NY

Executive Committee Meeting

A meeting of the Executive Committee of the Retirement Board was held at the System and via WebEx on March 21, 2025.

The following individuals were in attendance:

Committee Members: Phyllis Harrington (via WebEx), David Keefe (via WebEx), Oliver Robinson (via WebEx), Nicholas Smirensky (via WebEx)

Board Members: Paul Farfaglia (via WebEx)

NYSTRS' Staff: Thomas Lee, Matt Albano, Dave Gillan, Emily Ekland, Beth Dellea, Binoop Unni, Vijay Madala, Margaret Andriola, Miriam Dixon, Rebecca Kannan, Judy Huntley, Tim Mack Justin Milanese, Stacey Lesser Meehan
Via Webex: Melody Prangle, Kathy Ebert, Michael Federici, Gerald Yahoudy, Danny Malavé, Han Yik, Richard Young, Don Ampansiri

Visitors: Kira Johansen, BlackRock (via WebEx)

With unanimous consent, the meeting was called to order at 1:00 p.m. by David Keefe, Chair.

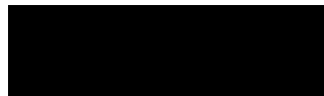
The following item was discussed:

1. System's Fiscal 2025-2026 Proposed Operating Budget

R. Kannan and J. Huntley gave a presentation on the proposed 2025-26 System operating budget. The Committee discussed the operating budget, which will come before the Board for action at its April 24, 2025 meeting.

There being no further business and with unanimous consent, the meeting adjourned at 1:41 p.m.

Respectfully submitted,



Thomas K. Lee



New York State Teachers' Retirement System

DATE: April 23, 2025
TO: Executive Committee
FROM: T. Lee
SUBJECT: 2025-26 Proposed Budget
CC: M. Andriola, M. Dixon, R. Kannan

Attached is the 2025-26 proposed budget.

- The overall System budget for 2025-26 is proposed to be \$116.1 million, which is a 12.6% increase over the 2024-2025 budget.
 - Salary and benefit expenses comprise 41% of the year-over-year increase, due to the annual contract increases and an increase in authorized headcount for the 25-26 fiscal year.
- The number of total authorized positions is proposed to increase from 490 to 510.
- The Administrative Expense Rate for 2025-26 will remain at 0.35% of member salary base.
- Capital Improvement Program:
 - The System's Capital Improvement Program includes funding for depreciation and maintenance costs of capital assets at the Albany and Malta locations.
 - The 2025-26 budget proposal includes an increase in the Capital Improvement Program from \$5.25 million to \$8.5 million, the first increase in nine years.
 - Accounts for 25% of the 2025-26 Budget year-over-year increase.
- The budget contains an estimated contribution of \$6.2 million for other post-employment benefits (other than pensions), which is an (8.3%) decrease from the 2024-25 budget. NYSTRS' actuarial consultant, Bolton has provided an actuarial valuation report which details the development of the actuarially determined contribution and plan funded ratio and is included in the April Board meeting material for the Retired Employee Health Benefits Trust Committee Meeting.



New York State
Teachers'
Retirement
System

Proposed Budget FY 2025-2026

April 23, 2025

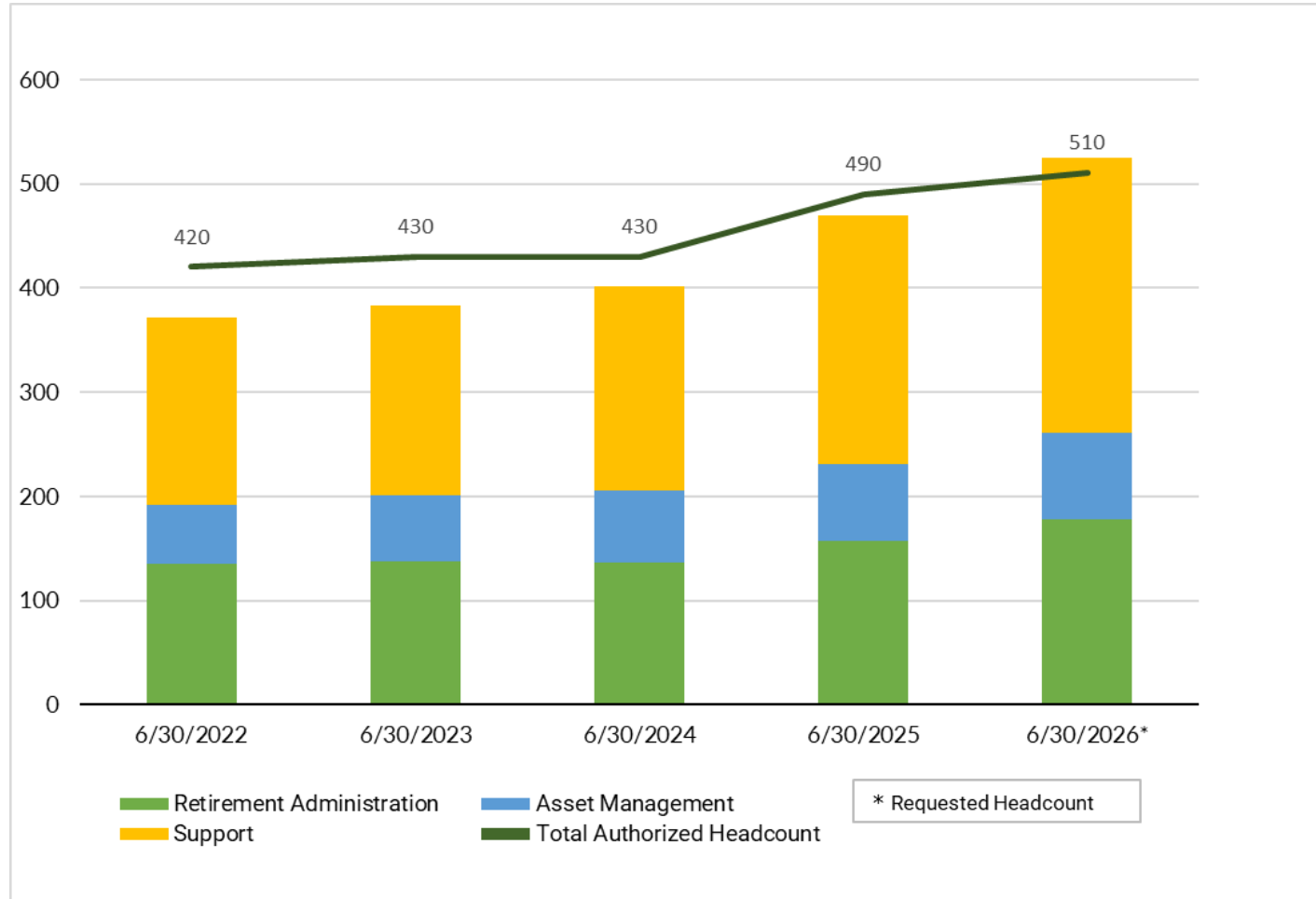
NYSTRS Vision

To be the model for pension fund excellence and exceptional customer service.

Agenda

- Workforce
- Infrastructure
- Fund Balance
- Administrative Rate

Future of Our Workforce



2025-2026 Proposed Authorized: 510
(24-25 Authorized: 490)

Hiring Goals:

Difficult to fully staff MR and IT due to turnover.

Focus on bringing Member Relations and IT staffing levels up to meet business needs:

- Closeouts
- Backfill turnover
- Workday
- Demand backlog
- Pension Admin System

Investing in Our Workforce

(dollars in thousands)	2025-26	2024-25	\$ Change	% Change
Salaries:	\$ 60,446	\$ 56,143	\$ 4,303	7.7%
Member	13,503	12,059	1,444	12.0%
Investment	11,396	10,519	877	8.3%
Support	35,547	33,565	1,982	5.9%
Benefits	18,859	17,278	1,581	9.2%
OPEB	6,236	6,804	(568)	-8.3%
Personnel Expenses	3,229	2,728	501	18.4%
Total	\$ 88,770	\$ 82,953	\$ 5,817	7.0%

Workforce investment:

- Contractual increases (max 6% per employee)
- Headcount increase to 510

Recruit, Develop and Retain:

- Internship and Fellowship programs
 - One prior intern now Fellow
 - All 3 graduating Fellows joining as permanent employees in July
- NY HELPS
 - Extended through 6/2026
 - Leveraging for many entry level
- Personnel Expenses
 - Training and development
 - Delegates' meeting expenses

Investing in Our Infrastructure

System Budget				
(dollars in thousands)	2025-26	2024-25	\$ Change	% Change
Building Occupancy	\$ 2,523	\$ 2,581	\$ (58)	-2.2%
Computer	9,872	6,968	2,904	41.7%
Professional and Governmental	6,482	5,432	1,050	19.3%
Capital Improvement Program	8,500	5,250	3,250	61.9%
Total	\$ 27,377	\$ 20,231	\$ 7,146	35.3%

Infrastructure investment:

Facilities:

- Replace obsolete camera system
- Cubicle reorganization
- Basement renovations – moving mailroom

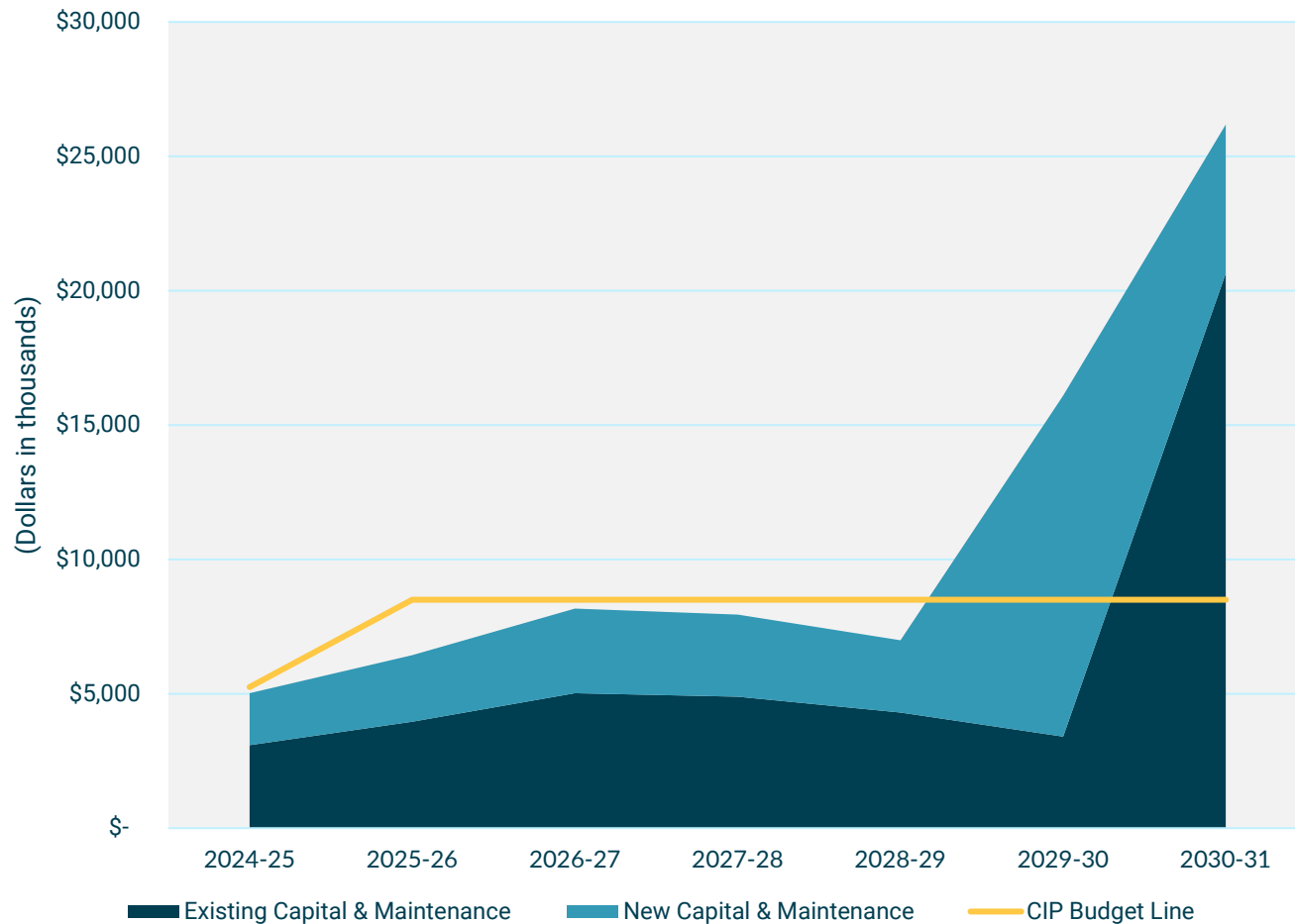
Information Technology:

- ERP (Workday)
- VDI Server replacement
- Phone system upgrade

Professional Fees:

- Pension Administration
- Succession planning
- Microfiche conversion

Future of Our Infrastructure



Capital Improvement Program

2025-2026 Budget: \$8,500,000

- Previous year CIP Budget of \$5,250,000 has been consistent since 2016-17
- Current year increase of \$3,250,000
 - Workday
 - Building changes

System Funding

Funding Sources

Employer Contribution Rate
Normal Rate
Group Life
Excess Benefit
Admin Rate

2026 \$80,421

Investment Income
Asset Management Costs
Member Benefits
Allocation of Inv. Income

2026 \$43,245

100%	Retirement Administration Expenses - 2026 \$20,195	
	Information and Communications Center Member Benefits Member and Employer Services Member Relations Quality Assurance	
65%	Support Department Expenses - 2026 \$81,082	
	Actuary Administration Budget & Analytics Business Continuity Site Communications & Outreach Diversity, Equity & Inclusion Engagement & Events Enterprise Planning & Development Executive Facility Services	Finance Human Resources Information Technology IT- Business Solutions IT - Technical Services Internal Audit Legal Office of Chief Financial Officer Risk Management Strategic Planning Training & Development
35%		
100%	Asset Management Expenses - 2026 \$14,870	
	Fixed Income Investment Operations Public Equities Private Equity Real Estate Stewardship	

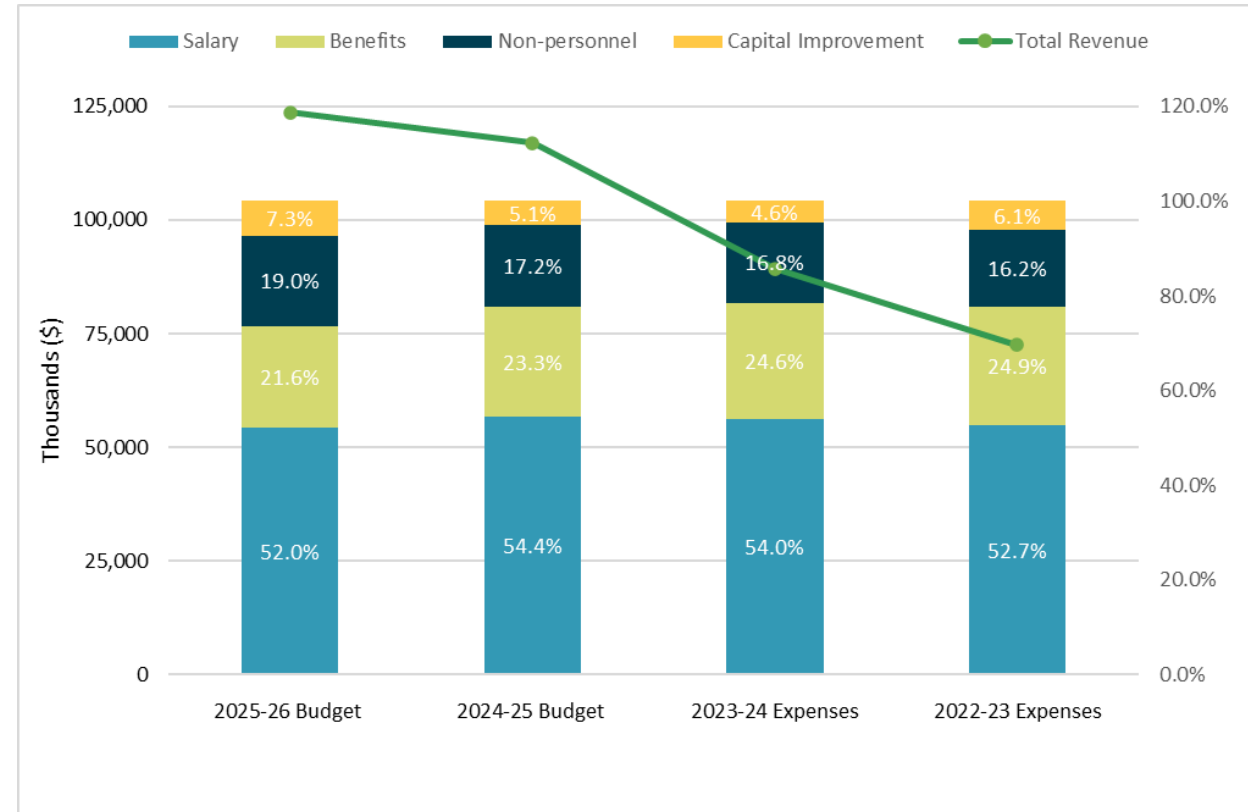
Excess

2026 \$7,519

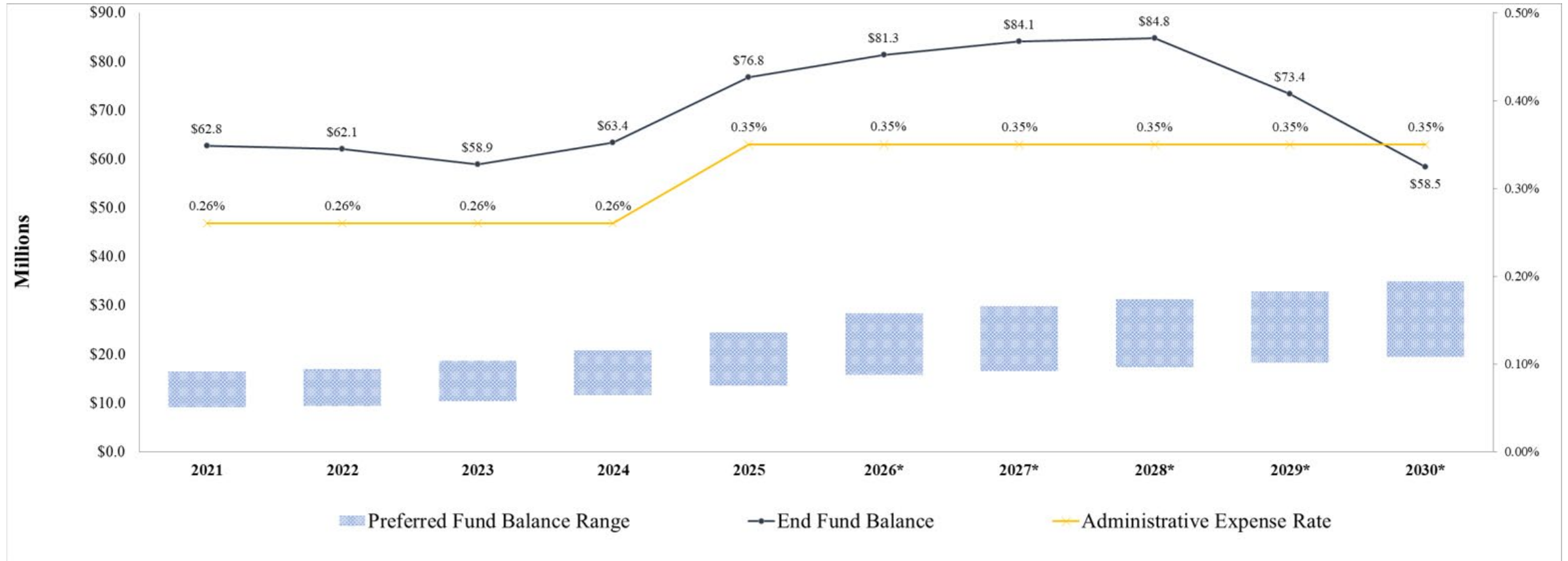
Administrative Fund Balance

Change in Fund Balance

System Budget				
(dollars in thousands)	FY 2025-26 Budget	FY 2024-25 Budget	FY 2023-24 Actual	FY 2022-23 Actual
Revenue				
Retirement administration	\$ 80,421	\$ 77,999	\$ 60,037	\$ 46,565
Asset management	43,245	38,914	29,287	25,990
Total revenue	123,666	116,913	89,324	72,555
Expenses				
Salary	60,446	56,143	45,581	39,898
Benefits	25,095	24,082	20,715	18,866
Non-personnel costs	22,106	17,709	14,182	12,279
Capital improvement	8,500	5,250	3,895	4,640
Total expenses	116,147	103,184	84,373	75,683
Change in fund balance	\$ 7,519	\$ 13,729	\$ 4,951	\$ (3,128)
Administrative Rate	0.35%	0.35%	0.26%	0.26%



Administrative Expense Rate 5-Year Projection



System Memberships

Retirement Administration	
International Centre for Pension Management	\$ 22,000
Sustainability Accounting Standards Board	20,000
National Institute of Retirement Security	19,000
National Council on Teacher Retirement	6,000
National Conference on Public Employee Retirement Systems	5,000
National Association of State Retirement Administration	5,000
Government Finance Officers Association	2,000
Pension Fund Data Exchange	1,287
International Foundation of Employee Benefit Plans	1,250
New York State Council of School Superintendents	125
Total	\$ 81,662

Asset Management	
Council of Institutional Investors	\$ 32,000
Investor Network on Climate Risk	10,000
Certified Commercial Investment Member	5,560
National Council of Real Estate Investment Fiduciaries	2,700
Urban Land Institute	680
Pension Real Estate Association	330
Total	\$ 51,270

