2026

Annual Investment Plan

For the Year Ended June 30, 2026

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO
ANNUAL INVESTMENT PLAN
For the year ended June 30, 2026

Prepared by SERS Investment Staff
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Serving the People Who Serve Our Schools®

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EXECUTIVE SUMMARY

The Board's Statement of Investment Policy (SIP) requires the Chief Investment Officer to prepare and present an Annual Investment Plan (Plan) to the Board for its approval. The following document outlines the recommended Plan for Fiscal Year (FY) 2026.

As in prior years, the Plan reviews the economic environment based upon consensus reports from leading sources, SERS' asset allocation target and long-term performance objective for each portfolio, previous year's objectives and accomplishments, a review of the market conditions over the last year and objectives for FY2026. Implementation Guidelines for each asset class portfolio are included to provide further details on how each portfolio will be managed in the coming year relative to portfolio construction parameters and risk limits. **This Plan is meant to be a living document subject to adjustment during the year.** If circumstances change or opportunities arise during the year, items that may lead to intra-year changes to the Plan or Strategy Statements will be discussed with the Board.

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The general objectives of the Investment Department for FY2025 were as follows:

- *Our major strategic goals remain unchanged. The focus will continue to be value-added performance, risk management, cost-effectiveness and maintenance of an investment program that meets or exceeds investment objectives over the long-term.*

Total Fund's net- of- fees (net) returns exceeded the policy benchmark for all periods over ten years. For FYTD, the Total Fund net return of 4.98% as of March 2025 exceeded the benchmark by 0.60%. For three years, the net annualized return of 5.33% exceeded the benchmark by 1.15%, and for five years, the net annualized return of 11.24% exceeded the benchmark by 1.57%. Over ten years, the Total Fund generated a net return of 8.03%, exceeding the benchmark by 0.98% on an annualized basis. On account of significant outperformance in recent periods, the twenty-year excess return has turned positive after being negative over the years. The excess returns have been generated with active risk remaining well within the limits approved by the Board. The Total Fund return has exceeded the actuarial target of 7% over all periods except for the three-year period.

- *Implement the asset allocation framework and targets approved by the Board in December 2023.*

The interim allocation targets approved by the Board in October 2023 – Global Equities at 41% and Private Equity at 13% – reverted to the strategic targets for FY2025 – Global Equities at 40% and Private Equity at 14% – on January 1, 2025. This strategic allocation represents a 5% decrease in target allocation to Global Equities and a 2% increase in target allocation to Global Private Equity compared to the previous -12% strategic allocation.

The actual allocation for Global Equities reduced from 43.7% in March 2024 to 41.7% as of March 2025, maintaining a 1.7% overweight vs. the 40% target allocation. Staff had a preference to have an overweight in public equity while Private Equity was working on increasing its allocation. Global Private Equity's March 2025 actual allocation was 13.4%, slightly below the 14% target allocation as FYTD distributions as of March 2025 have exceeded capital calls by approximately $93 million, or roughly 0.5% of Total Fund assets. SERS has $1.4 billion in undrawn commitments to private equity investments as of March 2025. Nevertheless, all asset classes remain within Board-approved ranges.

- *Continue to develop and engage the Investment team, including adding a new Administrative Assistant due to the retirement of the Operations Manager.*

A new Administrative Assistant was hired in December 2024 who is integrating well with the team and learning enthusiastically.

EXECUTIVE SUMMARY

FY2026 OBJECTIVES

- Our major strategic goals remain unchanged. The focus will continue to be on value-added performance, risk management, cost effectiveness and maintenance of an investment program that meets or exceeds investment objectives over the long-term.

- Conduct an asset allocation study in conjunction with Wilshire and the Board. Implement the new asset allocation framework and targets upon Board approval.

- Assess the need to conduct a General Investment Consultant search and implement, as the current agreement will expire on August 1, 2026.

- Continue to develop and engage the Investment team and ensure a high functioning Investment committee.

CONCLUSION

As of March 31, 2025, Total Fund net returns of 11.24% over five years and 8.03% over ten years exceed the actuarial rate of 7.00% by a good margin, thus improving the Plan's funded ratio. Staff will remain focused on adding value relative to policy benchmarks and managing risks and costs.

Staff appreciates the support and guidance from the Board in FY2025 and looks forward to working with the Board in FY2026 for another successful year.

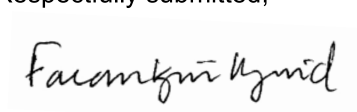
ACKNOWLEDGEMENTS

SERS is very fortunate to have an experienced and deep Investment Staff. The following individuals contributed to this report.

- Economic Outlook – Farouki Majeed and Hai Yen Le
- Total Fund Asset Allocation – Farouki Majeed and Chris Hyland
- Global Equities – Judi Masri and Hai Yen Le
- Global Private Equity – Steve Price and Phil Sisson
- Global Fixed Income – Jason Naber and Judi Masri
- Global Private Credit – Adam Messerschmitt and Brad Carr
- Global Real Assets – Paul Cheng and Michael Browning
- Cash Equivalents & Securities Lending – Jason Naber
- Opportunistic and Tactical – Farouki Majeed, Adam Messerschmitt and Brad Carr
- Overlay Program – Farouki Majeed, Jason Naber, and Judi Masri
- Investment Risk Management and Analytics – Chris Hyland and Hai Yen Le
- Investment Operations – Katie Swank and Maleia Te'o

We would appreciate the opportunity to review the Annual Investment Plan with you at the June 2025 Board meeting. If you have any questions or comments before then, please let me know.

Respectfully submitted,



Farouki A. Majeed
Chief Investment Officer

Global Economic Outlook

GLOBAL ECONOMIC OUTLOOK

Review of CY 2024:
US economic growth remained strong in 2024 at 2.8% despite sticky inflation and high interest rates. The resilience of consumer and government spending fueled 2024 growth. The global economic growth rate was 3.2% in 2024 with 1.7% for the advanced economies and 4.2% for the emerging and developing economies.

US headline inflation declined from 3.4% in December 2023 to 2.4% in September 2024, then fluctuated in a range of 2.4-3.1% from September 2024 to April 2025, showing its persistence. Global inflation trended down from 6.7% in 2023 to 5.8% in 2024, significantly higher than the US's level.

The US labor market remained resilient, adding 2.2 million jobs in 2024 vs. 3.0 million in 2023. The tightness of the labor market eased in 2024 as the unemployment rate increased from 3.7% in January 2024 to 4.2% in March 2025. US consumer sentiment declined slightly in 2024 due to sticky inflation and economic growth deceleration concerns.

The Fed pivoted the interest rate policy, conducting three interest rate cuts in the second half of 2024, reducing the federal funds rate from 5.25-5.50% to 4.25-4.50% which remains unchanged as of March 2025. The 10-year US Treasury rate increased from 3.9% in December 2023 to 4.6% in December 2024. The yield curve inversion eased as the yield spread between the 10-year note and cash turned slightly positive in mid-December.

Economic forecasts from the Blue Chip Consensus (US) and the IMF are presented below:

US ECONOMY
The consensus expects US economic growth to decelerate materially to 1.4% in 2025 and maintain the same rate in 2026 due to concerns of sticky and rising inflation along with slowing growth caused by high tariffs and trade frictions. Inflation is expected to stay above the Fed's 2.0% target at 3.3% in 2025 and 2.9% in 2026 (Table 1).

According to the Blue Chip Economic forecasts, the unemployment rate is expected to increase to 4.4% in 2025 and 4.7% in 2026. The yield on 10-year US Treasuries is expected to increase to 4.2%, slightly higher than the 3-Month T-Bill yield at 4.1%, indicating expectation of a modest yield curve normalization in 2025. The yield curve is expected to continue steepening in 2026 with the 3-Month T-Bill yield at 3.4%, materially lower than the 10-Year US Treasury yield at 4.1%. US corporate profits are expected to fall to $1.6 trillion in 2025 and slightly recover to $2.0 trillion in 2026.

Table 1

Period	Real GDP Growth Rate (%)	Unemployment Rate (%)	Inflation Rate CPI (%)	T-Bill 3-Mo. (%)	T-Note 10-Yr. (%)	Corporate Profits (Cur. $)
2021	5.8	5.4	4.7	0.0	1.4	27.6
2022	1.9	3.6	8.0	2.0	3.0	7.8
2023	2.9	3.6	4.1	5.1	4.0	6.9
2024	2.8	4.0	2.9	5.0	4.0	7.9
2025 Consensus	1.4	4.4	2.9	4.1	4.2	1.6
2026 Consensus	1.4	4.7	2.7	3.4	4.1	2.0

Source: Blue Chip Economic Indicators, April 2025

GLOBAL ECONOMIC OUTLOOK

GLOBAL ECONOMY

The IMF forecasted global GDP growth to decline to 2.8% in 2025 amid escalating trade tensions and policy uncertainty. Global economic growth is expected to improve slightly to 3.0% in 2026 (Table 2). Emerging and developing economies are expected to maintain the growth advantage vs. advanced economies as the former's expected growth rate is 3.7% while the latter's is 1.4% in 2025 and 3.9% vs. 1.5%, respectively, in 2026.

Table 2

Annual GDP Growth (in percent)	2024	2025 (projected)	2026 (projected)
World	3.2	2.8	3.0
US	2.8	1.8	1.7
Advanced Economies (including US)	1.7	1.4	1.5
Emerging and Developing Economies	4.2	3.7	3.9

Source: International Monetary Fund World Economic Outlook, April 2025

Portfolio Strategy

PORTFOLIO STRATEGY – Total Fund Asset Allocation

Actual asset allocation relative to policy target is shown in the table below:

	Target	Permissible Range	Actual as of 3/31/2025
Global Equities	40%	35 – 45%	41.7%
Global Private Equity	14%	11 – 17%	13.4%
Global Fixed Income	18%	13 – 23%	13.3%
Global Real Assets (Inflation)	20%	17 - 22%	18.2%
Global Real Estate	*13%*	*10 – 15%*	11.0%
Global Infrastructure	*7%*	*5 – 10%*	7.2%
Global Private Credit	5%	3 – 7%	6.1%
Opportunistic	0%	0 – 5%	3.2%
Cash	3%	1 – 5%	4.2%
Total Fund	**100%**		100%
Leverage	N/A	0 – 10%	0%
Total Notional Exposure (Including Leverage)	100%	100 – 110%	100%

Staff has maintained an overweight in Global Equities, Global Private Credit and Opportunistic, and an underweight in Global Real Estate, Global Private Equity and Global Fixed Income relative to the FY25 policy targets. The allocation tilts added value for CY 2024 and FY 2025 as the overweight asset classes outperformed the Total Fund benchmark. The Total Fund returned 4.98% FYTD through March 2025, exceeding the benchmark by 60 bps due to positive Total Fund allocation and asset class portfolio selection effects in Global Equities, Global Fixed Income, Global Infrastructure, Global Private Equity, and Opportunistic as these asset classes exceeded their respective benchmarks. The Overlay program reduced Total Fund performance by 5 bps FYTD.

Concurrent with heightened market volatility and economic uncertainty, Staff is focused on maintaining the strategic asset allocation and will consider tactical opportunities as they arise. Staff continue to actively monitor the underweight to Fixed Income and are prepared to adjust the allocation when the rate outlook changes. The current high volatility of fixed income and on-going positive correlation between equity and bond market performance complicates this picture further.

PORTFOLIO STRATEGY - Global Equities

INVESTMENT STRATEGY

SERS invests in equity securities to earn a premium over government treasury bonds due to higher compensation for assuming the higher risk inherent in public equity securities. A sizeable allocation to Global Equities is warranted to meet the long-term return goal of the Total Fund.

SERS' Statement of Investment Policy sets the Global Equities policy target allocation as follows:

	Target	Permissible Range
Global Equities	40%	35-45%

The performance objective of the Global Equity portfolio is to exceed the return of the MSCI All Country World Net Total Return Index (USD) by 40 basis points net of management fees. Actual net of fees performance as of March 31, 2025 is as follows:

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1 Year	3 Year	5 Year	10 Year
Global Equities	4.82	7.57	7.53	15.59	9.18
Global Equities Benchmark	4.16	7.15	7.06	15.14	8.68
Net Excess Return	0.66	0.42	0.47	0.45	0.50

Source: BNY Mellon GRS

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Monitor the portfolio for possible performance enhancement, completing searches, as necessary.*

Staff continues to focus on hiring core, broad based mandates with a benchmark aware focus. The following details portfolio changes in CY24 and CY25:

- JP Morgan US Core was funded January 1, 2024 with 7 bps net excess return since inception.
- T. Rowe Price US Core was funded January 1, 2024 with 75 bps net excess return since inception.
- Lazard EM Core was funded January 1, 2024 with 356 bps net excess return since inception.
- BlackRock STA was funded July 1, 2024 with 390 bps net excess return since inception.
- Brown Capital US Small Cap Growth was terminated in August 2024.
- JP Morgan China A was terminated in January 2025.
- AB US Small Cap Value was terminated in March 2025.
- State Street's R1000 Growth and Value accounts were terminated in March 2025.
- C,C&L Global Alpha Extension was funded April 1, 2025.

- *Manage the Global Equities portfolio structure relative to benchmark exposures to achieve appropriate risk and return characteristics.*

The 100% active Global Composite reduced its beta to 0.97, which was a headwind the first half of FY25 but yielded 362 bps of net excess return during the first quarter of CY25. Both global mandates have information ratios near or above 1.0.

US Equity risk monitoring focused on portfolio beta and small cap bias risks. The US large cap active composite beta gradually rose during CY24 from 0.88 to 0.95 by redeeming from low beta managers early in CY24 to fund JP Morgan and T. Rowe Price, each with a beta of 1.0. Beta increased again when BlackRock STA was added to the portable alpha composite with a beta of 1.0. The small cap overweight was reduced to neutral by terminating AB and Brown along with redeeming an additional $25 million from active managers.

The Non-US portfolio's primary risk factor is its small cap bias in both developed and emerging portfolios driven by quantitative mandates along with a dedicated developed market small cap composite. The developed market beta stands at 0.97 and emerging market beta is 1.0.

- *Review IMAs and Investment Guidelines to make any necessary adjustments.*

Walter Scott's IMA was fully re-negotiated in FY25.

