

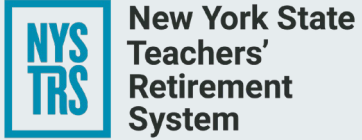


New York State
Teachers' Retirement
System

MWBE 2025

**Investments & Professional
Services Conference**

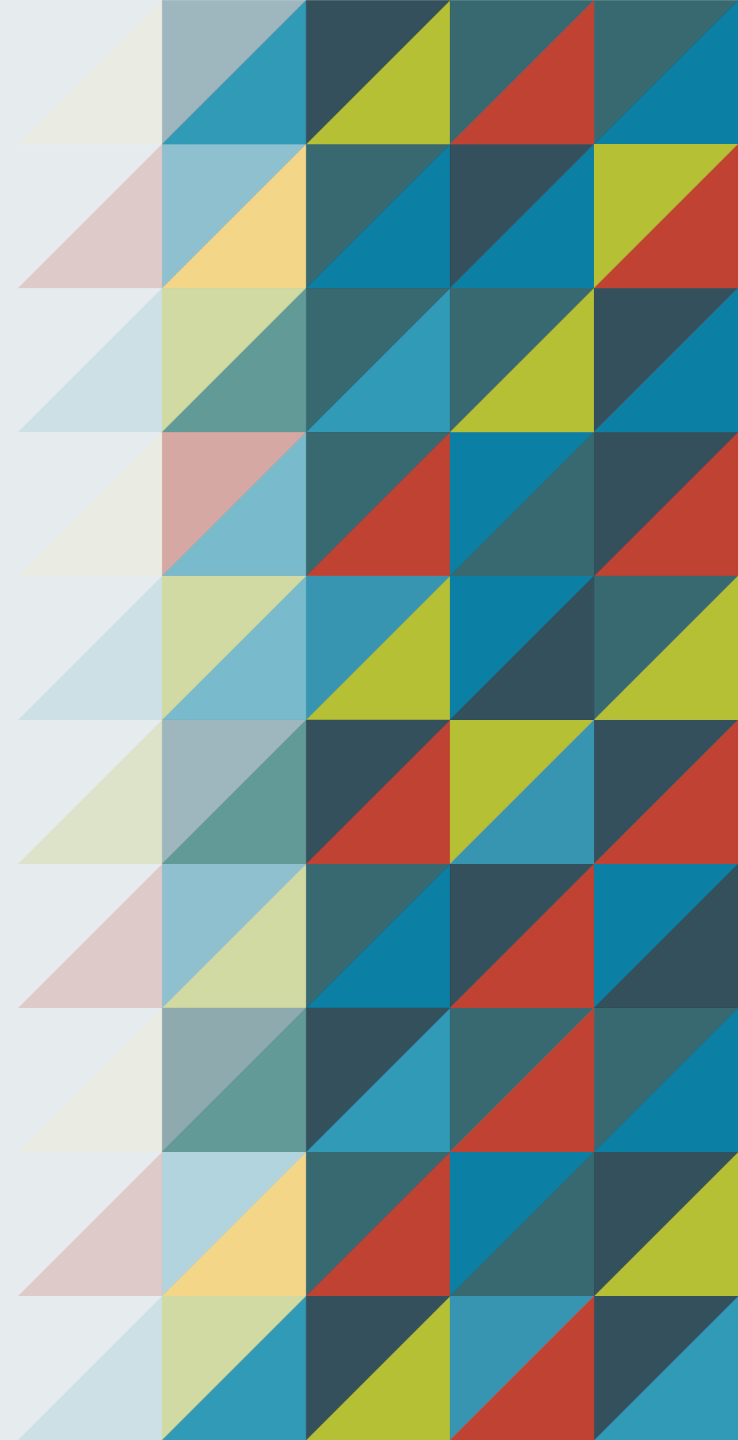
A Seat at the Table



MWBE 2025

**Investments & Professional
Services Conference**

Fixed Income Overview

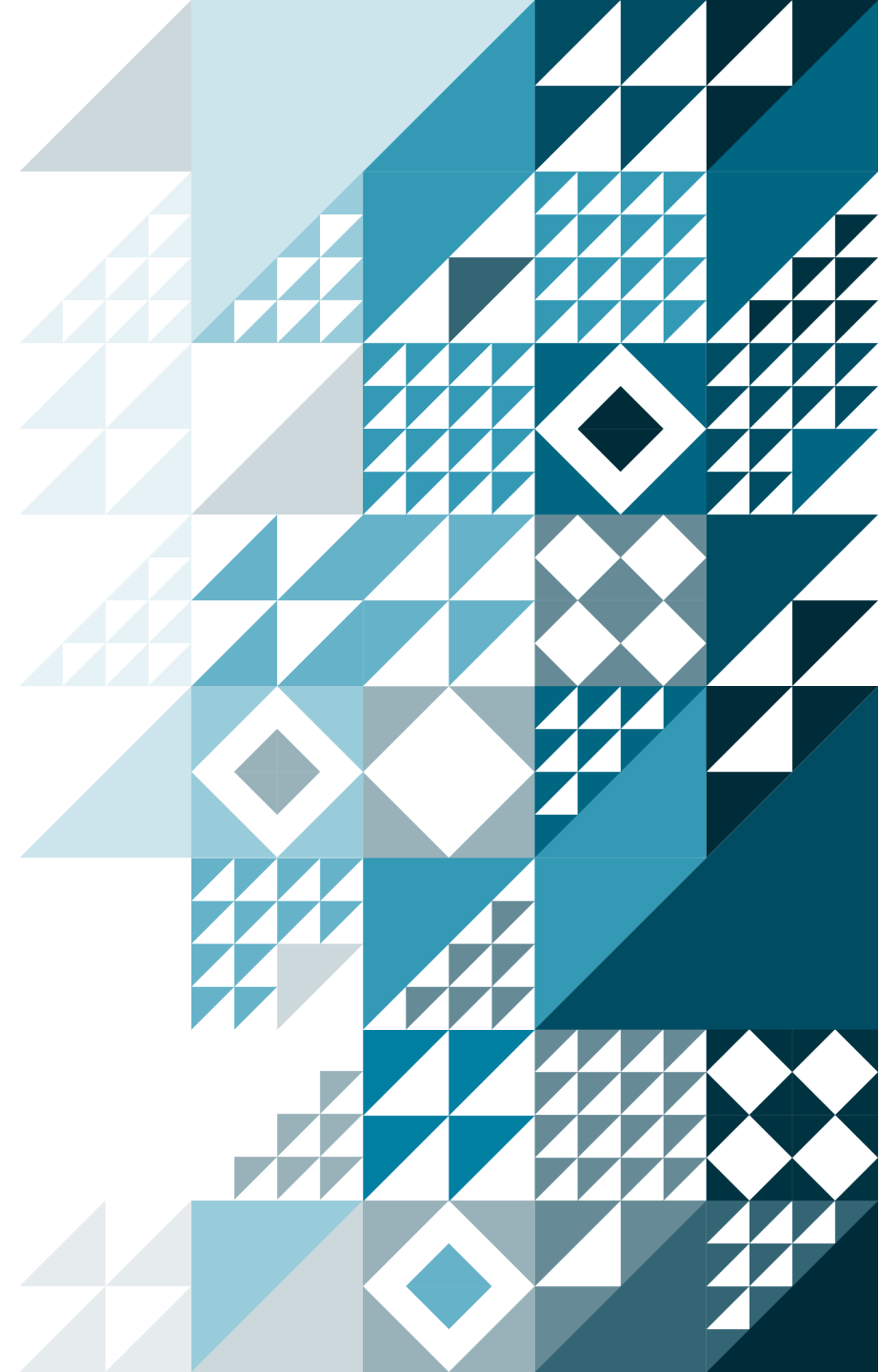


Fixed Income Team Members

- *Danielle Bondi* – *External Managers*
- *Richa Dhungana* – *Corporates*
- *Mike Federici* – *Managing Director*
- *Dawn Sherman* – *Treasuries and MBS*
- *Aaron VanDerwiel* – *Deputy Managing Director*
- *Christina Vasto* – *Short - Term*
- *Mike Wollner* – *Corporates*
- *Joe Wood* – *Director; Corporates*
- *Mark Wood* – *Short - Term and ABS*

