# INVESTMENT ADVISORY COUNCIL

## OF THE
## MINNESOTA
## STATE BOARD OF INVESTMENT

INVESTMENT ADVISORY COUNCIL
MEETING
October 20, 2025

**The Minnesota Legislature has established a seventeen member Investment Advisory Council (IAC) to advise the Board and its staff on investment-related matters. All proposed investment policies are reviewed by the IAC before they are presented to the State Board of Investment (SBI) for action.**

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# INVESTMENT ADVISORY COUNCIL MEETING

# AGENDA

# October 20, 2025

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**AGENDA**
**INVESTMENT ADVISORY COUNCIL MEETING**

**Monday, October 20, 2025**
**3:00 p.m.**

**Minnesota Judicial Center**
**Room 230**
**25 Rev. Dr. Martin Luther King Jr. Blvd.**
**St. Paul, MN**

| | TAB | |
|---|---|---|
| **1. Call to Order** | | |
| **2. Approval of Minutes of May 13, 2025** | | **Motion Needed** |
| **3. Report from the Executive Director** | | |
| **A. Quarterly Performance Summary** | **A** | |
| **B. Administrative Report** | **B** | |
| **4. Private Markets Investment Program Report** | **C** | **Motion Needed** |
| **5. Asset Allocation Study** | **D** | **Motion Needed** |
| **6. Investment Policy Statement** | **E** | **Motion Needed** |
| **7. Personal Securities Trading Policy** | **F** | **Motion Needed** |
| **8. Other Items** | | |

**REPORTS**

- **Public Markets Investment Program Report**
- **Participant Directed Investment Program and Non-Retirement Investment Program Report**
- **Aon Market Environment Report**
- **Meketa Capital Markets Outlook & Risk Metrics Report**
- **SBI Comprehensive Performance Report**

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# Approval of
# May 13, 2025
# IAC Meeting Minutes

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Minnesota
State Board of Investment

# Minutes
# Investment Advisory Council Meeting
# May 13, 2025

The Investment Advisory Council (IAC) met at 12:00 p.m. on Tuesday, May 13, 2025, in Room 106 of Retirement Systems Building, 60 Empire Drive, St. Paul, MN 55103.

**MEMBERS PRESENT:** Denise Anderson, Doug Anderson, Kim Faust, Jennifer Hassemer (for Erin Campbell), Peggy Ingison, Amy Jensen, Erin Leonard, Gary Martin, Dan McConnell, Ify Onyiah, Carol Peterfeso, Tim Maurer, and Jen Wilson.

**MEMBERS ABSENT:** Nancy Orr, Dennis Santos, Sunil Swami, and Shawn Wischmeier.

**SBI STAFF:** Jill Schurtz, Andy Christensen, Erol Sonderegger, Andrew Krech, Cassie Boll, Jonathan Stacy, Mercy Ndungu, Jeff Weber, and Samir Zahar.

**OTHER ATTENDEES:** Katie Comstock and Dan Gordon, Aon Investments; Stephanie Sorg, Gordon Latter, and Steve Voss, Meketa Investment Group; Jake Smith, Governor's Office; Dana Mitchell, Attorney General's Office; Ramona Advani, State Auditor's Office; and Ramona Advani, State Auditor's Office.

**Call to Order**
Gary Martin, Chair of the Investment Advisory Council, called the meeting to order.

**Comments and Announcements**
Executive Director/CIO Jill Schurtz thanked two IAC members for their many years of service, time, and talent spent with the SBI and the IAC colleagues: Kim Faust, President, Treasurer at Fairview Health Service, and a member of the IAC since 2012, and Carol Peterfeso, Managing Director of Investment at the Bush Foundation, and a member of the IAC since 2016.

**Election of IAC Chair and Vice Chair**
Mr. Martin called for the election of the Chair and Vice Chair of the Investment Advisory Council. Kim Faust entertained a motion for nomination for the role of IAC Chair. Erin Leonard made a motion to nominate Gary Martin for the position. The motion passed.