PORTFOLIO STRATEGY - Global Equities

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1 Year	3 Year	5 Year	10 Year
Russell – 3000 Index	3.88	7.22	8.22	18.18	11.80
Russell – 3000 Growth Index	(0.57)	7.19	9.63	19.57	14.55
Russell – 3000 Value Index	9.11	6.66	6.28	16.13	8.63
Russell – 1000 Index	4.10	7.82	8.65	18.47	12.18
Russell – 2000 Index	(0.75)	(4.01)	0.52	13.27	6.30
MSCI – AC World Index ($Net)	4.16	7.15	6.91	15.18	8.84
MSCI – AC World Ex-USA Index ($Net)	5.08	6.09	4.48	10.92	4.98
MSCI – World Ex USA Index ($Net)	5.94	5.30	5.70	12.16	5.50
MSCI – Emerging Markets Index ($Net)	2.95	8.09	1.44	7.94	3.71

Source: Nasdaq eVestment Fiscal years begin July 1 and end on June 30

CURRENT MARKET CONDITIONS AND OUTLOOK

Global equity markets (MSCI ACWI) rallied 17.5% in CY24 as US equity (Russell 3000) returned 23.8%, leading Non-US Equity Markets (MSCI AC World Ex-USA index) with a 5.5% return. In Q1, 2025, the US market rally halted with a loss of 4.7% while Non-US markets gained 5.2%. Global equity markets gained 4.2% for FY25 through March.

The US equity market performed strongly in CY24 thanks to broad-based healthy earnings and strong gains of Artificial Intelligence related companies. However, the uncertainty of the US tariff policy rattled the market in Q1 lowering the return to 3.9% for FY25 through March. The Non-US Developed market (MSCI World ex USA Index) underperformed the US market for CY 2024 but outperformed the latter for FY25 through March with returns of 4.7% and 5.9%, respectively. Emerging Markets (MSCI EM) beat the Non-US Developed market but lagged the US market for CY 2024 with a return of 7.5%. For the period FY25 through March, the Emerging Markets gained 3.0%, beating the US but lagging the Non-US Developed market.

Equity market volatility is expected to be elevated, and return is expected to be muted due to concerns about intensifying trade wars, high interest rates, high inflation and slower growth. The S&P 500 index was trading at 27 times earnings, significantly higher than the non-US market as well as its own historical average. The Developed ex-US and Emerging Markets were trading at 18 times earnings; while the former was slightly above its historical average, the latter was materially higher than its long-term average.

PORTFOLIO STRUCTURE

At the end of March, Global Equities allocation was overweight the 40.0% Total Fund's target allocation by 3.3% (1.7% including futures). The global composite grew to 25.8% of total equities due to appreciation and regional composite redemptions. The regional composite, 74.2% of total equities, has the following exposures:

- The US allocation changed from overweight a year ago to a 52bps underweight relative to its 64.6% March MSCI ACWI benchmark target allocation as the US performance advantage deteriorated in 2025,

- The Non-US Developed Market allocation moved to a 29bps overweight in 2025 relative to its 25.1% March MSCI ACWI benchmark target allocation, and

- The Non-US Emerging allocation was adjusted to 23bps overweight in 2025 relative to its 10.0% March MSCI ACWI benchmark target allocation.

The US portfolio maintains a slight growth tilt. The US portfolio is currently 74.7% passively managed, which slightly increased by 0.3% over the prior year. Passive management may decline in favor of active management over the next year as active management is anticipated to outperform in a broader and/or declining market.
The Non-US portfolio maintains a small capitalization bias and a marginal growth style tilt. The portfolio will remain a moderate overweight to small capitalization stocks, as small caps are undervalued relative to large cap thus is expected to add to longer-term return. The Non-US portfolio is 84.4% active in Developed Markets (DM), 1.3% higher than the previous year. Active management may continue to grow above 84.4% as Staff redeems from passive to fund a new global manager. Emerging markets will remain 100% active management due to greater market inefficiency.

PORTFOLIO STRATEGY - Global Equities

FY2026 OBJECTIVES
Staff will focus on the following objectives during FY2026:

- Complete the funding of the new CC&L Global Equity Alpha Extension mandate as approved by the January 2025 Investment Committee.

- Monitor the portfolio for possible performance enhancement, completing searches, as necessary.

- Manage the Global Equities portfolio structure relative to benchmark exposures to achieve appropriate risk and return characteristics.

- Engage Wilshire on a portfolio structure review focusing on correct global and regional composite composition, active-passive allocation, and detailed manager alignment. Make portfolio adjustments, as necessary.

- Review IMAs and Investment Guidelines to make any necessary adjustments.

PORTFOLIO STRATEGY – Global Private Equity

INVESTMENT STRATEGY
SERS invests in private equity to provide risk adjusted returns in excess of those provided by publicly traded equities.

SERS' Statement of Investment Policy sets the Private Equity target allocation as follows:

	Target	Permissible Range
Global Private Equity	14%	11% - 17%

The performance objective for Private Equity is to provide net returns in excess of the MSCI-Burgiss Global Private Equity Funds Index by 150 basis points. Actual net of fees performance as of March 31, 2025, follows:

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	10-Years
SERS Private Equity	7.04	10.81	7.61	17.14	16.51
Private Equity Policy Benchmark	4.47	5.60	1.68	12.69	12.27
Net Excess Return	2.57	5.21	5.93	4.45	4.24

Source: MSCI-Burgiss Global Private Equity Funds Index

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION
The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Manage the Private Equity portfolio and fiscal year commitments to reflect the investment allocation of 14%, subject to identifying opportunities that meet SERS' investment criteria.*

The Private Equity allocation is 13.4% as of March 31, 2025. This is slightly below the target allocation of 14% but well within the range of 11% to 17%. To date, approximately $137 million has been approved by the SERS Investment Committee to two funds and two co-investments.

- *Review the Private Equity portfolio strategy and structure and develop a plan to improve risk and return characteristics of the portfolio, achieve fee reductions, and optimize manager counts as appropriate.*

To date, two commitments have been approved to private equity funds with an average management fee of 1.83%. Additionally, two commitments have been approved to co-investments that have no management fees or carried interest. Together the average management fee on all approved commitments is 0.91%. These private equity commitments are diversified by investment strategy, sector focus and geography.

- *Actively seek co-investment opportunities where appropriate with current SERS' private equity general partners who meet co-investment criteria, as outlined in the Private Equity co-investment guidelines.*

Two co-investments have been made fiscal year to date. The Private Equity co-investment portfolio has grown considerably in size the last several years and has a market value of $188 million as of March 31, 2025, representing 7% of the Private Equity portfolio.

- *Research and identify new and innovative investment opportunities with managers who offer compelling return expectations. These new opportunities may be used for a combination of purposes to replace current managers who no longer meet SERS' investment criteria or to target strategies that are not currently a directly invested component of the Private Equity portfolio.*

Staff reviewed over 100 investment offerings during FY25. A few compelling prospects were identified, and staff will continue to track these opportunities for future review and consideration.

PORTFOLIO STRATEGY – Global Private Equity

PORTFOLIO COMPOSITION

	Allocations as of March 31, 2025	Target Ranges
Buyout	78%	55% - 95%
Venture Capital	9%	0% - 10%
Special Situations	6%	5% - 25%
Co-Investments	7%	0% - 25%
Domestic	79%	55% - 95%
International	21%	5% - 45%

CURRENT MARKET CONDITIONS AND OUTLOOK

The past few years have been the private equity industry's most challenging period since the global financial crisis. Macro conditions and policy decisions will weigh heavily on momentum and uncertainty continues to keep the private equity market on edge. Much uncertainty remains around inflation and interest rates and private equity investors are seeking clarity on tariffs and other macro issues. Economic uncertainty combined with elevated purchase valuations and a steady flow of dry powder once again underscores the importance of identifying and backing high quality private equity managers that remain disciplined in their process, due diligence, and selection criteria throughout investment cycles.

The long-term outlook for private equity remains positive. Top quartile private equity managers find ways to overcome problems, generate returns for their limited partners and earn the capability to raise additional funds. With this in mind, the outlook for the SERS Private Equity portfolio is favorable. Current market conditions reflect positively on the style of investing employed by the general partners that make up the core of the SERS Private Equity portfolio. SERS' Private Equity portfolio is comprised primarily of general partners who have demonstrated the ability to identify, create value and exit companies in all market environments.

In an effort to ensure the portfolio is properly positioned for future uncertainty, our goals for the fiscal year include: continuing to identify and invest with operationally focused managers who primarily target the middle market and avoid the competition in the large and mega space; increasing exposure to attractive investments that meet our criteria and offer lower costs through co-investments; and ensuring that we stay on top of market trends and opportunities by continuing to research and seek out managers offering investment strategies that deliver private equity like returns with differentiated and unique strategies. Additionally, as the Total Fund moves into what many believe will be a low return environment, we are targeting an allocation level of Private Equity to slightly above its target of 14% to capture the benefit of this higher returning asset class to the Total Fund. This will take time as Private Equity is a long-term asset class where manager selection is critical, and additional capital takes more time to deploy.

FY2026 OBJECTIVES

Staff will focus on the following objectives during FY2026:

- Manage the Private Equity portfolio and fiscal year commitments to reflect the investment allocation of 14%, subject to identifying opportunities that meet SERS' investment criteria.

- Review the Private Equity portfolio strategy and structure and develop a plan to improve risk and return characteristics of the portfolio, achieve fee reductions, and optimize manager counts as appropriate.

- Actively seek co-investment opportunities where appropriate with current SERS' private equity general partners who meet co-investment criteria, as outlined in the Private Equity co-investment guidelines.

- Research and identify new and innovative investment opportunities with managers who offer compelling return expectations. These new opportunities may be used for a combination of purposes to replace current managers who no longer meet SERS' investment criteria or to target strategies that are not currently a directly invested component of the Private Equity portfolio.

PORTFOLIO STRATEGY - Global Fixed Income

INVESTMENT STRATEGY

SERS invests in fixed income assets for the primary purpose of risk diversification and decreasing the overall risk of the investment plan. Fixed income assets may include sovereign debt securities, global corporates, securitized securities, private placements, convertibles, derivatives, and currency.

SERS' Statement of Investment Policy sets the Global Fixed Income target allocation as follows:

	Target	Permissible Range
Global Fixed Income	18%	13% - 23%

The performance objective for the Fixed Income portfolio is to exceed the Bloomberg US Universal Bond Index, net of manager fees, by 60 basis points. Actual net of fees performance as of March 31, 2025, follows:

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	10-Years
Global Fixed Income	5.40	5.74	1.60	1.56	2.41
Global Fixed Income Policy Benchmark*	5.04	5.11	0.59	(0.35)	1.49
Net Excess Return	0.36	0.63	1.01	1.91	0.92

**Bloomberg US Aggregate Bond Index through 6/30/2024; Bloomberg US Universal Bond Index starting 7/1/2024*

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Manage the portfolio structure and risk relative to the benchmark as central banks globally reach peak interest rates and the potential for a US recession grows.*

As of March 31, the portfolio outperformed the benchmark by 36 bps, net of fees, with a return of 5.40% fiscal year-to-date. The drivers of outperformance were the higher allocations to high yield, emerging market debt and mortgage-backed securities as spreads continued to tighten in these sectors fiscal year-to-date. Portfolio duration was kept close to benchmark duration due to uncertainty of the direction of interest rates. Also, the portfolio's US Treasury allocation has increased to its highest weight in several years as credit spreads grinded to very tight levels, making valuations in credit unattractive.

- *Tactically manage the allocations to core, core plus and tactical and diversifying strategies to enhance the risk and return tradeoff. Continue to research new and innovative investment opportunities to position the portfolio for a potential recession, falling interest rates and to diversify sources of return.*

Staff continued making additional allocations and reallocating funds between core, core plus, and tactical and diversifying strategies to adjust portfolio duration and sector exposures. Additional allocations totaling $25 million were contributed to core strategies, $66 million to core plus and $30 million to tactical diversifying strategies. Staff terminated one core plus manager due to underperformance and senior level personnel turnover. A new core plus manager with consistent outperformance and low correlation with existing managers was funded with $200 million in Q1 2025.

- *Implement the new portfolio benchmark change, if the Board approves, to the Bloomberg US Universal Bond Index, which includes allocations to high yield and emerging market debt and more accurately reflects the portfolio holdings and risk exposures and result in lower tracking error.*

The new benchmark was implemented on July1st. Since the benchmark includes allocations to high yield and emerging market debt, the portfolio overweight to these sectors has decreased. As a result, the annualized tracking error of the portfolio has also decreased. The tracking error range in the implementation guidelines has been changed from a limit of 5% down to 4% to reflect the lower expected tracking error going forward.

- *Review IMAs and Investment Guidelines to make any necessary adjustments.*

Two IMAs were fully renegotiated and investment guidelines for one strategy were updated during the year.

PORTFOLIO STRATEGY - Global Fixed Income

CURRENT MARKET CONDITIONS AND OUTLOOK

The Bloomberg US Universal Bond Index returned 5.04% for FY2025 through March 2025. All sectors of the index had positive performance with high yield performing the best, outperforming the index by 1.48% with a 6.53% return as spreads continued to compress to very tight levels and continued to earn an attractive yield of 7.73%. Blended emerging market debt also had strong outperformance of 1.44% with a 6.48% return. Commercial MBS, which has a small allocation in index of 1% outperformed by 0.71% as certain sectors like office continue to improve in the long wake of the pandemic. US agency mortgages, which is the largest sector in the index, returned 5.32% and outperformed due to low housing inventory and high mortgage rates leading to higher home prices and consumers continuing to stay put, unwilling to give up the low interest rate on their mortgage. US Treasuries performed relatively in line with the index with a 4.99% return earning only slightly more than the prevailing yield. The yield started the fiscal year 4.4%, fell as low as 3.6% but rose back to 4.2% at the end of Q1.

After cutting interest rates three times in the fall of 2024 for a total of 1%, the Fed has been on pause as inflation continued to fall slowly and unemployment remained steady. As the US has now entered a trade war with the rest of the world, the potential inflationary impacts could keep the Fed on the sidelines until the labor market weakens due to slowing US growth. Currently, the three rate cuts are priced into markets. The US Treasury market outlook is mixed with longer maturities vulnerable to volatility due to inflation and fiscal deficits and the belly of the curve offering the most potential for value if the Fed cuts rates. For now, a neutral to slightly long duration position continues to make sense while the path of rates remains volatile. Investment grade and high yield credit spreads have moved wider recently, and this could continue due to current economic uncertainty, but balance sheets remain healthy, and defaults are expected to be in-line with historical averages. Agency mortgage fundamentals remain neutral, and as macro-economic uncertainty subsides, mortgages look attractive at current spread levels. In securitized credit, federal policy uncertainty is a headwind, particularly tariffs, but credit fundamentals remain solid. For emerging market debt, US trade policy uncertainty and subsequent global financial market volatility make the potential impact on emerging market economies difficult to predict.