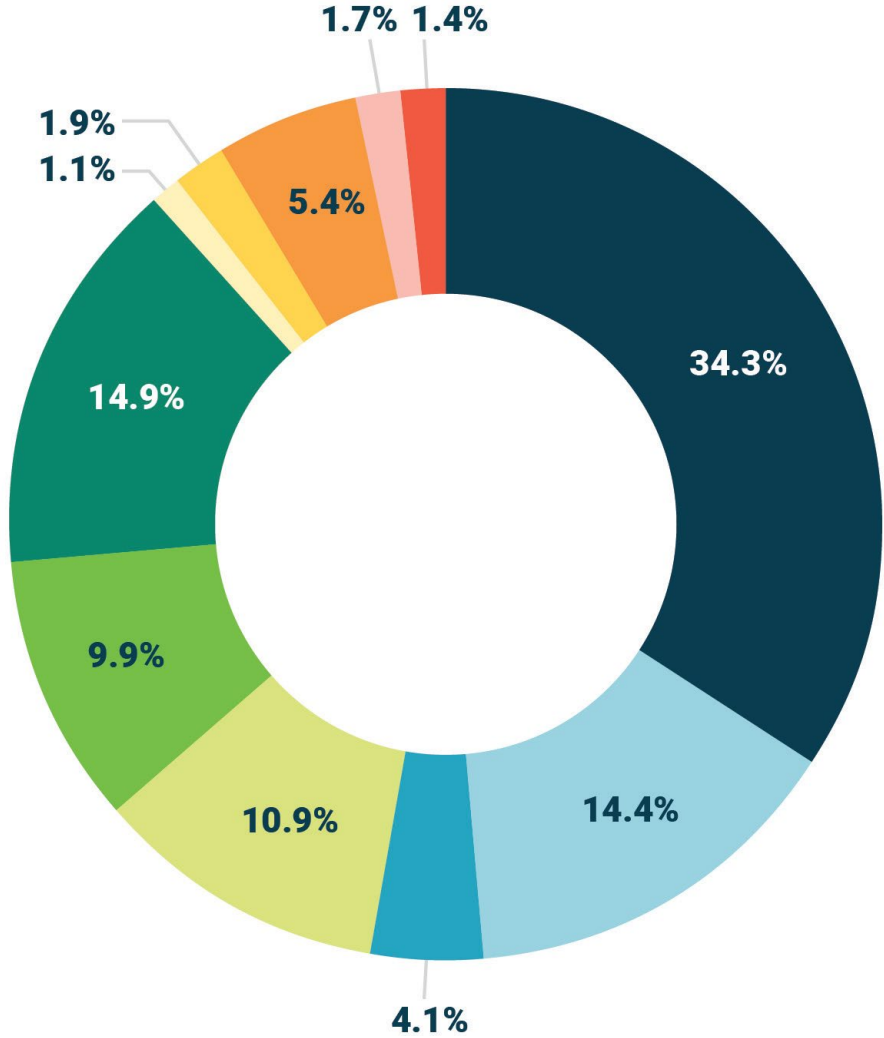
Fixed Income Investment Fellows

- *Bisma Aijaz*
- *Chris Brown*



NYSTRS Asset Allocation

as of June 30, 2024



	ACTUAL	TARGET	RANGE
Domestic Equity	34.3%	33%	29-37%
International Equity	14.4%	15%	11-19%
Global Equity	4.1%	4%	0-8%
Real Estate Equity	10.9%	11%	6-16%
Private Equity	9.9%	9%	4-14%
Domestic Fixed Income	14.9%	16%	12-20%
High-Yield Bonds	1.1%	1%	0-3%
Global Bonds	1.9%	2%	0-4%
Real Estate Debt	5.4%	6%	2-10%
Private Debt	1.7%	2%	0.5-5%
Cash Equivalents	1.4%	1%	0-4%

Fixed Income Responsibilities

Internally Managed Portfolios

- **Short-Term:** *iMoneyNet Fund Report Averages/All Taxable Index*
- **Domestic Fixed Income / Long-Term Bond:** *Bloomberg U.S. Aggregate Float-Adjusted Index*
- **Emerging Market Debt USD:** *Bloomberg EM USD Investment Grade 10% Country Capped*

Externally Managed Portfolios

- **Global Bonds:** Bloomberg Global Aggregate Float-Adjusted ex-CNY hedged to USD
- **Global Corporate Carbon Transition:** Bloomberg Global Agg Corporate Bond Index hedged to USD
- **High Yield:** ICE BAML US High Yield Constrained Index

Securities Lending: Two agent lenders for domestic & international stocks and bonds

Foreign Exchange: Execute FX trades in support of NYSTRS' investment departments

Fixed Income Asset Allocation

as of June 30, 2024

Fixed Income Portfolios	Fixed Income Asset Allocation					Fixed Income ² AUM ¹ (\$bn)		
	Target	Range	FYE2024	FYE2023	Change	FYE2024	FYE2023	Change
Short-Term	1%	0% - 4%	1.4%	1.3%	+0.1%	2.1	1.8	+0.3
Long-Term	16%	12% - 20%	14.9%	13.5%	+1.4%	21.4	18.2	+3.2
Global Bonds ³	2%	0% - 4%	1.9%	2.0%	-0.1%	2.8	2.7	+0.1
High Yield	1%	0% - 3%	1.1%	1.0%	+0.1%	1.5	1.4	+0.1

¹ Fixed Income AUM includes accrued interest

² CMBS and Private Debt not included as administered by NYSTRS Real Estate Department and Private Equity Department, respectively