Asset Management Cost

(dollars in thousands)	Internally Managed Investments**	Total Internal Managed Expenses**	Basis Points
FY 2023-2024	\$ 82,829,196	\$ 120,177	14.5
FY 2022-2023	77,458,193	87,707	11.3
FY 2021-2022	74,390,578	70,808	9.5
FY 2020-2021	82,755,001	60,407	7.3
FY 2019-2020	70,840,469	56,606	8.0
Five Year Average	\$ 77,654,687	\$ 79,141	10.1

(dollars in thousands)	Externally Managed Investments	Total Externally Managed Expenses	Basis Points
FY 2023-2024	\$ 60,527,735	\$ 381,276	63.0
FY 2022-2023	57,367,774	347,045	60.5
FY 2021-2022	55,630,413	352,784	63.4
FY 2020-2021	63,570,275	303,264	47.7
FY 2019-2020	47,915,730	296,736	61.9
Five Year Average	\$ 57,002,385	\$ 336,221	59.3

(dollars in thousands)	Total Investments*	Total Investment Expenses	Basis Points
FY 2023-2024	\$ 143,356,930	\$ 501,453	35.0
FY 2022-2023	134,825,967	434,752	32.2
FY 2021-2022	130,020,991	423,592	32.6
FY 2020-2021	146,325,276	363,671	24.9
FY 2019-2020	118,756,199	353,342	29.8
Five Year Average	\$ 134,657,073	\$ 415,362	30.9

New York State Teachers' Retirement System FY 2025-26 Budget Proposal All Segments								
	3-Year Historical Expenses			FY 2024-25		FY 2025-26 Budget		
	2021-22	2022-23	2023-24	Budget	YTD Actual	Proposed	\$ Increase	% Increase
Salaries:								
Salaries	\$ 36,065,900	\$ 37,307,700	\$ 42,578,000	\$ 52,468,000	\$ 27,971,825	\$ 56,456,000	\$ 3,988,000	7.6%
Social Security	2,510,900	2,594,000	3,004,000	3,675,000	1,843,670	3,990,000	315,000	8.6%
	38,576,800	39,901,700	45,582,000	56,143,000	29,815,495	60,446,000	4,303,000	7.7%
Benefits:								
Employees retirement	4,450,900	5,285,900	6,116,000	7,326,000	5,002,530	8,348,000	1,022,000	14.0%
Health and dental insurance	5,108,000	6,606,500	8,146,000	9,890,000	5,730,925	10,416,000	526,000	5.3%
Civil Service	57,000	63,300	60,000	62,000	73,905	95,000	33,000	53.2%
	9,615,900	11,955,700	14,322,000	17,278,000	10,807,360	18,859,000	1,581,000	9.2%
OPEB Trust:								
OPEB trust	6,910,000	6,910,000	6,910,000	6,804,000	5,103,000	6,236,000	(568,000)	-8.3%
	6,910,000	6,910,000	6,910,000	6,804,000	5,103,000	6,236,000	(568,000)	-8.3%
Building Occupancy Expenses:								
Building operation expenses	938,600	1,005,400	940,000	1,034,000	929,045	1,129,000	95,000	9.2%
Office supplies and expenses	163,900	184,900	176,000	233,000	184,735	205,000	(28,000)	-12.0%
Utilities and municipal assessments	1,126,500	1,100,600	983,000	1,314,000	920,390	1,189,000	(125,000)	-9.5%
	2,229,000	2,290,900	2,099,000	2,581,000	2,034,170	2,523,000	(58,000)	-2.2%
Computer Expenses:								
IT hardware and software	799,000	1,612,400	858,550	2,262,000	923,535	2,058,000	(204,000)	-9.0%
IT contracts and maintenance	3,228,000	3,295,800	5,432,650	4,706,000	4,057,585	7,814,000	3,108,000	66.0%
	4,027,000	4,908,200	6,291,200	6,968,000	4,981,120	9,872,000	2,904,000	41.7%
Personnel and Meeting Expenses:								
Board - meetings, travel and education	72,100	82,800	70,150	150,000	31,995	151,000	1,000	0.7%
Delegates' meeting	5,500	632,100	101,000	70,000	121,900	500,000	430,000	614.3%
Preretirement seminars	(2,600)	4,500	58,000	76,000	60,300	118,000	42,000	55.3%
Professional development	635,700	832,500	1,081,910	1,437,000	817,985	1,426,000	(11,000)	-0.8%
Travel and automobile expenses	68,400	211,300	310,700	558,000	240,015	547,000	(11,000)	-2.0%
Other personnel expenses	116,000	192,700	235,620	437,000	227,835	487,000	50,000	11.4%
	895,100	1,955,900	1,857,380	2,728,000	1,500,030	3,229,000	501,000	18.4%
Professional and Governmental Expenses:								
Auditor expenses	482,400	460,800	259,820	430,000	397,505	423,000	(7,000)	-1.6%
Disability medical examinations	96,400	80,000	80,000	100,000	61,300	100,000	-	0.0%
Postage and cartage	804,200	862,900	1,034,440	1,020,000	674,590	1,102,000	82,000	8.0%
Publications	129,600	254,600	215,050	234,000	248,490	293,000	59,000	25.2%
Other professional fees	1,354,500	1,463,400	2,343,480	3,648,000	4,569,015	4,564,000	916,000	25.1%
	2,867,100	3,121,700	3,932,790	5,432,000	5,950,900	6,482,000	1,050,000	19.3%
Capital Improvement Program:								
Amortization and depreciation	3,204,500	2,986,300	3,151,600	3,651,000	1,567,680	5,002,000	1,351,000	37.0%
Capital improvement maintenance	920,100	1,654,600	742,900	1,370,000	983,470	1,437,000	67,000	4.9%
Capital contingency	-	-	-	229,000	-	2,061,000	1,832,000	800.0%
	4,124,600	4,640,900	3,894,500	5,250,000	2,551,150	8,500,000	3,250,000	61.9%
Total	\$ 69,245,500	\$ 75,685,000	\$ 84,888,870	\$ 103,184,000	\$ 62,743,225	\$ 116,147,000	\$ 12,963,000	12.6%

New York State Teachers' Retirement System								
FY 2025-26 Budget Proposal								
Retirement Administration Segment								
	3-Year Historical Expenses			FY 2024-25		FY 2025-26 Budget		
	2021-22	2022-23	2023-24	Budget	YTD Actual	Proposed	\$ Increase	% Increase
Salaries:								
Salaries	\$ 22,499,000	\$ 23,376,950	\$ 26,475,000	\$ 31,620,000	\$ 16,871,825	\$ 34,154,000	\$ 2,534,000	8.0%
Social Security	1,588,130	1,632,830	1,882,000	2,257,000	1,149,670	2,455,000	198,000	8.8%
	24,087,130	25,009,780	28,357,000	33,877,000	18,021,495	36,609,000	2,732,000	8.1%
Benefits:								
Employees retirement	2,791,890	3,316,480	3,853,000	4,438,000	3,006,530	5,055,000	617,000	13.9%
Health and dental insurance	3,481,000	4,509,500	5,561,000	6,511,000	3,746,975	6,859,000	348,000	5.3%
Civil Service	39,900	44,310	42,000	40,000	47,905	62,000	22,000	55.0%
	6,312,790	7,870,290	9,456,000	10,989,000	6,801,410	11,976,000	987,000	9.0%
OPEB Trust:								
OPEB trust	4,837,000	4,837,000	4,837,000	4,423,000	3,316,950	4,053,000	(370,000)	-8.4%
	4,837,000	4,837,000	4,837,000	4,423,000	3,316,950	4,053,000	(370,000)	-8.4%
Building Occupancy Expenses:								
Building operation expenses	657,020	703,780	658,000	672,000	604,045	734,000	62,000	9.2%
Office supplies and expenses	116,830	132,420	127,000	155,000	123,735	138,000	(17,000)	-11.0%
Utilities and municipal assessments	788,550	770,420	688,000	854,000	598,390	773,000	(81,000)	-9.5%
	1,562,400	1,606,620	1,473,000	1,681,000	1,326,170	1,645,000	(36,000)	-2.1%
Computer Expenses:								
IT hardware and software	559,300	1,128,680	601,000	1,470,000	600,535	1,338,000	(132,000)	-9.0%
IT contracts and maintenance	2,398,800	2,305,890	3,952,000	3,182,000	2,704,585	5,162,000	1,980,000	62.2%
	2,958,100	3,434,570	4,553,000	4,652,000	3,305,120	6,500,000	1,848,000	39.7%
Personnel and Meeting Expenses:								
Board - meetings, travel and education	50,470	57,960	49,000	97,000	20,995	98,000	1,000	1.0%
Delegates' meeting	5,500	632,100	101,000	70,000	121,900	500,000	430,000	614.3%
Preretirement seminars	(2,600)	4,500	58,000	76,000	60,300	118,000	42,000	55.3%
Professional development	409,480	536,670	702,000	843,000	503,985	867,000	24,000	2.8%
Travel and automobile expenses	28,790	63,800	138,000	193,000	105,015	198,000	5,000	2.6%
Other personnel expenses	81,260	134,740	165,000	289,000	147,835	317,000	28,000	9.7%
	572,900	1,429,770	1,213,000	1,568,000	960,030	2,098,000	530,000	33.8%
Professional and Governmental Expenses:								
Auditor expenses	337,680	322,560	182,000	280,000	258,505	275,000	(5,000)	-1.8%
Disability medical examinations	95,110	80,000	80,000	100,000	61,300	100,000		0.0%
Postage and cartage	563,000	631,030	774,000	723,000	475,590	783,000	60,000	8.3%
Publications	108,540	197,720	178,000	188,000	188,490	240,000	52,000	27.7%
Other professional fees	967,050	1,025,640	1,653,000	2,371,000	3,192,015	3,094,000	723,000	30.5%
	2,071,380	2,256,950	2,867,000	3,662,000	4,175,900	4,492,000	830,000	22.7%
Capital Improvement Program:								
Amortization and depreciation	2,243,150	2,090,410	2,206,000	2,373,000	1,018,680	3,251,000	878,000	37.0%
Capital improvement maintenance	644,070	1,158,220	520,000	891,000	639,470	934,000	43,000	4.8%
Capital contingency	-	-	-	149,000	-	1,339,000	1,190,000	798.7%
	2,887,220	3,248,630	2,726,000	3,413,000	1,658,150	5,524,000	2,111,000	61.9%
Total	\$ 45,288,920	\$ 49,693,610	\$ 55,482,000	\$ 64,265,000	\$ 39,565,225	\$ 72,897,000	\$ 8,632,000	13.4%

New York State Teachers' Retirement System								
FY 2025-26 Budget Proposal								
Asset Management Segment								
	3-Year Historical Expenses			FY 2024-25		FY 2025-26 Budget		
	2021-22	2022-23	2023-24	Budget	YTD Actual	Proposed	\$ Increase	% Increase
Salaries:								
Salaries	\$ 13,566,900	\$ 13,930,750	\$ 16,103,000	\$ 20,848,000	\$ 11,100,000	\$ 22,302,000	\$ 1,454,000	7.0%
Social Security	922,770	961,170	1,122,000	1,418,000	694,000	1,535,000	117,000	8.3%
	14,489,670	14,891,920	17,225,000	22,266,000	11,794,000	23,837,000	1,571,000	7.1%
Benefits:								
Employees retirement	1,659,010	1,969,420	2,263,000	2,888,000	1,996,000	3,293,000	405,000	14.0%
Health and dental insurance	1,627,000	2,097,000	2,585,000	3,379,000	1,983,950	3,557,000	178,000	5.3%
Civil Service	17,100	18,990	18,000	22,000	26,000	33,000	11,000	50.0%
	3,303,110	4,085,410	4,866,000	6,289,000	4,005,950	6,883,000	594,000	9.4%
OPEB Trust:								
OPEB trust	2,073,000	2,073,000	2,073,000	2,381,000	1,786,050	2,183,000	(198,000)	-8.3%
	2,073,000	2,073,000	2,073,000	2,381,000	1,786,050	2,183,000	(198,000)	-8.3%
Building Occupancy Expenses:								
Building operation expenses	281,580	301,620	282,000	362,000	325,000	395,000	33,000	9.1%
Office supplies and expenses	47,070	52,480	49,000	78,000	61,000	67,000	(11,000)	-14.1%
Utilities and municipal assessments	337,950	330,180	295,000	460,000	322,000	416,000	(44,000)	-9.6%
	666,600	684,280	626,000	900,000	708,000	878,000	(22,000)	-2.4%
Computer Expenses:								
IT hardware and software	239,700	483,720	257,550	792,000	323,000	720,000	(72,000)	-9.1%
IT contracts and maintenance	829,200	989,910	1,480,650	1,524,000	1,353,000	2,652,000	1,128,000	74.0%
	1,068,900	1,473,630	1,738,200	2,316,000	1,676,000	3,372,000	1,056,000	45.6%
Personnel and Meeting Expenses:								
Board - meetings, travel and education	21,630	24,840	21,150	53,000	11,000	53,000	-	0.0%
Delegates' meeting	-	-	-	-	-	-	-	-
Preretirement seminars	-	-	-	-	-	-	-	-
Professional development	226,220	295,830	379,910	594,000	314,000	559,000	(35,000)	-5.9%
Travel and automobile expenses	39,610	147,500	172,700	365,000	135,000	349,000	(16,000)	-4.4%
Other personnel expenses	34,740	57,960	70,620	148,000	80,000	170,000	22,000	14.9%
	322,200	526,130	644,380	1,160,000	540,000	1,131,000	(29,000)	-2.5%
Professional and Governmental Expenses:								
Auditor expenses	144,720	138,240	77,820	150,000	139,000	148,000	(2,000)	-1.3%
Disability medical examinations	1,290	-	-	-	-	-	-	-
Postage and cartage	241,200	231,870	260,440	297,000	199,000	319,000	22,000	7.4%
Publications	21,060	56,880	37,050	46,000	60,000	53,000	7,000	15.2%
Other professional fees	387,450	437,760	690,480	1,277,000	1,377,000	1,470,000	193,000	15.1%
	795,720	864,750	1,065,790	1,770,000	1,775,000	1,990,000	220,000	12.4%
Capital Improvement Program:								
Amortization and depreciation	961,350	895,890	945,600	1,278,000	549,000	1,751,000	473,000	37.0%
Capital improvement maintenance	276,030	496,380	222,900	479,000	344,000	503,000	24,000	5.0%
Capital contingency	-	-	-	80,000	-	722,000	642,000	802.5%
	1,237,380	1,392,270	1,168,500	1,837,000	893,000	2,976,000	1,139,000	62.0%
Total	\$ 23,956,580	\$ 25,991,390	\$ 29,406,870	\$ 38,919,000	\$ 23,178,000	\$ 43,250,000	\$ 4,331,000	11.1%



New York State Teachers' Retirement System

Date: April 23, 2025
To: Executive Committee
From: R. Kannan
Re: Operating Expense Review
CC: T. Lee, M. Andriola, M. Dixon

Executive Summary

NYSTRS has a proposed 2025-26 annual administrative operating budget of \$116M. At the request of the Executive Committee, an informal survey was conducted to assess NYSTRS' operating costs compared to peer retirement systems. Research was also performed to gather additional publicly available information to supplement the survey results. NYSTRS obtained comparable data on seven retirement systems, all with assets above \$30B. The full results of the survey and visuals are included on page 2.

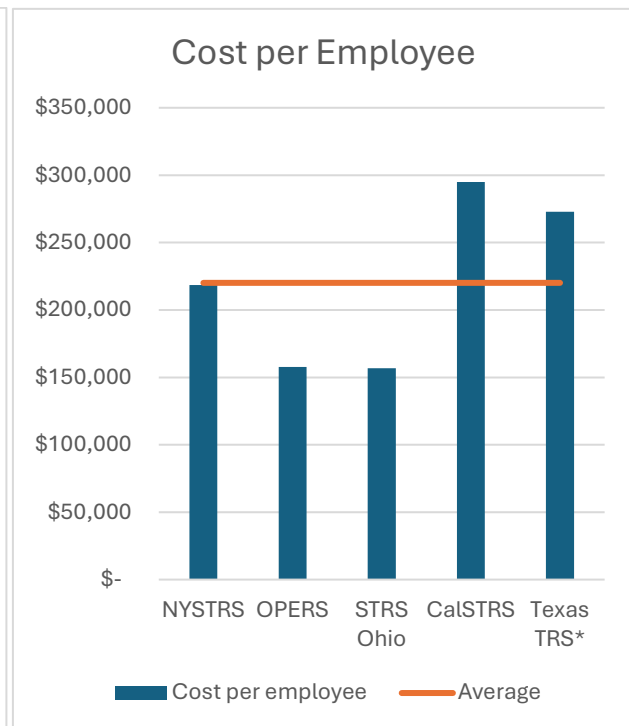
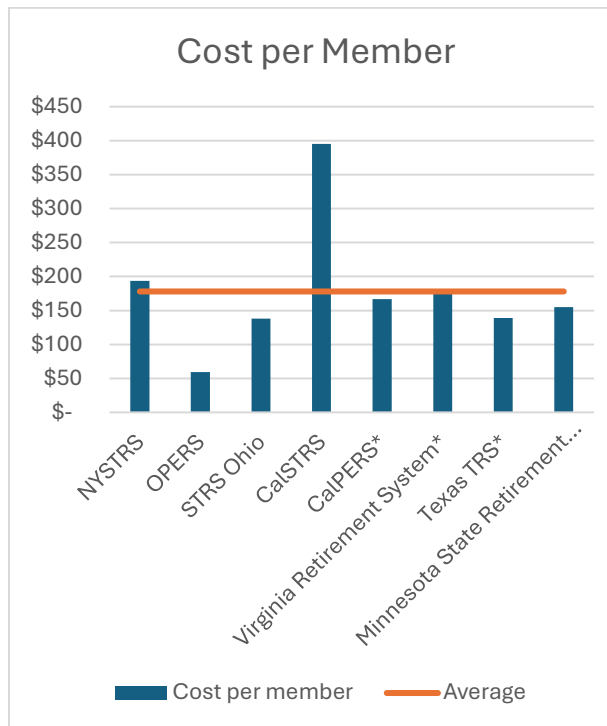
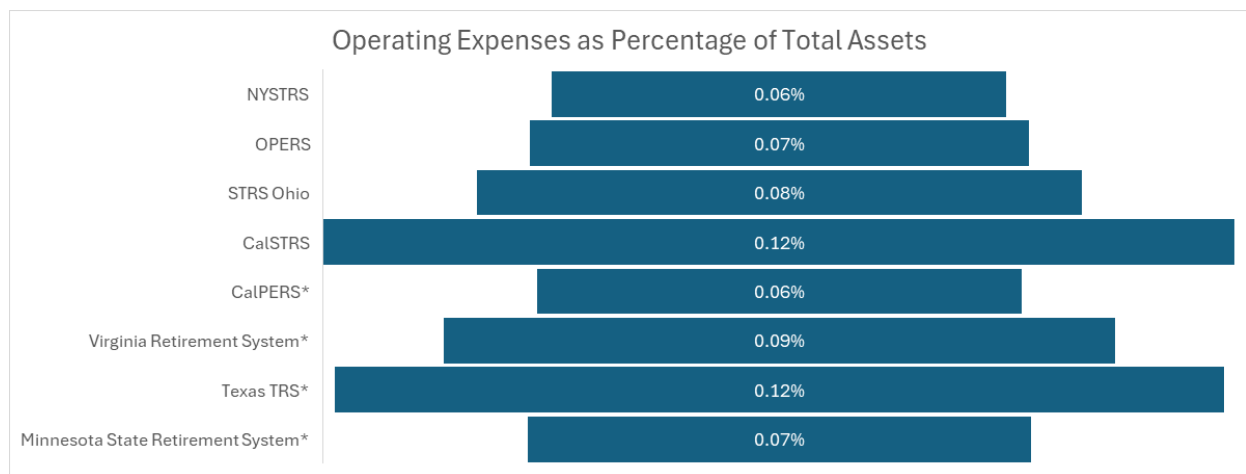
Given the variance in system size, three ratios were used to normalize the data and effectively compare administrative operating expenses between systems: as a percentage of total assets, cost per member, and cost per employee.

- *As percentage of total assets*
NYSTRS incurred operating expenses of .06% of total assets, the lowest of all peer systems reviewed. Our survey showed that operating expenses of peer systems range from .06% of total assets to .12% of total assets, with the average being .08%. NYSTRS' operating expenses are approximately 25% below the average; however, NYSTRS is within .02% of most of the peer systems reviewed (four out of seven).
- *Cost per member*
NYSTRS' operating expenses reflect a cost of \$194 per member, which is 9% above the average of survey respondents of \$178.
- *Cost per employee*
On a per employee basis, NYSTRS' operating expenses of \$218,000 per employee is only 1% below the average of survey respondents of \$220,000. Salaries and benefits expense comprise a large portion of system budgets (73% of NYSTRS' proposed 25-26 budget), so this comparison is particularly useful to gauge the level of operating expenses. Salaries and benefits are benchmarked periodically; NYSTRS targets the 50th percentile of market compensation.

Based on the most recent completed fiscal year available, NYSTRS' administrative operating expenses appear to be within a reasonable range of similar systems. To ensure continued efficiency, this survey will be conducted annually.