PORTFOLIO STRUCTURE

The Fixed Income portfolio is currently weighted 48% core, 40% core plus and 12% to tactical and diversifying strategies. With additional cash contributions to lower yielding strategies and spreads moving tighter fiscal year-to-date, the yield of the portfolio has decreased by 0.51% to 5.08%, which is a yield advantage of 0.27% over the benchmark. The average credit quality of the portfolio increased to AA-, matching the rating of the benchmark. The average portfolio duration of the core and core plus strategies is 6.0 years, 0.2 years longer than the benchmark.

The portfolio is underweight US government sectors by the smallest amount in several years and overweight credit sectors to earn additional yield and price appreciation over the benchmark. The allocation to US Treasuries was increased by 5% since the beginning of the year with the hiring of the core plus manager who has a more dynamic sector allocation approach, while the allocations to mortgages, investment grade corporates and high yield were reduced by 5% as a result. The portfolio is conservatively positioned with each credit sector exposure over/under weights less than 2% except asset-backed securities at +5% and a long duration position 3% higher than the benchmark.

FY2026 OBJECTIVES

Staff will focus on the following objectives in FY2026:

- Manage the portfolio structure and risk relative to the benchmark as uncertainty resulting from the tariff war, immigration policy, taxes and deregulation make the outlook for markets unclear.

- Increase the portfolio allocation closer to the 18% strategic allocation weight if fixed income becomes more attractive relative to other asset classes.

- Tactically manage the allocations to core, core plus and tactical and diversifying strategies to enhance the risk and return tradeoff. Continue to research new and innovative investment opportunities to position the portfolio for a potential recession, global market volatility and to diversify sources of return.

- Adjust IMAs and Investment Guidelines as needed.

PORTFOLIO STRATEGY – Global Private Credit

INVESTMENT STRATEGY

SERS invests in private credit to provide risk adjusted returns in excess of those offered by publicly traded fixed income securities and to generate a consistent cash yield.

SERS' Statement of Investment Policy sets the Global Private Credit target allocation as follows:

	Target	Permissible Range
Global Private Credit	5%	3% – 7%

The performance objective for the Global Private Credit portfolio is to provide net of fee returns of 100 basis points above the 90-day SOFR rate + 4.5%, one quarter in arrears.

Annualized Returns (in percent) for Periods Ended March 31, 2025				
	FYTD	1-Year	3-Years	Since Inception
Global Private Credit	6.32	10.00	8.74	10.69
Policy Benchmark	7.33	9.95	8.98	7.38
Net Excess Return	(1.01)	0.05	(0.24)	3.31

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Manage the Global Private Credit allocation within the target allocation range while considering the pace of drawdowns for new investments and re-evaluate existing manager performance as new capital is raised.*

Staff continued to slow deployment during the course of the fiscal year since the Global Private Credit portfolio is over the target allocation of 5%, but within the permissible range of 3% - 7%. Staff also reduced commitment sizes for new investments to maintain the target allocation within the permissible range, as well as discontinued commitments to new fund vintages that were not performing in line with underwriting expectations.

- *Build the Global Private Credit allocation in line with the implementation guidelines and ensure appropriate risk and return characteristics are present within the target allocation.*

Staff executed $125 million in capital commitments within the Global Private Credit portfolio during the fiscal year. This included increasing the commitment to an existing fund within the Direct Lending sub-asset class by $25 million. Staff also made two commitments of $50 million each to new investments within the Asset Based Lending/Other sub-asset class. The Asset Based Lending/Other sub-asset class includes investments collateralized by financial and hard assets that generate cash flows from sources that are differentiated from traditional corporate lending cash flows and can provide additional downside protection for lenders. Compared to Direct Lending investments, Asset Based Lending investments are typically shorter in duration and have faster amortization profiles. The Global Private Credit allocation exceeded the target allocation of 5% by 1.2% at the end of 2024.

- *Evaluate new investments with a cautious approach given the economic outlook and higher interest rate environment, while focusing on increasing the cash yield of the portfolio and income distribution to the Total Fund.*

The three commitments that were executed and the new investments considered for the Global Private Credit portfolio all include an income component, which is expected to comprise the largest part of the investment return. Most of the underlying investments within private credit funds include a contractual cash payment that is distributed to investors in the form of income on a quarterly basis. Although base rates started to decline during the fiscal year, the expanding number of loans within the Global Private Credit portfolio resulted in an overall increase of distributed income compared to the prior fiscal year. In addition, increasing the allocation to Asset Based Lending strategies will provide incremental income to the portfolio, as well as further downside protection with the collateralization of loans. During the fiscal year, Staff remained focused on investing with managers that have robust due diligence processes, monitored the ability of portfolio companies to withstand the higher interest rate environment, and took a disciplined approach to investing new capital.

• *Evaluate new investment ideas within Asset Based Lending/Other to build the sub-asset class towards the target allocation.*

During the year, Staff reviewed numerous Asset Based Lending strategies that could provide diversification benefits to the portfolio, which is primarily comprised of corporate cash flow lending strategies. As previously mentioned, Staff made two new commitments to Asset Based Lending strategies in order to increase the allocation within the Global Private Credit portfolio. However, Staff is taking a slow and disciplined approach to adding new Asset Based Lending managers to the portfolio. Overall, the pace of capital deployment has slowed given the Global Private Credit allocation is above target. As capacity becomes available, Staff will consider adding new strategies to the portfolio with a focus on increasing the allocation to Asset Based Lending, which is one of the fastest growing areas of the private credit market.

• *Review the appropriateness of the benchmark and recommend changes if necessary.*

Staff continue to review the appropriateness of the Global Private Credit policy benchmark and recommend replacing the current policy benchmark with the 90-day SOFR rate + 4.5%, one quarter in arrears. The SOFR rate is utilized as the reference rate for private loans and is a more appropriate measure for performance.

CURRENT MARKET CONDITIONS AND OUTLOOK

The private credit market was estimated to be $1.7 trillion in assets under management (“AUM”) at the end of the year and is forecast to surpass $2.8 trillion in the next several years. During 2024, fundraising activity slowed given the economic uncertainty and higher interest rate environment. Many investors paused on new investments within the private credit space given the uncertainty of corporate earnings growth and the ability of companies to service debt obligations. The direct lending strategy continued to grow in AUM and raised approximately $120 billion during the year, exceeding fundraising in all other private credit strategies as investors continued to seek the higher cash yield associated with direct lending. The leveraged loan market continued to see lower deal activity throughout most of the year, but activity began to pick up towards the end of 2024. Larger companies, including public companies, continued to turn to the private credit market for financing needs given the lack of readily available capital. Loan defaults and distressed debt volumes were relatively stable throughout 2024 with distressed debt exchanges comprising most of the defaults during the year. The impact of higher interest rates for longer and the potential for higher tariffs could lead to an increase in default rates across the leveraged loan and private credit markets.

The outlook for the private credit market is positive with considerable growth still expected despite the slowdown in private equity deal activity throughout 2024, which had an impact on the number of loans executed by private credit managers. Private equity deal activity is expected to pick up during 2025, but the potential for headwinds related to higher tariffs could have a negative impact on mergers and acquisitions. However, there is still a robust opportunity set within the private credit market as many companies need alternative financing. The private credit market continues to expand into new areas that have been traditionally serviced by the banks. Asset lending is the fastest growing area that includes loans collateralized by various types of assets. As these new areas of growth emerge, the private credit market could grow larger than expected. The cash yields on debt instruments continued to provide an attractive return for investors. In particular, the income focused direct lending strategy delivered an estimated 12.3% yield to investors, which was an attractive premium over the U.S. non-investment grade, U.S. investment grade, and 10-year U.S. Treasury yields of 7.1%, 5.1%, and 4.2%, respectively.

The Federal Reserve began to decrease interest rates in the second half of 2024 but at a slower pace than originally expected. Unless the Federal Reserve is motivated to decrease interest rates at a faster pace, it is expected that interest rates will remain higher for longer. The higher interest rate environment can add to returns within the private credit asset class, but it can also increase the likelihood of higher default rates given the uncertainty around whether borrowers will be able to continue servicing debt. Therefore, it is important for private lenders to conduct a rigorous underwriting process on portfolio companies to ensure borrowers can withstand the impacts of higher interest rates and other economic pressures, such as higher tariffs. Since the pipeline of opportunities is expected to be robust, private lenders can be even more disciplined when selecting borrowers. Thus, resulting in the ability to originate loans with better protections in place for the lender, while providing downside protection and an attractive cash yield for investors.

PORTFOLIO STRATEGY – Global Private Credit

FY2026 OBJECTIVES
Staff will focus on the following objectives in FY2026:

- Manage the Global Private Credit allocation within the target allocation range while considering the pace of drawdowns for new investments and re-evaluate existing manager performance as new capital is raised.

- Manage the Global Private Credit allocation in line with the implementation guidelines and ensure appropriate risk and return characteristics are present within the target allocation.

- Evaluate new investments with a cautious approach given the economic outlook and higher interest rate environment, while focusing on increasing the cash yield of the portfolio and income distribution to the Total Fund.

- Evaluate new investment ideas within Asset Lending to increase the allocation within the portfolio.

- Continue to review the appropriateness of the benchmark and recommend changes if necessary.

PORTFOLIO STRATEGY - Global Real Assets

INVESTMENT STRATEGY

The role of SERS' Global Real Estate portfolio is to provide stable income return from tangible real estate assets, partial inflation hedge over the long term, and diversification from equities.

SERS' Statement of Investment Policy sets the Global Real Estate target allocation as follows:

	Target	Permissible Range
Global Real Estate	13%	10-15%

The performance objective for Global Real Estate is to produce net of fee returns in excess of the Expanded NCREIF Property Index ("ENPI"), one quarter in arrears. The performance objective is intended to be accomplished over a market cycle, with the income component of the return comprising a significant portion of the total return.

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	10-Years
Global Real Estate	0.09	(1.08)	(1.60)	4.32	6.55
Policy Benchmark	1.42	0.43	(0.82)	3.13	5.66
Net Excess Return	(1.34)	(1.51)	(0.78)	1.19	0.89

Source: BNY Mellon & NCREIF

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The FY2025 Real Estate Annual Investment Plan objectives and related activities are as follows:

Formulate a one-year plan to keep the allocation within the 10-15% range.

Staff has tactically lowered the Real Estate portfolio allocation towards the lower end of the allowed 10-15% range. Staff has redeemed $504 million from open-end funds over the past four years to lower the allocation to 10% in order to grow the allocation in Infrastructure to 10%. Infrastructure has outperformed Real Estate in most periods.

- *Upgrade the allocation by evaluating new investment strategies such as real estate debt and secondaries that could take advantage of the current market correction, and niche property types that have secular growth drivers.*

Staff committed to a real estate debt fund in FY2024 to take advantage of the market dislocations. During FY2025 Staff increased that commitment by 50% due to the fund's high income return and solid performance to date.

- *Actively pursue co-investment opportunities with existing and high-quality non-current Real Estate managers.*

During the fiscal year, Staff evaluated many co-investment opportunities. However, Staff did not pursue any real estate co-investments given the tactical shift to lower the allocation to Real Estate.

CURRENT MARKET CONDITIONS AND OUTLOOK

Across most property types, real estate values declined in 2024, continuing the depreciation trend of (7.9%) in 2023, though in the second half, there were signs of stabilization and recovery. SERS' Real Estate portfolio returned (5.93%) net of fees in 2024 versus a benchmark NPI return of (3.47%) gross of fees, producing an excess return of (2.46%). Real Estate income return gross of fees during 2024 was 4.31%.

Real Estate portfolio performance in 2024 was disappointing, consistent with the broader market downturn. In the most aggressive interest rate hiking cycle since the 1970s, the U.S. Federal Reserve increased interest rates nine times from 0.25% to 5.25% over an 18-month period before reducing interest rates to 4.5% by the end of 2024. Consequently, capitalization (cap) and discount rates used to value real estate assets increased dramatically, resulting in lower asset values. Meanwhile, fundamentals for Industrial, Multifamily, and Retail properties remained relatively positive, with new construction starts declining, vacancy rates below 8% and total rental income growth rates in the 3-4%, reflective of good demand. Because lending standards leading up to the downturn have been stringent and supply has been either flat or grown moderately, the conditions that led to significant drawdowns as seen during the Global Financial Crisis are not present. Asset markdowns have been primarily driven by the aforementioned higher cap and discount rates.

PORTFOLIO STRATEGY - Global Real Assets

The Office sector continues to face challenges due to oversupply and functional obsolescence. However, government and corporate mandates to return to office and a less accommodating job market are leading to improved occupancy and stabilizing rents. Additionally, the values of many office buildings have adjusted downward enough to attract buyers. While the outlook has improved, the office sector is expected to see slower rent growth and appreciation compared to others.

Despite the current negative sentiment, 2025-2026 could be an attractive period to allocate new capital as values reset and provide attractive entry points. New construction has declined because higher interest rates and material costs have made it financially challenging to build. With sellers becoming more realistic with asking prices, 2025 could see an uptick in transactions after significant slowdowns in 2022-24.

FY2026 OBJECTIVES

Staff will focus on the following objectives in FY2026:

- Formulate a one-year plan to keep the allocation within the 10-15% range, with the goal of reducing allocation to the low end of the range, while still committing to strategies and investments that can out-perform the benchmark and improve portfolio construction.
- Staff continue to review the appropriateness of the Global Real Estate policy benchmark and recommend replacing the current policy benchmark with the Expanded NCREIF Property Index (Expanded NPI). Versus the current NCREIF Property Index, the Expanded NPI includes a broader set of property types.
- Evaluate new investment strategies such as residential real estate and niche property types to improve portfolio property type allocations.
- Actively pursue co-investment opportunities with existing and high-quality non-current Real Estate managers.

INVESTMENT STRATEGY

The role of SERS' Global Infrastructure portfolio is to provide stable income return from tangible infrastructure assets, partial inflation hedge over the long term and diversification from equities.

SERS' Statement of Investment Policy sets the Global Infrastructure target allocation as follows:

	Target	Permissible Range
Global Infrastructure	7%	5-10%

The performance objective for Global Infrastructure is to produce net of fee returns in excess of the Consumer Price Index (CPI) on a smoothed quarterly (4 qtrs.) basis + 1.2% per quarter (or approximately CPI + 5% on an annual basis, with income component of the return comprising a significant portion of the total return.