³ Includes externally managed Global Corporate Carbon Transition portfolios and will eventually include internally managed Emerging Market Debt USD portfolio that was funded in October 2024

Long - Term Bond Portfolio

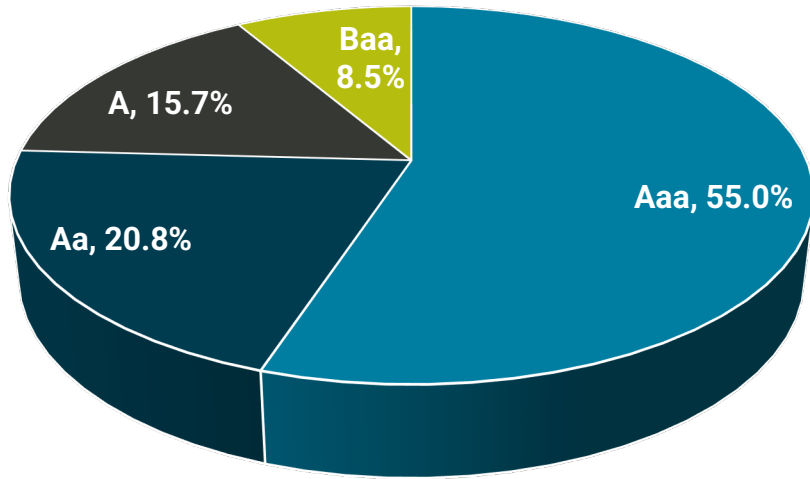
The Long-Term Bond (Domestic Fixed Income) portfolio generates cash to help meet the System's ~\$8.7 billion annual retirement benefit obligation and contributes to the stability of the overall investment program

- Diversified with high-quality securities including U.S. Treasuries, SSAs, agency MBS, ABS, and investment grade corporates
- Actively managed for returns, liquidity, capital preservation and generation of cash flow
- CMBS are externally managed and monitored by NYSTRS Real Estate staff
- Holdings are updated quarterly on the website and include Long-Term Bond, CMBS, REIT debt, and high yield manager holdings