Mr. Martin entertained a motion for nomination for the role of Vice Chair of the IAC. Jen Wilson made a motion to nominate Nancy Orr for the position. The motion passed.

**Approval of IAC Minutes**
The minutes of February 25, 2025, meeting were approved.

**Performance Summary**
Ms. Schurtz referred members to the Quarterly Performance Summary in Tab A of the meeting materials and outlined the following items from the report, as of March 31, 2025:

> AUM: The SBI was responsible for $147.2 billion in assets, of which the Combined Funds represented $96 billion.
>
> Performance: The Combined Funds returned 0.1% for the quarter and 6.3% for the 12-month period ending March 31, 2025. The Combined Funds exceeded its long-term objectives by outperforming its Composite Index for the ten-year period and providing a real rate of return above inflation over a 20-year period.
>
> Asset Allocation and TUCS Ranking: The Combined Funds asset mix was in-line with asset allocation targets. When compared to other public pension plans with assets greater than $20 billion in the Trust Universe Comparison Service (TUCS), the Combined Funds return ranked in the 84th percentile for the quarter and the 35th percentile for the tracking 12 months.

**Executive Director's Administrative Report**
Ms. Schurtz referred members to Tab B of the meeting materials for the Executive Director's Administrative Report. Items highlighted in the report for review were the annual budget, as well the status of Russia, Belarus and Iran restrictions.

Deputy Chief Investment Officer Erol Sonderegger gave an update on the asset allocation study that will be presented to the IAC and Board at the next meeting.

Vice President, Director of Stewardship, Nate Blumenshine gave an update on the corporate engagement request for proposal process and how events are proceeding.

**Private Markets Investment Program Report**
Ms. Schurtz referred members to Tab C of the meeting materials for the Private Markets Investment Program Report. Co-Directors of Private Markets, Cassie Boll and Jon Stacy, and other members of the Private Markets team presented five private market recommendations: Advent International GPE XI SCSP; Blackstone Supplemental Account – M, L.P.; ECP VI, L.P.; TA Realty Value-Add Fund XIV, L.P.; and TPG Partners X, L.P.

A motion was made that the IAC endorse staff's recommendation to invest in the five private markets investment funds. The motion passed.

**Market Overview Presentation**
Ms. Schurtz introduced Ronald Templeton, Chief Market Strategist of Lazard to share his perspective on the economic and investment environment.

**Informational Reports Included in the Quarterly Meeting Materials**
*Public Markets Investment Program Report*
*Participant Directed Investment Program and Non-Retirement Investment Program Report*
*Aon Market Environmental Report*
*Meketa Capital Markets Outlook & Risk Metrics Report*
*SBI Comprehensive Performance Report*

**Adjournment of Meeting**
The motion to adjourn the meeting was approved. The meeting adjourned at 1:42 p.m.

Respectfully submitted,

Jill E. Schurtz
Executive Director and
Chief Investment Officer

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# TAB A

# Quarterly Performance Summary

June 30, 2025

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# Performance Summary

## June 30, 2025

# Description of SBI Investment Programs

The Minnesota State Board of Investment (SBI) is responsible for the investment management of various retirement funds, trust funds, and cash accounts.

**Combined Funds**

The Combined Funds represent the assets for both the active and retired public employees in the statewide retirement systems, the biggest of which are the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the Minnesota State Retirement System (MSRS). The SBI commingles the assets of these plans into the Combined Funds to capture investment efficiencies. All assets in the Combined Funds are managed externally by investment management firms retained by contract.

**Other Retirement Funds**

In addition to the assets of the Statewide Retirement Systems, the SBI provides broad asset-class investment options to both defined benefit and defined contribution retirement plans that either make investment decisions at the plan level and participant-directed plans. Other public retirement funds include the Public Employees Retirement Association (PERA) Defined Contribution Plan, St. Paul Teachers' Retirement Fund Association, Statewide Volunteer Firefighter Plan, Unclassified Retirement Plan, and Volunteer Fire Relief Associations.