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	Since Inception
Global Infrastructure	7.12	9.27	7.71	7.96	10.08
Policy Benchmark	5.88	8.05	3.37	5.72	6.61
Net Excess Return	1.24	1.22	4.34	2.24	3.46

Source: BNY Mellon

PORTFOLIO STRATEGY - Global Real Assets

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The FY2025 Infrastructure Annual Investment Plan objectives and related activities are as follows:

- *Formulate a one-year plan to keep the allocation within the 5-10% allocation.*

  Staff committed $606 million to new investments during the fiscal year to increase the allocation towards the 7% target, with a long-term goal of increasing allocation to the high end of the range (10%).

- *Evaluate new investment strategies such as energy security and transition, digital infrastructure, and others that provide inflation protection and income return.*

  New funds and strategies were added to provide diversification and gain exposure to attractive investment themes like energy transition and secondaries. During the fiscal year, Staff committed to several funds that target 5-7% income return over the long run.

- *Actively pursue co-investment opportunities with existing and high-quality non-current Infrastructure managers.*

  During the fiscal year, Staff evaluated many co-investment opportunities. Staff committed to two co-investment, one continuation fund, and two co-investment sidecars for additional exposure to attractive assets with favorable fee economics alongside high conviction managers.

CURRENT MARKET CONDITIONS AND OUTLOOK

The infrastructure portfolio once again proved to be a safe harbor in a volatile year. The core, essential, and monopolistic characteristics of many infrastructure assets demonstrated their resilience. SERS infrastructure portfolio performed well in 2024, providing downside protection and cash yield. Most of SERS' infrastructure funds are still in early life cycle but are performing as expected and providing cash distributions. New funds may underperform for short periods due to start-up fees and as assets mature. However, SERS' large, diversified portfolio with different vintages should withstand this impact. The infrastructure program added three new co-investments/continuation funds, and two co-investment sidecars in 2024.

Going forward, the infrastructure program will continue to focus on attractive assets that provide inflation protection, diversification, and cash yield. Beginning in 2024, infrastructure was given its own allocation target and range with a CPI-based absolute return benchmark. As CPI moderates from the post-pandemic, multi-decade highs, the infrastructure portfolio will compete with a less volatile benchmark.

Sectors that will be high priority are energy security / transition because of growing power demand, and digital infrastructure, which continues to benefit from the global mega-trend of digitalization. However, sectors like utilities that provide consistent income returns while benefiting from the energy transition theme and assets that meet the inflation protection, income return, and diversification requirements for infrastructure will also be considered.

FY2026 OBJECTIVES

Staff will focus on the following objectives in FY2026:

- Formulate a one-year plan to keep the allocation within the 5-10% allocation, with the goal of increasing allocation to the high end of the range.

- Evaluate new investment strategies such as energy security and transition, digital infrastructure, and others that provide inflation protection and income return.

- Actively pursue co-investment opportunities with existing and high-quality non-current Infrastructure managers.

INVESTMENT STRATEGY

SERS invests in cash equivalents for the purpose of earning market returns on cash held for benefits and expenses and to provide short-term cash needed to fund other asset classes. Cash Equivalents are fixed income assets with maturities of less than 270 days and may include US government, asset-backed, corporate, and high-quality money market-type securities.

SERS' Statement of Investment Policy sets the Cash Equivalent target allocation as follows:

	Target	Permissible Range
Cash Equivalents	3%	1% - 5%

The performance objective for Cash Equivalents is to exceed the return as measured by the FTSE 30-day US Treasury Bill Index.

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	10-Years
Cash Equivalents	3.83	5.15	4.35	2.60	1.93
FTSE 30-day US T-Bill Index	3.68	5.08	4.35	2.61	1.84
Net Excess Return	0.15	0.07	0.00	(0.01)	0.09

The Securities Lending program is designed to be a low risk, intrinsic value focused strategy that generates additional income for the plan by temporarily lending equity and fixed income securities. All loans are collateralized with cash at 102-105% of security market value and reinvested in government money markets and repurchase agreements. Loans to approved borrowers are limited to 25% of the average monthly market value of the loan from the prior year. Fixed income security loans require a ten-basis point minimum spread at loan initiation. The program is implemented through a third-party lending agent and collateral reinvestment manager.

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Research and monitor money market funds for opportunities to earn additional yield over the portfolio benchmark.*

Due to prime money market regulation reforms in October that instituted mandatory liquidity fees for institutional investors, Staff moved all cash into a government money market fund that only invests in US government securities for stability and lower risk. Staff also explored investing directly in tri-party repurchase agreements, but did not move forward due to unattractive rates, a large on-going investment requirement and onerous legal documentation.

- *Migrate the cash portfolio to BNY's Liquidity Direct platform, which will improve the breadth of options available to invest the short-term cash going forward.*

The migration to the Liquidity Direct platform was completed in December. Staff now have access to an online portal to evaluate a wide range of competing money market fund options. In addition, with this robust research platform, Staff now has the capability to utilize tools to monitor the cash portfolio's parameters.

- *Continue to forecast and analyze expected asset class cash flows and pension payments quarterly to ensure cash flow needs can be anticipated and planned for in advance.*

Staff continue to utilize a cash flow variance report to monitor forecasted versus actual cash flows. The fiscal year-to-date monthly pension transfers have been lower than forecasted due to excess cash in the pension account.

- *Monitor the Securities Lending program for opportunities to generate incremental income and ensure it is operating within the program implementation guidelines.*

Lending income continued its downward trend over the same period last year as strong upward US equity markets have led to lower demand for shorting securities. Income was lower across US equities, non-US equities and fixed income.

PORTFOLIO STRATEGY - Cash Equivalents & Securities Lending

CURRENT MARKET CONDITIONS AND OUTLOOK

Cash continues to offer an attractive return with the US government money market fund yielding 4.30% but trended down from 5.25% in the fall when the Federal Reserve started cutting interest rates. The Fed cut interest rates three times, reducing interest rates by a total of 1%. With the implementation of the new tariff and immigration policies this spring, the Fed is now concerned about the potential for rising inflation and higher unemployment. The Fed is not expected to cut rates further unless the unemployment rate approaches 4.5%, otherwise they risk exacerbating inflation risks further.

FY2026 OBJECTIVES

Staff will focus on the following objectives in FY2026:

- Research and monitor money market funds for opportunities to earn additional yield over the portfolio benchmark.
- Continue to forecast and analyze expected asset class cash flows and pension payments quarterly to ensure cash flow needs can be anticipated and planned for in advance.
- Monitor the Securities Lending program for opportunities to generate incremental income and ensure it is operating within the program implementation guidelines.

PORTFOLIO STRATEGY – Opportunistic & Tactical

INVESTMENT STRATEGY
SERS invests in opportunistic & tactical investments for the purpose of earning returns greater than the Bloomberg US Aggregate Bond Index + 2% for investments that do not fit within the existing asset classes. The investments are defined as tactical or non-traditional investment opportunities. Such investments may involve capitalizing on short-term market dislocations or other unique situations or innovative strategies including tactical allocation.

SERS' Statement of Investment Policy sets the Opportunistic & Tactical investments target allocation as follows:

	Target	Permissible Range
Opportunistic & Tactical	0%	0% - 5%

The performance objective for the Opportunistic & Tactical portfolio is to provide net of fee returns of 100 basis points above the Bloomberg US Aggregate Bond Index + 2%.

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	10-Years
Opportunistic & Tactical	9.59	10.83	5.69	8.70	6.95
Policy Benchmark	6.26	6.88	2.52	2.67	3.58
Net Excess Return	3.33	3.95	3.17	6.03	3.37

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION
The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Search for possible Opportunistic & Tactical investments for the Fund that are expected to exceed the portfolio benchmark. This will be accomplished through the evaluation of markets, strategies and specific funds that offer compelling risk adjusted returns. Specific investments under consideration include strategies that provide diversification, downside protection, and exposure to themes not suitable for other asset classes. Investments that pass initial screening will undergo detailed due diligence prior to Staff recommendation.*

Staff added two new investments totaling $119 million to the portfolio during the fiscal year. Staff made an investment in a fund that makes private subordinated debt and equity investments in European companies, as well as a fund that focuses on stressed trading and distressed-for-control investments, with an emphasis on companies based in the United States and Europe. Staff also made additional investments of $10 million each in an existing long/short equity strategy focused on the energy sector as well as an existing gold ETF. Staff continue to review potential investment opportunities that could be a fit for the portfolio and provide diversification benefits for the Total Fund.

- *Actively manage the Opportunistic & Tactical allocation to improve portfolio structure and returns without increasing risk.*

Staff continue to closely monitor and manage the liquid portion of the portfolio. The portfolio is comprised of five funds that offer liquidity on a regular basis. These liquid funds represent approximately 38% of the Opportunistic allocation.

PORTFOLIO COMPOSITION
The investments in the portfolio are grouped into four strategies and the allocations are as follows:

	Allocations as of March 31, 2025
Distressed	32%
Diversified & Tactical	30%
Multi Asset Strategy	9%
Structured Credit	29%

CURRENT MARKET CONDITIONS AND OUTLOOK
The Opportunistic & Tactical portfolio consists of funds that seek to take advantage of market dislocations, or which do not fit within the risk and return objectives of other asset classes. The return objective of the portfolio is to outperform the Bloomberg US Aggregate Bond Index + 2%. The portfolio is positioned to take advantage of an environment consisting of high interest rates, high inflation, and a slowing economy. Current strategies include investments that provide inflation protection as well as investments that are uncorrelated to public equities and fixed income, such as distressed assets, structured credit, and long/short commodity and equity funds.

PORTFOLIO STRATEGY – Opportunistic & Tactical

FY2026 OBJECTIVES
Staff will focus on the following objectives in FY2026:

- Evaluate new investments that are expected to exceed the policy benchmark and provide diversification benefits for the Total Fund. This will be accomplished through the evaluation of markets, strategies and specific funds that offer compelling risk adjusted returns. Staff will focus on investment strategies that provide diversification, downside protection, and exposure to themes not suitable for other asset classes.
- Actively manage the Opportunistic & Tactical portfolio to improve risk-adjusted returns and diversification for the Total Fund, while considering the liquidity profile of the portfolio.
- Review the current portfolio composition and recommend changes to the four strategies if necessary.

PORTFOLIO STRATEGY – Overlay Program

INVESTMENT STRATEGY
SERS invests in overlay strategies that trade derivatives of the Total Fund's underlying assets and currency exchange rates to enhance the Total Fund portfolio efficiency. The overlay program includes tactical asset allocation and active currency strategies.

The tactical asset allocation strategy aims to add value to the Total Fund performance through active allocations (long/short) across stocks and bonds thereby exploiting short-term macro market dislocations. The active currency strategies aim to add value and risk diversification to the Total Fund, as well as help manage currency risk by utilizing short-term inefficiency in the foreign exchange markets and low correlation of the strategies to the major asset classes such as US equity and fixed income.

The program is fully tactical; exposures to any overlay strategies in this program are not required by the Statement of Investment Policy.

The overlay program is targeted to add 10 to 20 bps to Total Fund performance on a three-to five-year horizon. The tracking error of the tactical rebalancing strategy and the active currency program are expected to be in the range of 5 to 15 basis points and 5 to 8%, respectively.

Cumulative FYTD & Annualized Returns (in percent) for Periods Ending March 31, 2025					
	FYTD	1-Year	3-Years	5-Years	10-Years
Overlay Program	(0.05)	(0.19)	(0.10)	0.12	0.00

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION
The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Actively monitor the Tactical Asset Allocation Strategy to enhance the impacts of the strategy on the Total Fund performance.*

The strategy continued to hold a market-neutral short US equity, long US Treasury trade as of March 31. The manager actively reduced the size of the position in Q4 2024 around the US election and in Q1 as equity markets sold off. At the end of March, the short equity position size was 2.2%. The strategy has contributed -0.06% to fiscal year-to-date performance and -0.03% annualized since program inception through March 31.

- *Actively monitor the Active Currency Strategy to improve the program's risk and return characteristics.*

The strategy continues to actively manage developed and emerging market currencies relative to the USD. After strong performance in the first half of the fiscal year, Staff added $50 million to the notional value in Q1 2025. As of March 31, the strategy has contributed 0.01% fiscal year-to-date and 0.04% annualized since program inception.

FY2026 OBJECTIVES
Staff will focus on the following objectives in FY2026:

- Actively monitor the Tactical Asset Allocation Strategy to enhance the impacts of the strategy on the Total Fund performance.

- Actively monitor the Active Currency Strategy to improve the program's risk and return characteristics.

PORTFOLIO STRATEGY - Investment Risk Management & Analytics

Investment Risk Management and Analytics is responsible for the provision and communication of diligent, thorough, timely and forward-looking investment risk analytics and other investment analytics to the Board and Investment Staff.

Total Fund forecast risk decreased from 10.8% in March 2024 to 9.9% in March 2025, primarily due to reduced allocation to public equity markets and the impact of the overlay programs. Total Fund realized risk for the 3-year period ending March 2025 was 7.2%. However, the Total Fund's total risk is expected to rise due to heightened tariff and economic uncertainty.

Forecast risk is a forward-looking risk estimate based on the Fund's holdings at a point of time, while realized risk measures the volatility of actual monthly returns over a period of time. The former corrects for the smoothing effect of infrequent valuation of private investments that is inherent in the latter. Hence, forecast risk tends to be higher than realized risk for a fund that includes private investments. Forecast risk more accurately reflects the risk-return profile of an investment and is preferable for informing allocation decisions.

The composition of Total Fund forecast risk changed somewhat over the year, with Global Equities contributing 249 bps less risk, Private Equity and Infrastructure contributing 110 bps and 129 bps more risk, respectively, and the Overlay program reducing risk by 172 bps less as of March 2025 compared to March 2024. These changes are mostly due to a 2.0% reduction in Global Equities' allocation, a 0.8% increase in Global Infrastructure's allocation, and a 1.2% reduction in the notional exposure of the Asset Allocation Overlay. As of March 2025, 73.2% of the Total Fund's risk was attributable to equity factors, while real estate, fixed income, currency, private equity, and other factors accounted for the remaining 26.8%. The Total Fund's active risk stayed under the 3% limit stipulated in the Statement of Investment Policy as 3-year realized active risk was 1.58% and forecast active risk was 1.22% as of March 2025.

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION

The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Provide risk forecasts and analyses of the Total Fund and asset class portfolios.*

Staff utilized the Barra risk system to generate risk analyses of the Total Fund and asset class portfolios. These analyses, based on SERS' investment holdings, provide forecasted volatility of returns, decomposition of total and active risk by asset class, strategy and factor, and forecasted return correlation between asset class portfolios.