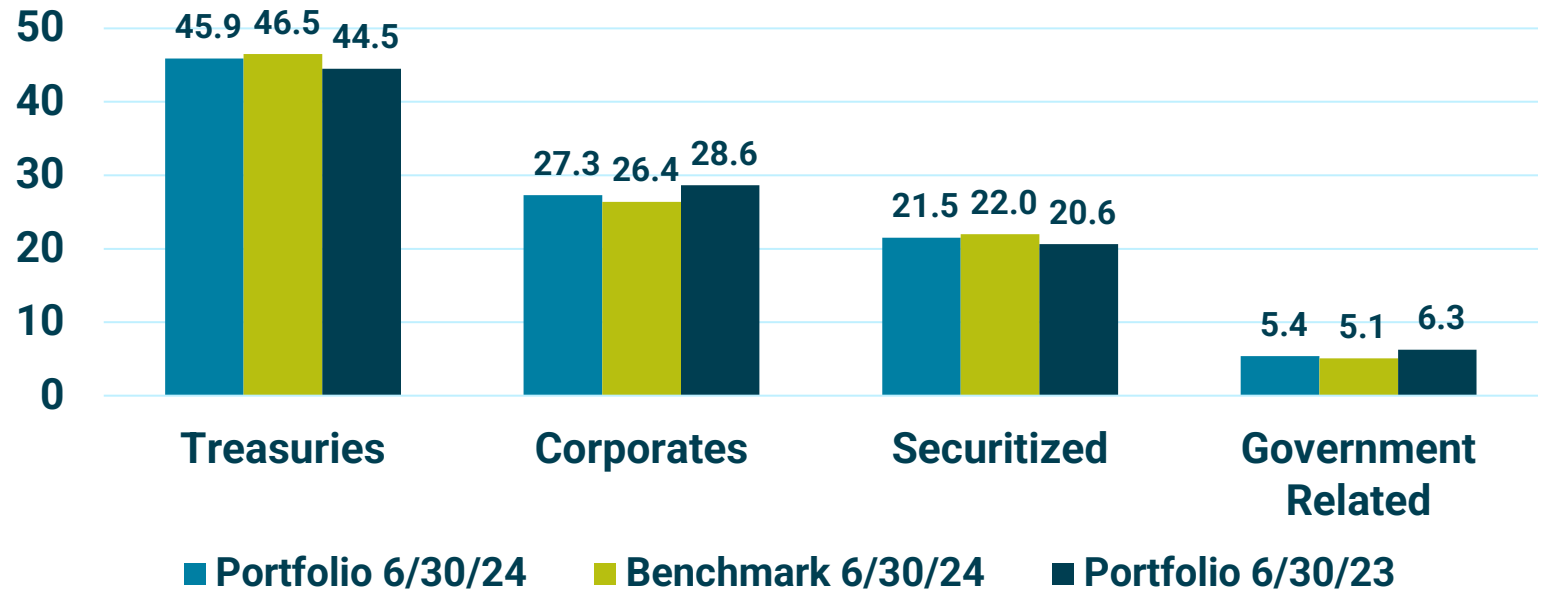
Long - Term Bond Portfolio

as of June 30, 2024

Credit Quality Breakdown



Long-Term Bond Portfolio Holdings by Sector (%)



Long - Term Bond Portfolio

as of June 30, 2024

June 30, 2024	NYSTRS LTB Portfolio	Benchmark ^
Average Credit Quality	Aa2	Aa2
Duration	5.89*	5.99
Years to Maturity	11.56	12.13
Yield to Maturity	4.98%	5.00%
Corporate Credit Duration	6.19	6.93
Corporate Credit Ratings	A2	A3

^Bloomberg U.S. Aggregate Float-Adjusted Benchmark

*Excluding maturities one year or less, duration is 6.07

Corporate Bond Management

as of June 30, 2024

LTB Portfolio Corporate Bond Characteristics							
	6/30/2024			6/30/2023			
	Portfolio	Benchmark	Active	Portfolio	Benchmark	Active	YoY Active Δ
Market Value %	27.3%	26.4%	1.0%	28.6%	27.1%	1.5%	-0.5%
Duration	6.19	6.93	-0.74	5.88	7.22	-1.34	0.6
Spread Duration	6.37	7.11	-0.74	6.05	7.40	-1.35	0.61
OAS	81	91	-10	98	120	-22	12
Yield to Worst	5.34%	5.48%	-0.13%	5.26%	5.47%	-0.21%	0.08%

During the 2023-2024 fiscal year, the fixed income team:

- Reduced the market value % OW of the corporates sleeve of the LTB portfolio by actively managing the portfolio based on positioning and relative value
- Methodically reduced UWs to duration, spread duration, OAS and YTW

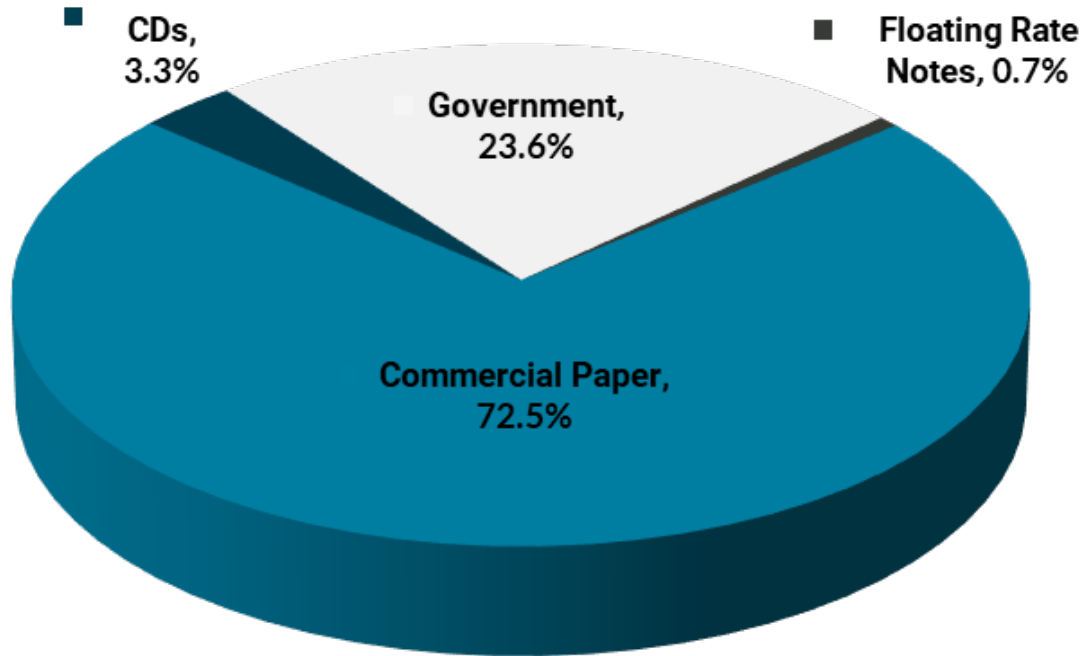
Short - Term Bond Portfolio

- **The System's short-term fixed income portfolio consists of high-quality securities that can easily be liquidated to satisfy the over \$720 million monthly payment of pension benefits (\$8.7 billion annually), fund the cash needs of other asset classes and support the System's operating expenses.**
- **Securities held in this portfolio generally mature in 12 months or less and consist of commercial paper, asset-backed commercial paper, CDs/Yankee CDs, agency discount notes, treasury bills and floating-rate notes.**
 - *As of June 30, 2024, the portfolio's WAM and WAL were 25 days*