Full Results & Visuals

	NYSTRS	OPERS	STRS Ohio	CalSTRS	CalPERS*	Virginia Retirement System*	Texas TRS*	Minnesota State Retirement System*
Date of most recent year end	6/30/2024	12/31/2023	12/31/2024	6/30/2024	6/30/2024	6/30/2024	8/31/2024	6/30/2024
Total Assets	\$146.5B	\$115B	\$91.3B	\$341.4B	\$601B	\$125.8B	\$243B	\$35B
Annual Operating Costs	\$ 88,040,000	\$ 76,000,000	\$ 73,050,000	\$ 410,900,000	\$ 385,652,000	\$ 111,670,000	\$ 285,560,000	\$ 23,289,000
Total number of Employees	403	482	466	1,393			1,047	
Investment/Asset Management	67	60	102	216				
Retirement Administration	131	167	114	498				
Support / Other	205	255	250	679				
Total number of Members	454,804	1,286,089	529,125	1,040,301	2,313,916	628,432	2,057,610	150,227
Cost per member	\$ 194	\$ 59	\$ 138	\$ 395	\$ 167	\$ 178	\$ 139	\$ 155
Cost per employee	\$ 218,462	\$ 157,676	\$ 156,760	\$ 294,975			\$ 272,741	
Ratio of Administrative expenses to assets	0.06%	0.07%	0.08%	0.12%	0.06%	0.09%	0.12%	0.07%



*Public Information, not a survey response

Executive Committee Meeting April 23, 2025

SYSTEM OPERATING BUDGET 2025-26

WHEREAS, System staff has presented to the Retirement Board a proposed Operating Budget for Fiscal Year 2025-26, a copy of which is annexed hereto and made a part hereof as Appendix ; be it

RESOLVED, That the Operating Budget for Fiscal Year 2025-26 is approved as presented.



**New York State
Teachers'
Retirement
System**

To: Retirement Board
From: D. Ampansiri, Jr./ K. Vrbanc
CC: T. Lee
Date: April 15, 2025
Re: NYSTRS 2025 Legislative Update

At the April Board meeting, staff provides an update on the legislative program for the current year and any pertinent legislation of interest introduced for current Legislative Session that may have a significant impact on the System. Attached to this memorandum, please find the 2025 Legislation of Interest chart and the 2025 Legislative Program Grid.

2025 Legislative Program

The 2025 Legislative Program contains one new bill 25-1 (MWBE Report). This bill would amend Education Law Section 508-a subdivision 2(b) to change the date in which NYSTRS is required to submit its MWBE report from 60 days after fiscal year end (June 30), or effectively on or before September 1, to on or before December 31 of the current year.

Staff met with Senator Robert Jackson, Chair of the Senate Civil Service and Pensions Committee and the Senator's Legislative Policy Director, Sam Fein and Assembly Member, Stacey Pheffer Amato's, Chair of Assembly Government Employees Committee, Legislative Director, Greg Slade and presented our 2025 Legislative Program. Bill packets have been submitted to both the Senate and Assembly for introduction and currently waiting to be assigned to a sponsor.

2025 Legislation of Interest that may affect NYSTRS

The 2025 Legislation of Interest chart contains several bills we are monitoring that have been introduced in this Legislative Session that could have an impact on the System.

Of particular note, as mentioned at the January Board meeting the Teachers' Fossil Fuel Divestment Act (S954/A1580) was introduced in the Senate Civil Service and Pensions Committee on January 8, 2025, and the Assembly Government Employees Committee introduced a "same as" version on January 10, 2025. To date, this bill has not moved in either Committee since its introduction this Legislative Session. Please note, this proposed bill did not pass either house in any of the prior 2021, 2022, 2023, and 2024 Legislative Sessions.

Nonetheless, staff has met with a number of the sponsors/co-sponsors on this bill to share our thoughts, voice our concerns, provide an overview and summary of our investment approach and responsible stewardship (with a copy of NYSTRS January 2025 Stewardship Report), and our fiduciary responsibility in administering the System. We continue to have positive engagement. Staff will continue to monitor and report back to the Board with any material movement on this bill and any other legislation that may have an impact on the System.

2025-26 Budget

If passed by the date of the Board meeting, staff will provide an update on the New York State Budget and items therein that may impact on the System.

2025 LEGISLATION OF INTEREST TO NYSTRS

Senate No. Assembly No.	Subject	Introduced By
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I. AMENDMENTS TO THE RETIREMENT AND SOCIAL SECURITY LAW

S2566	Amends Section 177-b to require New York state pension funds to invest up to 20% of their assets in MWBE asset management and investment firms. Last Action 01/21/25 Referred to CS (Senate)	Comrie
A5471 (Part A)	Requires public pension funds to adopt an investment manager diversity policy, setting objectives to invest a certain amount of the fund's total assets in Black Indigenous and People of Color (BIPOC) owned investment management firms. Last Action 02/14/25 Referred to GE (Assembly)	Alvarez
S5398 A4057	Clarifies the definition of a qualifying condition and a discharged LGBT+ veteran and includes New York State active duty military and National Guard service performed under the authority of the Governor of New York in the definition of the Veterans' Service Law. Last Action: 01/31/25 Referred to GE (Assembly) 02/21/25 Referred to Veterans, Homeland Security & Military Affairs (Senate) 03/11/25 Amend and Recommit to Veterans, Homeland Security & Military Affairs, Print#5398A (Senate)	Scarcella-Spanton Berger
A5531	Allows members of the Army and Air National Guard, New York State Guard and New York State Naval Militia to purchase up to three years of military service credit. Last Action: 02/14/25 Referred to GE	Brook-Krasny
S6840	Increases the amount of military service credit a member who was honorably discharged may obtain from three years to four years. Last Action: 03/25/25 Referred to CS 04/08/25 Reported and Committed to Finance	Scarcella-Spanton
A6932	Provides new members who join a public retirement system of the state on or after April 1, 2026, an optional defined contribution plan with the exception of newly hired elected official whose membership would be mandatory. Last Action: 03/18/25 Referred to GE	Fitzpatrick

April 15, 2025

Committees: GE = Assembly Governmental Employees;
W&M = Ways and Means; CS = Senate Civil Service and Pensions

A6914	Creates a defined contribution plan for all existing non-civil service appointed employees and elected officials of New York state or any public employer that participates in NYSLRS. Last Action: 03/18/25 Referred to GE (Assembly)	Fitzpatrick
S5579 A6978	Amends Section 212 to increase the amount a public retiree may earn in the year 2026 up to \$50,000 without diminishing the retiree's pension benefit. Last Action: 02/25/25 Referred to CS (Senate) 03/18/25 Referred to Ge (Assembly)	Lanza Fall
S6638	Improves the Tier 5 benefit formula multiplier from 2% at 25 years to 2% at 20 years and increases the Tier 6 benefit formula from 35% of FAS plus 2% per year of service greater than 20 to 40% of FAS plus 2% per year of service greater than 20. Last Action: 3/19/25 Referred to CS (Senate)	Gounardes

II. AMENDMENTS TO THE EDUCATION LAW

A469	Adds a school business official to NYSTRS Board of Trustees. Last Action 01/08/25 Referred to Education (Assembly)	Paulin
S954 A1580	Creates the "Teachers' Fossil Fuel Divestment Act" requiring the NYSTRS Board to create an exclusion list of coal producers and oil and gas producers and provides timeframes for divesting any investments in companies included on the exclusion list; requires reporting to the legislature. Last Action 01/08/25 Referred to CS (Senate) 01/10/25 Referred to GE (Assembly)	Brisport Kelles
A6536	Rename the Boards of Cooperative Educational Services to NY Polytechnical Institutes. Last Action: 03/05/25 Referred to Education (Assembly)	Brown
S1011 A3357	Requires individuals employed and participating in one of the New York state retirement systems to formally acknowledge termination of participation in the retirement system. Last Action: 01/08/25 Referred to CS (Senate) 01/27/25 Referred to GE (Assembly) 02/11/25 Reported and Committed to Finance (Senate)	Brouk Bronson

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

S6750 A5223	Permits a retired member of one of the retirement systems to change their option election or designate a new beneficiary where the beneficiary has been convicted of an act of domestic violence against the retiree. Last Action 02/12/25 Referred to GE (Assembly) 03/21/25 Referred to CS (Senate)	Webb Reyes
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III. AMENDMENTS TO THE CIVIL SERVICE LAW

S1724 A1979	Requires public employers to notify the organization that advocates for managerial or confidential employees within 30 day from when an employee is hired or promoted as managerial or confidential with the employee's personal data and job duties and title information. Last Action: 02/25/25 Passed Senate 04/01/25 Passed Assembly 04/01/25 Returned to Senate	Jackson Pheffer Amato
S3691 A6349	Prohibits a person who is convicted of a rebellion or insurrection from state or municipal employment. Last Action: 01/29/25 Referred to CS (Senate) 02/11/25 1 st Report Cal 307(Senate) 02/12/25 2 nd Report Cal. (Senate) 02/24/25 Advanced to Third Reading (Senate) 03/04/25 Referred to GE (Assembly)	Sanders Lucas
S4523 A3627	Permits public employees an excused absence for mental health purposes without it being charged against their existing sick time. Last Action: 01/29/25 Referred to GE (Assembly) 02/06/25 Referred to CS (Senate)	Bailey Simon
A1202	Permits public employees to use any accrued sick time, vacation time, personal time or other compensation time during a waiting period for their workers' compensation. Last Action: 01/09/25 Referred to GE (Assembly)	Simon
A5494	Entitles public employees up to eight hours paid leave annually to volunteer as a poll worker during a local, national or primary election. Last Action: 02/14/25 Referred to GE (Assembly)	Brook-Krasny

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

S6405 A6754	Allows NYS employees to use their accrued vacation time towards the payment of their student loans while they remain employed. Last Action: 03/11/25 Referred to GE (Assembly) 03/13/25 Referred to CS (Senate)	Jackson Simone
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IV. AMENDMENTS TO THE LABOR LAW

S1673 A639A	Requires every employer in New York state to provide new employees hired for a post-graduate internship or an entry-level position that an associate's degree or higher is required with a summary of the responsibilities and repayment options relating to the Public Loan Forgiveness Program. Last Action: 01/08/25 Referred to Banks (Assembly) 02/26/25 Amend and Recommit to Banks, Print# 639A (Assembly) 03/20/25 Passed Senate 03/20/25 Delivered to Assembly & Referred to Banks (Assembly)	Gounardes Kim
S5254 A6612	Protects employees involved in an investigation of workplace violence from a reduction of wages. Last Action: 03/06/25 Referred to Labor (Assembly) 03/26/25 Passed Senate 03/26/25 Delivered to Assembly and Referred to Labor	Ryan Bronson
A244	Requires employers to provide employees with three full work days of paid sick leave for a miscarriage or stillbirth of an infant born to the employee. Last Action: 01/08/25 Referred to Labor (Assembly)	Dilan
A368	Requires employers to retain the written acknowledgment from employees of sexual harassment prevention training for six years. Last Action: 01/08/25 Referred to Labor (Assembly)	Rozic
A479	Grants employees 45 years of age and older one day of leave from work every ten years for a colonoscopy screening. Last Action: 01/08/25 Referred to Labor (Assembly)	Paulin
A791	Establishes the "Sick Leave for Pet Care Act" to provide employees paid sick leave to care for a sick pet. Last Action: 01/08/25 Referred to Labor (Assembly)	De Los Santos

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

S3460 A2107	Grants all employees access to personnel records and be notified when a negative report is filed against them. Last Action: 01/15/25 Referred to Labor (Assembly) 01/27/25 Referred to Labor (Senate)	Gounardes Gonzalez-Rojas
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V. STATE TECHNOLOGY LAW

S1139 A6347	Requires governmental entities to implement multifactor authentication for access to their servers, email or official applications used by employees or agents for local and remote network access. Last Action: 01/08/25 Referred to Internet and Technology (Senate) 02/10/25 Report and Committed to Finance (Senate) 03/04/25 Referred to Science and Technology (Assembly)	Gonzalez Otis
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VI. OTHERS

S4999 A7069	Amends Estates, Powers and Trusts Law Section 5-1.2 to permit the disqualification of a spouse in the event a final judgment or decree of annulment is issued after the death of the decedent. Last Action: 03/04/25 Passed Senate 03/04/25 Delivered to Assembly and Referred to Judiciary 03/20/25 Referred to Judiciary (Assembly)	Hoylman-Signal Braunstein
S4816 A1038	Amends Workers' Compensation Law Section 201 to include lime diseases and other tick-borne diseases for the purpose of workers' compensation and disability claims. Last Action: 01/08/25 Referred to Labor (Assembly) 04/09/25 Passed Senate 04/09/25 Delivered to Assembly and Referred to Labor	Ryan Barrett
S3413 A533	Amends Article 78 of CPLR Section 7806 to authorize a court to grant the petitioner the requested disability retirement allowance, where it is determined that the decision of the retirement system to deny the petitioner was not supported by sufficient evidence. Last Action: 01/08/25 Referred to Judiciary (Assembly) 01/27/25 Referred to Judiciary (Senate) 03/11/25 1 st Report Cal. 539 (Senate) 03/12/25 2 nd Report Cal. (Senate) 03/13/25 Advanced to Third Reading (Senate)	Jackson Pheffer Amato

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

S4463 A1467	Amends Workers' Compensation Law Section 201 to provide paid family leave for a serious health condition caused by or in connection with a pregnancy following a stillbirth. Last Action: 01/09/25 Referred to Labor (Assembly) 02/05/25 Referred to Labor (Senate)	Mayer Rajkumar
S4468 A5319	Amends Workers' Compensation Law Section 201 Subdivision 15 to provide family leave benefits for someone recovering from the unintended intrauterine death of a fetus that occurs after the clinical estimate of the twentieth week of gestation. Last Action: 02/05/25 Referred to Labor (Senate) 02/13/25 Referred to Labor (Assembly) 03/19/25 Amend and Recommit to Labor, Print#A5319A (Assembly) 03/25/25 Amend and Recommit to Labor, Print#S4468A (Senate)	Mayer Pheffer Amato
S3920 A3088	Amends Article 1 of the Constitution to establish a constitutional protection of the right to personal privacy. CONCURRENT RESOLUTION OF THE SENATE AND ASSEMBLY Last Action: 01/23/25 Referred to Judiciary (Assembly) 01/24/25 To Attorney-General for Opinion (Assembly) 01/30/25 Referred to Judiciary (Senate) 01/30/25 To Attorney-General for Opinion (Senate) 02/05/25 Opinion Referred to Judiciary (Assembly) 02/05/25 Opinion Referred to Judiciary (Senate)	Parker Lunsford
A1780	Amends Article 5 of the Constitution to exclude any overtime worked from a public employees' pension calculation, so that it is limited to an individual's base pay. CONCURRENT RESOLUTION OF THE SENATE AND ASSEMBLY Last Action: 01/14/25 Referred to Governmental Operations (Assembly) 01/15/25 To Attorney-General for Opinion (Assembly) 01/29/25 Opinion Referred to Judiciary (Assembly)	Fitzpatrick
S1261A	Amends Domestic Relations Law Sections 170 and 200 to allow for a no fault separation where the parties have documented irreconcilable differences for a period of 6 months. Last Action: 03/05/25 Passed Senate 03/24/25 Passed Assembly 03/24/25 Return to Senate	Krueger

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

A2062	Amends Military Law Section 243 to allow a person who is on any eligible employment list to retain the rights and status of that list while in active duty and be placed on a special eligible employment list for up to two years after termination of military duty. Last Action: 01/15/25 Referred to GE	Rajkumar
S3484 A3778	Amends various Articles of the Constitution to permit New York state to place a non-binding initiative on the ballot, before December 31, 2025, to propose a constitutional amendment to divide the state into three autonomous regions. CONCURRENT RESOLUTION OF THE SENATE AND ASSEMBLY Last Action: 01/27/25 Referred to Judiciary (Senate) 01/28/25 To Attorney General for Opinion (Senate) 01/30/25 Referred to Local Government (Assembly) 01/31/25 To Attorney General For Opinion (Assembly) 02/05/25 Opinion Referred to Judiciary (Senate) 02/07/25 Opinion Referred to Judiciary (Assembly)	Helming DiPetro

VII. SPECIAL INTEREST MEMBER BILLS

S4485 A7838	Grants James Demarco retroactive membership in the NYSTRS from Tier 2 to Tier 1 based on time he was a non-member for seasonal employment in July 1969. Last Action: 02/05/25 Referred to CS (Senate) 04/11/25 Referred to GE (Assembly)	Gallivan DiPietro
S4490 A7785	Allows Christine Hasseler, retired Tier 1 member of NYSTRS, to have her retirement benefit recalculated to include retirement incentive payments that her employer failed to pay her within the required timeframe, before the end of her retirement year. Last Action: 02/05/25 Referred to CS (Senate) 04/10/25 Referred to GE (Assembly)	Helming Manktelow
S4491 A7780	Allows Jeffrey Alva Beall, who retired as a Tier 4 from NYSTRS before Chapter 41 of the Laws of 2016 was signed into law, to purchase 3 years of military service for the period of active duty service between April 17, 1984 to February 27, 1987, retroactive to his effective date of retirement. Last Action: 02/05/25 Referred to CS (Senate) 04/10/25 Referred to GE (Assembly)	Helming Manktelow

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

A7073	Grants retroactive membership to Eileen Saumell in NYSTRS based on her employment for the period of August 8, 1994 to August 27, 2004 with the Nassau County Demonstration Project, a non-participating employer. Last Action: 03/20/25 Referred to GE	Gandolfo
S7339 A7083	Authorizes retired member Carl Spatola to receive a refund of contributions from NYSTRS for the period of October 1, 2000 through June 30, 2004, the period of time prior to the transfer between retirement systems. Last Action: 03/20/25 Referred to GE (Assembly) 04/10/25 Referred to CS (Senate)	Gandolfo Weik
S6856 A7541	Allows Kyle Brower, retiree of NYSTRS to receive a performance of duty disability retirement benefit equal to three-quarters of FAS instead of ordinary disability benefit, retroactive to date of retirement, July 9, 2013. Last Action: 03/25/25 Referred to CS (Senate) 04/01/25 Referred to Ge (Assembly)	Palumbo Giglio

April 15, 2025

Committees: GE = Governmental Employees;
W&M = Ways and Means; CS = Civil Service and Pensions

NYSTRS 2025 LEGISLATIVE PROGRAM GRID

Subject	2025 Bill No.	Sponsor	Com. Ref.	Report 1 st /2 nd	3 RD Reading	Passed	To Gov.	Gov.'s Action
25-1 Amends Education Law Section 508-a subdivision 2 (b) to change the due date in which the New York State Teachers' Retirement System is required to submit the MWBE report to on or before December 31 st after fiscal year end. No Cost	-----	-----	-----	-----	-----	-----	-----	

April 15, 2025

Committees: GE = Assembly Governmental Employees Committee;
 CS = Senate Civil Service and Pensions Committee; W&M = Assembly Ways and Means



**New York State
Teachers'
Retirement
System**

To: Retirement Board
From: D. Ampansiri, Jr./ J. Graham/ K. Starks
CC: T. Lee
Date: April 23, 2025
Re: Proposed Amendment to the System's Rules and Regulations Part 5021

Part 5021 of the System's Rules and Regulations governs the election of a System retiree to the Retirement Board. The current election rules and procedures contemplate only written ballots and the System's first class mailing and subsequent receipt of a returned postmarked copy of same by a date certain for the ballots to be eligible to be counted. In recognition of improved and more modern means of secure communication, staff recommends the following amendment to Part 5021 of the System's Rules and Regulations. A mark-up and clean copy of the proposed amendment accompanies this memo for your consideration.

Part 5021 – Election of System Retiree to the Retirement Board

Staff specifically recommends amendment of Section 5021.5, paragraphs (b), (d) and (e) to permit and direct retired members to submit a ballot either electronically or by traditional postmarked mailing.

The purpose of this amendment is to provide retired members with an additional and secure method of voting for their preferred candidate, allowing them greater flexibility to cast a vote. Staff does not expect the addition of electronic voting to compromise the current election process. Rather, it may in fact help to bolster the security and accuracy of same. Additionally, electronic voting may potentially increase voter participation and the number of total votes cast.

The proposed amendment makes the necessary changes to the current Rules and Regulations to implement this additional method of voting.

Section 5021.5 ELECTION.

(a) All retired members of the New York State Teachers' Retirement System as of October 1 of the year in which the election is held shall be entitled to vote in the election.

(b) The election shall be by secret, ~~written~~ **paper and/or electronic** ballot in a form prescribed by the System.

(c) The names of candidates and alternate candidates on the ballot shall be listed in the order in which the petitions on their behalf have been filed with the System.

(d) **Paper** Bballots shall be mailed by first class mail on or after October 1 but no later than October 15. **The paper ballot will direct retired members to vote by the method of their choice: return paper ballot or electronically.**

(e) In order to be eligible to be counted in the election, ~~written~~ **paper** ballots must be delivered by October 31 or sent by mail postmarked no later than October 31 and received no later than the Saturday before the day on which the election is certified; **electronic ballots must be submitted no later than October 31.** All **Paper** ballots shall be delivered or mailed to a location within New York State designated by the System for the purposes of counting the ballots and certifying the election.

(f) If only one candidate is nominated, no election shall be held and the candidate shall be deemed to have been elected.

(g) Anything in the foregoing to the contrary notwithstanding, the Retirement Board may by resolution establish an alternative procedure for the conduct of an election by ~~electronic or~~ other means which provide comparable security and convenience for voting by retired teachers.

Section 5021.5 ELECTION.

(a) All retired members of the New York State Teachers' Retirement System as of October 1 of the year in which the election is held shall be entitled to vote in the election.

(b) The election shall be by secret, paper and/or electronic ballot in a form prescribed by the System.

(c) The names of candidates and alternate candidates on the ballot shall be listed in the order in which the petitions on their behalf have been filed with the System.

(d) Paper ballots shall be mailed by first class mail on or after October 1 but no later than October 15. The paper ballot will direct retired members to vote by the method of their choice: return paper ballot or electronically.

(e) In order to be eligible to be counted in the election, paper ballots must be delivered by October 31 or sent by mail postmarked no later than October 31 and received no later than the Saturday before the day on which the election is certified; electronic ballots must be submitted no later than October 31. Paper ballots shall be delivered or mailed to a location within New York State designated by the System for the purposes of counting the ballots and certifying the election.

(f) If only one candidate is nominated, no election shall be held and the candidate shall be deemed to have been elected.

(g) Anything in the foregoing to the contrary notwithstanding, the Retirement Board may by resolution establish an alternative procedure for the conduct of an election by other means which provide comparable security and convenience for voting by retired teachers.