- *Report risk of the Total Fund to the Board on a quarterly basis.*

Staff provided quarterly risk reports on the Total Fund to the Board showing forecast total risk and active contribution by asset class as well as by factor risks across the portfolio. The total risk decomposition by asset class focused on their role in the Total Fund. Total risk decomposition by factors focused on cross factor exposures, especially equity factors among the asset class portfolios as equity factors are the main risk drivers of the Total Fund. Active risk decomposition showed risk contribution from investment implementation, which is comprised of active allocation among the asset classes and active selection of strategies and securities. Staff presented the Q4 2024 Total Fund risk report to the Board at the March 2025 Board meeting.

- *Communicate asset class portfolios' risk with asset class investment officer(s) and discuss any potential changes of the portfolio structure on a quarterly basis.*

Staff discussed the risk profile of asset class portfolios with each asset class team on a quarterly basis. These discussions were focused on i) trend and level of forecast risks, ii) the portfolio's risk structure in terms of manager line-up and factor tilts, and iii) the portfolio's sensitivity to market movements. The discussions assisted each asset class team in monitoring their portfolio's structure and risks and uncovering unintended risk tilts to be mitigated.

- *Provide return attribution analyses of the Total Fund and asset classes of the Fund to the Investment Strategy Team.*

Staff reported monthly return attribution analyses of the Total Fund, analyzing effects of active weights and active performance of each asset class on the Total Fund's alpha generation. The analyses were presented to the Investment Strategy Team. Staff also delivered to the Investment Strategy Team attribution reports of each asset class portfolio analyzing the contribution of each account within an asset class.

- *Continue to develop expertise in investment risk analytics and understanding of all asset classes.*

Staff improved the processes for migrating holdings data into the Barra risk system and improved the modelling specifications of certain holdings and commingled funds, resulting in more accurate and actionable outputs from the system. Staff implemented incremental improvements to monthly performance attribution, quarterly manager monitoring and quarterly asset-class risk reports, making them more interpretable and actionable. Staff discussed planned changes to portfolio structure with individual officers to understand and provide feedback on the likely risk impact of such changes.

- *Perform other portfolio and market analyses and research as needed.*

Staff conducted a targeted search for a new investment manager data and analytics provider that resulted in the hiring of eVestment. Staff conducted analyses of Total Fund liquidity and counterparty risk. Staff also conducted portfolio, market and economic analyses on an ad-hoc basis.

FY2026 OBJECTIVES

Staff will focus on the following objectives in FY2026:

- Provide risk forecasts and analyses of the Total Fund and asset class portfolios.
- Report risk of the Total Fund to the Board on a quarterly basis.
- Communicate asset class portfolios’ risk with asset class investment officer(s) and discuss any potential changes of the portfolio structure on a quarterly basis.
- Provide return attribution analyses of the Total Fund and asset classes of the Fund to the Investment Strategy Team.
- Execute a smooth transition to eVestment as investment manager data and analytics provider.
- Perform other portfolio and market analyses and research as needed.

Investment Operations

The Investment Operations area is responsible for managing administrative activities for the Investment department, assisting the CIO and investment officers, and providing reports and information to Staff and the Board. The objectives for FY2026 remain consistent with those of FY2025 as these broad categories reflect the primary duties of Investment Operations.

REVIEW OF FY2025 OBJECTIVES AND IMPLEMENTATION
The FY2025 Annual Investment Plan objectives and related activities are as follows:

- *Hire and train a new Administrative Assistant to fill a vacancy created by the retirement of the Investment Operations Manager and promotion of the Sr. Administrative Assistant.*

An Administrative Assistant was hired in December 2024 and has been training with the Operations Supervisor.

- *Coordinate, assist, and participate in organizational initiatives including annual Policy review; Information Governance project; fiscal budget; Subject Matter Experts (SMEs); and Emergency Response Program (ERP).*

Investment Operations assisted with the annual review and revisions to the Investment Department Policies and participated in the system-wide Information Governance Project to create an annual checklist for the department to ensure staff are compliant with SERS' Information Governance Policy and current Records Retention schedule. Staff prepared and analyzed the fiscal budget for executive approval as well as participated in and provided feedback in relation to SME Communications and ERP activities.

- *Perform administrative duties and attend meetings for the Investment Committee, Strategy Team and Board meetings including establishing meeting dates and agendas, organizing, and distributing documents to team members, producing reports, and taking minutes.*

Operations attended all Investment Committee, Strategy Team, and Board meetings. Agendas and documents were prepared and distributed, minutes taken and distributed in a timely manner. Staff assisted with processing documents associated with hiring, termination, and redemption of managers.

- *Assist with projects for the CIO and Investment officers including revising the Annual Investment Plan, updating the Statement of Investment Policy as needed, searches for Investment managers, and aiding with special projects for Staff.*

Operations coordinated revisions and produced the FY2025 Annual Investment Plan, the amended Statement of Investment Policy, and assisted with manager searches throughout the fiscal year.

FY2026 OBJECTIVES
Staff will focus on the following objectives in FY2026:

- Coordinate, assist, and participate in organizational initiatives including annual Policy review; Information Governance project; fiscal budget; Subject Matter Experts (SMEs); and Emergency Response Program (ERP).

- Perform administrative duties and attend meetings for the Investment Committee, Strategy Team and Board meetings including establishing meeting dates and agendas, organizing, and distributing documents to team members, producing reports, and taking minutes.

- Assist with projects for the CIO and Investment officers including revising the Annual Investment Plan, updating the Statement of Investment Policy as needed, searches for Investment managers, and aid with special projects for Staff.

Implementation Guidelines

IMPLEMENTATION GUIDELINES - Global Equities

I. ROLE

The role of Global Equities is to earn the equity risk premium over US Treasury bonds by investing in common stock of publicly listed companies.

II. ASSET ALLOCATION

	Total Fund Target	Range	
		Minimum	Maximum
Global Equities	40%	35%	45%

Global Equities is divided into two portfolios as follows:

Global Equities – Global Composite: Managers invest in securities from across all regional markets of the world including US, Non-US Developed Markets and Emerging Markets. This composite is benchmarked to the MSCI All Country World Net Total Return Index (MSCI ACWI).

Global Equities – Regional Composite: Managers invest in securities of assigned regional markets only. Staff manages the regional market allocation versus the MSCI ACWI. This composite is benchmarked to the MSCI ACWI. Typical benchmarks utilized within the regional market mandates are:

- US Equity: Russell 3000 Index
- Non-US Equity Developed Market: MSCI World ex-USA Net Total Return Index (USD)
- Non-US Equity Emerging Market: MSCI Emerging Markets Net Total Return Index (USD)

III. BENCHMARK:

The Global Equities benchmark is the MSCI All Country World Net Total Return Index (USD).

IV. PERFORMANCE OBJECTIVE

The annualized return objective, net of management fees, for the Global Equities portfolio is 40 basis points over the MSCI ACWI.

V. PORTFOLIO DESIGN AND CONSTRUCTION:

The *Global Composite* portfolio is constructed with global mandates which select securities from across the world, making discretionary decisions between US, Non-US Developed Markets and Emerging Markets. This is a 100% active portfolio. Portfolio design will consider risk/return characteristics, manager count and investment management fees.

The *Regional Composite* portfolio is constructed using a multi-manager line-up of US, Non-US Developed and Emerging Market mandates and a combination of active and passive strategies to deliver risk-adjusted performance relative to respective benchmarks. Portfolio design will consider risk/return characteristics, manager count and investment management fees.

The Global Equities portfolio may employ economic leverage via portable alpha overlay and equity extension strategies. The leverage employed will be within the allowed Total Fund leverage parameters and portfolio tracking error will be maintained within stated ranges in Section VII. Risk Management.

PERMISSIBLE INVESTMENTS

Security Type	US Equity Portfolio	Global & Non-US Equity Portfolios
Common Stock	Y	Y
Stock Treated as Common Stock	Y	Y
Cash / Treasuries	Y	Y
Preferred Stock	Y	Y
Convertible Rights	Y	Y
Warrants	Y	Y
Depository Receipts	Y	Y
REITS	Y	Y
Rule 144a Issues	Y	Y
Private Placement	Y	Y
IPOs	Y	Y
Commingled Funds	Y	Y
Exchange Traded Funds	Y	Y
Derivatives	Y	Y
Currency	N	Y
Country Funds	N	Y

VI. RISK MANAGEMENT

	Active Risk Target
Global Equity – Global Composite	Tracking Error of 3.0% with a range of 3.0% to 7.0%
Global Equity – Regional Composite	Tracking Error of 1.5% within a range of 0.50% to 2.5%

Below are the guidelines for the *Global Equity – Regional Composite* Portfolio:

US Equity Implementation Guidelines			
	Investment Benchmark	**Global Equity Target Allocation**	**Permissible Range**
US Equity Allocation	Russell 3000 Index	MSCI ACWI US Allocation	+/- 10%
Portfolio Structure			
Capitalization			
Large Cap Equity	Russell 1000 Index	Neutral to BM	+/- 5%
Large Cap Active	Manager Specific	-	0% - 30%
Large Cap Passive	Russell 1000 Index	-	65% - 100%
Small Cap Equity	Russell 2000 Index	Neutral to BM	+/- 5%
Small Cap Active	Manager Specific	100% Active	N/A
Style			
Growth	Manager Specific	Neutral to BM	+/- 5%
Value	Manager Specific	Neutral to BM	+/- 5%

Factors such as currency, sector and country limits are manager specific and outlined in each manager's Investment Guidelines. Aggregate portfolio characteristics such as P/E, B/P, yield, size, etc., shall be within a reasonable range of the US equity benchmark.

IMPLEMENTATION GUIDELINES - Global Equities

Non-US Equity Implementation Guidelines			
	Investment Benchmark	**Global Equity Target Allocation**	**Permissible Range**
Non-US Equity Developed Markets	MSCI World ex-USA Net Total Return Index (USD)	MSCI ACWI Non-US Developed Market Allocation	+/- 7%
Non-US Equity Emerging Markets	MSCI Emerging Markets Net Total Return Index (USD)	MSCI ACWI Emerging Market Allocation	+/- 7%
Broad Market Exposure			
Developed Markets Active	Manager Specific	--	75-100%
Developed Markets Passive	MSCI World ex US Index ($net)	--	0-25%
Emerging Markets Active	Manager Specific	100% Active	N/A
Portfolio Structure			
Capitalization			
Large Cap Equity	Manager Specific	BM Weight	+/- 10%
Small to Mid-Cap Equity	Manager Specific	BM Weight	+/- 10%
Small Cap Equity	Manager Specific	BM Weight	+/- 10%
Micro Cap Equity	Manager Specific	BM Weight	+/- 5%
Style			
Growth	Manager Specific	Neutral to BM	+/- 10%
Value	Manager Specific	Neutral to BM	+/- 10%

Factors such as currency, sector and country limits are manager specific and outlined in each manager's Investment Guidelines. Aggregate portfolio characteristics such as P/E, B/P, yield, size, etc., shall be within a reasonable range of the Non-US developed and emerging market equity benchmarks.

IMPLEMENTATION GUIDELINES – Global Private Equity

I. ROLE

SERS invests in Private Equity to provide returns in excess of those provided by publicly-traded equities to compensate for private equity's liquidity and concentration risk.

II. ASSET ALLOCATION

The Private Equity target asset allocation is established with periodic asset allocation studies. The most recent asset allocation study authorized a 14% allocation target to Private Equity with a range of 11%-17%.

III. BENCHMARK

Private Equity performance is benchmarked to the MSCI-Burgiss Global Private Equity Funds Index, one quarter in arrears.

IV. PERFORMANCE OBJECTIVE

The performance objective for Private Equity is to provide net returns in excess of the MSCI-Burgiss Global Private Equity Funds Index by 150 basis points. Over time periods of five years and longer Private Equity net returns are expected to exceed SERS Global Equity portfolio by 2%.

V. PORTFOLIO DESIGN AND CONSTRUCTION

Capital allocation among the various market segments is a critical driver for the long- term success of the Private Equity portfolio. Capital allocation risk is controlled in a portfolio structure incorporating long-term sub asset target allocations.

Long-term sub-asset target exposure is detailed below:

	Range	
	Minimum	**Maximum**
Buyout		
Small/Middle	50%	70%
Large/Mega	5%	25%
Total Buyout	55%	95%
Venture Capital	0%	10%
Special Situations	5%	25%
Total		
Domestic	55%	95%
International	5%	45%
Total		
Primary Commitments	75%	100%
Fund of Funds	0%	15%
Co-Investments	0%	25%
Total		

The portfolio is tilted toward buyout investments. There is no target allocation to venture capital due to higher risk and manager selection issues, however, there may be opportunistic allocations to venture capital up to 10% of the portfolio as shown in the accompanying table. Within buyouts, the preference is for small and middle market managers with a significant value creation approach and de-emphasizes larger firms with a financial engineering approach.

VI. PERMISSIBLE INVESTMENTS

Investment Structure	
Limited Partnership Interests	Y
Discretionary Managers investing in Private Equity Partnerships	Y
Co-Investments	Y
Separate Accounts	Y

Investment Type	
Buyouts	Y
Venture Capital	Y
Special Situations (secondary interests, distressed debt or equity, mezzanine, co-investments, energy, etc.)	Y

Buyout
Net Expected Return 10-15%, Moderate Risk
Capital is typically invested in more established companies, those further along the business life cycle having relatively predictable cash flows and the ability to raise capital along the entire capital structure, including secured and unsecured debt. Buyouts are targeted to represent 75% of the Private Equity portfolio.

Venture Capital
Net Expected Return: 15-25%, High Risk
Venture capital equity is targeted at companies in the earliest phases of a business life cycle. Companies may be classified as seed, early, middle and late stage and are characterized by their inability to access public equity and other forms of capital such as secured and unsecured debt. These companies have uncertain revenues and a need for cash to build their businesses and are subject to high failure rates. Venture capital is targeted to represent 0% of the portfolio.

Special Situations
Net Expected Return: 10-20%, Moderate Risk
Many private equity opportunities have characteristics of buyout or venture capital but have enough differences as to require separate classification. These investments include energy, distressed debt, mezzanine, opportunity, and secondary funds. Special situations is targeted to represent 25% of the portfolio.

Co-Investments
Net Expected Return: 15-20%, Moderate Risk
Co-Investments are direct investments in a single asset of a multi-asset fund, made alongside the Fund's investment in the asset. Typically, co-investments are offered on more attractive economic terms and shorter time frames than those of the Fund. Co-Investments are targeted to represent up to 10% of the portfolio.