**Tax-Advantaged Savings Plans**

The SBI aims to help participants meet their savings and investment goals by offering a range of investment options across asset classes managed by institutional investment managers that charge competitive fees. The investment options offered within each plan will vary based on several factors, including statutory requirements, operational limitations, and other rules and regulations established for each participating plan. Tax-advantaged savings plans include the Health Care Savings Plan, Hennepin County Supplemental Retirement Plan, and Minnesota Deferred Compensation Plan

**State-Sponsored Savings Plans**

The SBI is responsible for oversight of the investment options in the State-Sponsored Savings Plans, including the Minnesota College Savings Plan and the Minnesota ABLE Plan. SBI does not directly administer plans; it partners with the respective plan-administrating agencies when selecting investment options.

**Non-Retirement Investment Program**

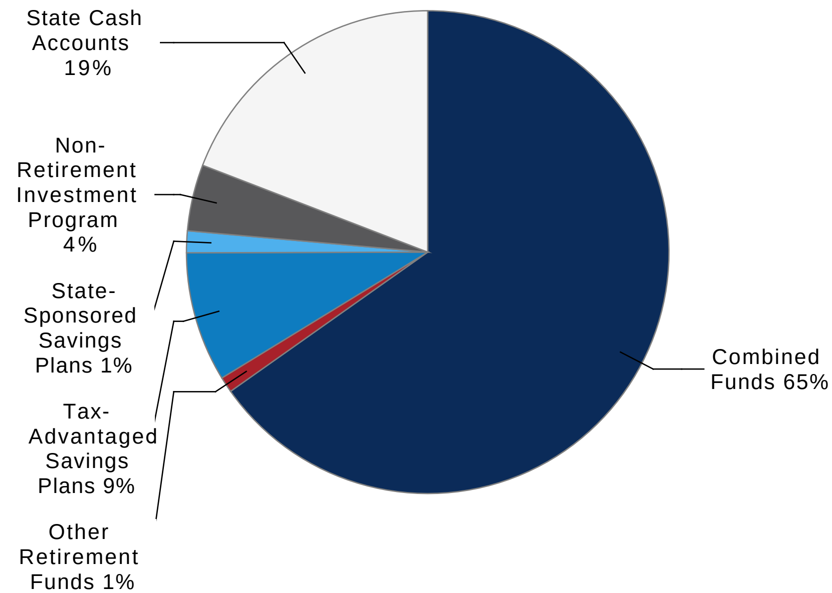
The SBI is responsible for the assets of several state trust funds, public sector sponsored entities, Other Postemployment Benefits (OPEB) trusts, and Qualifying Governmental Entities. These trust funds and accounts have different accounting requirements and spending targets derived from constitutional and statutory provisions. Statute will also identify whether the SBI or the sponsoring entity is responsible for determining the asset allocation targets for the respective fund or account.

**State Cash**

The State Cash accounts are cash balances of state government funds including the State General Fund. Most accounts are invested by SBI staff through a short-term pooled fund referred to as the Treasurer's Cash Pool. It contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and non-dedicated cash in the State Treasury. Because of special legal restrictions, a small number of cash accounts cannot be commingled.

## Funds Under Management

| | $ Millions |
|---|---|
| **Combined Funds** | **$101,221** |
| **Other Retirement Funds** | **$1,568** |
| PERA Defined Contribution Plan | $106 |
| St. Paul Teachers' Retirement Fund | $335 |
| Statewide Volunteer Firefighter Plan | $415 |
| Unclassified Retirement Plan | $442 |
| Volunteer Fire Relief Associations | $270 |
| **Tax-Advantaged Savings Plans** | **$13,599** |
| Health Care Savings Plan | $2,343 |
| Hennepin County Supplemental Retirement Plan | $184 |
| Minnesota Deferred Compensation Plan | $11,072 |
| **State-Sponsored Savings Plans** | **$2,303** |
| Minnesota College Savings Plan | $2,241 |
| Minnesota Achieving a Better Life Experience Plan | $62 |
| **Non-Retirement Investment Program** | **$6,921** |
| Other Postemployment Benefits (OPEB) | $1,071 |
| Qualifying Governmental Entities | $21 |
| Trust Funds | $5,828 |
| **State Cash** | **$30,248** |
| Invested Treasurer's Cash | $29,610 |
| Other State Cash Accounts | $637 |
| **TOTAL SBI AUM** | **$155,859** |