Executive Committee Meeting April 23, 2025

RESOLUTION APPROVING THE BUSINESS CONTINUITY PLAN

RESOLVED, That the Business Continuity Plan, as presented to the Retirement Board reflecting changes through January 2025 is approved and accepted.

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM

MEMORANDUM

TO: T. Lee

FROM: Office of the CFO / Finance Department

DATE: April 23, 2025

SUBJECT: Retirement Board Package

Attached are the System's quarterly financial statements and related schedules for the quarters ended March 31, 2025 and 2024.

The following is a list of the documents included:

1. Statements of Fiduciary Net Position (Unaudited)
2. Statements of Changes in Fiduciary Net Position (Unaudited)
3. Schedule of Administrative Expenses (Unaudited)



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
Statements of Fiduciary Net Position (Unaudited)

March 31, 2025 and 2024

Assets	<u>2025</u>	<u>2024</u>
Investments at fair value:		
Domestic equity	\$ 45,115,007,887	\$ 49,626,940,511
International equity	21,828,175,509	20,319,825,894
Global equity	6,160,426,084	5,765,335,133
Real estate equity	16,294,417,531	16,157,204,497
Private equity	14,486,167,973	13,739,987,324
Domestic fixed income	22,659,942,007	20,475,918,374
High-yield bonds	1,258,069,422	1,486,079,531
Global bonds	2,950,676,753	2,792,167,326
Real estate debt	8,807,748,369	7,510,712,040
Private debt	2,737,644,936	2,273,279,016
Cash equivalents	1,956,102,641	2,666,646,092
Total investments	<u>144,254,379,112</u>	<u>142,814,095,738</u>
Receivables:		
Employer	1,452,605,326	1,356,757,405
Member	174,475,322	148,764,001
Investment income	418,677,051	413,704,731
Investment sales	271,687,999	190,574,286
Total receivables	<u>2,317,445,698</u>	<u>2,109,800,423</u>
Other assets:		
Securities lending collateral, invested	256,015,099	319,255,975
Member loans	291,295,568	281,061,454
Net investment in capital assets	26,180,463	22,568,827
Miscellaneous assets	18,564,192	49,358,121
Total other assets	<u>592,055,322</u>	<u>672,244,377</u>
Total assets	<u>147,163,880,132</u>	<u>145,596,140,538</u>
Deferred outflows of resources:		
Changes in net OPEB liability	15,718,775	15,103,133
Changes in net pension liability	12,201,645	15,366,904
Total deferred outflows of resources	<u>27,920,420</u>	<u>30,470,037</u>
Liabilities		
Securities lending collateral, due to borrowers	254,697,946	317,590,122
Investment purchases payable	443,200,727	306,839,760
Mortgage escrows and deposits, net of investments	1,285,000	851,500
Net OPEB liability	50,667,926	48,846,994
Other liabilities	206,772,270	221,125,145
Total liabilities	<u>956,623,869</u>	<u>895,253,521</u>
Deferred inflows of resources:		
Changes in net OPEB liability	1,280,285	2,249,463
Changes in net pension liability	9,080,289	1,305,207
Total deferred inflows of resources	<u>10,360,574</u>	<u>3,554,670</u>
Net position restricted for pensions	<u>\$146,224,816,109</u>	<u>\$144,727,802,384</u>



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
Statements of Changes in Fiduciary Net Position (Unaudited)

For the nine months ending March 31, 2025 and 2024

Additions:	<u>2025</u>	<u>2024</u>
Investment income:		
Net increase in fair value of investments	\$ 3,375,928,526	\$ 10,629,473,169
Interest	958,288,651	786,525,146
Dividends	938,242,172	931,029,342
Real estate, net operating income	402,766,992	363,440,802
Securities lending, gross earnings	11,987,745	16,885,789
Other (net)	(2,737,388)	7,407,851
	<u>5,684,476,698</u>	<u>12,734,762,099</u>
Less: Investment expenses	330,713,083	356,850,132
Securities lending:		
Broker rebates	9,763,477	13,164,969
Management fees	320,103	545,597
Depreciation on collateral	202,455	135,553
Net investment income	<u>5,343,477,580</u>	<u>12,364,065,848</u>
Contributions:		
Employer	1,457,297,764	1,360,177,425
Member	192,649,046	167,864,781
Transfers (to)/from other systems	14,709,297	10,057,081
Total contributions	<u>1,664,656,107</u>	<u>1,538,099,287</u>
Net additions	<u>7,008,133,687</u>	<u>13,902,165,135</u>
Deductions:		
Retirement benefit payments, periodic	6,461,730,459	6,271,602,358
Beneficiary payments	60,020,407	47,728,312
Return of contributions	15,231,210	15,942,928
Administrative expenses	<u>67,770,282</u>	<u>60,626,095</u>
Total deductions	<u>6,604,752,358</u>	<u>6,395,899,693</u>
Net increase in net position	403,381,329	7,506,265,442
Net position restricted for pensions, beginning of year	<u>145,821,434,780</u>	<u>137,221,536,942</u>
Net position restricted for pensions, end of period	<u><u>\$146,224,816,109</u></u>	<u><u>\$144,727,802,384</u></u>



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
Schedule of Administrative Expenses (Unaudited)
Compared to Budget Appropriations for 2024-2025

	Budget Appropriations 2024-2025	Expenses and Encumbrances YTD 03/31/2025	Remaining Balance 3/31/2025	Actual Expenses YTD 03/31/2025
Salaries:				
Salaries	\$ 52,402,705	\$ 35,109,503	\$ 17,293,202	\$ 35,109,503
Overtime salaries	65,000	118,964	(53,964)	118,964
Social Security	3,675,395	2,390,969	1,284,426	2,390,969
Subtotal Salaries	56,143,100	37,619,436	18,523,664	37,619,436
Benefits				
Employees retirement	7,325,761	5,668,211	1,657,550	5,668,211
Dental insurance	380,827	256,281	124,546	256,281
Health insurance	9,509,399	5,809,670	3,699,729	5,806,895
OPEB contribution	6,804,000	5,103,000	1,701,000	5,103,000
Civil service	62,000	95,190	(33,190)	95,190
Subtotal Benefits	24,081,987	16,932,352	7,149,635	16,929,577
Total salaries and benefits	80,225,087	54,551,788	25,673,299	54,549,013
Building occupancy:				
Building security and vending	396,000	337,353	58,647	249,419
Building supplies and expenses	155,000	160,541	(5,541)	159,090
Heat, light and power	530,000	336,043	193,957	336,043
Insurance	483,308	468,564	14,744	468,564
Municipal assessments	199,000	193,806	5,194	193,806
Office supplies and expenses	160,350	139,618	20,732	137,665
Storage	68,880	62,000	6,880	29,972
Telephone	585,000	514,022	70,978	347,042
Total building occupancy	2,577,538	2,211,947	365,591	1,921,601
Computer:				
IT Hardware Purchases	1,222,600	524,865	697,735	305,987
IT Software Purchases	702,500	579,447	123,053	574,670
Software and support services	4,704,995	4,043,630	661,365	2,823,420
Project Costs - Hardware and Software	336,000	35,865	300,135	35,865
Total computer	6,966,095	5,183,807	1,782,288	3,739,942
Personnel and meeting:				
Board - meetings, travel and education	150,000	38,037	111,963	37,614
Delegates meeting	70,000	121,910	(51,910)	121,910
Dues	465,685	161,014	304,671	159,814
Employee Engagement	58,500	27,972	30,528	27,972



NEW YORK STATE TEACHERS' RETIREMENT SYSTEM
Schedule of Administrative Expenses (Unaudited) (Continued)

Compared to Budget Appropriations for 2024-2025

	Budget Appropriations 2024-2025	Expenses and Encumbrances YTD 03/31/2025	Remaining Balance 3/31/2025	Actual Expenses YTD 03/31/2025
Personnel and meeting (continued):				
Library	\$ 52,175	\$ 32,770	\$ 19,405	\$ 23,973
Overtime meals	2,500	2,410	90	2,410
Personnel expenses	359,850	211,506	148,344	204,560
Pre-retirement seminars	76,000	73,760	2,240	73,760
Staff schooling	863,721	719,464	144,257	553,985
Travel and automobile expense	554,380	276,096	278,284	269,717
Tuition assistance	50,000	15,225	34,775	15,225
Wellness fund	9,250	3,852	5,398	1,477
Meeting Expense	10,450	12,472	(2,022)	12,472
Total personnel and meeting	<u>2,722,511</u>	<u>1,696,488</u>	<u>1,026,023</u>	<u>1,504,889</u>
Professional and governmental services:				
Auditors - financial	429,700	397,700	32,000	397,700
Disability medical examinations	100,000	69,457	30,543	69,457
Postage and cartage	1,020,200	731,358	288,842	666,283
Professional fees and services	2,002,984	1,668,083	334,901	735,360
Publications	234,000	248,296	(14,296)	211,202
Project Costs - Professional Fees	1,493,000	2,558,413	(1,065,413)	1,020,325
Statutory custodian charges	150,000	113,750	36,250	113,750
Total professional and governmental services	<u>5,429,884</u>	<u>5,787,057</u>	<u>(357,173)</u>	<u>3,214,077</u>
Capital improvement program:				
Depreciation - building and improvements	1,715,883	1,286,685	429,198	1,286,685
Depreciation - equipment	308,310	231,288	77,022	231,288
Amort./depreciation - computer micro	1,505,999	739,157	766,842	739,157
Building improvement expense	273,000	149,251	123,749	121,139
Building maintenance contracts	847,571	777,862	69,709	414,621
Equipment	143,000	5,263	137,737	5,263
Equipment maintenance	67,000	47,068	19,932	28,144
Fleet maintenance	40,000	14,463	25,537	14,463
Capital contingency	228,502	—	228,502	—
SBITA Asset Amortization Expense	120,736	—	120,736	—
Total capital improvement program	<u>5,250,001</u>	<u>3,251,037</u>	<u>1,998,964</u>	<u>2,840,760</u>
Total Administration Expenses	<u>\$ 103,171,116</u>	<u>\$ 72,682,124</u>	<u>\$ 30,488,992</u>	<u>\$ 67,770,282</u>



Quarterly Signatory Additions & Deletions

For Quarter Ended March 31. 2025

Division	Name	Position	Warrant Signatory	Document Signatory
Member Relations	Heidi Travis	Manager/Director	Not Applicable	Deleted
Public Equities	Binoop Unni	Deputy Executive	Added	Added
Public Equities	Paul Cummins	Executive	Deleted	Deleted



Meeting on Retired Employee Health Benefits Trust

April 23, 2025

AGENDA p. 341

Call to Order by Chair

- A. Approve minutes of the October 30, 2024 Trust Meeting pp. 342-343
- B. OPEB Trust Actuarial Valuation Report pp. 344-377
- C. Resolution Authorizing Contribution to the Retired Employees Health Benefits Trust for the 2025-2026 Fiscal Year p. 378
- D. Trust Financial Statements pp. 379-383

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM

A meeting of the Trustees of the New York State Teachers' Retirement System Retired Employee Health Benefits Trust was held at the System on October 30, 2024.

Board Members: Juliet Benaquisto, Paul Farfaglia, Phyllis Harrington (via WebEx), Eric Iberger, David Keefe, Donald A. Little III, Oliver Robinson, Nicholas Smirensky

NYSTRS Staff: Thomas K. Lee, Don Ampansiri, Kathy Ebert, Richard Young

Plante Moran: Jean Young

Visitor: Kevin Balaod, WithIntelligence (via WebEx)

The meeting was called to order by D. Keefe at 12:45 p.m.

1. Approval of Minutes of April 25, 2024

Upon motion of N. Smirensky, seconded by O. Robinson and unanimously adopted by the Trustees, the minutes of the April 25, 2024 meeting were approved.

2. Review of GASB 74/75 Report (Appendix A, pp. 3-42)
3. Review of Trust Financial Statements Quarter Ended September 30, 2024 (Appendix B, pp. 43-47).
4. Review of Trust Financial Statements with Independent Auditor's Report Year Ended June 30, 2024

J. Young of Plante Moran reviewed the Trust's audited financial statements for the year ended June 30, 2024 (Appendix C, pp. 48-85).

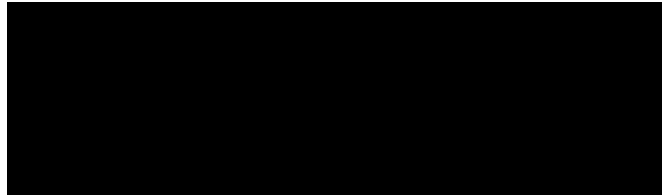
5. Resolution Accepting Plante Moran Annual Audit – Trust

N. Smirensky, moved the following resolution, seconded by E. Iberger and unanimously adopted by the Trustees:

RESOLVED, That the report of Plante Moran on the financial statements of the New York State Teachers' Retirement System Retired Employee Health Benefits Trust as of June 30, 2024 and for the Trust year then ended, as presented to the Trustees, is accepted.

There being no further business, the meeting adjourned at 12:50 p.m.

Respectfully submitted,

A large black rectangular box redacting the signature of Thomas K. Lee.

Thomas K. Lee



**New York State Teachers'
Retirement System (NYSTRS)
Other Post-Employment Benefits (OPEB)**

Actuarial Valuation as of July 1, 2024
to Determine the NYSTRS' Contribution
for the Fiscal Year Ending June 30, 2026

Bolton

Submitted by:

Rebecca Trauger, FSA, FCA, MAAA
Senior Consulting Actuary
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rtrauger@boltonusa.com

Timothy Barry, ASA, MAAA
Actuary
(667) 218-6926
tbarry@boltonusa.com



February 27, 2025

Mr. Richard A. Young
Chief Actuary
New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211-2395

Dear Richard:

The following sets forth the Actuarial Determined Contribution (ADC) for the New York State Teachers' Retirement System (NYSTRS) for the fiscal year ending June 30, 2026. Section I of the report provides an executive summary while Sections II through IV contain the calculation of NYSTRS' contribution for FYE 2026 along with the development of the underlying assets and liabilities used in determining it. Sections V through VII provide a summary of the plan provisions, census data, and actuarial methods and assumptions, and Section VIII provides a glossary of many of the terms used in this report. The appendix provides a five-year projection of the ADC based on the plan provisions and assumptions described in this report.

The plan's funded ratio has increased from 56.0% funded as of June 30, 2023 to 62.9% funded as of June 30, 2024. It is projected to be 66.3% funded as of June 30, 2025. The ADC has decreased from \$6,764,602 for FYE 2025 to \$6,235,976 for FYE 2026. The decrease was largely due to updating the per capita cost assumption based on the 2025 premiums provided by NYSTRS, updating the healthcare cost trend assumption to reflect the expected impact of the Inflation Reduction Act, and favorable investment experience. These decreases were partially offset by updating the spousal coverage election assumption based on an experience study performed by Bolton dated January 28, 2025. The ADC is projected to be approximately \$0.3 million more than the estimated FY2026 pay-as-you-go cost of \$6.0 million (see Section IV). Section I includes a detailed reconciliation of the impact of each change on the ADC.

Methodology, Reliance, and Certification

This report has been prepared for NYSTRS for the purpose of computing the FYE 2026 ADC as well as to calculate and monitor the Plan's funded ratio. It is neither intended nor necessarily suitable for other purposes. Bolton is not responsible for the consequences of any other use, or its reliance, by another party.

The report is based on June 30, 2024 census data and financial statements for the fiscal year ending June 30, 2024 provided by NYSTRS.

NYSTRS is responsible for selecting the plan's funding policy and assumptions. The demographic assumptions were recently reviewed in the experience study performed by Bolton dated January 28, 2025. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are found in Section VII. NYSTRS is solely responsible for communicating to Bolton Partners, Inc. any changes required thereto. The actuarial methods and assumptions used in this report comply with ASOP 6 and the actuarial standards of practice promulgated by the American Academy of Actuaries and are, in our opinion, reasonable and appropriate for the purposes of this valuation.



Methodology, Reliance, and Certification

NYSTRS is solely responsible for selecting the plan's investment policies, asset allocation, and individual investments. Bolton, Inc.'s actuaries have not provided any investment advice to NYSTRS.

Future medical care cost increase rates are unpredictable and could be volatile. They will depend upon the economy, future health care delivery systems and emerging technologies. The trend rate used in this valuation is based on an economic model developed by a health care economist for the Society of Actuaries. Future medical trend increases could vary significantly from the model. Model inputs will be updated periodically based on the best estimate of the economy at that time. Small changes in the model inputs can result in large actuarial gains or losses.

This report is based on assets, plan provisions, census data, and premium rates submitted by NYSTRS. We have relied on this information for purposes of preparing this report but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

We make every effort to ensure that our calculations are accurately performed. However, given the complexity of these calculations, there may be errors. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the plan in the case of plan termination. Future actuarial measurements may differ significantly from the current measurements 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.

The COVID-19 pandemic has impacted many aspects of OPEB valuations, including increasing mortality rates, fluctuating medical plan costs, creating supply shortages which increased inflation, and causing new trends in turnover and retirement rates. The impact of this pandemic through the valuation date is already reflected in the census data and the premium rates provided. However, since OPEB valuations are long-term estimates of future costs, we (and more broadly, the actuarial profession) are closely monitoring experience of all assumptions to determine what the long-term impacts of the COVID-19 pandemic will be. Given the current levels of uncertainty, we have not made any changes to the assumptions to account for any potential long-term impacts but will continue to monitor emerging experience, and make changes as necessary.



Methodology, Reliance, and Certification

The Inflation Reduction Act (IRA), which was signed into law in August 2022, is expected to make numerous changes to prescription drug costs for Medicare enrollees and plan sponsors, including capping member out of pocket spending and other plan design changes beginning in 2025 and requiring the federal government to negotiate drug prices for certain high-cost drugs starting in 2026. The expected impact of these changes has been reflected in the trend assumption used for Rx costs for Medicare-eligible participants. Further detail on how this was done can be found in Section VII.

The analysis was completed using both proprietary and third-party models (including software and tools). We have tested these models to ensure they are used for their intended purposes, within their known limitations, and without any known material inconsistencies unless otherwise stated.

Bolton Partners is completely independent of the New York State Teachers' Retirement System, their programs, activities, and any of their key personnel. Bolton Partners does not have any relationship with the New York State Teachers' Retirement System which would impair or appear to impair the objectivity of our work.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Rebecca Trauger, FSA, FCA, MAAA
Senior Consulting Actuary

Timothy Barry, ASA, MAAA
Actuary



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Section I. Executive Summary

Background

This report sets forth the FYE 2026 Actuarial Determined Contribution (ADC) for New York State Teachers' Retirement System. It is also used to calculate and monitor the Plan's funded ratio. The prior valuation report, which developed the ADC for FYE 2025, was completed on April 2, 2024. The GASB 74 and GASB 75 accounting results are presented in a separate report.

In 2016, New York State Teachers' Retirement System elected to determine the ADC based on the normal cost plus a 30-year closed amortization of the unfunded actuarial accrued liability. As of the development of the FYE 2026 ADC, there are 22 years remaining in the amortization period.

OPEB Trust Arrangement and Funding Policy

NYSTRS has established an irrevocable Trust to pre-fund benefits. Asset information was provided by NYSTRS; the market value of assets as of June 30, 2024 is \$76,485,077. It is our understanding that NYSTRS pays benefits out of the Trust and contributes the ADC to the Trust each year.

Actuarial Value of Assets

The ADC is based on the actuarial value of assets (AVA). The actuarial value of assets is based on the market value of assets with investment gains and losses smoothed over a five-year period. Asset gains and losses are determined by comparing the expected value of assets to the market value of assets. As of June 30, 2024 the actuarial value of assets is \$73,284,793, which is 96% of the market value. The development of the AVA is shown in Section III.

Estimated FYE 2025 Assets

The market value of assets as of June 30, 2025 was estimated assuming the plan contributes the ADC for FYE 2025 and actual benefit payments are equal to expected based on valuation assumptions. The actuarial value of assets was estimated assuming no investment gain or loss for FY2025 but includes the impact of recognition of past investment gains and losses due to the actuarial smoothing method. The development of the market and actuarial value of assets as of June 30, 2025 is shown in Section III.

The actual return on plan assets was 12.3% during FYE 2023 and 15.0% during FYE 2024.

Plan Provisions

Employees who retire from the New York State Teachers' Retirement System who worked for the System for at least 10 years are eligible for benefits through the Plan. Dependents of eligible employees and retirees may also be covered under the Plan.

NYSTRS offers medical, prescription drug, and vision benefits, as well as Medicare Part B reimbursement to eligible participants. Retirees and spouses are eligible for a subsidy from NYSTRS which varies by benefit.

Please see Section V for more details regarding the Plan.

Section I. Executive Summary

Comparison with Previous Valuation

The prior valuation was based on July 1, 2023 data, and those results were used in the FYE 2025 OPEB funding report dated April 2, 2024. There was a decrease in the ADC from FY2025 to FY2026, which was mainly due to the updated per capita costs based on the 2025 premium rates and updating the healthcare cost trend assumption to reflect the expected impact of the Inflation Reduction Act (IRA). These decreases were partially offset by updating the spousal coverage election assumption based on an experience study performed by Bolton dated January 28, 2025.

The following table compares the census data used in the current and prior valuations and reconciles the ADC. Amounts shown are rounded to the nearest \$0.1M.