VII. RISK MANAGEMENT

The primary risk management tool in private equity is industry diversification as well as extensive due diligence of prospective investments. Monitoring is managed through a combination of quantitative and qualitative constraints. The following sections identify the most significant risks with private equity investments and the method of control.

Liquidity Risk
Private equity investments are illiquid and typically have expected holding periods of 10-12 years. Investments are typically held until maturity and selling prior to maturity typically results in a discount to fair market value. Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding maximum exposure limits or lowering asset allocation exposure limits.

Geographic Risk
Geographic risk is controlled through a long-term international target exposure of 25% by market value.

Vintage Risk
Vintage reflects the year of first capital draw and vintage risk refers to the variability of private equity commitments over time. The investment-pacing model controls the short and long-term private equity commitment amounts and attempts to minimize vintage risk while achieving targeted exposure. Commitments will be dependent on the availability of investments that meet SERS' investment criteria and will not be driven by the target investment pace in any given year.

Manager Risk
Manager risk consists of two elements, managing the exposure within a partnership and controlling the number of general partners in our private equity portfolio. Partnership exposure is controlled by limiting the commitment size within a partnership and the maximum commitment to a partnership will be 25% of a fund's size. The 25% limit does not apply to funds committed to a discretionary manager or a separate account. The maximum market value exposure to a single manager is targeted to be less than 20% of the portfolio. The optimum number of general partners in the portfolio varies with time.

Firm Risk
Firm risk is the exposure to a private equity general partner and is controlled by limiting the maximum commitment to funds operated by a general partner and its affiliates.

Currency Risk
The Private Equity program accepts the currency risks consistent with the geographic constraints. Private equity partnerships generally do not hedge currency risk, and the private equity program will not implement currency hedges.

Industry Risk
Typically, private equity partnerships are permitted to invest in a wide variety of industries. Industry risk is controlled primarily through appropriate diversification across classes and subclasses.

Leverage Risk
General partners invest capital from private equity partnerships throughout the capital structure of firms. The capital markets control the maximum leverage available to the general partners and limited partners control leverage exposure through partnership selection and portfolio construction.

IMPLEMENTATION GUIDELINES – Global Fixed Income

I. ROLE

The primary role of diversified fixed income is to reduce the overall risk of the investment plan. Fixed income securities should provide stable income returns through yield-oriented assets. Fixed income provides risk reduction through lower correlations to the investment program.

II. ASSET ALLOCATION

The Global Fixed Income allocation is established with periodic asset allocation studies. The most recent asset allocation study authorized an 18% market value exposure to Global Fixed Income with a range of 13%-23%.

III. BENCHMARK

Global Fixed Income performance is benchmarked to the Bloomberg US Universal Bond Index.

IV. PERFORMANCE OBJECTIVE

The annualized return objective for the Global Fixed Income portfolio is 60 basis points net of fees above the benchmark and is comprised of the following strategies:

Strategy	Expected Excess Return	Tracking Error	Benchmark
Core	20 basis points	N/A	Bloomberg US Aggregate Bond Index
Core Plus	60 basis points	N/A	Bloomberg US Universal Bond Index
Tactical & Diversifying	200 basis points	N/A	Bloomberg US Universal Bond Index
Total Portfolio	60 basis points	0 – 4%	Bloomberg US Universal Bond Index

V. PORTFOLIO DESIGN AND CONSTRUCTION

SERS seeks to obtain broad fixed income market exposure to gain diversification while receiving income. The portfolio is 100% externally managed in active strategies, in broad mandates of core, core plus, and Tactical & Diversifying strategies. Core mandates invest primarily in the sectors covered in the Bloomberg US Aggregate Index, which does not include allocations to high yield, Non-US or emerging market debt. Core sector weightings can deviate from this index, depending on the external manager's market views and strategies. Core plus mandates allow investments in all sectors of the portfolio benchmark. The Tactical & Diversifying sector invests in return seeking or diversification, enhancing strategies and can provide high excess returns. The strategy invests in all sectors of the index as well as emerging market macro, and long/short credit.

The portfolio may employ economic leverage to obtain benchmark or sector exposure to enhance the excess return of the portfolio. The leverage employed will be within the parameters of the Total Fund leverage policy and portfolio tracking error will be maintained within the range stated in Section IV.

Below are the current sector exposure limits:

Strategy	Range	
	Minimum	Maximum
Core	30%	70%
Core Plus	25%	50%
Tactical & Diversifying	0%	20%

VI. PERMISSIBLE INVESTMENTS

Security Type	Core	Core Plus	Tactical & Diversifying
Governments			
US Treasuries, TIPS and Agencies	Y	Y	Y
Sovereigns/Quasi-Sov. In US $	Y	Y	Y
Sovereigns/Quasi-Sov. In local currency	N	Y	Y
Corporates			
US Corporates	Y	Y	Y
Non-US Corporates in US $	Y	Y	Y
Non-US Corporates in local currency	N	Y	Y
High Yield	N	Y	Y
Bank Loans	N	Y	Y
Structured Credit			
Mortgages	Y	Y	Y
Asset Backed	Y	Y	Y
Collateralized Loan Obligations	N	Y	Y
Other			
144 (A)s	Y	Y	Y
Commingled Funds	Y	Y	Y
Convertibles	N	Y	Y
Currency	N	Y	Y
Derivatives	Y	Y	Y
Equity	N	Y	Y
Exchange Traded Funds	Y	Y	Y
Money Markets	Y	Y	Y
Municipals	Y	Y	Y
Repurchase Agreements	Y	Y	Y

VII. RISK MANAGEMENT

For strategies held in separate accounts, the following risk factors are controlled through limits specified in each manager's Investment Manager Agreement (IMA) and Investment Guidelines. Duration, sector, and credit risk are reviewed on a total portfolio basis quarterly by SERS:

Interest Rate
Controlled by duration band limits around the benchmark duration.

Yield Curve Risk
Controlled by duration band limits around the benchmark duration.

Sector Risk
Moderate risk sectors like high yield, non-US, non-agency mortgages and CMBS are controlled around set limits with each individual manager. Portfolios are allowed 25% maximum exposure to any one industry.

Credit Risk
Portfolios must maintain a minimum exposure to investment grade securities. In addition, each manager of individual portfolios has an established average-weighted credit quality that must be maintained at all times.

IMPLEMENTATION GUIDELINES – Global Fixed Income

Currency Risk
Currency is not hedged at the overall portfolio level. Managers who demonstrate skill are allowed to purchase non-US securities on a hedged or unhedged basis or take direct currency positions without owning securities.

Issuer Risk
Issuer limits are specified in each IMA investment guidelines.

Liquidity Risk
Accounts have a maximum 144(A) limit without registration rights.

Active Risk
Normal tracking error is expected to be 1-3% over any rolling three-year time horizon. During periods of increased volatility, tracking error should not exceed 4% over any rolling three-year time horizon.

IMPLEMENTATION GUIDELINES – Global Private Credit

I. ROLE

The role of SERS' Private Credit portfolio is to provide risk adjusted returns in excess of those provided by publicly traded fixed income securities and to generate a consistent cash yield.

II. ASSET ALLOCATION

SERS' Statement of Investment Policy sets the private credit target allocation at 5%, with a range of 3% to 7%.

III. BENCHMARK

The private credit benchmark is the 90-day SOFR rate + 4.5%, one quarter in arrears.

IV. PERFORMANCE OBJECTIVE

The performance objective of the Private Credit portfolio is to provide net returns of 100 basis points above the policy benchmark and to outperform the SERS Global Fixed Income portfolio over time periods five years and longer, with the income component of the return comprising a significant portion of the total return.

V. PORTFOLIO DESIGN AND CONSTRUCTION

The Private Credit portfolio is designed to gain exposure to various aspects of the private credit market with a focus on consistent income generation. It is expected that a greater portion of the Private Credit portfolio will be allocated to strategies with higher expected cash yields.

The strategies that are in focus and allocation ranges are detailed in the table below. Staff will primarily focus on adding to the Asset Lending strategy during the fiscal year, meanwhile, seeking to maintain exposures to the other strategies:

	Current	Range	
	Allocation*	**Minimum**	**Maximum**
Direct Lending	59%	50%	90%
Opportunistic Lending	32%	10%	50%
Asset Lending	2%	0%	15%
Distressed Lending	7%	0%	15%
Total	100%		
Domestic	61%	40%	85%
International	39%	15%	60%
Total	100%		
Primary Commitments	100%	80%	100%
Secondaries	0%	0%	10%
Co-Investments	0%	0%	10%
Total	100%		

*As of March 31, 2025.

VI. PERMISSIBLE INVESTMENTS

Investment Structure	
Limited Partnership Interests	Y
Co-Investments	Y
Separate Accounts	Y

Investment Type	
Direct Lending	Y
Opportunistic Lending	Y
Asset Lending	Y
Distressed Lending	Y

Direct Lending
Net Expected Return: 8-12%, Moderate Risk
Direct Lending includes loans made directly to small to medium size companies; secured by assets/cash flows/contracts, etc. depending on the type of loan. Direct Lending has a target range of 50 – 90% of the Global Private Credit portfolio.

Opportunistic Lending
Net Expected Return: 10-18%, High Risk
Opportunistic Lending includes loans to companies that are typically unable to access traditional sources of capital or that may be in a transitional period. Opportunistic Lending strategies will allocate across the entire capital structure, including senior debt, junior debt, preferred equity, common equity, and equity-like securities. These strategies tend to focus on a mix of capital appreciation and income generation for investors. Opportunistic Lending has a target range of 10 – 50% of the Global Private Credit portfolio.

Asset Lending
Net Expected Return: 10-15%, Moderate Risk
Asset Lending includes loans collateralized by financial and hard assets, as well as cash flows generated from differentiated sources other than traditional corporate lending backed by cash flows. These types of investments are typically shorter in duration and may include auto loans, real estate loans, consumer loans, litigation finance, leasing, royalties, portfolio finance, and various other types. Asset Lending has a target range of 0 – 15% of the Global Private Credit portfolio.

Distressed Lending
Net Expected Return: 12-25%, High Risk
Distressed Lending includes loans made to companies that are financially stressed and/or are likely to go through restructuring/bankruptcy. These investments typically have longer holding periods and the lender sometimes seeks to take control of the company. Distressed Lending has a target range of 0 – 15% of the Global Private Credit portfolio.

VII. RISK MANAGEMENT

The primary risk management tool in private credit is extensive due diligence of prospective investments and diversification. The following sections identify the most significant risks of private credit investments and the method of control.

Credit Risk
Credit risk is the primary risk associated with the asset class. Thorough due diligence of investments will be completed to ensure the general partners have sufficient measures in place to monitor and assess the risks involved with underlying investments, as well as the capabilities to structure loans with adequate covenants to protect the lender.

Interest Rate Risk
Interest rate risk is inherent within the Private Credit portfolio since investments are typically structured as floating rate credit instruments and interest rates will fluctuate over time. The risk is managed by the general partners through the structuring process to ensure appropriate interest rate floors and other measures are in place to manage an acceptable level of interest income.

Liquidity Risk
Private credit investments are illiquid but have shorter holding periods than other private security types, with 3 – 5 years being a typical holding period. Investments are typically held until maturity and selling prior to maturity typically results in a discount to fair market value. Liquidity risk is managed through the portfolio construction process by limiting the amount of exposure to more illiquid areas of private credit, such as distressed debt.

Geographic Risk
International exposure refers to non-US investments and is limited to 60% of the portfolio.

Vintage Risk
Vintage reflects the year of first capital draw and vintage risk refers to the variability of private credit commitments over time. The investment-pacing model controls the short and long-term private credit commitment amounts and attempts to minimize vintage risk while achieving targeted exposure. Commitments will be dependent on the availability of investments that meet SERS' investment criteria and will not be driven by the target investment pace in any given year.

Manager Risk
Manager risk consists of two elements, managing the exposure within a partnership and controlling the number of general partners in the Global Private Credit portfolio. Partnership exposure is controlled by limiting the commitment size to 25% of the aggregate commitments to the partnership or master fund if more than one feeder vehicle exists. The 25% limit does not apply to funds committed to a discretionary manager or a separate account. The maximum market value exposure to a single manager is targeted to be less than 35% of the portfolio. The optimum number of general partners in the portfolio varies with time.

Firm Risk
Firm risk is the exposure to a private credit general partner and is controlled by limiting the maximum commitment to funds operated by a general partner and its affiliates.

Currency Risk
The Private Credit program does not hedge currency risk and relies upon its external managers to determine if such hedges are appropriate. Currency risk will be managed through geographic exposure limits, as shown above under geographic risks.

Industry/Sector Risk
Typically, private credit partnerships are permitted to invest in a wide variety of industries and sectors. Industry/Sector risk is controlled primarily through appropriate diversification across classes and subclasses.

Leverage Risk
The capital markets control the maximum leverage available to the general partners and limited partners control leverage exposure through partnership selection and portfolio construction. Leverage at an individual fund level is managed through the portfolio construction process.

Valuation Risk
The valuation frequency for private credit is dependent upon the external managers' internal and external valuation policies, which are reviewed during the operational due diligence process.

IMPLEMENTATION GUIDELINES – Global Real Assets

I. ROLE

The role of SERS' Global Real Estate portfolio is to provide a stable income return from real estate assets, to be a partial inflation hedge over the long term and to provide low correlation to equities.

II. ASSET ALLOCATION

SERS' Statement of Investment Policy sets the global real estate target allocation at 13%, with a permissible range of 10-15%.

III. BENCHMARK

The global real estate benchmark is the Expanded NCREIF Property Index (ENPI), one quarter in arrears.

IV. PERFORMANCE OBJECTIVE

The performance objective for Global Real Estate is to produce net of fee returns that are 100 bps in excess of the benchmark over a market cycle, with the income component of the return comprising a significant portion of the total return.

V. PORTFOLIO DESIGN AND CONSTRUCTION

SERS' Global Real Estate Implementation Guidelines set the private market, public market and asset type exposures for Global Real Estate, as shown in the table below. Farmland is included in Real Estate.

Strategy	Target	Range	
		Minimum	Maximum
Total Real Estate*	**13%**	**10%**	**15%**
Private Core Real Estate	*85%*	*70%*	*95%*
Private Non-Core Real Estate	*10%*	*0%*	*20%*
Listed REITs / ETFs	*3%*	*0%*	*10%*
Farmland	*2%*	*0%*	*5%*

**The rows below Total Real Estate are meant to represent % of the Total.*
Example: Private Core Real Estate Target of 85% would represent 85% of the Total Real Estate target of 13%.