Note: Differentials within column amounts may occur due to rounding. Totals are unaudited and may differ from the final fiscal year-end report.

## Quarterly Report

### Comparison to Objective

**Match or Exceed Composite Index (10 yr.)**

Outperform a composite market index weighted in a manner that reflects the long-term asset allocation of the Combined Funds over the latest 10 year period.

| | 10 Year |
|---|---|
| **Combined Funds** | 8.9% |
| *Combined Funds - Composite Index* | 8.7 |
| Excess | 0.2 |

**Provide Real Return (20 yr.)**

Provide returns that are 3-5 percentage points greater than inflation over the latest 20 year period.

| | 20 Year |
|---|---|
| **Combined Funds** | 8.3% |
| *CPI-U* | 2.6 |
| Excess | 5.8 |

Note:

Throughout this report performance is calculated net of investment management fees, differentials within column amounts may occur due to rounding, and returns for all periods greater than one year are annualized.

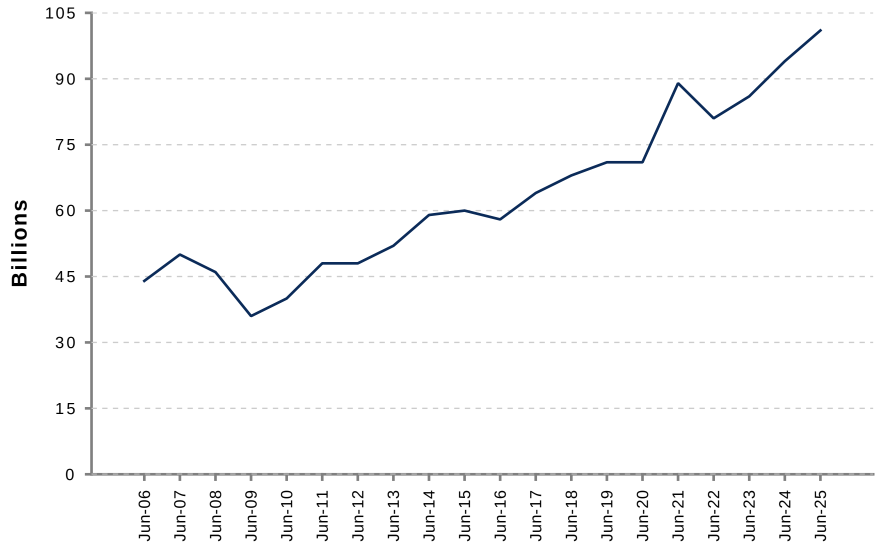
## Combined Funds Summary

### Combined Funds Change in Market Value ($Millions)

| | One Quarter |
|---|---|
| **COMBINED FUNDS** | |
| Beginning Market Value | $96,008 |
| Net Contributions | -619 |
| Investment Return | 5,833 |
| Ending Market Value | 101,221 |