Comparison of Current and Previous Valuations		
Data as of	July 1, 2023	July 1, 2024
Data is used to calculate ADC for FYE	2025	2026
Census Data		
Active Employees ¹	384	402
Deferred Vested Participants ²	2	2
Retirees ^{3,4}	313	313
Dependents	140	144
Total	839	861
Reconciliation of Actuarially Determined Contribution (ADC)		
ADC Previous Valuation, FYE 2025		\$6.8M
Expected Increase/(Decrease) to ADC for FYE 2026 ⁵		0.2
Increase/(Decrease) due to Investment Experience		(0.2)
Increase/(Decrease) due to Demographic Experience		0.2
Increase/(Decrease) due to Updated Per Capita Cost Assumption		(0.7)
Increase/(Decrease) due to Updated Healthcare Cost Trend Assumption to Reflect the Expected Impact of the Inflation Reduction Act (IRA)		(0.4)
Increase/(Decrease) due to Updated Spousal Coverage Election Assumption		0.3
ADC Current Valuation, FYE 2026		\$6.2M

¹ Counts include 26 active employees who waived medical/Rx coverage as of July 1, 2023 and 31 who waived medical/Rx coverage as of July 1, 2024 who were not included in the respective valuations because they were assumed to continue waiving medical/Rx coverage at retirement. Of the 31 who waived medical/Rx coverage as of July 1, 2024, 16 were waiving all coverage and 15 were enrolled in vision coverage but waived medical/Rx.

² These participants were not shown in the above comparison in the prior report. However, since we are assuming deferred vested participants will elect coverage upon turning 65, they have been added for this year's report.

³ Includes 15 surviving spouses as of July 1, 2023 and 14 surviving spouses as of July 1, 2024.

⁴ Excludes 2 retirees and 2 surviving spouses who are enrolled in vision coverage but waiving medical/Rx coverage as of July 1, 2024, as well as 1 retiree who is waiving all coverage as of July 1, 2024.

⁵ Includes impact of recognition of past investment gains and losses due to actuarial smoothing method.

Section I. Executive Summary

Funding Measures – Entry Age Normal

Below is a summary of the expected Actuarial Value of Assets and Liabilities as of July 1, 2025 that were used in developing the ADC for FYE 2026:

Funding Measures	July 1, 2025
(1) Entry Age Normal Actuarial Accrued Liability	\$121,671,047
(2) Estimated Actuarial Value of Assets	\$80,634,148
(3) Funded Ratio (2 / 1)	66.3%

Census Data

Census data as of July 1, 2024 was provided to us by NYSTRS. This data included current medical coverage for active employees, retirees, and their dependents. Although we have not audited this data, we have no reason to believe that it is inaccurate.

Cost Information

Bolton received 2025 premium rates from NYSTRS, which are the same for active employees and retirees regardless of Medicare status. Expected per capita costs for pre-Medicare participants were determined by age adjusting the blended premium rates. The expected per capita costs for Medicare participants were also determined based on the premium rates provided for each plan, with age adjustments applied as appropriate.

The published insurance rates are based on a blend of active employee, pre-Medicare retiree, and Medicare retiree experience, and because there are significantly more active employees and Medicare retirees, the rates are primarily based on their healthcare usage. However, because retirees tend to use healthcare at a higher rate than active employees, using these blended rates creates an implicit subsidy for the retiree group, particularly for pre-Medicare retirees where the Plan is responsible for the full cost. Actuarial Standards of Practice (ASOP) 6 require that the per capita cost assumption we use for this valuation be based on just the retiree cost. Therefore, we have age-adjusted the premium rates provided to determine a retiree per capita cost for both pre-Medicare retirees and Medicare retirees who are not on a Medicare Advantage plan¹.

Demographic Assumptions

The demographic (retirement, termination, and disability) assumptions are the same as those used in the June 30, 2023 OPEB funding report dated April 2, 2024. They were reviewed as part of an experience study performed by Bolton dated January 28, 2025 and determined to still be reasonable and appropriate. The mortality assumption is based on the SOA Pub 2010 headcount-weighted mortality tables with an 98.75% adjustment for both males and females, projected on a fully generational basis using mortality improvement scale MP-2021. There has not been a new mortality improvement scale published by the SOA since MP-2021; therefore, we have continued to use this scale for the July 1, 2024 valuation. The life expectancy assumption for purposes of sick leave credit is based on the 2015 Life Expectancy Table.

¹ An exception was made in the ASOP 6 Practice Note issued in March 2021 that Medicare Advantage plans do not need to be age adjusted.

Section I. Executive Summary

Demographic Assumptions (continued)

All employees enrolled in medical coverage as actives are assumed to retain coverage at retirement. Employees currently waiving medical coverage are assumed to waive coverage upon retirement. 70% of male participants and 55% of female participants expected to enroll in coverage at retirement are assumed to cover a spouse. This assumption was updated since the prior valuation based on the experience study performed by Bolton dated January 28, 2025.

Additional information regarding these assumptions is provided in Section VII.

Economic Assumptions

The expected rate of return assumption of 6.50% was selected by the plan sponsor. This assumption was reviewed based on the 2024 Horizon Survey of Capital Market Assumptions and the OPEB Trust Target Asset Allocation and determined to be reasonable and appropriate.

NYSTRS has established an irrevocable Trust and adopted a funding policy to contribute the Actuarial Determined Contribution (ADC) each year. Under this policy, the plan is projected to be fully solvent in the future, and therefore the discount rate is the expected rate of return of 6.50%.

The healthcare cost trend assumption was developed using the 2024 version of the Society of Actuaries (SOA) Getzen Long-Term Healthcare Cost Trend Model with baseline assumptions. This model was designed to estimate the trend after 2025. The initial trend rates reflect actual premium increase for 2024 (3.2% for pre-Medicare and 2.7% for Medicare-eligible participants) and 7.0% expected for 2025. The 2025 trend reflects recent inflation, which we estimate will result in higher medical costs as providers renew their contracts. The baseline trend rates were then adjusted to account for the potential impact of the Inflation Reduction Act when projecting the Rx costs for Medicare-eligible participants. The trend for pre-Medicare costs is expected to be 7.00% in 2025 and 6.20% in 2026, decreasing to 5.29% by 2030 and 4.54% by 2050, ultimately leveling off at 4.04% in 2075. The blended medical and Rx trend for Medicare costs is expected to be 5.98% in 2025 and 5.40% in 2026, decreasing to 4.90% by 2030 and 4.41% by 2050, ultimately leveling off at 3.92% in 2075.

The SOA Long-Run Medical Cost Trend Model is based on an econometric analysis of historical U.S. medical expenditures and the judgments of experts in the field. The long-run baseline projection, tolerance ranges and input variables have been developed under the guidance of an SOA Project Oversight Group.

Medicare Part B premiums are expected to increase by 4% annually based on the average increase over the past 10-15 years.

The salary scale assumption is the same as that used in the June 30, 2023 OPEB funding report dated April 2, 2024.



Section II. Actuarially Determined Contribution

FYE 2026 Actuarial Determined Contribution

Below is a summary of the calculation of the Plan's Actuarially Determined Contribution (ADC) under current plan provisions and assumptions.

	FYE 2026
(1) Expected Rate of Return	6.50%
(2) Actuarial Accrued Liability as of July 1, 2025	\$121,671,047
(3) Estimated Actuarial Value of Assets as of July 1, 2025	\$80,634,148
(4) Amortization of Unfunded Accrued Liability	
(a) Unfunded Accrued Liability	\$41,036,899
(b) Amortization Period (years)	22
(c) Amortization Factor (rounded)	15.32
(d) Amortization Amount	\$2,678,727
(5) Actuarial Determined Contribution	
(a) Normal Cost (with interest to July 1, 2025)	\$3,557,249
(b) Amortization of Unfunded Accrued Liability (with interest to July 1, 2025)	\$2,678,727
(c) Total Actuarial Determined Contribution	\$6,235,976

Section III. Assets

June 30, 2024 Market Value of Assets Reconciliation

Below is a reconciliation of the market value of assets from last year to this year as well as the asset gain/(loss) development.

(1)	Expected Rate of Return	6.50%
(2)	Market value of assets as of June 30, 2023	\$65,553,482
(3)	Employer Contributions	6,910,000
(4)	Investment gains/(losses)	9,931,293
(5)	Retired Employee Health Benefit Payments paid from Trust	(5,895,698)
(6)	Administrative Expenses	(14,000)
(7)	Market value of assets as of June 30, 2024 (2) + (3) + (4) + (5) + (6)	\$76,485,077
(8)	Expected investment return	4,293,486
(9)	Asset (gain)/loss (8) – (4)	\$(5,637,807)

Asset (Gain)/Loss Bases

Below are the initial bases for the asset (gains)/losses that are still being recognized.

FY2024	\$(5,637,807)
FY2023	(3,336,118)
FY2022	13,905,782
FY2021	(11,253,404)

Development of June 30, 2024 Actuarial Value of Assets

Below is a table showing how the actuarial value of assets as of June 30, 2024 was calculated.

(1)	Market Value as of June 30, 2024	\$76,485,077
(2)	Prior Asset (Gain)/Loss Deferred	
	(a) 80% of (Gain)/Loss during FY2024	\$(4,510,245)
	(b) 60% of (Gain)/Loss during FY2023	(2,001,671)
	(c) 40% of (Gain)/Loss during FY2022	5,562,313
	(d) 20% of (Gain)/Loss during FY2021	(2,250,681)
	(e) Total Amount of (Gain)/Loss Deferred	\$(3,200,284)
(3)	Actuarial Asset Value as of June 30, 2024 (1) + (2)(e)	\$73,284,793

Section III. Assets

Estimation of June 30, 2025 Market Value of Assets

The market value of assets as of June 30, 2025 was estimated assuming the plan contributes the ADC for FYE 2025 and actual benefit payments are equal to expected based on valuation assumptions. The calculation is detailed below:

(1)	Expected Rate of Return	6.50%
(2)	Market value of assets as of June 30, 2024	\$76,485,077
(3)	Expected Employer Contributions	6,764,602
(4)	Expected Investment Earnings	5,006,580
(5)	Expected Retired Employee Health Benefit Payments paid from Trust	(5,672,136)
(6)	Expected Investment Expenses ¹	(14,000)
(7)	Estimated Market value of assets as of June 30, 2025 (2) + (3) + (4) + (5) + (6)	\$82,570,123

Estimation of June 30, 2025 Actuarial Value of Assets

The actuarial value of assets was estimated assuming no investment gain or loss for FY2025 but includes the impact of recognition of past investment gains and losses due to the actuarial smoothing method. The calculation is detailed below:

(1)	Estimated Market Value as of June 30, 2025	\$82,570,123
(2)	Prior Asset (Gain)/Loss Deferred	
	(a) 80% of Expected (Gain)/Loss during FY2025	0
	(b) 60% of (Gain)/Loss during FY2024	(3,382,684)
	(c) 40% of (Gain)/Loss during FY2023	(1,334,447)
	(d) 20% of (Gain)/Loss during FY2022	2,781,156
	(e) Total Amount of (Gain)/Loss Deferred	\$(1,935,975)
(3)	Estimated Actuarial Asset Value as of June 30, 2025 (1) + (2)(e)	\$80,634,148

¹ Assumed investment expenses for FY2025 would be the same as FY2024.

Section IV. Liabilities and Expected Benefit Payments

Liabilities as of Valuation and Measurement Dates

Below is a summary of the Plan's liabilities as of July 1, 2024 and rolled to July 1, 2025 under current plan provisions.

	July 1, 2024	July 1, 2025
(1) Discount Rate	6.50%	6.50%
(2) Actuarial Accrued Liability		
(a) Actives	\$47,762,541	\$49,870,466
(b) Retirees in Pay Status	68,765,714	71,800,581
(c) Total (a + b)	\$116,528,255	\$121,671,047

Projected Retired Employee Health Benefit Payments

Below are the expected employer benefit payments over the next ten years based on the current valuation. Amounts are rounded to the nearest thousand.

Fiscal Year Ending	Expected Retired Employee Health Benefit Payments
2025	\$5,672,000
2026	5,976,000
2027	6,463,000
2028	6,884,000
2029	7,119,000
2030	7,566,000
2031	7,764,000
2032	8,176,000
2033	8,499,000
2034	8,835,000

Please note:

- The expected benefit payment stream for retired employee health benefits shown above assumes that the covered population is a closed group, i.e. there are no new entrants or re-entrants.
- The Plan's actual retired employee health benefit payments may be greater or lesser than the amounts shown, depending on actual demographic experience and future premium rates.
- The expected retired employee health benefit payments shown are net of retiree contributions and include the implicit subsidy associated with providing all retirees with access to the plan at the same premium rates as active employees.

Section V. Summary of Principal Plan Provisions

The following summary describes principal plan provisions assumed in calculating the cost of the OPEB Plan.

General Eligibility Rules

Employees are eligible for retiree health benefits only if all of the following requirements are met:

1. Must have worked for at least 10 years for the System,
2. Retired directly from System employment, and
3. Eligible to commence receipt of a pension from the New York State and Local Employees' Retirement System (ERS). If enrolled in the Optional Retirement Program administered by TIAA/CREF, the employee must meet the retirement age requirement of the ERS tier in effect on the date the employee last entered New York State service.

Employees who become disabled must have 10 years of service in order to be eligible for benefits. However, NYSTRS has historically had no disability incidence, and therefore no rates of disability were assumed and only service retirement was considered for this valuation.

Surviving spouses of active employees are eligible to continue coverage in the Plan if the employee had 10 or more years of service at the time of death.

In order to maintain coverage, eligible retirees must remain enrolled in the Plan and pay the required monthly premiums.

Benefits Covered

The retiree health plan offered to eligible employees of the New York State Teachers' Retirement System includes medical, prescription drug (Rx), and vision benefits, as well as Medicare Part B reimbursement. Eligible retirees can elect coverage for themselves, their spouses and dependent children.

Medical and Rx Benefits

Each of the plans offered includes medical coverage (inpatient facility, outpatient facility, physician and surgeon services, and other related care) and prescription drug (Rx) benefits. Upon reaching eligibility for Medicare (generally at age 65), the Plan coordinates with Medicare, with Medicare being primary before the Plan pays benefits.

Dental Benefits

None offered.

Vision Benefits

Included

Medicare Part B Reimbursement

Medicare Part B premiums are reimbursed by the State and are included in the blended premiums charged by the State. These blended premiums reflect both the standard Medicare Part B premium per month per Medicare beneficiary covered and the additional premium that applies if participants' incomes exceed certain thresholds. Both the standard Part B premiums and the income thresholds are determined annually by the Centers for Medicare & Medicaid Services (CMS).



Life Insurance
None offered.

Section V. Summary of Principal Plan Provisions

Participant Contributions

No retiree contributions apply for retirees who retired before July 1, 1985 and enrolled in the Plan.

For retirements on or after July 1, 1985:

- Non-Medicare and Medicare retirees pay the same amount.
- Retirees contribute 15% of the Empire plan premium paid, subject to a maximum retiree contribution related to pay at retirement. Retirees pay 10% of the vision plan premium.
- If a retiree chooses a plan other than the Empire Plan, they are responsible for 100% of the excess, if any, of the premium for that plan over the Empire Plan premium.
- Sick time conversion can be used to offset contributions otherwise owed by retirees.

Eligible spouses continue coverage by paying 25% of the cost of coverage. In the event of the death of a retiree, surviving spouses are eligible to continue to enroll in the Plan by paying 25% of the cost of coverage. Surviving spouses of eligible active employees also pay 25% of the premium cost after a three-month extended coverage period.

Annual Maximums

Retiree contributions vary by tier, which are determined based on salary at retirement.

Tiers	Salary at Retirement
Tier 1	Up to \$60,000
Tier 2	\$60,001 - \$90,000
Tier 3	\$90,001 and above

The annual maximum contributions for individual health insurance coverage beginning January 1, 2025 through December 31, 2029 are as follows:

	2025	2026	2027	2028	2029
Tier 1	\$1,950	\$1,950	\$1,950	\$1,950	\$1,950
Tier 2	\$2,150	\$2,350	\$2,550	\$2,750	\$2,950
Tier 3	\$2,625	\$2,875	\$3,125	\$3,375	\$3,625

The annual maximum contributions for family health insurance coverage beginning January 1, 2025 through December 31, 2029 are as follows:

	2025	2026	2027	2028	2029
Tier 1	\$3,450	\$3,450	\$3,450	\$3,450	\$3,450
Tier 2	\$5,675	\$6,225	\$6,775	\$7,325	\$7,875
Tier 3	\$6,225	\$6,825	\$7,425	\$8,025	\$8,625

Annual maximums after 2029 are subject to future contract negotiations.

Section V. Summary of Principal Plan Provisions

Participant Contributions (continued)

Banked Sick Leave Pay Credit

Retirements after April 1, 1991 are eligible to have unused sick leave converted into a credit to offset retiree contributions otherwise owed to the health plan. Sick Leave Credit is determined as daily pay times the number of sick leave days, divided by life expectancy. Daily Pay is defined as the daily rate of pay at retirement. Sick Leave Days are the number of unused sick leave days at retirement. Life Expectancy is determined in months at retirement using factors established by the Plan.

Sick Leave is subject to the following maximums:

Effective Period	Sick Leave Maximum	
	Management Employees	Non-Management Employees
April 1, 1991 to January 7, 2004	165 days	165 days
January 8, 2004 to December 31, 2020	185 days	165 days
January 1, 2021 and after	200 days	200 days

Changes in plan provisions since prior valuation

None.

Section VI. Valuation Data

Summary of Participants

The following table summarizes the census data used in the current and prior valuations. Retiree and dependent counts only include those who are enrolled in medical/Rx coverage.

Data as of:	July 1, 2023	July 1, 2024
Number of Participants		
Active Employees ¹	384	402
Deferred Vested Participants ²	2	2
Pre-Medicare Retirees ³	84	75
Medicare-eligible Retirees ^{4,5}	229	238
Dependents ⁶	<u>140</u>	<u>144</u>
Total	839	861
Active Statistics		
Average Age	46.6	45.3
Average Service	10.5	9.6
Inactive Statistics		
Deferred Vested Participant Average Age	61.1	62.1
Pre-Medicare Retiree Average Age	61.1	61.2
Medicare Retiree Average Age	74.0	73.9
Dependent Average Age	69.5	69.5

¹ Counts include 26 active employees who waived medical/Rx coverage as of July 1, 2023 and 31 who waived medical/Rx coverage as of July 1, 2024 who were not included in the respective valuations because they were assumed to continue waiving medical/Rx coverage at retirement. Of the 31 who waived medical/Rx coverage as of July 1, 2024, 16 were waiving all coverage and 15 were enrolled in vision coverage but waived medical/Rx.

² These participants were footnoted as 2 of the 5 retirees who waived medical/Rx coverage as of July 1, 2023 in the prior report. However, since we are assuming they will elect coverage upon turning 65, they have been added to the summary above.

³ Excludes 1 retiree who is waiving medical/Rx and vision coverage as of July 1, 2024

⁴ Includes 15 surviving spouses as of July 1, 2023 and 14 surviving spouses as of July 1, 2024.

⁵ Excludes 2 retirees and 2 surviving spouses who are enrolled in vision coverage but waiving medical/Rx coverage as of July 1, 2024.

⁶ Includes 2 dependent children as of July 1, 2023 and 3 dependent children as of July 1, 2024.

Section VI. Valuation Data

Active Age - Service Distribution

Shown below is a distribution by age and service for all active employees as of July 1, 2024. This exhibit includes 31 active employees who are not included in the valuation because they are currently waiving medical/Rx coverage and therefore assumed to waive medical/Rx coverage at retirement.

Age	Years of Service								Total
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	7	3	0	0	0	0	0	0	10
25 – 29	9	14	1	0	0	0	0	0	24
30 – 34	12	15	16	0	0	0	0	0	43
35 – 39	10	15	13	6	0	0	0	0	44
40 – 44	8	18	25	5	8	1	0	0	65
45 – 49	3	17	15	10	13	6	1	0	65
50 – 54	1	10	12	11	13	8	5	2	62
55 – 59	3	7	7	5	9	9	4	8	52
60 – 64	0	4	7	1	8	7	2	1	30
65+	0	0	2	1	2	2	0	0	7
Total	53	103	98	39	53	33	12	11	402

Retiree and Dependent Age Distribution

The following table shows the distribution by age of retirees and dependents who are currently enrolled in medical/Rx coverage as of July 1, 2024.

Age	Retirees ¹	Dependents	Total
<55	1	4	5
55 – 59	16	11	27
60 – 64	59	29	88
65 – 69	73	30	103
70 – 74	62	23	85
75 – 79	55	26	81
80 – 84	35	13	48
85+	14	8	22
Total	315	144	459

¹ Includes 2 deferred vested participants and 14 surviving spouses.

Section VI. Valuation Data

Status Reconciliation

The following table shows the status reconciliation of actives, deferred vested participants, retirees and surviving spouses from July 1, 2023 to July 1, 2024. Details are included in the footnotes.

	Active	Deferred Vested	Retired	Surviving Spouses	Total
Members as of July 1, 2023	384¹	2	299²	14³	699
New Hires	53				53
Active Pickup	1				1
Terminations	(21)				(21)
Retired and Elected Coverage	(9)		9		0
Retired but Waived Coverage	(1)				(1)
Retiree Pickup					
New Surviving Spouse					
Deceased / Dropped Coverage	(5)		(9)		(14)
Members as of July 1, 2024	402⁴	2	299⁵	14⁶	717

¹ Includes 26 actives who waived medical/Rx coverage as of July 1, 2023.

² Excludes 3 retirees who waived medical/Rx coverage as of July 1, 2023.

³ Excludes 1 surviving spouse who waived medical/Rx coverage as of July 1, 2023.

⁴ Includes 31 actives who waived medical/Rx coverage as of July 1, 2024. Of these, 16 were waiving all coverage and 15 were enrolled in vision coverage but waived medical/Rx.

⁵ Excludes 2 retirees who are enrolled in vision coverage but waived medical/Rx and 1 retiree who waived all coverage as of July 1, 2024.

⁶ Excludes 2 surviving spouses who are enrolled in vision coverage but waived medical/Rx coverage as of July 1, 2024.

Section VII. Valuation Methods and Assumptions

Actuarial Valuation Date

July 1, 2024

Measurement Date

June 30, 2025

Cost Method

This valuation uses the Entry Age Normal Funding Method calculated on an individual basis with level percentage of payroll.

Asset Valuation Method

The asset valuation method is the smoothed market value with phase-in method, using a smoothing period of 5 years, as described in paragraph 3.11 of IRS Revenue Procedure 2000-40.