Core real estate investments include substantially leased or fully operational institutional quality properties or projects located in developed markets. The revenue streams from core real estate are generally long duration and comprise a majority of the asset's total return. Core real estate strategies are typically implemented through open-end commingled funds.

Non-core real estate investments include value-added and opportunistic strategies in which properties or projects are re-leased, re-developed, or newly constructed, particularly in developing or transitional markets. This strategy has a higher return expectation but has higher reliance on capital appreciation (vs income return). Non-core real estate strategies are typically implemented through closed-end commingled funds.

Public market real estate are securities of companies whose primary source of revenue comes from the operation of listed real estate (REITs).While more liquid in nature, public market real estate exhibits greater volatility than privately held ones.

Private Farmland investments include annual row and permanent crops located throughout the United States. Core farmland will be substantially leased on long-term contracts to top quality growers. Core farmland provides a strong income stream that will comprise the majority of the total return. Core farmland strategies are typically implemented through open-end funds.

Over time, Staff intends to judiciously increase exposure to co-investments in real estate through underwriting of individual assets as well via programmatic sidecar vehicles.

VI. PERMISSIBLE INVESTMENTS

The underlying investments included in the Global Real Estate portfolio generally are tangible assets, have long term investment horizons or holding periods, produce attractive income returns and cash yields and provide a partial inflation hedge over the long term. Permissible investment structures and types are as follows.

Investment Structure and Type	
Limited Partnership Interests	Y
Co-Investments (including sidecars)	Y
Separate Accounts	Y
Commingled Funds	Y
Continuation Funds	Y
Secondaries Vehicles	Y
Secondary Transaction of Real Estate Funds	Y
Joint Ventures	Y
Real Estate Operating Companies (REOCs)	Y
Private Real Estate Equity and Debt	Y
Real Estate Investment Trusts (REITs)	Y
Exchange Traded Funds	Y
Farmland and Agriculture	Y

VII. RISK MANAGEMENT

Qualitative constraints and quantitative measures are used to manage risk in the Global Real Estate portfolio. The following sections identify the most significant risks with real estate investments and the method of control.

Real Estate Life Cycle Risk
Life cycle risk refers to the stage of an investment's life and generally falls into two categories, operating and non-operating investments. Operating investments are those that are leased or functioning at a level in which the contractual cash payments are supporting operations. Non-operating investments are those in pre-development, construction, conversion, or in a stage of major releasing. A significant portion of the private market real assets portfolio will be in operating investments in order to achieve Global Real Estate's role of providing income.

	Operating	Non-Operating
Target Exposure	≥85%	≤15%

Real Estate Property Type
Property type refers to the level of exposure of the major property type categories in the private market real estate portfolio relative to the Expanded NCREIF Property Index. Property type risk will be managed through portfolio design and the use of commingled funds. At least 80% of the private market real estate portfolio will be invested in the four primary property type categories including apartment, industrial, office and retail.

(as of March 31, 2025)	Expanded NCREIF Property Index ("ENPI")	Range
Hotel	**0.4%**	**0 – 5%**
Industrial	**33.4%**	**15 – 50%**
Office	**19.2%**	**5 - 30%**
Other	**1.8%**	**0 – 5%**
Residential	**28.3%**	**15% - 45%**
Retail	**13.1%**	**5 – 25%**
Self Storage	**2.5%**	**0 – 5%**
Seniors Housing	**1.3%**	**0 – 5%**
Total	**100%**	**NA**

Real Estate Geographic Risk
Geographic risk can be broken down into two segments: US regional exposure and non-US exposure. US regional exposure refers to the level of exposure in the four US regions in the private market real estate portfolio relative to the Expanded NCREIF Property Index.

(as of March 31, 2025)	Expanded NCREIF Property Index ("ENPI")	Range
West	39.3%	20% - 50%
East	29.%	20% - 45%
Midwest	7.3%	5% - 20%
South	23.9%	10% - 35%
Total	100%	

Global Real Estate Geographic Risk
Non-US exposure refers to the level of exposure of non-US investments in the total Global Real Estate portfolio. The current non-US exposure is about 1%. Non-US exposure will be limited to 10% of the private market portfolio.

Liquidity Risk
Private market real estate investments are illiquid, with both holding periods and commingled fund terms ranging from 7-10 years or longer. Liquidity risk will be managed through target allocations to private and public market real estate as well as vintage year diversification.

Leverage Risk
Private market real estate investments typically are acquired with a combination of equity capital and debt financing. The amount of leverage per asset or pool of assets depends on debt availability, property type, tenant quality, and asset life cycle. The amount of leverage and financing terms ultimately are the responsibility of SERS' external real estate managers and are governed and constrained by partnership agreements. The leverage maximum for the total private market real estate portfolio is 40% of the gross asset value of the private market real estate portfolio. Leverage risk will be managed through target allocations and portfolio design.

Currency Risk
The Global Real Estate program does not actively hedge currency risk in-house and relies upon its external managers to determine if such hedges are appropriate when manager provided hedging solutions exist. Currency risk will be managed through geographic exposure limits, as shown above under geographic risks. Because SERS' portfolio is almost entirely U.S.-based, hedging has not been a major concern.

Valuation Risk
The valuation frequency for private market real assets is dependent upon the external managers' internal and external valuation policies, which are reviewed during the operational due diligence process.

Manager Concentration Risk
A single manager utilizing core strategies shall not constitute more than 25% of the net assets of the Global Real Estate program. For non-core strategies, a single fund commitment shall not constitute more than 10% of the net assets of the Global Real Estate program and a single manager with multiple fund commitments, including co-investments, shall not constitute more than 20% of the net assets of the Global Real Estate program.

IMPLEMENTATION GUIDELINES – Global Real Assets

I. **ROLE**

The role of SERS' Global Infrastructure portfolio is to provide stable income return from tangible infrastructure assets to be a partial inflation hedge over the long term and to provide low correlation to equities.

II. **ASSET ALLOCATION**

SERS' Statement of Investment Policy sets the global infrastructure target allocation at 7%, with a permissible range of 5-10%.

III. BENCHMARK

The global infrastructure benchmark is quarterly (4 qtrs.) smoothed CPI + 1.2% (approximately CPI + 5%).

IV. PERFORMANCE OBJECTIVE

The performance objective for Global Infrastructure is to produce net of fee returns that are 100 bps in excess of the benchmark, with the income component of the return comprising a significant portion of the total return.

V. PORTFOLIO DESIGN AND CONSTRUCTION

SERS' Global Infrastructure Implementation Guidelines set the private market, public market and asset type exposures for Global Infrastructures, as shown in the table below.

Strategy	Target	Range	
		Minimum	**Maximum**
Total Infrastructure	**7%**	**5%**	**10%**
Private Core and Non-Core Infra	*90%*	*85%*	*100%*
Co-Investments; Continuation Funds	*10%*	*0%*	*15%*
Listed Infrastructure ETFs	*0%*	*0%*	*5%*

Private infrastructure typically involves the movement (and storage or housing) of goods, people, water, energy, and communication signals. The sectors include, but are not limited to, power (including renewables), energy, utilities, transportation, communication, and social infrastructure sectors. Infrastructure revenue streams are typically long duration, contractual and inflation linked. Private infrastructure is implemented through both open- and closed-end commingled funds, as well as co-investments.

Public market infrastructure are securities of companies whose primary source of revenue comes from the operation of tangible assets, including, but not limited to, listed infrastructure, natural resources, and master limited partnerships. While more liquid in nature, public market infrastructure exhibits greater volatility than privately held ones. Master limited partnerships, or MLPs, are publicly traded limited partnerships that derive most of the partnership's cash flows from infrastructure and natural resource assets. The advantage of an MLP is that it combines the tax benefits of a limited partnership with the liquidity of a publicly traded company.

Over time, Staff intends to judiciously increase exposure to co-investments in infrastructure through underwriting of individual assets as well via programmatic sidecar vehicles.

VI. PERMISSIBLE INVESTMENTS

The underlying investments included in the Global Infrastructure portfolio generally are tangible assets, have long term investment horizons or holding periods, produce attractive income returns and cash yields and provide a partial inflation hedge over the long term. Permissible investment structures and types are as follows.

Investment Structure and Type	
Limited Partnership Interests	Y
Co-Investments (including sidecars)	Y
Separate Accounts	Y
Commingled Funds	Y
Continuation Funds	Y
Secondaries Vehicles	Y
Secondary Transaction of Real Assets Funds	Y
Joint Ventures	Y
Private Infrastructure Equity and Debt	Y
Exchange Traded Funds	Y
Private Infrastructure Equity and Debt	Y
Public Infrastructure Securities and MLPs	Y
Natural Resources and Commodities	Y

VII. RISK MANAGEMENT

Qualitative constraints and quantitative measures are used to manage risk in the Global Infrastructure portfolio. The following sections identify the most significant risks with infrastructure investments and the method of control.

Infrastructure Life Cycle Risk
Life cycle risk refers to the stage of an investment's life and generally falls into two categories, operating and non-operating investments. Operating investments are those that are leased or functioning at a level where the contractual cash payments are supporting operations. Non-operating investments are those in pre-development, construction, conversion, or in a stage of major re-leasing. A significant portion of the private market infrastructure portfolio will be in operating investments in order to ensure operating income.

	Operating	Non-Operating
Target Exposure	≥85%	≤15%

Infrastructure sector risks refer to the level of exposure to the major infrastructure sectors in the private markets infrastructure portfolio. Sector risk will be managed through portfolio design and the use of commingled funds and co-investments.

(as of December 31, 2024)	Current Portfolio	Range
Communications	13%	5% - 25%
Energy	28%	15% - 35%
Renewables / Sustainability	5%	0% - 15%
Social	5%	0% - 10%
Transportation	45%	25% - 60%
Utilities	4%	0% - 15%
Total	100%	

Infrastructure Geographic Risk
Infrastructure geographic risk is broken into the regional exposure of the private market infrastructure portfolio. Geographic risks will be managed through portfolio design and the use of commingled funds and co-investments.

(as of December 31, 2024)	Current Portfolio*	Range
Asia-Pacific	8%	5% - 20%
Europe/U.K.*	35%	25% - 50%
Latin America	11%	5% - 20%
North America	44%	40% - 60%
Other	2%	0% - 5%
Total	100%	

*Approximately 1% in Eastern Europe

Global Infrastructure Geographic Risk
Non-US exposure refers to the level of exposure of non-US investments in the total Global Infrastructure portfolio. Non-US exposure will be limited to 50% of the private market portfolio.

Liquidity Risk
Private market infrastructure investments are illiquid, with both holding periods and commingled fund terms ranging from 7-10 years or longer. Liquidity risk will be managed through target allocations to private and public market infrastructure as well as vintage year diversification.

Leverage Risk
Private market infrastructure investments typically are acquired with a combination of equity capital and debt financing. The amount of leverage per asset or pool of assets depends on debt availability, property type, tenant or counterparty quality, and asset life cycle. The amount of leverage and financing terms ultimately are the responsibility of SERS' external infrastructure managers and are governed and constrained by partnership agreements. The leverage maximum for the total private market infrastructure portfolio is 50% of the gross asset value of the private market infrastructure portfolio. Leverage risk will be managed through target allocations and portfolio design.

Currency Risk
The Global Infrastructure program does not actively hedge currency risk in-house and relies upon its external managers to determine if such hedges are appropriate when manager provided hedging solutions exist. Currency risk will be managed through geographic exposure limits, as shown above under geographic risks.

Valuation Risk
The valuation frequency for private market infrastructure is dependent upon the external managers' internal and external valuation policies, which are reviewed during the operational due diligence process.

Manager Concentration Risk
A single manager utilizing core strategies shall not constitute more than 60% of the net assets of the Global Infrastructure program. For non-core strategies, a single fund commitment shall not constitute more than 25% of the net assets of the Global Infrastructure program and a single manager with multiple fund commitments, including co-investments, shall not constitute more than 50% of the net assets of the Global Infrastructure program.

IMPLEMENTATION GUIDELINES – Cash Equivalents & Securities Lending

I. ROLE

Short-Term Cash should provide liquidity for funding investment capital calls and operational expenses. Cash should be invested in conservative, low risk securities/funds to preserve capital for future expenditures and investments.

II. ASSET ALLOCATION

The Cash allocation is established with periodic asset allocation studies. The most recent asset allocation study authorized a 3% exposure to cash with a range of 1-5%.

III. BENCHMARK

The Short-Term cash benchmark is the FTSE 30 Day Treasury Bill.

IV. PERFORMANCE OBJECTIVE

The annualized return objective for the Short-Term portfolio is five basis points net of fees over the benchmark.

V. PORTFOLIO DESIGN AND CONSTRUCTION

The Cash portfolio is designed with preservation of capital in mind. A cash balance of one to three months of expenditures is usually maintained. A higher allocation to cash may also be used to preserve capital in volatile markets. The average weighted maturity of the portfolio will not exceed 20 days.

Risk is constantly assessed before investment purchases are made in the portfolio. Only top tier commercial paper is purchased. Money market holdings are also reviewed on a regular basis along with choosing a top tier money market provider with a deep credit analyst team and whose short-term investments are important to the organization.

The Securities Lending program is designed to be a low risk, intrinsic value focused strategy that can generate additional income for the system. The program is implemented through a third-party lending agent and collateral reinvestment manager. Separately, additional securities lending income is earned by the commingled passive global equity accounts.

VI. PERMISSIBLE INVESTMENTS

Security Type	
US Treasury Bills	Y
Commercial Paper rated A-1/P-1 or higher	Y
Money Market Funds rated at least A-1/P-1	Y
Unrated Market Funds comparable to an A-1/P-1 equivalent fund	Y
Tri-Party Repurchase Agreements	Y

VII. RISK MANAGEMENT

Liquidity Risk
The weighted average maturity shall not exceed 20 days. All money market funds must provide daily liquidity.

Credit Risk
A commercial paper issuer must be on the approved credit list or approved by the Chief Investment Officer before purchasing. Market and issuer news are reviewed daily by the Senior Investment Officer – Global Fixed Income. Money market funds must regularly send a holdings report to SERS, where it is reviewed on a regular basis.

Issuer Risk
Single issuer commercial paper investments are limited to $20 million. Related entity commercial paper investments are limited to the lower of 30% of the short-term account or $40 million. Overnight commercial paper issuer maturities are limited to $50 million.

Securities Lending Risk

All loans will be collateralized with cash at 102% for US securities and 105% for non-US securities and marked-to-market daily. Collateral will be reinvested in government money market funds and/or repurchase agreements. Loans on fixed income securities will be subject to a ten-basis point minimum spread requirement at loan initiation. Loans to approved borrowers will be limited to 25% of the average monthly market value on loan for the prior calendar year.