The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

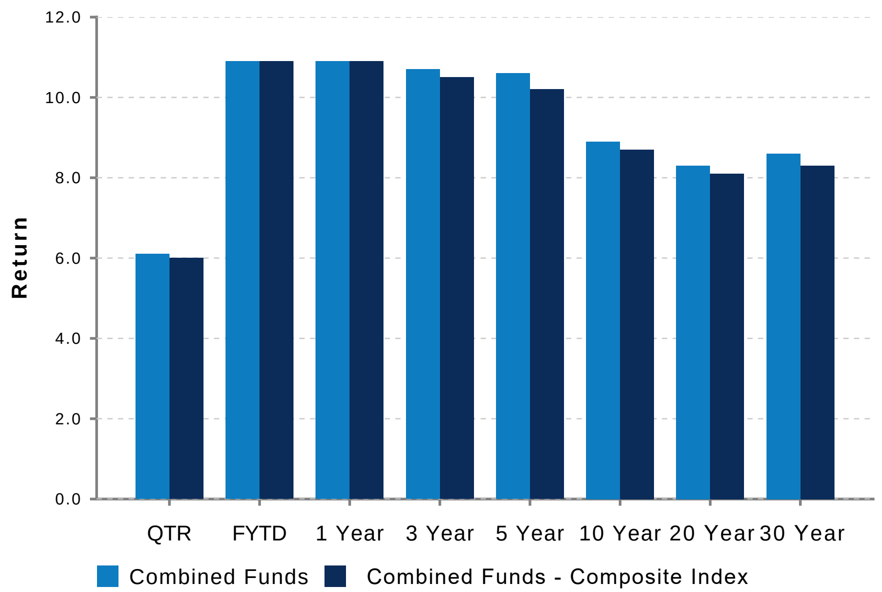
### Asset Growth




### Performance (Net of Fees)

The Combined Funds' performance is evaluated relative to a composite of public market index and private market investment returns. The Composite performance is calculated by multiplying the beginning of month Composite weights and the monthly returns of the asset class benchmarks.

| | QTR | FYTD | 1 Yr | 3 Yr | 5 Yr | 10 Yr | 20 Yr | 30 Yr |
|---|---|---|---|---|---|---|---|---|
| Combined Funds | 6.1% | 10.9% | 10.9% | 10.7% | 10.6% | 8.9% | 8.3% | 8.6% |
| Combined Funds-Composite Index | 6.0% | 10.9% | 10.9% | 10.5% | 10.2% | 8.7% | 8.1% | 8.3% |
| Excess | 0.2% | 0.0% | 0.0% | 0.3% | 0.4% | 0.2% | 0.2% | 0.3% |

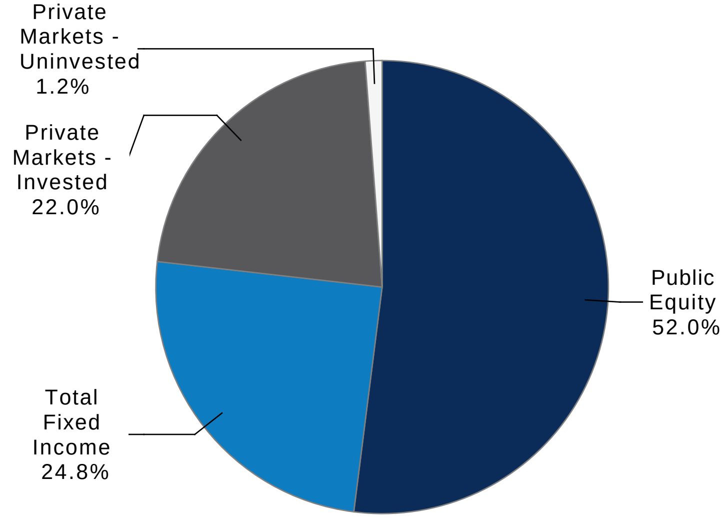


## Combined Funds Summary

### Asset Mix

The Combined Funds actual asset mix relative to the Strategic Asset Allocation Policy Target is shown below. Any uninvested portion of the Private Markets allocation is held in cash.