The actuarial value of assets will equal the market value of assets with gains subtracted or losses added at the rate described below:

- a) 4/5 of the prior year's gain or loss
- b) 3/5 of the second preceding year's gain or loss
- c) 2/5 of the third preceding year's gain or loss
- d) 1/5 of the fourth preceding year's gain or loss

The gain or loss for a year is determined by calculating the difference between the expected value of assets for the year and the market value of assets as of the valuation date. The expected value of assets for the years is the market value of assets brought forward with interest at the valuation interest rate to the current valuation date. If the expected value is less than the market value, the difference is a gain. If the expected value is greater than the market value, there is a loss.

Party Responsible for Assumptions and Methods

New York State Teachers' Retirement System

Roll Forward Method

Liabilities are rolled forward from the actuarial valuation date to the measurement date through the use of a roll forward method (if necessary). Liabilities are adjusted for passage of time by adding normal cost minus benefit payments, all adjusted with interest.

Amortization of Unfunded Actuarial Accrued Liability

30-year closed amortization period as of July 1, 2016. There are 22 years remaining as of the development of the FYE 2026 ADC. The unfunded liability is amortized as level percent of payroll.

Expected Rate of Return on Assets

6.50%. Our reasonable range is within the 35th and 65th percentiles of the 20-year geometric expected rate of return based on the 2024 Horizon Survey of Capital Market Assumptions and the OPEB Trust Target Asset Allocation. 6.50% falls within the 35th and 50th percentiles and therefore is an acceptable assumption.

Payroll Growth

3.00%

Section VII. Valuation Methods and Assumptions

Election Assumption

For current retirees, actual medical coverage elections provided by NYSTRS were used. Current deferred vested participants are assumed to elect coverage upon turning 65.

For future retirees, 100% of employees enrolled in medical/Rx coverage as actives are assumed to retain this coverage at retirement. Employees currently waiving coverage are assumed to waive coverage at retirement. 0% of future inactive vested retirees were assumed to retain eligibility for and elect coverage.

Spousal Coverage and Age

For current retirees, actual spouse information provided by NYSTRS was used.

For future retirees, 70% of males and 55% of females were assumed to cover a spouse at retirement. Spouses were assumed to be the opposite gender of retirees, and females were assumed to be 2 years younger than male spouses.

75% of surviving spouses of actives with 10 or more years of service and 0% of surviving spouses of actives with less than 10 years of service were assumed to elect coverage.

Sick Leave Credit

All employees are assumed to use 100% of sick leave credit upon retirement.

Decrement Assumptions

Below is a summary of decrements used in this valuation; sample retirement and termination rates are illustrated in the tables below. We generally use the same demographic assumptions that were used in the June 30, 2023 OPEB funding valuation, which were reviewed as part of the experience study dated January 28, 2025 and are, in our opinion, reasonable and appropriate for the purposes of this valuation.

Mortality

Status	Description of Mortality Assumption
Active Employees	SOA Pub-2010 General Employee Headcount-Weighted Mortality Table with an 98.75% adjustment for both males and females, projected on a fully generational basis with mortality improvement scale MP-2021
Healthy Retirees and Covered Spouses	SOA Pub-2010 General Retiree Headcount-Weighted Mortality table with an 98.75% adjustment for both males and females, projected on a fully generational basis with mortality improvement scale MP-2021
Surviving Spouses	SOA Pub-2010 General Contingent Survivors Headcount-Weighted Mortality table with an 98.75% adjustment for both males and females, projected on a fully generational basis with mortality improvement scale MP-2021
Disabled Retirees	SOA Pub-2010 General Disabled Retiree Headcount-Weighted Mortality table with an 98.75% adjustment for both males and females, projected on a fully generational basis with mortality improvement scale MP-2021

There has not been a new mortality improvement scale published by the SOA since MP-2021; therefore, we have continued to use this scale for the July 1, 2024 valuation.

Section VII. Valuation Methods and Assumptions

Decrement Assumptions (continued)

Life Expectancy

Life expectancy for the purposes of sick leave credit is based on the mortality table in use at retirement age. Calculations are based on the 2015 Life Expectancy Table.

Retirement

Age	Rate
<45	0.00%
45-54	0.25%
55	20.00%
56	14.00%
57	15.00%
58	16.00%
59	17.00%
60	20.00%
61	25.00%
62	30.00%
63	40.00%
64	25.00%
65	20.00%
66-69	10.00%
70+	100.00%

Termination

Service	Rate
0	15.00%
1	12.00%
2	9.00%
3	8.00%
4	7.00%
5	6.00%
6	5.00%
7	4.75%
8	4.50%
9	4.25%
10	3.75%
11	3.25%
12	2.75%
13	2.25%
14	1.75%
15+	1.00%

Section VII. Valuation Methods and Assumptions

Decrement Assumptions (continued)

Disability

No disability was assumed.

Salary Increase Rates

Salary is assumed to increase at the following rates based on years of service:

Years of Service	Increase
0-1	8.00%
2	7.00%
3	6.00%
4	5.00%
5	4.50%
6	4.20%
7	4.10%
8	4.00%
9	3.90%
10	3.80%
11	3.70%
12	3.60%
13	3.50%
14	3.40%
15	3.30%
16	3.20%
17	3.10%
18+	3.00%

Annual Contribution Maximums

Retiree contributions are subject to annual maximums, which increase each year and vary based on coverage tier and salary at retirement. These amounts are set through 2029, but in 2030 and later are subject to future contract negotiations.

The annual contributions after 2029 are assumed to increase by the following amounts each year based on coverage tier and salary at retirement:

	Single Coverage	Family Coverage
Tier 1	\$100	\$200
Tier 2	\$200	\$550
Tier 3	\$250	\$600

Section VII. Valuation Methods and Assumptions

Per Capita Cost Assumption

Medical and Rx Benefits

We received 2024 and 2025 premium rates from NYSTRS for each plan and coverage tier option offered to active employees and retirees. All plans include both medical and Rx benefits. Administrative fees were assumed to be included in the premium rates provided. The rates for 2024 and 2025 are shown below:

	2024		2025	
	Individual	Family	Individual	Family
Empire	\$ 13,086	\$ 33,599	\$ 13,086	\$ 33,599
CDPHP	11,241	25,878	12,628	29,126
MVP	10,996	25,284	11,931	27,489
Highmark BlueShield	11,198	27,611	12,023	29,715
Emblem Health (HIP)	16,301	39,318	18,767	45,345

The average premium was calculated by blending the 2025 premiums for each plan based on retiree enrollment as of the valuation date and trending to the midpoint of the projection period using 3.20% trend for pre-Medicare and 2.70% trend for Medicare (the weighted-average increase in premium rates from 2024 to 2025). The average premium was then age adjusted based on the total population (actives, pre-Medicare participants and Medicare-eligible participants) using the Yamamoto aging curve to determine a retiree per capita cost for all participants not in a Medicare Advantage plan. The average premium for participants in Medicare Advantage plans was not age adjusted based on guidance in the ASOP 6 Practice Note issued in March 2021. The per capita costs for these participants were determined based on the average premiums, adjusted by a factor of 30% assuming Medicare pays 70% of the costs. Costs for pre-Medicare spouses were assumed to be 1.3 times the cost for a pre-Medicare retiree, and costs for Medicare spouses were assumed to be the same as the cost for a Medicare retiree.

Section VII. Valuation Methods and Assumptions

Per Capita Cost Assumption (continued)

The following chart shows the expected per capita costs and average premium rates for pre-Medicare and Medicare-eligible participants. Per capita costs for pre-Medicare participants are shown for a 64-year-old male, and per capita costs for Medicare-eligible participants are shown for a 65-year-old male.

	Per Capita Costs	Average Premiums
Pre-Medicare Participants		
Retiree	\$ 24,601	\$ 12,735
Spouse	31,982	18,877
Medicare-eligible Participants in Medicare Advantage Plans		
Retiree	\$9,613	\$9,613
Spouse	13,190	13,190
Medicare-eligible Participants in non-Medicare Advantage Plans		
Retiree	\$6,510	\$10,672
Spouse	10,535	17,269

Medicare Part B Premiums

Participants eligible for Medicare Part B premium reimbursement were assumed to receive \$179.85 per month in FY2025, based on the average of the calendar year 2024 and 2025 premiums published by CMS. These costs were not age-adjusted as Part B premiums do not vary by age.

Section VII. Valuation Methods and Assumptions

Aging Factors

Aging factors were developed from the "Health Care Costs – From Birth to Death" study led by Dale Yamamoto, which was sponsored by the Society of Actuaries and prepared by Health Care Cost Institute. Aging factors were developed separately for medical and prescription drug (Rx) costs and then blended assuming a weight of 78.4% medical/21.6% Rx for pre-Medicare benefits and normalized to a male aged 65. The aging factors for Medicare-eligible participants were then adjusted to reflect the Plan portion of the costs, assuming that Medicare pays 70% of the costs, and re-normalized to a male aged 65. Sample factors are shown below:

Age	Male	Female
20	0.5629	0.7397
25	0.4809	0.9722
30	0.5957	1.3716
35	0.7479	1.5043
40	0.9474	1.5283
45	1.1785	1.6290
50	1.5407	1.9046
55	2.0192	2.2259
60	2.5982	2.5998
65	1.0000	0.9507
70	1.2474	1.1754
75	1.3606	1.2872
80	1.4283	1.3606
85	1.4387	1.4113

Healthcare Cost Trend Assumption

Medical and Rx Benefits

The baseline healthcare cost trend assumption was developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model. The current valuation uses the 2024 version of the model with baseline assumptions. The following assumptions were used as input variables into this model:

Rate of Inflation	2.6%
Rate of Growth in Real Income / GDP per capita	1.4%
Excess Medical Growth	0.9%
Expected Health Share of GDP in 2033	19.0%
Health Share of GDP Resistance Point	17.0%
Year for Limiting Cost Growth to GDP Growth	2075

This model was designed to estimate the trend after 2025. The initial trend rates reflect the actual premium increase for 2024 (3.2% for pre-Medicare and 2.7% for Medicare-eligible participants) and 7.0% expected for 2025. This 2025 trend reflects recent inflation, which we estimate will result in higher medical costs as providers renew their contracts.

Section VII. Valuation Methods and Assumptions

Healthcare Cost Trend Assumption (continued)

Medical and Rx Benefits

The baseline trend rates developed from the model and inputs described above were adjusted to account for the potential impact of the Inflation Reduction Act as follows:

- The changes to the cost sharing structure for Medicare Part D plans effective in 2025 are assumed to have already been reflected in the 2025 premiums that were used to set the per capita costs and initial trend assumption. Therefore, we have not adjusted the expected trend for 2025 to reflect any increase due to this change in cost sharing.
- The federal government being able to negotiate pricing for certain high-cost drugs starting in 2026 was assumed to result in a 10% savings for the drugs that are selected for negotiations. These drugs were assumed to make up 15% of the market share in 2026, and we expect that the market share for newly selected drugs will decline over time, decreasing to 10% by 2028, 5% by 2032, and ultimately leveling off at 2% in 2041.

These adjustments will only be reflected in the trend assumption for Rx costs for Medicare-eligible participants as the Inflation Reduction Act is not expected to impact medical costs or Rx costs for non-Medicare enrollees.

The trend rates for selected years are shown below:

Year	Pre-Medicare	Medicare
2024	3.20%	2.70%
2025	7.00%	5.98%
2026	6.20%	5.40%
2030	5.29%	4.90%
2040	4.60%	4.47%
2050	4.54%	4.41%
2060	4.48%	4.35%
2070	4.24%	4.12%
2075+	4.04%	3.92%

The SOA Long-Run Medical Cost Trend Model and its baseline projection are based on an econometric analysis of historical U.S. medical expenditures and the judgments of experts in the field. The long-run baseline projection and input variables have been developed under the guidance of an SOA Project Oversight Group.

Medicare Part B Premiums

Medicare Part B premiums are expected to increase 4% annually. This is based on the average increase over the past 10-15 years.

Changes in methods and assumptions since prior valuation

- The per capita cost assumption was updated based on the 2025 premium rates provided by NYSTRS.
- The healthcare cost trend assumption was updated to reflect the known increase in premiums from 2024 to 2025 as well as the expected impact of the Inflation Reduction Act (IRA).
- The assumption for spousal coverage election for future female retirees was updated from 40% to 55% reflecting recent experience and detailed in the Bolton experience study dated January 28, 2025.

Section VIII. Glossary

Actuarial Assumptions

Estimates or projections of future plan experience such as investment return, expected lifetimes and the likelihood of receiving OPEB from the OPEB plan. Demographic, or “people” assumptions include rates of mortality, retirement, and separation. Economic, or “money” assumptions, include expected investment return, inflation and salary increases. Assumptions of a long-term nature are representative of average expectations (i.e., they will not be exactly realized in every year, however over an extended period is a reasonable projection of future outcomes).

Actuarial or Experience Gain or Loss

A measure of the difference between actual experience and experience anticipated by a set of Actuarial Assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used. Such gains or losses are not actual economic gains or losses immediately incurred by a plan, as experience in future years could offset the effect of experience in a single year due to the typically long-term average nature of actuarial assumptions.

Actuarially Determined Contribution:

For Plans with irrevocable trusts, the recommended contribution to the Plan (determined in conformity with Actuarial Standards of Practice) that is projected to result in assets equaling the actuarial accrued liability within a period of time.

Covered Group:

Plan members included in an actuarial valuation.

Discount Rate:

The rate used to adjust a series of future payments to reflect the time value of money.

Election Rate:

The percentage of retiring employees assumed to elect coverage.

Employer's Contributions:

Contributions made in relation to the actuarially determined contributions of the employer. An employer has made a contribution in relation to the actuarially determined contribution if the employer has (a) made payments of benefits directly to or on behalf of a retiree or beneficiary, (b) made premium payments to an insurer, or (c) irrevocably transferred assets to a trust, or an equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator.

Entry Age Normal Funding Method:

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit.

Funded Ratio:

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Section VIII. Glossary

Healthcare Cost Trend Rate:

The rate of change in per capita health claim costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

OPEB Plan:

An OPEB plan having terms that specify the amount of benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare insurance premiums).

Other Post-Employment Benefits:

Post-employment benefits other than pension benefits. Other post-employment benefits (OPEB) include post-employment healthcare benefits, life insurance, regardless of the type of plan that provides them, and all post-employment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

Pay-as-you-go (PAYGO):

A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Payroll Growth Rate:

An actuarial assumption with respect to future increases in total covered payroll attributable to inflation; used in applying the level percentage of projected payroll amortization method.

Plan Liabilities:

Obligations payable by the plan at the reporting date, including, primarily, benefits and refunds due and payable to plan members and beneficiaries, and accrued investment and administrative expenses. Plan liabilities do not include actuarial accrued liabilities for benefits that are not due and payable at the reporting date.

Plan Members:

The individuals covered by the terms of an OPEB plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.

Post-employment:

The period between termination of employment and retirement as well as the period after retirement.

Section VIII. Glossary

Post-employment Healthcare Benefits:

Medical, dental, vision, and other health-related benefits provided to terminated or retired employees and their dependents and beneficiaries.

Select and Ultimate Rates:

Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 2000, 7.5% for 2001, and 7% for 2002 and thereafter, then 8% and 7.5% are select rates, and 7% is the ultimate rate.

Service Cost:

That portion of the Actuarial Present Value of plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Valuation Date:

The as-of date for employee census data. Under GASB 75, the valuation date must be within 30 months of the last day of the fiscal year.

Appendix 1. Projections

ADC Projection (based on July 1, 2024 Valuation)

	FYE 2026	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031
Expected Rate of Return	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Actuarial Accrued Liability	\$121,671,047	\$126,969,616	\$132,250,632	\$137,586,437	\$143,178,462	\$148,830,762
Estimated Actuarial Value of Assets	80,634,148	85,268,670	92,827,618	99,746,371	105,815,194	112,055,719
Percent Funded	66.3%	67.2%	70.2%	72.5%	73.9%	75.3%
Unfunded Accrued Liability (UAL)	\$41,036,899	\$41,700,946	\$39,423,014	\$37,840,066	\$37,363,268	\$36,775,043
Amortization Period (years)	22	21	20	19	18	17
Amortization Factor (rounded)	15.32	14.84	14.34	13.83	13.30	12.75
Amortization Amount	\$2,678,727	\$2,810,014	\$2,748,321	\$2,735,724	\$2,808,880	\$2,883,446
Actuarial Determined Contribution						
Normal Cost	\$3,557,249	\$3,697,808	\$3,843,920	\$3,995,807	\$4,153,694	\$4,317,820
Amortization of UAL	2,678,727	2,810,014	2,748,321	2,735,724	2,808,880	2,883,446
Total ADC	\$6,235,976	\$6,507,822	\$6,592,241	\$6,731,531	\$6,962,574	\$7,201,266

Appendix 2. Long-Term Expected Rate of Return Assumption Rationale

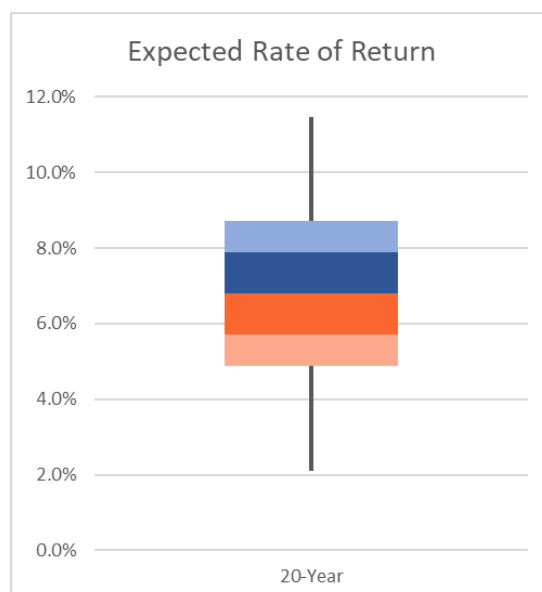
Our reasonable range is within the 35th and 65th percentiles of the 20-year geometric expected rate of return based on the 2024 Horizon Survey of Capital Market Assumptions and the OPEB Trust Target Asset Allocation. 6.50% falls within the 35th and 50th percentiles and therefore is an acceptable assumption.

Target Asset Allocation

Asset Class	Target Allocation
US Equity – Large Cap	37.50%
US Equity – Small/Mid Cap	12.50%
Non-US Equity – Developed	21.25%
Non-US Equity – Emerging	3.75%
US Corp Bonds – Core	7.50%
US Treasuries (Cash Equivalent)	17.50%

Expected 20-Year Geometric Long-Term Investment Rate of Return

Percentile	Return
95 th	11.47%
75 th	8.71%
65 th	7.89%
50 th	6.79%
35 th	5.70%
25 th	4.87%
5 th	2.11%





Appendix 3. ADC Trend Sensitivity

FYE 2026 ADC – Trend Sensitivity

Below is a summary of the calculation of the Plan's Actuarially Determined Contribution (ADC) if the trend assumption was increased by 1%.

	FYE 2026
(1) Expected Rate of Return	6.50%
(2) Actuarial Accrued Liability as of July 1, 2025	\$143,177,091
(3) Estimated Actuarial Value of Assets as of July 1, 2025	\$80,634,148
(4) Amortization of Unfunded Accrued Liability	
(a) Unfunded Accrued Liability	\$62,542,943
(b) Amortization Period (years)	22
(c) Amortization Factor (rounded)	15.32
(d) Amortization Amount	\$4,082,557
(5) Actuarial Determined Contribution	
(a) Normal Cost (with interest to July 1, 2025)	\$4,660,515
(b) Amortization of Unfunded Accrued Liability (with interest to July 1, 2025)	\$4,082,557
(c) Total Actuarial Determined Contribution	\$8,743,072

**RESOLUTION AUTHORIZING THE CONTRIBUTION TO THE RETIRED
EMPLOYEE HEALTH BENEFITS TRUST FOR THE 2025-2026 FISCAL YEAR**

WHEREAS, Governmental Accounting Standards Board (“GASB”) Statements 74 and 75 have established certain standards for the reporting of the System’s liabilities to provide health care benefits to its current and future retired employees and their eligible dependents;

WHEREAS, Said GASB Statements afford certain advantages to the reporting of such liabilities when such liabilities are pre-funded through a trust which satisfies the requirements for a trust under the GASB Statements; and

WHEREAS, The System established a Trust Agreement for the New York State Teachers’ Retirement System Retired Employee Health Benefits Trust in November 2007, be it

RESOLVED, That the System’s Executive Director and Chief Investment Officer or his designee, is authorized to deposit, or cause to be deposited, into such trust, a total of \$6,236,000 in contributions for the 2025-2026 fiscal year.

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM

MEMORANDUM

TO: T. Lee

FROM: Office of the CFO / Finance Department

DATE: April 23, 2025

SUBJECT: Retirement Board Package - OPEB Trust

Attached are the quarterly OPEB Trust financial statements and related supplemental schedule for the quarters ended March 31, 2025 and 2024.