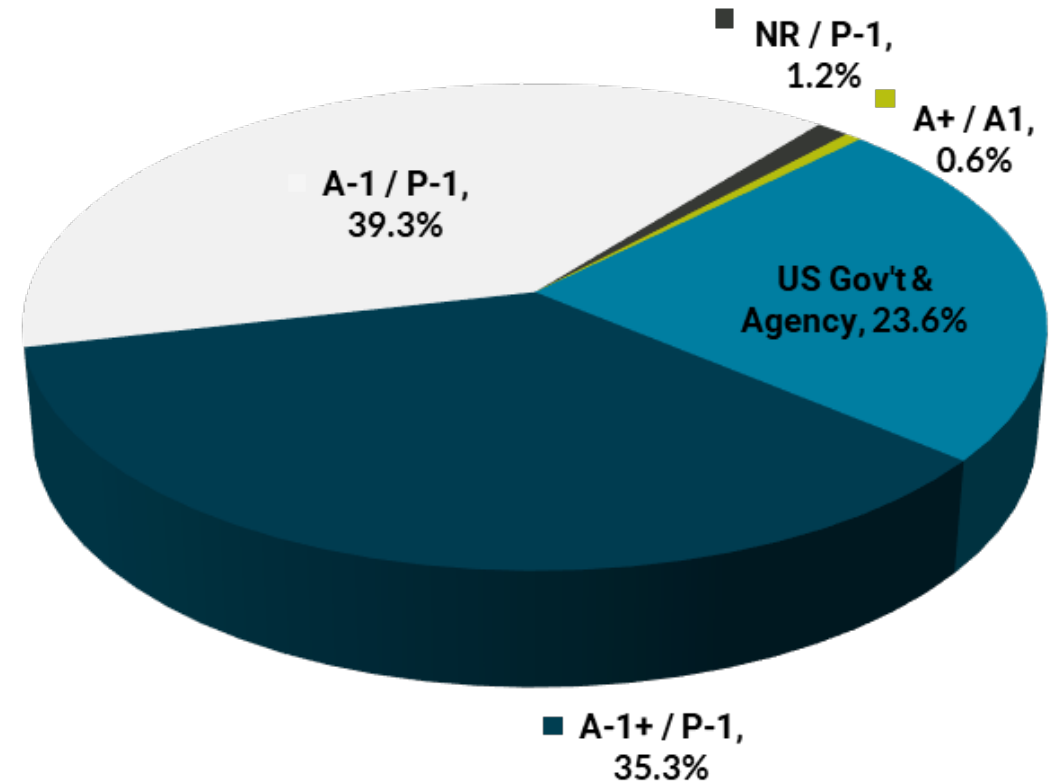
Short - Term Bond Portfolio

as of June 30, 2024

Asset Type Breakdown



Credit Quality Breakdown



Activity with MWBE Firms

Fixed Income Trading Volume by Portfolio

Face Amount in \$ Millions	Fiscal Year 23-24		Fiscal Year 22-23	
	Short-Term	Long-Term	Short-Term	Long-Term
Total Trading Volume	\$51,118	\$7,721	\$42,730	\$5,250
DVBE Trading Volume	\$266	\$11	\$503	\$24
MWBE Trading Volume	\$13,838	\$903	\$9,302	\$674
MWBE %	27.1%	11.7%	21.8%	12.8%

Externally managed assets with MWBE Firms

NYSTRS funded a new high yield portfolio with MWBE firm Advent Capital Management in October 2024

Internally Managed Insight

- **The fixed income portfolios are managed in compliance with statutory and internal investment policy guidelines such as ratings criteria, tenor/size limits, asset allocation, etc.**
- **Fixed Income participates in both primary and secondary markets**
- **Corporate credits are subject to a review process before approval for investment in either portfolio**
- **Corporate credit must be rated investment grade at time of purchase for inclusion into long-term portfolio, but not forced seller of fallen angels**
- **Platforms used: DirectBooks, Bloomberg, TradeWeb, MarketAxess**

2025 Priorities

Past Year:

- Net invested into Long-Term Bond portfolio to bring closer to 16% target
- Completed search due diligence and funded external high yield manager (MWBE)
- Evaluated tenured high yield mandates that have performed through a full cycle
- Consolidated BB-B mandate into existing broad high yield mandate of same manager
- Implemented internally managed emerging market debt portfolio
- Received approval to implement UST Futures for internally managed portfolios
- Worked to establish accounts, processes and mechanics for futures implementation
- Regularly met with external managers to stay informed of various sub-asset classes
- Implemented T+1 settlement cycle

2025:

- Fully implement U.S. Treasury Futures for inclusion into internally managed portfolios
- Ramp up EMD portfolio to fully invest
- Continue to manage long-term bond portfolio to move closer to asset allocation target

Additional Information

Broker-Dealer Approval Process: *Dependent on NYSTRS' trading needs & dealer product offerings*

- Complete a questionnaire that covers:
 - Financial Standing
 - Resources and experience as it relates to fixed income sub-asset class participation and presence
 - Regulatory record and compliance
 - Relevant MWBE Certifications and other pertinent information such as relationships with U.S. Government Agencies
 - Approval is subject to NYSTRS' Satisfactory review by a department independent of Fixed Income

Broker-Dealer Renewal Process

- Complete annual attestation form
- Submit updated questionnaire every five years with next update in 2025

Fixed Income ongoing monitoring of MWBE Broker-Dealers

- Proactive communication, periodic calls and/or meetings with Broker-Dealer relationship personnel as necessary

Leeway Clause

- Up to 35% of System assets may be invested in assets which do not qualify or are not permitted under any other subdivision of NY State Retirement & Social Security Law, Article 4-Q Section 177(9), notwithstanding any other provision of law
- Includes Fixed Income securities below investment grade and/or foreign domiciled (USD denominated)

External Fixed Income

Broad Principles

Strategy Design

- Measured Rate, Credit, and Foreign Currency Risk
- Benchmarked to Index
- Current Strategies
 - *Global Bonds*
 - *Global Carbon Transition*
 - *US High Yield*
- Other Strategies
 - *None planned but reviewed in annual asset allocation process*
 - *Continuously meet with external managers to discuss variety of mandates*

Advantages for NYSTRS

- Expanded credit risk/return opportunity
- Additional research capabilities
- Correlation and diversification benefits
- Generate incremental return