IMPLEMENTATION GUIDELINES – Opportunistic & Tactical

I. ROLE

The role of SERS' Opportunistic & Tactical portfolio is to enhance the Total Fund return over a three-year period by investing in assets and strategies that do not fit within the existing asset classes. The investments are defined as tactical or non-traditional investment opportunities.

II. ASSET ALLOCATION

SERS' Statement of Investment Policy sets the Opportunistic & Tactical portfolio target allocation at 0%, with a range of 0-5%.

III. BENCHMARK

The Opportunistic & Tactical portfolio benchmark is the Bloomberg US Aggregate Bond Index + 2%.

IV. PERFORMANCE OBJECTIVE

The performance objective of the Opportunistic & Tactical portfolio is to provide net of fee returns of 100 basis points above the benchmark.

V. PORTFOLIO DESIGN AND CONSTRUCTION

The Opportunistic & Tactical portfolio may consist of a wide variety of investment types, structures and strategies targeting price appreciation as well as cash yield. Investment strategies include separate accounts, commingled funds, ETFs, co-investments, and derivatives.

VI. PERMISSIBLE INVESTMENTS

Permissible investments include, but are not limited to, common stock, preferred stock, debt securities, currencies, commodities, ETFs, etc.

VII. RISK MANAGEMENT

Leverage Risk
Leverage will be prudent for the given strategy and consistent with the fund's offering memorandum.

Liquidity Risk
Liquidity will be monitored regularly to ensure the portfolio can be traded or rebalanced within a reasonable timeframe. Liquidity risk will be managed through target allocations to private and public market assets as well as through portfolio design.

Currency Risk
The Opportunistic portfolio does not directly hedge foreign currency risk and relies upon its external managers to determine if such hedges are appropriate.

Valuation Risk
The valuation frequency for private market assets is dependent upon the external managers' internal and external valuation policies, which are reviewed during the operational due diligence process.

IMPLEMENTATION GUIDELINES – Overlay Program

I. ROLE

SERS invests in Overlay strategies that trade derivatives of the Total Fund's underlying asset exposures and currency exchange rates to enhance the Total Fund portfolio's efficiency. The Overlay program includes i) tactical asset allocation, and ii) active currency strategies.

The tactical asset allocation strategy aims to add value to the Total Fund performance through long and short positions based on short-term relative attractiveness of assets.

The active currency strategies aim to add value to the Total Fund on a risk-adjusted basis by employing long and short positions in various currency pairs based on relative attractiveness of the currencies. The strategies are expected to have low correlation to the major asset classes such as US equity and fixed income.

II. ASSET ALLOCATION

The target allocation of the tactical asset allocation and Currency Overlay program is 0% since long and short positions net out.

The tactical asset allocation program's notional exposure limit is +/-7% of the Total Fund to each of the following assets: US fixed income, US equity and Non-US equity. Since the tactical asset allocation positions are employed for short periods, the notional exposures are not subject to the policy asset allocation ranges set forth in the Statement of Investment Policy; however, the active risk contribution by the overlay program as a whole is subjected to the overall guideline on active risk for the management of the Total Fund specified in the Risk Management Policy.

The notional value of the active currency program is capped at 50% of the Non-US Equity portfolio's value.

III. BENCHMARK

The benchmark for the tactical asset allocation and Currency Overlay program is 0% since net exposure is 0%.

IV. PERFORMANCE OBJECTIVE

The Overlay program is expected to add 5 to 10 bps of excess return to the Total Fund's performance on a three to five year horizon.

V. PORTFOLIO DESIGN AND CONSTRUCTION

The mandates are unfunded. The Overlay strategies buy (long) or sell (short) futures or forwards contacts to get exposures to desired markets in order to exploit shifts in relative valuation of assets and currencies.

The tactical rebalancing strategy's net exposures, sum of long and short positions, will be net neutral at the time of initiation and the gross notional value may be net long or short up to $100 million. Active currency strategies can go either net long or net short US dollar. Both tactical rebalancing and active currency aggregate portfolios are constructed to have no dependency on any single risk factor.

VI. PERMISSIBLE INVESTMENTS

Tactical asset allocation: equity, fixed income, commodity and precious metals futures and options on futures.

Currency Overlay: currency forwards, currency futures, gold forwards, gold futures, and limited currency options.

VII. RISK MANAGEMENT

Counter-party risk management

- Futures and exchange traded options are traded at exchanges thus having default risk only to the clearinghouse while having no credit risk to trade counterparties.

IMPLEMENTATION GUIDELINES – Overlay Program

- Forward contracts and over-the-counter options entail default risk of the counterparties. Counterparty risk of these contracts is managed through ISDA (International Swaps and Derivatives Association) and EMIR (European Market Infrastructure Regulation) umbrella agreements with managers.

Volatility management
- The tactical asset allocation program's tracking error range is 5 to 15 bps.
- All active currency strategies have targeted tracking error equal to or less than 8%; the aggregate active currency program's tracking error is expected to be in the range of 5 to 8%.

Liquidity
- The use of derivatives requires initial margin as well as daily variation margin for futures. Liquidity risk will be managed by ensuring that an adequate reserve of cash is available to meet margin requirements at all times.

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Glossary

GLOSSARY

Active Risk – see Tracking Error.

Alpha – the premium an investment portfolio earns above a certain benchmark (such as the Standard & Poor's 500 Index). A positive alpha indicates the investor earned a return in excess of the index return.

Asset Allocation – the practice of allocating a certain percentage of a portfolio between different types of investment assets, such as stocks, bonds, real estate, cash, etc. By diversifying among asset classes, it is expected to create a favorable risk/reward ratio for the portfolio.

Basis Point – one hundredth of one percent. For example, an addition of 40 basis points to a yield of 7.50 percent would increase the yield to 7.90 percent. Basis points are normally used when quoting yields or returns, alpha, or fees paid to investment managers.

Benchmark – a measurement or standard that serves as a point of reference by which portfolio performance is measured. Benchmarks must meet standard criteria.

Bloomberg US Aggregate Bond Index – a market capitalization weighted US bond index published by Bloomberg LLC. Most US traded investment grade bonds are represented in the index. The Bloomberg US Aggregate Bond Index was SERS' global fixed income policy benchmark through June 30, 2024.

Bloomberg US Universal Bond Index – a market capitalization index that consists of USD-denominated securities only. The index includes debt issued by the U.S. government and other government-related entities, residential and commercial mortgage-backed securities, investment grade and high yield bonds as well as debt from emerging market countries and other foreign issuers. The policy benchmark for the global fixed income portfolio switched from the US Aggregate index to the US Universal index on July 1, 2024.

Co-investment – a direct investment in a single asset of a multi-asset Fund, made alongside the Fund's investment in the asset; typically involves terms that are more attractive and with shorter time frames than those of the Fund.

Derivatives (Derivative Instruments) – financial instruments (securities or contracts) whose values are derived from underlying financial assets, indices, or other instruments. Derivative performance is based on the performance of assets, interest rates, currency exchange rates and various domestic and foreign indices underlying the instruments. The common forms of derivatives are forward, futures, swap, and options contracts. The total exposure to the underlying assets is referred to as the notional value.

Diversification – the method of reducing risk by distributing investment assets among a variety of investment securities which have different risk/ reward ratios.

Due Diligence – an investigation or audit of a potential or existing investment.

Equity Extension Strategy – an equity investment strategy that expresses portfolio managers' both positive and negative views on stocks through long and short positions while maintaining a net market exposure close to 100%.

Equity Investment – claims held by the residual owners of a firm. May also be referred to as common stock. Investments in Real Estate and certain Private Markets classifications may also be considered equity.

Exchange Traded Funds (ETF) – publicly traded investment security that provides exposure to a basket of securities.

Expanded NCREIF Property Index ("ENPI") – ENPI is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. The renamed and new property types of Expanded NPI are Residential, Hotel, Industrial, Office, Retail, Self-Storage, Senior Housing, and Other (Data Center, Operating Land, Entertainment, Parking, and Other). The Expanded NPI was created to reflect the evolution of the industry and to provide greater transparency. The Expanded NCREIF Property Index will be a component of SERS' Global Real Estate Policy Benchmark.

Fixed Income Investment – a security issued by a borrower that obligates the issuer to make specified payments to the holder over a specific period. May also be referred to as "debt" or "bonds."

FTSE 30 Day Treasury Bill – an index that measures the rate of return for 30-day US Treasury Bills, which are considered representative of the performance of Short-Term money market instruments. The FTSE 30 Day Treasury Bill is SERS' policy benchmark for Cash Equivalents.

Fund – fund means a limited partnership, trust or commingled investment vehicle in which SERS invests or may invest (e.g., private credit fund, private equity fund, or real estate fund).

Global Equities – reflects the consolidation of what had been treated by SERS as US Equity and Non-US Equity asset classes; includes equities of US and non-US origin, equities of various capitalizations (e.g., large cap, small cap, mid cap, etc.), equities from developed, emerging and frontier markets, growth and value equities and passive and active strategies. Investments in Global Equities strategies are made in accordance with established investment guidelines, and amended as necessary, by mutual agreement between the Chief Investment Officer and the Investment Consultant.

Guidelines – refers to an Investment Manager's "Investment Guidelines," established between the Investment Manager and Staff as part in an investment management agreement. Guidelines may be general or specific.

Investment Committee – a committee comprised of the Chief investment Officer and Investment Officers from SERS' Investment Department who possess the Ohio State Retirement System Investment Officer (SRSIO) license, with clearly defined structure, rules, and procedures for reviewing and approving investments in a timely and prudent fashion.

Investment Consultant – any consultant hired by the Board or by Staff to advise or assist with the Investment Program in accordance with the Statement of Investment Policy. Board investment consultants must be approved by the Board. Staff investment consultants shall be approved by the Executive Director.

Investment Manager – a manager or potential manager of SERS assets, both public market and private market. Includes, but is not limited to managers of equity, fixed income, private credit, private equity, real estate, commodities, and cash.

Investment Staff – members of the investment department of SERS, including the Chief Investment Officer, Investment Officers, and other department personnel.

Leverage – in investments, this is the control of a large amount of money by a smaller amount of money, such as buying on margin. In finance, this is the relationship of debt to equity on a company's balance sheet in the form of the debt/equity ratio.

Long a futures contract or a forward contract – buying exposure to the underlying assets of the contract without actually owing those assets. When the underlying assets deliver a positive return, the long position gains; when the underlying assets deliver a negative return, the reverse is true.

Morgan Stanley Capital International – All Country World Free ex-USA Index ($Net) – an equity index representing 44 developed and emerging countries. "Free" indicates the index reflects actual investable opportunities for global investors by taking into account local market restrictions on share ownership by foreigners. "Net" indicates that dividends are reinvested after the deduction of withholding taxes applicable to non-resident institutional investors. The MSCI-ACWI ex-USA Index, net of dividends reinvested is SERS' policy benchmark for Non-US Equities.

MSCI-Burgiss Global Private Equity Funds Index (formerly known as the Burgiss All Private Equity Index) –The index is comprised of data from more than 5,000 private equity funds contributed by limited partners that are Burgiss clients and use Burgiss' web-based institutional portfolio management platform Private i. The benchmark data is sourced from Burgiss' limited partner clients and includes complete transactional and valuation history between the limited partner and their fund investments. Burgiss publishes a detailed breakdown of the dataset every quarter allowing for increased transparency. MSCI purchased Burgiss in 2023 and rebranded the indices in 2024. The renamed benchmark uses the same construction methodology as the Burgiss All Private Equity Index.

GLOSSARY

Opportunistic and Tactical Investments – global opportunistic investments are tactical or non-traditional investment opportunities that may be short-term or may not fit within the generally accepted risk/return parameters of specific asset classes or strategy groupings. Such opportunities may involve capitalizing on short-term market dislocations or other such unique situations. Tactical investments may include strategies with dynamic allocations to single assets or across multiple asset types or other innovative approaches.

Options contract – a form of financial derivatives. In an options contract, two parties (buyer and seller) agree that the buyer, who pays an option premium to the seller, has the right to exercise an option whether to buy or sell a particular asset at a specified price at a specified future date.

Portable Alpha Overlay Strategy – an investment strategy that gains the beta exposure to a targeted market via derivatives and an alpha from a market neutral strategy(es).

Portfolio – a collection of investments owned, managed, or overseen by an individual or investment manager, a board, or an organization. Portfolio can mean a manager account or subset thereof (e.g., Goldman Sachs Core Plus account), an asset class (e.g., US Equity), or the entire fund (e.g., SERS' Total Fund).

Rebalancing – adjusting asset class or portfolio allocations relative to their targets or ranges to adjust for actual or anticipated market movements.

Russell 3000 Index – a market-value weighted equity index published by FTSE Russell. The index measures the performance of the 3,000 largest US companies in terms of market capitalization. The Russell 3000 Index is SERS' Domestic Equity Policy Benchmark.

Secondaries – pre-existing investor capital commitments to private funds that are purchased in the secondary market.

Securities Lending – the temporary loan of a security from an institutional investor's portfolio to a broker/dealer to support the firm's trading activities. Loaned securities are collateralized with cash at 102-105% of the loan exposure. The lender retains the entitlement to all the benefits of the loaned security, including dividends and interest, except the right to vote proxies. The lender has a right to recall the loan at any time.

Sidecar or Sidecar Investment – a sidecar is an additional fund created to invest in co-investments alongside a main fund commitment. Sidecars may be discretionary or non-discretionary. Investments in a sidecar have more favorable fee economics and allow an investor to average down fund costs.

Short a futures contract or forward contract – selling exposure to the underlying assets of the contract without transferring the ownership of those assets to the buyers. When the underlying assets deliver a positive return, the short position experiences losses; when the underlying assets deliver a negative return, the reverse is true.

SOFR – The secured overnight financing rate ("SOFR") is a benchmark interest rate reflecting the cost of borrowing money overnight, using U.S. Treasury securities as collateral. SOFR has become the primary reference rate utilized to determine the interest rate for private loans in the U.S.

Style – style refers to an investment product, strategy or style offered by an Investment Management Firm and reflects how the assets are invested. For example, value versus growth; core versus value added; quantitative versus fundamental; etc.

T-bill – refers to Treasury Bill. Staff utilizes the 90-day T-bill rate as a reference benchmark.

Total Fund – refers to SERS' total investment assets.

Tracking Error – standard deviation of the excess return of the portfolio relative to the Benchmark, often measured over rolling three-year periods.

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