The following is a list of the documents included:

1. Statements of Fiduciary Net Position (unaudited)
2. Statements of Changes in Fiduciary Net Position (unaudited)
3. Diversification of Investments
4. Fund Performance

New York State Teachers' Retirement System Retired Employee Health Benefits Trust
 (Administered by New York State Teachers' Retirement System)
Statements of Fiduciary Net Position (Unaudited)

March 31, 2025 and 2024

	<u>2025</u>	<u>2024</u>
Assets:		
Investments at fair value:		
Cash equivalents	\$ 117,454	\$ 10,982
Mutual funds	<u>80,326,558</u>	<u>74,862,708</u>
Total investments	<u>80,444,012</u>	<u>74,873,690</u>
Receivables:		
Employer contributions	<u>1,701,000</u>	<u>1,727,500</u>
Total assets	<u>82,145,012</u>	<u>76,601,190</u>
 Liabilities:		
Accounts payable	<u>12,500</u>	<u>—</u>
Total liabilities	<u>12,500</u>	<u>—</u>
 Net position restricted for other postemployment health benefits	 \$ <u><u>82,132,512</u></u>	 \$ <u><u>76,601,190</u></u>

New York State Teachers' Retirement System Retired Employee Health Benefits Trust
 (Administered by New York State Teachers' Retirement System)
Statements of Changes in Fiduciary Net Position (Unaudited)

For the nine months ending March 31, 2025 and 2024

	<u>2025</u>	<u>2024</u>
Additions:		
Investment income:		
Net increase in fair value of investments	\$ 2,109,927	\$ 7,239,639
Dividends	1,460,155	1,272,561
Net investment income	<u>3,570,082</u>	<u>8,512,200</u>
Contributions:		
Employer	<u>6,804,000</u>	<u>6,910,000</u>
Total contributions	<u>6,804,000</u>	<u>6,910,000</u>
Total additions	<u>10,374,082</u>	<u>15,422,200</u>
Deductions:		
Other postemployment benefit payments	4,714,147	4,360,492
Professional fees and services	<u>12,500</u>	<u>14,000</u>
Total deductions	<u>4,726,647</u>	<u>4,374,492</u>
Net increase	5,647,435	11,047,708
Net position restricted for other postemployment health benefits		
Beginning of year	<u>76,485,077</u>	<u>65,553,482</u>
End of period	<u><u>\$ 82,132,512</u></u>	<u><u>\$ 76,601,190</u></u>

New York State Teachers' Retirement System Retired Employee Health Benefits Trust
 (Administered by New York State Teachers' Retirement System)
Diversification of Investments

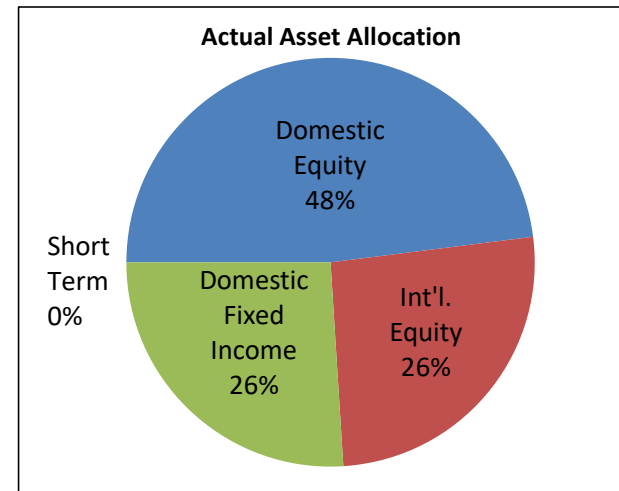
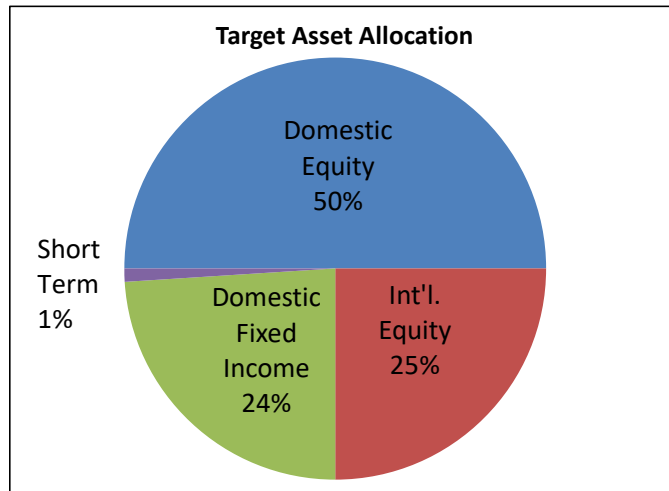
March 31, 2025 and 2024

<u>Investment Type*</u>	<u>2025</u>		<u>2024</u>		<u>Increase (Decrease)</u>	<u>Target Percent</u>
		<u>Percent</u>		<u>Percent</u>		
Short-term:						
Federal Money Market Fund	\$ 117,454	0.15	\$ 10,982	0.01	\$ 106,472	1.00
Domestic fixed income securities:						
Total Bond Market Index Institutional Fund	20,710,053	25.74	17,537,197	23.42	3,172,856	24.00
Domestic equities:						
Total Stock Market Index Institutional Fund	38,344,408	47.67	38,885,370	51.94	(540,962)	50.00
International equities:						
International Stock Index Institutional Fund	<u>21,272,097</u>	<u>26.44</u>	<u>18,440,141</u>	<u>24.63</u>	<u>2,831,956</u>	<u>25.00</u>
Total investments	\$ <u>80,444,012</u>	<u>100.00</u>	\$ <u>74,873,690</u>	<u>100.00</u>	\$ <u>5,570,322</u>	<u>100.00</u>

*All investments are held with Vanguard

**New York State Teachers' Retirement System
Retired Employee Health Benefits Trust
as of March 31, 2025**

Fund Performance¹								
	Market Value	Quarter	FYTD	1 Year	3 Years	5 Years	10 Years	Inception Return Date
Domestic Equity ²	\$ 38,344,408	-4.83%	3.70%	7.07%	8.11%	17.25%	14.43%	10.39% 4/30/2008
CRSP US Total Market ³		-4.82%	3.72%	7.09%	8.11%	17.26%	11.87%	10.40%
International Equity ⁴	\$ 21,272,097	5.51%	5.54%	6.38%	4.68%	11.47%	8.64%	3.03% 4/30/2008
FTSE Global All Cap ex US ⁵		4.55%	4.83%	5.91%	4.21%	10.88%	4.96%	2.79%
Domestic Fixed Income	\$ 20,710,053	2.77%	4.70%	4.88%	0.53%	-0.40%	1.29%	2.77% 4/30/2008
Bloomberg Cap. US Agg. Float Adj.		2.75%	4.79%	4.87%	0.56%	-0.36%	1.49%	2.83%
Short Term	\$ 117,454	1.07%	3.54%	4.83%	4.34%	2.61%	1.81%	1.49% 4/30/2008
iMoney Net Money Fund Avg/Taxable		1.00%	3.38%	4.68%	4.04%	2.42%	1.63%	1.04%
Total Portfolio	\$ 80,444,012	-0.37%	4.61%	6.56%	5.51%	11.25%	9.60%	7.56% 4/30/2008



Footnotes:

¹Returns for periods greater than 1 year are annualized. All returns are time-weighted rates of return and reflect the deduction of fund expense ratios, purchase or redemption fees, and any advisory service fees.

²Effective 5/31/21, the Domestic Equity portfolio was transferred from the Institutional Index fund to the Vanguard Total Stock Market Index fund.

³S&P 500 Index through 5/31/21, and the CRSP US Total Market Index thereafter.

⁴The Benchmark for the Vanguard Total International Stock Index Fund was the MSCI EAFE + Emerging Markets Index through 12/15/2010; MSCI ACWI ex USA IMI Index through 6/2/2013; and FTSE Global All Cap ex US Index thereafter.

⁵MSCI EAFE Index through 10/31/11, MSCI ACWI Ex-US Index through 5/31/21, and the FTSE Global All Cap ex US Index thereafter.



Audit Committee Meeting

April 23, 2025

COMMITTEE MEMBERS

Oliver Robinson, Chair

Juliet Benaquisto, Phyllis Harrington, Eric Iberger, Jennifer Longtin

AGENDA p. 384

Call to Order by Chair

- A. Approve Minutes of the January 29, 2025 Meeting pp. 385-386
- B. Audit Plan for the Fiscal Year Ending June 30, 2025 Financial Statements - Plante Moran pp. 387-402
- C. Status Report on Audits of NYSTRS Wholly Owned Real Estate Investment Accounts – CohnReznick pp. 403-424
 - June 30, 2024 and December 31, 2024 Audit Results
 - December 31, 2025 Audit Plan
- D. Internal Audit Update pp. 425-436
- E. Executive Session (motion for **Executive Session** pursuant to Section 105(1) (f) of the Open Meetings Law to discuss personnel matters) pp. 436-439

NEW YORK STATE
TEACHERS' RETIREMENT SYSTEM
Audit Committee Meeting

A meeting of the Audit Committee of the New York State Teachers' Retirement System was held at the System on January 29, 2025.

Committee Members: Juliet Benaquisto, Phyllis Harrington, Eric Iberger,
Jennifer Longtin, Oliver Robinson

Board Members: Paul Farfaglia, David Keefe, Donald A. Little III (via WebEx),
Ruth Mahoney, Nicholas Smirensky

NYSTRS Staff: Thomas K. Lee, Don Ampansiri, Kathy Ebert, Bruce Woolley,
Teddi Kaczmarek, Darlene Dempsey

Audit Committee Advisor: Sue Landauer (via WebEx)

O. Robinson, Chair, called the meeting to order at 1:15 p.m.

1. Approval of Minutes from December 11, 2024

Upon motion of J. Benaquisto seconded by E. Iberger and unanimously carried, the Committee approved the minutes of the December 11, 2024 meeting.

2. Internal Audit Report for the year ending December 31, 2024

K. Ebert and B. Woolley reviewed the report.

3. Internal Audit Plan for the year ending December 31, 2025

K. Ebert presented the Internal Audit plan for the audit of the year ending December 31, 2025.

4. Resolution to Approve the Internal Audit Plan

Upon motion of J. Longtin, seconded by J. Benaquisto and unanimously carried, the Audit Committee approved the following resolution:

WHEREAS, System staff has presented to the Audit Committee
of the Retirement Board a proposed internal audit plan for the year

ending December 31, 2025, a copy of which is annexed hereto and made a part hereof as Appendix A, attached; be it

RESOLVED, That the Internal Audit Plan for the year ending December 31, 2025 is approved as presented.

5. Executive Session

Upon motion of J. Longtin, seconded by E. Iberger and unanimously carried, the Committee went into Executive Session at 1:39 p.m. to discuss personnel matters. Upon motion of J. Longtin, seconded by J. Benaquisto and unanimously carried, the Committee came out of Executive Session at 1:58 p.m.

There being no further business, and with unanimous consent, the meeting adjourned at 1:58 p.m.

Respectfully submitted,

A solid black rectangular box used to redact the signature of the official.

Thomas K. Lee



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Wealth Management.

NYSTRS Audit Committee Pre-Audit Communication - Fiscal year 2025 audits

Representing Plante Moran:
Jean Young, Jake Talarek



Your Team Here Today



Jean Young, CPA
Co-Engagement Partner

- 30+ years of experience
- A leader in the firm's governmental and PERS practice areas, with a specialty serving large state-wide entities



Manju Patnaik, CPA
Senior Manager

- 16 + years of experience
- Member of the firm's governmental and PERS practice areas, with a specialty serving large state-wide plans



Jake Talarek, CPA
Manager

- 5 + years of experience
- Member of the firm's governmental and PERS practice areas, with a specialty serving GASB pension and RHC plans



Agenda



- Pre-Audit Communication
 - Audits to Perform
 - Auditor Responsibilities
 - Identification of Significant Risks
 - Plante Moran's Approach to Internal Control
 - Materiality Concept
 - Audit Timeline
 - Audit Committee Member Views
- Questions



Pre-Audit Communication



Pre-Audit Communication

Plante Moran will perform an audit and express an opinion on the following statements:

- NYSTRS basic Financial Statements as of and for the year ended June 30, 2025
- NYSTRS Annual Comprehensive Financial Report (ACFR) as of and for the year ended June 30, 2025
- Separately issued audit of the NYSTRS Retired Employee Health Benefits Trust as of and for the year ended June 30, 2025
- Audit in accordance with GASB 68 of the Schedules of Collective Pension Amounts and Employer Allocations for the measurement year ended June 30, 2025
- Actuarial review opinion suitable for publication in the ACFR



Pre-Audit Communication

Auditor Responsibilities

- Express an opinion about whether the financial statements prepared by management are fairly presented, in all material respects, in accordance with GAAP
- Communicate noncompliance with provisions of laws and regulations that have a material effect on the financial statements that come to our attention



Pre-Audit Communication

Identification of Significant Risks

- Appropriate valuation of investments, particularly the alternative investment that do not have readily establish market values
- Accuracy of participant census data and the assumptions underlying the determination of the total pension liability under GASB 67
- Areas where there is potential for management to override controls



Pre-Audit Communication

Plante Moran's Approach to Internal Control

- Narratives/Questionnaires
- Observation and inspection of procedures
- Effectiveness of controls over investment valuation
- No opinion on effectiveness of internal controls

Materiality Concept

We place greater emphasis on those items that have, on a relative basis, more importance to the financial statements and greater possibilities of material error than with those items of lesser importance or those in which the possibility of material error is remote.



Audit Timeline

- November 2024 – May 2025 – Planning and preliminary information gathering phase and risk assessment phase
- November 2024 – May 2025 – Employer Payroll Census Audits to be completed with samples selected in November 2024
- June/July 2025 – perform control walkthroughs, interim work, retiree census testing, benefit eligibility testing
- August- October 2025– perform year end audit procedures, October 2025 - Actuarial review opinion suitable for publication in the ACFR
- October 2025 – issuance of audit opinion for NYSTRS basic financial statements and NYSTRS Retired Employee Health Benefits Trust
- November 2025 – complete testing of schedules of Collective Pension Amounts and Employer Allocations in accordance with GASB 68
- December 2025 – issuance of report in accordance with GASB 68
- December 2025 – issuance of opinion on NYSTRS ACFR
- December 2025– procedures on NYSTRS PAFR



New Accounting Standards

GASB 101 – Compensated Absences

- This Statement provides better information to meet the needs of financial statement users by updating the recognition and measurement guidance for compensated absences. That objective is achieved by aligning the recognition and measurement guidance under a unified model and by amending certain previously required disclosures. We don't expect this accounting standard to have a significant impact of the System.



Questions?

**We greatly appreciate the opportunity
to serve you!**



Contact Information:

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Engagement Partner

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Senior Manager

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Jake Talarek, CPA

Manager

Jake.Talarek@plantemoran.com

248.223.3762

April 1, 2025

Audit Committee
New York State Teachers' Retirement System
10 Corporate Woods Drive
Albany, NY 12211

Dear Audit Committee Members:

We are in the process of planning for the audit of the financial statements of New York State Teachers' Retirement System ("NYSTRS") for the year ended June 30, 2025.

We expect to issue audit opinions on the following:

- NYSTRS basic financial statement as of and for the year ended June 30, 2025
- NYSTRS Annual Comprehensive Financial Report (ACFR) as of and for the year ended June 30, 2025
- NYSTRS Retired Employee Health Benefits Trust as of and for the year ended June 30, 2025
- Audit in accordance with GASB 68 of the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer for the measurement year ended June 30, 2025

An important aspect of planning for the audit is communication with those who have responsibility for overseeing the strategic direction of NYSTRS and obligations related to the accountability of NYSTRS. At NYSTRS, these responsibilities and obligations are held by the Audit Committee, collectively and individually; therefore, it is important for us to communicate with each of you in your role as a member of the Audit Committee.

As part of this communication process, we have spoken at length with Oliver Robinson, Audit Committee Chair regarding our responsibilities under generally accepted auditing standards and the planned scope and timing of our audit. The purpose of this letter is to provide each of you with a summary of those discussions and to provide you with the opportunity to communicate with us on matters that may impact our audit.

Our Responsibility Under Generally Accepted Auditing Standards

As stated in our engagement letter addressed to Kathy Ebert and dated March 25, 2025, our responsibility, as described by professional standards, is to express an opinion about whether the financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities.

Overview of the Planned Scope and Timing of the Audit

Jean Young is the engagement partner responsible for supervising our services performed as part of this engagement. Our audit fieldwork will include three phases. The planning and preliminary information-gathering phase will occur during January and continue through March 2025; the risk assessment phase in March through June 2025; and the rest of our audit procedures will be performed during July through October 2025. The procedures related to the ACFR and the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer for the measurement year ended June 30, 2025 will occur in November through December 2025.

To plan an effective audit, we must identify significant risks of misstatement in the financial statements, including those related to changes in the financial reporting framework or changes in the entity's environment, financial condition, or activities, and design procedures to address those risks.

Because management is in a unique position to perpetrate fraud due to its ability to manipulate accounting records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively, generally accepted auditing standards require that we always consider this to be a significant risk. In addition, we identified the following significant risks of misstatement:

- Appropriate valuation of investments, particularly the harder-to-value investments that do not have readily established market values.
- Accuracy of participant census data and the assumptions underlying the determination of actuarial valuations, including accuracy of information reported by participating employers.

In response to these identified significant risks, we will perform the following:

- Testing of journal entries recorded in the general ledger and other adjustments made in the preparation of the financial statements.
- Testing of all investments on a sample basis to address NYSTRS valuation estimates, control testing on the valuation assertion for your harder-to-value investments which includes a deep dive into NYSTRS internal controls over valuation.
- Detailed testing at select participating employers will be performed to address active census accuracy and completeness (employer audits). We will also perform certain detailed testing of retiree census data at the System and perform analytical procedures to certain other aspects of census data. We will test significant assumptions underlying the actuarial valuations and incorporate Plante Moran's internal actuary staff to review those actuarial valuations and assumptions.

We will gain an understanding of accounting processes and key internal controls through a review of the accounting procedures questionnaires and control procedures questionnaires prepared by management. We will confirm through observation and inspection procedures that accounting procedures and controls included in the questionnaires have been implemented. In addition, we plan to perform testing of the effectiveness of controls over valuation of investments for harder-to-value investments, such as NAV and Level 3 investments. We will not express an opinion on the effectiveness of internal control over financial reporting; however, we will communicate to you significant deficiencies and material weaknesses identified in connection with our audit to the Audit Committee and management.

The concept of materiality is inherent in our work. We place greater emphasis on those items that have, on a relative basis, more importance to the financial statements and greater possibilities of material error than with those items of lesser importance or those in which the possibility of material error is remote.

We plan to use the work of a fair value specialist and actuary to assist in obtaining sufficient appropriate evidence related to our evaluation of the fair value of investments that are harder-to-value and actuarial assumptions used for calculating of the pension liability under GASB 67.

Information from You Relevant to Our Audit

An important aspect of this communication process is the opportunity for us to obtain from you information that is relevant to our audit. Your views about any of the following are relevant to our audit:

- NYSTRS' objectives and strategies and the related business risks that may result in material misstatements
- Matters that you consider warrant particular attention during the audit and any areas where you want to request additional procedures be undertaken
- Significant communications between NYSTRS and regulators
- Understanding of NYSTRS' relationships and transactions with related parties that are significant to NYSTRS and any concerns regarding those relationships or transactions
- The attitudes, awareness, and actions concerning:
 - NYSTRS' internal control and its importance to NYSTRS, including how the Audit Committee oversees the effectiveness of internal control and the detection or possibility of fraud
 - The detection or possibility of fraud, including whether Audit Committee has knowledge of any actual, suspected, or alleged fraud affecting NYSTRS
 - Any significant unusual transactions NYSTRS has entered into
- The actions of the Audit Committee in response to developments in accounting standards, regulations, laws, previous communications from us, and other related matters and the effect of such developments on, for example, the overall presentation, structure, and content of the financial statements, including the following:
 - The relevance, reliability, comparability, and understandability of the information presented in the financial statements
 - Whether all required information has been included in the financial statements and whether such information has been appropriately classified, aggregated or disaggregated, and presented
- Other information included in the annual comprehensive financial report comprises introductory, statistical, actuarial and investment sections and the entirety of the Popular Annual Financial Report (PAFR). In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements or the other information otherwise appears to be misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

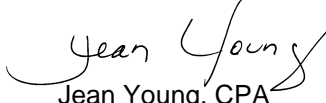
Management expects that final versions of the ACFR and PAFR will be provided to us in November and December, respectively. We will request management provide a written representation that the final version of the documents will be provided to us when available, and prior to issuance by NYSTRS, in order for us to complete necessary procedures.

If you have any information to communicate to us regarding the above or any other matters you believe are relevant to the audit, or if you would like to discuss the audit in more detail, please call Jean at 517.336.7458 or via email at jean.young@plantemoran.com or Michelle at 248.223.3520 or via email at michelle.watterworth@plantemoran.com.

Thank you for your time and consideration in this important aspect of the audit process. You can expect to hear from us again after the completion of our audit when we will report to you the significant findings from the audit.

Very truly yours,

Plante Moran, PC


Jean Young, CPA
Engagement Partner


Michelle Watterworth, CPA
Colleague Partner



New York State Teachers' Retirement System (NYSTRS)

June 30, 2024 and December 31, 2024, Audit Results and June 30, 2025, Audit Plan

Presented to: The Audit Committee of NYSTRS

Date: April 23, 2025

"CohnReznick" is the brand name under which CohnReznick LLP and CohnReznick Advisory LLC and their respective subsidiaries provide professional services. CohnReznick LLP and CohnReznick Advisory LLC (and their respective subsidiaries) practice in an alternative practice structure in accordance with the AICPA Code of Professional Conduct and applicable law, regulations and professional standards. CohnReznick LLP is a licensed CPA firm that provides attest services to its clients. CohnReznick Advisory LLC provides tax and business consulting services to its clients. CohnReznick Advisory LLC and its subsidiaries are not licensed CPA firms.



April 23, 2025

Dear Members of the Audit Committee:

Thank you for the opportunity to provide professional services to the New York State Teachers' Retirement System ("NYSTRS"), an organization we are proud to serve. We look forward to meeting with you on April 23, 2025, to discuss the results of our audits of the financial statements as of and for the years ended June 30, 2024, and December 31, 2024, and to discuss our plan to perform the audits of the financial statements as of and for the year ending June 30, 2025. This meeting will serve as a forum to validate our understanding of key issues, confirm your expectations, and make certain that our efforts are aligned with your expectations. We welcome your suggestions regarding areas of special concern and ideas to aid us in presenting the most appropriate and valuable reports to you.

Our audits are designed to express an opinion on the financial statements. We will consider NYSTRS's current and emerging business needs, along with an assessment of risks that could materially affect the financial statements and design our audit procedures accordingly. Our audits will be conducted with the objectivity and independence that you and the entire Board of Trustees expect. Rest assured that our unceasing commitment to quality is and will be reflected in every aspect of our work.