External Manager Due Diligence

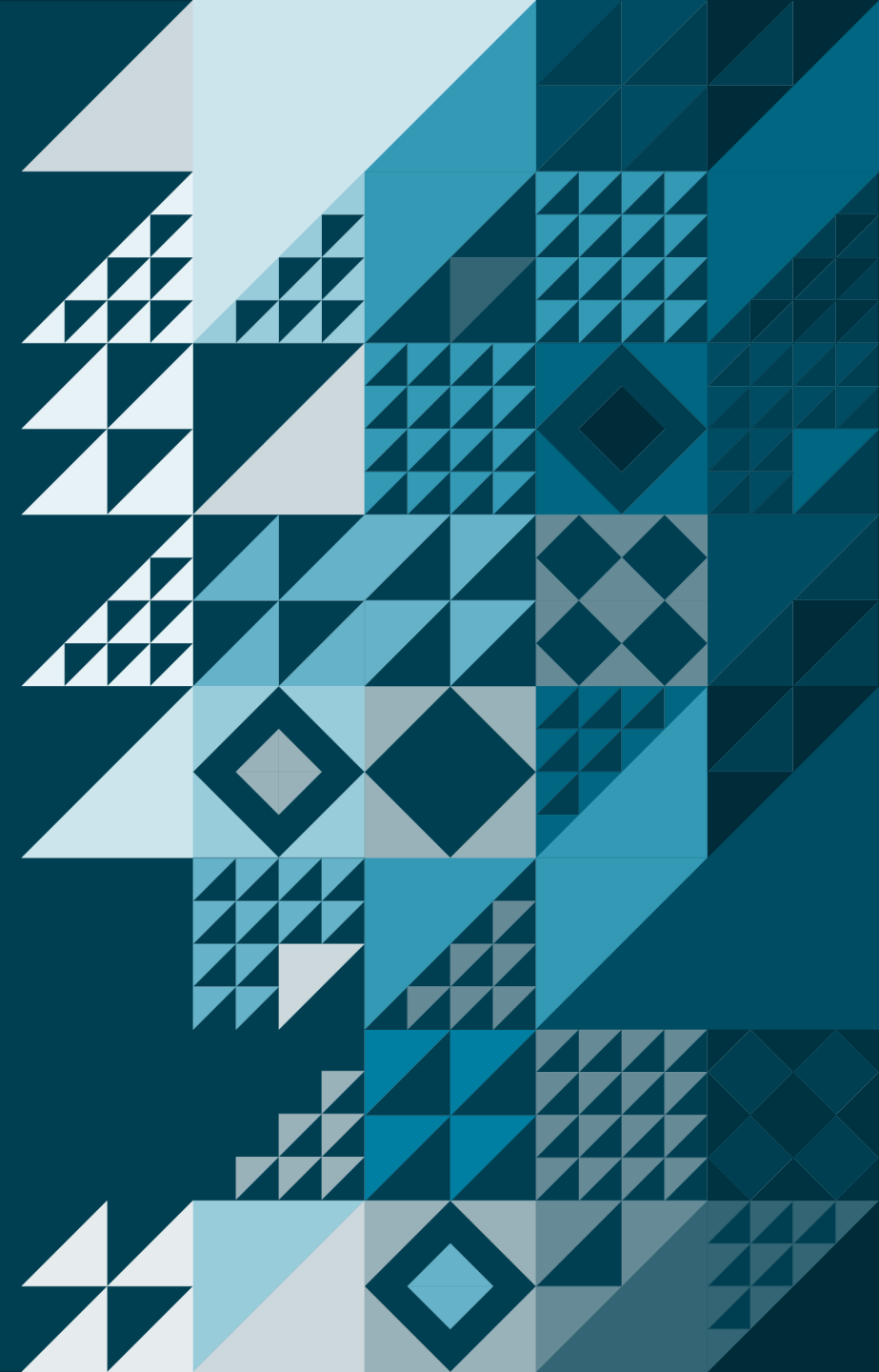
Track Record	<ul style="list-style-type: none">• <i>Risk-adjusted performance over cycles and relative to peers</i>• <i>Strategy capacity and investor base</i>• <i>Performance attribution and drivers of excess returns</i>• <i>Style drift and lessons learned</i>
People and Platform	<ul style="list-style-type: none">• <i>History of team and tenure</i>• <i>Bench strength</i>• <i>Idea generation</i>
Portfolio Construction & Risk	<ul style="list-style-type: none">• <i>Repeatable investment process</i>• <i>Compliance oversight</i>• <i>Risk management policies and integration</i>• <i>Insurance and liability; counterparty and service providers</i>
Information Technology	<ul style="list-style-type: none">• <i>System / Data integrity and security</i>• <i>Portfolio analytics</i>• <i>Trading platforms</i>• <i>Disaster recovery system & testing</i>
Relationship Management	<ul style="list-style-type: none">• <i>Monthly reporting, quarterly calls and annual on-site due diligence</i>• <i>Responsive relationship management and proactive disclosure</i>



New York State
Teachers'
Retirement
System

Questions for the Fixed Income Team?

*Suggestions for the next
MWBE conference?*





New York State
Teachers'
Retirement
System

MWBE 2025

Investments & Professional Services Conference

A Seat at the Table

10:00 a.m.-11:00 a.m.

11:00 a.m.-11:15 a.m.

11:15 a.m.-11:30 a.m.

11:30 a.m.-12:00 p.m.

12:00 p.m.-1:00 p.m.

1:00 p.m.-1:30 p.m.

1:30 p.m.-2:00 p.m.

2:00 p.m.-2:30 p.m.

2:45 p.m.-4:15 p.m.

4:30 p.m.

General Registration & Check-in	Entrance Table
Conference Welcome	Ballroom
Opening Remarks	Ballroom
<i>Thomas K. Lee, Executive Director & Chief Investment Officer</i>	
ED & CIO Opening Fireside Chat	Ballroom
<i>Featured Speaker – Cathy Marcus, PGIM Real Estate</i>	
Lunch Break	
<i>Boxed Lunches in Long Hallway</i>	Long Hallway
<i>Attendees can take lunch to Ballroom</i>	Ballroom
ED & CIO Fireside Chat	Ballroom
<i>Featured Speaker – Maggie Arvedlund, Turning Rock Partners</i>	
Networking Session	Long Hallway
Miscellaneous Breakout Sessions	
<i>Gender Equity in Finance Roundtable (Emily Ekland)</i>	Albany Room
<i>Culture Building & DEI (Danny Malavé)</i>	Troy Room
<i>Private Debt Seminar (Endurance Aku & David Maye)</i>	Big Breakout
<i>Cont. Networking (Business Partner Tabling)</i>	Long Hallway
Asset Class Breakouts	
<i>Private Equity</i>	Ballroom
<i>Fixed Income</i>	Albany Room
<i>Real Estate</i>	Troy Room
<i>Public Equities</i>	Big Breakout
Closing Speaker/Remarks	Ballroom