The attached report outlines the scope of our work and key considerations affecting the audits of the 2024/2025 financial statements. If you have questions or comments on this material, please contact me anytime at (646) 448-5470 or at Anthony.LaMalfa@CohnReznick.com.

We look forward to working with you this year.



Anthony La Malfa
Partner, Commercial Real Estate
CohnReznick LLP



ALTERNATIVE PRACTICE STRUCTURE



- Unified team under our brand

CohnReznick Advisory LLC

- Not a licensed CPA firm
- Tax, advisory, other non-attest services
- All partners and employees
- David Kessler, CEO

CohnReznick Advisory LLC

Owned 49% by all partners

Owned 51% by Apax Partners

CohnReznick LLP

- Licensed CPA firm
- Attest services
- Attest partners also partners of CRLLP; employees provide attest services under CRLLP
- Kelly O'Callaghan, CEO

CohnReznick LLP

Owned by attest partners with CPA designation

Entities/Reports with June 30 year ends:

- Merritt 7 Venture, LLC
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which Sentinel Realty Advisors Corporation is Investment Advisor
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which Cabot Properties, Inc. is Investment Advisor
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which BentallGreenOak (US) LP is Investment Advisor

Entities/Reports with December 31 year ends:

- Knickerbocker Longwood LLC
- Adirondack Timber Company, Inc. I and Subsidiary
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which J.P. Morgan is Investment Advisor (was previously Knickerbocker Barrington Place, LLC and will now include Bethesda Commerce JV LLC)
- RSQ Tower LLC
- Knickerbocker Fourth & Madison, LLC (new for December 31, 2023, however is being audited as of 2024)
- Knickerbocker Park Point LLC
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) Residential Portfolio Managed by CBRE Investment Management

Audit Results - June 2024 and December 2024

- We have completed (substantially completed for certain entities) our audits of the financial statements as of and for the years ended June 30, 2024, and December 31, 2024. The audits have been conducted in accordance with auditing standards generally accepted in the United States (“GAAS”).
- The objective of our audits was to obtain reasonable assurance about whether the financial statements are free from material misstatement.
- We have issued (intend to issue for certain entities) unmodified opinions on each of the financial statements as of and for the years ended June 30, 2024, and December 31, 2024.

Additional Services Provided:

- We have prepared the annual Return of Organization Exempt From Income Tax (Form 990) and U.S. Return of Partnership Income (Form 1065) and have filed with the Internal Revenue Service and other state regulatory compliance filings for the year ended June 30, 2024.
- We intend to prepare the annual Return of Organization Exempt From Income Tax (Form 990) and U.S. Return of Partnership Income (Form 1065) to be filed with the Internal Revenue Service and other state regulatory compliance filings for the year ended December 31, 2024.

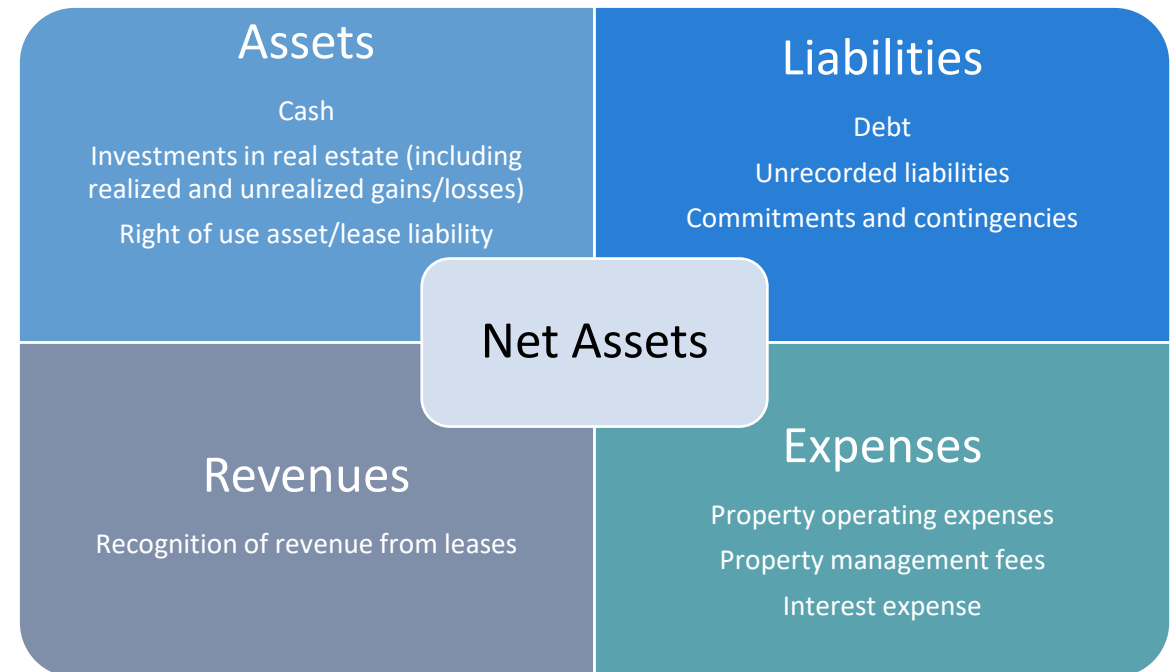
Audit Results - June 2024 and December 2024

Areas of Audit Emphasis

We considered the following factors during the planning and performance of our audit procedures:

- Accounting policies and procedures and internal controls
- Information systems and related controls
- Significant operating risks, including fraud risk factors
- Relationship of current versus prior year financial and non-financial data
- Changes on operations and environmental factors

Our areas of audit emphasis included, but were not limited to, the following:



Required Communications – June 2024 and December 2024

Required Discussion Item	Comments
Auditors' Responsibilities under Generally Accepted Auditing Standards (GAAS)	<p>As communicated in our engagement letter, our responsibilities include:</p> <ul style="list-style-type: none"> • Forming and expressing an opinion about whether the financial statements, prepared by management, are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States. • Planning and performing our audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. • Consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered internal controls solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal controls. • Communicating significant matters related to the audit that are, in our professional judgement, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you. <p>Our audit does not relieve you or management of your responsibilities.</p> <p>We have substantially completed the audits of the financial statements of as of and for the years ended June 30, 2024, and December 31, 2024, in accordance with GAAS and intend to issue unmodified opinions.</p>
Planned Scope and Timing of the Audit	<p>We conducted our audit consistent with the planned scope and timing we previously communicated to you during our proposal process and in our engagement letter.</p>

Required Communications – June 2024 and December 2024

Required Discussion Item	Comments
Compliance with All Ethics Requirements Regarding Independence	The engagement teams, others in our firm, as appropriate, and our firm as a whole, have complied with all relevant ethical requirements regarding independence.
Significant Risks	Significant risks related to our audits are as follows: <ul style="list-style-type: none"> • Management override of internal controls • Fair value of investments in real estate • Fair value of debt instruments • Improper revenue recognition (presumed risk of fraud)
Significant Accounting Policies	Management has the responsibility to select and use appropriate accounting policies. The significant accounting policies are described in Note 2 to the financial statements. During the year ended December 31, 2023, the entities adopted “ASU 2016-02”, Leases, which did not have a material impact on the financial statements. The ASU revises accounting guidance on lease accounting and supersedes all previous leasing standards. The new standard requires lessees to record a right-of-use asset and a lease liability for all leases with a term greater than 12 months and to classify such leases as either finance or operating leases. During the year ended June 30, 2024 and December 31, 2024, there were no new significant accounting policies adopted.
Significant Accounting Estimates	Accounting estimates are an integral part of the financial statements prepared by management and are based on management’s current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ markedly from management’s current judgments. We evaluated the key factors and assumptions used to develop these estimates in determining that they are reasonable in relation to the financial statements taken as a whole. <p>The most sensitive estimates affecting the financial statements were:</p> <ul style="list-style-type: none"> • Fair value of investments in real estate • Fair value of debt instruments

Required Communications – June 2024 and December 2024

Required Discussion Item	Comments
Financial Statement Disclosures	<p>Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:</p> <ul style="list-style-type: none"> • Summary of Significant Accounting Policies • Fair Value Measurements • Leases • Related Party Transactions <p>The disclosures in the financial statement are neutral, consistent, and clear.</p>
Significant Unusual Transactions	<p>For purposes of this communication, professional standards require us to communicate to you significant unusual transactions identified during our audit.</p> <p>There were no significant unusual transactions identified.</p>
Identified or Suspected Fraud	<p>During the course of the audits, we perform procedures, including inquiries of management and others involved in the financial reporting process, designed to identify actual or suspected instances of fraud.</p> <p>There were no actual or suspected instances of fraud identified.</p>
Significant Difficulties Encountered During the Audit	<p>We encountered no significant difficulties in dealing with management in performing and completing the audit.</p>

Required Communications – June 2024 and December 2024

Required Discussion Item	Comments
Uncorrected and Corrected Misstatements	<p>For purposes of this communication, professional standards also require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. Further, professional standards require us to also communicate the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances or disclosures, and the financial statements as a whole.</p> <ul style="list-style-type: none"> During the June 30, 2024 audit of Merritt 7 Venture, LLC, management passed on a \$1,300,000 adjustment to reduce the value of the investment due to a difference between the trial balance and the valuation model. Clarion’s asset management team noted that the 1.4% decrease was immaterial and the original valuation of \$95.0 million was already 15% lower than the \$111.4 million external appraised value. <p>In addition, professional standards require us to communicate to you all material, corrected misstatements that were brought to the attention of management as a result of our audit procedures. There were no material, corrected financial statement misstatements.</p>
Disagreements with Management	<p>For purposes of this letter, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter, which could be significant to the financial statements or the auditor’s report.</p> <p>No such disagreements arose during the course of the audit.</p>
Circumstances that Affect the Form and Content of the Auditor’s Report	<p>There were no circumstances that affected the form and content of the auditor’s report regarding the entities. We expect to issue unmodified opinions.</p>

Required Communications – June 2024 and December 2024

Required Discussion Item	Comments
Representations Requested from Management	We will request certain representations from management and the investment advisors that will be included in a letter to us, all of which are expected to be dated prior to December 31, 2025.
Management's Consultations with Other Accountants	In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing and accounting matters.
Other Significant Matters, Findings, or Issues	During the course of our interactions, we discussed a variety of matters, including the application of accounting principles and auditing standards, operating conditions affecting the entity, and operating plans and strategies that may affect the risks of material misstatement. None of the matters discussed resulted in a condition to our retention.

Looking forward: Audit Plan – June 2025

Entities/Reports with June 30 year ends:

- Merritt 7 Venture, LLC
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which Sentinel Realty Advisors Corporation is Investment Advisor
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which Cabot Properties, Inc. is Investment Advisor
- Combined financial statements of That Portion of the New York State Teachers' Retirement System (NYSTRS) for which BentallGreenOak (US) LP is Investment Advisor



COHNREZNICK'S COMMITMENT TO YOU

- To provide forward-thinking solutions, service that exceeds expectations, and create opportunity, value, and trust for our clients, our people, and our communities.
- We will be a firm of excellence and innovation – providing invaluable services and insights to our clients; fostering a workplace culture that develops leaders and values diversity; and working to make our communities better.

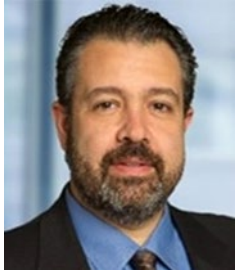
Meeting the **challenges**. Providing **value**.

SERVICES AND DELIVERABLES TO NYSTRS

Financial Statements Audits	<ul style="list-style-type: none"> Express an opinion on the financial statements as of and for the year ending June 30, 2025. Communicate matters in accordance with AU-C 265, “Communicating Internal Control Related Matters Identified in an Audit.”
Non-attest services	<ul style="list-style-type: none"> Prepare Federal Form 990, Federal Form 1065, and other state regulatory compliance filings as of and for the year ended June 30, 2025, and assist management with e-filing the returns.

KEY MEMBERS OF THE ENGAGEMENT TEAM

Resources



Anthony La Malfa, CPA
Lead Engagement Partner



Courtney Klinga, CPA
Real Estate Audit Senior Manager



E.J. Edelman, CPA/ABV, CGMA, MAI
Director Valuation Advisory Services



Ron Kaplan, CPA
Commercial Real Estate Industry Leader
Account Executive



Lori Rothe Yokobosky, CPA MST
Lead Tax Partner



Sima Wolfson, CPA
Exempt Organizations Tax Services Manager

AUDIT PLAN CONSIDERATIONS



Understanding and Evaluating Controls

- Review accounting policies and procedures
- Understand the design of internal controls and perform walkthroughs of key processes:
 - Revenue
 - Expenses
 - Leases
 - Valuation
 - Financial reporting and closing



Significant Risks

- Management override of controls
- Internal controls over financial reporting
- Fair value of investments in real estate and debt instruments
- Improper revenue recognition risk



Key Audit Areas

- Rental revenue
- Operating expenses
- Property management fees
- Realized and unrealized gains/losses
- Debt and interest expense

KEY AUDIT PROCEDURES

To ensure that our audit procedures will effectively address the risks associated with the areas identified we will:

- Obtain an understanding of the significant financial reporting and accounting processes, the important business strengths and risks, and controls to monitor operations.
- Obtain an understanding of general controls over information systems.
- Evaluate the design of internal controls, including any changes in internal controls, over the key financial processes.
- Test the valuations of investments and debt instruments.
- Perform a search for unrecorded liabilities to ensure expenses are recorded in the proper period.
- On a sample basis, agree revenue and expense transactions to supporting documentation.
- Test year-end reconciliations and rollforward schedules of key audit areas.
- Perform preliminary and final analytical reviews.
- Evaluate key factors and assumptions used by management to develop significant estimates.
- Independently confirm with third parties select year-end balances.
- Evaluate management's assumptions about the ability to continue as a going concern.

CYBERSECURITY CONSIDERATIONS

- **Increased cybersecurity risks**
 - Usage of remote workflows
 - Surge and sophistication of cyber attacks
 - Risks & vulnerabilities in third party vendors
- **Audit considerations**
 - Obtain an understanding of the IT General Controls
 - Perform walkthroughs of selected controls to determine the operating effectiveness of those controls
- **Information security**
 - The audit team will use Converge or Sharefile to transmit documents during the engagement for enhanced security.



TIMETABLE OF AUDIT SERVICES – JUNE 2025

	APR	MAY	JUNE	JULY	AUG	SEPT	OCT - DEC
Pre-planning meeting with audit committee and management							
Audit design and planning							
Year-end field work							
Present drafts of the financial statements and if applicable, management letter, to audit committee							
Issue financial statements and if applicable, management letter							

RESPONSIBILITIES

Management's Responsibilities*

- The preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP").
- Designing, implementing, and maintaining of internal controls relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error, fraudulent financial reporting, misappropriation of assets or violations of laws, governmental regulations, grant agreements, or contractual agreements.
- Accepting responsibility for nonattest services, including identifying the proper party with the skills, knowledge, and experience to oversee the nonattest services provided.
- Informing us of any known or suspected fraud affecting the entity involving management, employees with significant role in internal control and others where fraud could have a material effect on the financials.
- Ensuring the accuracy and completeness of all information provided.
- The audit of the consolidated financial statements does not relieve management or those charged with governance of their responsibilities.

Auditor's Responsibilities*

- Communicating with those charged with governance the responsibilities of CohnReznick regarding the consolidated financial statements audit and an overview of the planned scope and timing of the audit.
- Obtaining from those charged with governance information relevant to the audit.
- Providing those charged with governance with timely observations arising from the audit that are significant and relevant to their responsibility to oversee the financial reporting process.
- Promoting effective two-way communication between the auditor and those charged with governance.
- Communicating effectively with management and third parties.
- Forming and expressing an opinion about whether the consolidated financial statements that have been prepared by management, with the oversight of governance, are prepared, in all material respects, in accordance with the applicable financial reporting framework.
- Establish the overall audit strategy and audit plan, including the nature, timing, and extent of procedures necessary to obtain sufficient appropriate audit evidence.

**The complete terms of our mutual responsibilities are included in our engagement letter.*

EFFECTIVE ACCOUNTING AND AUDITING UPDATES

Accounting		
Effective Date for the Organization	Pronouncement Number	Description
Through December 31, 2024	FASB ASU 2022-06	FASB Codification - FASB Accounting Standards Updates, FASB Accounting Standards Updates - Accounting Standards Update No. 2022-06 – Reference Rate Reform (Topic 848) – Deferral of the Sunset Date of Topic 848
January 1, 2023, and July 1, 2023	FASB ASU 2016-13	Financial Instruments—Credit Losses (Topic 326) Measurement of Credit Losses on Financial Instruments (see summary on page 22)
Auditing		
Effective Beginning Date for the Organization	Auditing Standards Number	Description
January 1, 2024	Auditing Standard 145	Understanding the Entity and Its Environment and Assessing the Risks of Material Misstatement

UPCOMING ACCOUNTING AND AUDITING UPDATES

Accounting

Effective Beginning Date for the Organization	Pronouncement Number	Description
January 1, 2025 (early adoption permitted)	FASB ASU 2023-05	Business Combinations—Joint Venture Formations (Subtopic 805-60) - Recognition and Initial Measurement



New York State
Teachers'
Retirement
System

Internal Audit Update

Audit Committee April 23, 2025

Kathy Ebert, CPA, CIA
Managing Director of Internal Audit

REPORT HIGHLIGHTS

Mortgage Servicing

Engagement Objectives

The objective of this engagement was to provide reasonable assurance that the controls used by the Real Estate and Investment Operations Departments in monitoring, accounting for, and reporting on mortgages are in place and effective.

Risk

There is a risk that internal control weaknesses in mortgage collections, payment processing, and modifications may lead to poor investment performance and lead to an inability of the System to meet its obligations. This risk is assessed at low.

Background

Responsible Departments & Units

- Real Estate Department
- Investment Operations Department (IOD)

The Real Estate Department is responsible for monitoring mortgage performance, including ensuring compliance with loan documents and the Investment Policy Manual (IPM), and timely and accurate reporting.

Additionally, the Real Estate Department is responsible for analyzing borrower needs or issues and ensuring NYSTRS collects full settlement amounts when mortgages are being satisfied.

The IOD is responsible for sending out mortgage bills, receiving monthly payments, recording payments received, reconciling total monthly receipts to the general ledger, and reporting on performance.

Project Facts

Audit Period

January 1 to December 31, 2024

Numbers at a Glance

Population:

183 Loan Payments	\$786 million
16 Active Mortgages	\$2,435 million
2 Loan Pay Offs	\$548 million

Sample:

40 Loan Payments	\$35 million
4 Active Mortgages	\$664 million
2 Loan Pay Offs	\$548 million

REPORT HIGHLIGHTS

Participating Employer Reviews

Engagement Objectives

The objective of this engagement was to provide reasonable assurance that processes and controls used to capture, edit, and post census data was accurate and complete; adhered to System policies and procedures, *Rules and Regulations*, and statute.

Risk

There is a risk that salary, service, or demographic information used to calculate benefits and develop assumptions to determine pension liabilities may not be accurate or complete. This risk is assessed as low.

Background

Responsible Department & Unit

Member & Employer Services

- Employer Reporting Unit
- Terminating Employees Unit

Responsible for reviewing and posting salary and service information received from participating employers each month.

Members and System staff rely on the accuracy of this payroll information to perform a variety of tasks that include:

- Annual member profile statement that provide an estimate of future benefits
- Annual bill to each participating employer to fund the System
- Compute benefits, such as, retirement, death, refunds of contributions, and loans
- Calculate the actuarial pension liability
- Respond to Freedom of Information requests

This audit meets the requirements of the AICPA for there to be effective controls over financial reporting that verify the underlying payroll and personnel records of participating employers.

Project Facts

Audit Period

Fiscal year ending June 30, 2024

Numbers at a Glance

825 participating employers reported over 2.6 million records for over 250,000 members.

Annual automated reporting process alerted Member & Employer Services staff to review and potentially adjust over 148,000 transactions (5.63%).

Sample

- 20 employers (2.42%) with over 6,300 members and 132,000 records
- Reviewed payroll information for 618 members and 6,200 records.

REPORT HIGHLIGHTS

Employee Payroll

Engagement Objectives

The objective of this engagement was to provide reasonable assurance the employee payroll process contains appropriate controls to ensure payments are accurate, complete, and compliant with approved agreements.

Risk

There is a risk that employee payroll is not accurate, complete or compliant with union contract, management agreement or Board approved executive pay. The risk is assessed at medium.

Background

Responsible Departments & Units

Human Resources

- Talent & Acquisition Unit
- Benefit Unit

Finance

- Payroll Unit
- Cash Control Unit
- General Accounting Unit

Budget & Analytics

Talent & Acquisition Unit is responsible for entering salary information.

Benefit Unit is responsible for entering benefit deductions and maintaining the automated time entry system to create employee's paycheck.

Payroll Unit is responsible for entering garnishments, tax withholdings, direct deposit information, making manual adjustments to an employee's paycheck, calculating and confirming payroll, and creating the warrant for management approval.

Cash Control Unit is responsible for sending payroll files to the bank for direct deposit and issuing manual checks to employees.

General Accounting Unit is responsible for recording payroll transactions in the PeopleSoft Financials general ledger for reporting.

Budget & Analytics is responsible for compiling and reviewing employee payroll changes to determine if warrant amounts appear reasonable, testing annual salary updates, and setting up the annual compensation structure in PeopleSoft Human Resource Management System (HRMS).

A new financial and payroll system to replace PeopleSoft Financials and HRMS used for employee payroll is scheduled to be implemented in the upcoming year.

REPORT HIGHLIGHTS

Employee Payroll

Project Facts	
Audit Period Fiscal year ending June 30, 2024	
Numbers at a Glance	
Annual payroll	\$42.6 Million
Sampled payroll	\$5.9 Million