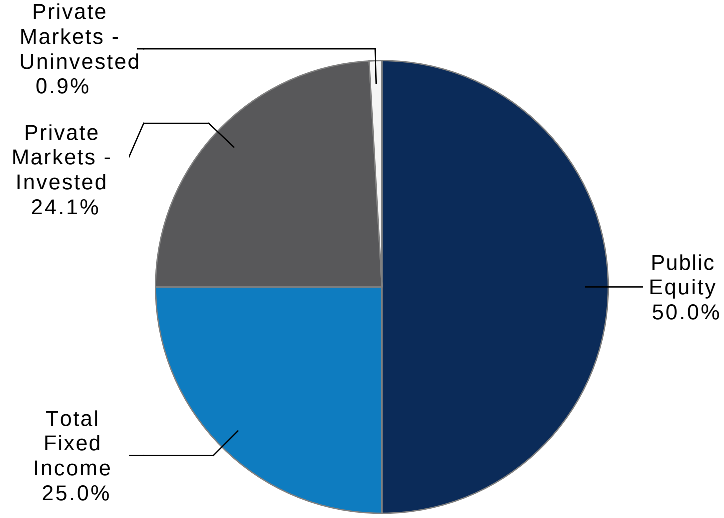
| | (Millions) | Actual Mix | Policy Target |
|---|---|---|---|
| Public Equity | $52,596 | 52.0 | 50.0 |
| Total Fixed Income | 25,111 | 24.8 | 25.0 |
| Private Markets - Total | 23,514 | 23.2 | 25.0 |
| Private Markets - Invested | 22,306 | 22.0 | |
| Private Markets - Uninvested | 1,208 | 1.2 | |
| TOTAL | 101,221 | 100.0 | |




### Composite Index Comparison

The Combined Funds Composite is set as the Strategic Asset Allocation Policy Target. The Combined Funds Composite weighting shown below is as of the first day of the quarter.

| | Policy Weight | Market Index |
|---|---|---|
| Public Equity | 50.0 | Public Equity Benchmark |
| Total Fixed Income | 25.0 | Total Fixed Income Benchmark |
| Private Markets - Invested | 24.1 | Private Markets |
| Private Markets - Uninvested | 0.9 | ICE BofA US 3-Month Treasury Bill |



## Combined Funds Asset Class Performance Summary

### Public Equity

The Combined Funds Public Equity includes Domestic Equity, International Equity and Global Equity.

The Public Equity benchmark is 67% Russell 3000 and 33% MSCI ACWI ex US (net).

| | Market Value | Actual Weight | Policy Weight | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Public Equity | $52.6 | 52.0% | 50.0% | 11.2% | 15.6% | 15.6% | 17.6% | 14.4% | 10.9% | 9.3% | 9.2 |
| Public Equity Benchmark | | | | 11.4 | 16.3 | 16.3 | 17.5 | 14.1 | 10.8 | 9.2 | 9.0 |
| Excess | | | | -0.1 | -0.6 | -0.6 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| | | | | | | | | | | | |
| Domestic Equity | 34.6 | 34.2 | 33.5 | 11.1 | 15.2 | 15.2 | 19.2 | 16.1 | 12.8 | 10.4 | 10.1 |
| Domestic Equity Benchmark | | | | 11.0 | 15.3 | 15.3 | 19.1 | 16.0 | 12.9 | 10.5 | 10.2 |
| Excess | | | | 0.1 | -0.1 | -0.1 | 0.1 | 0.1 | -0.1 | -0.1 | -0.1 |
| | | | | | | | | | | | |
| International Equity | 16.8 | 16.6 | 16.5 | 11.3 | 16.6 | 16.6 | 14.5 | 11.1 | 6.7 | 6.4 | 6.3 |
| International Equity Benchmark | | | | 12.0 | 17.7 | 17.7 | 14.0 | 10.1 | 6.1 | 5.8 | 5.6 |
| Excess | | | | -0.8 | -1.2 | -1.2 | 0.5 | 1.0 | 0.6 | 0.5 | 0.7 |
| | | | | | | | | | | | |
| Global Equity | 1.1 | 1.1 | 0.0 | 13.2 | 14.2 | 14.2 | 14.4 | | | | |
| MSCI AC WORLD INDEX NET | | | | 11.5 | 16.2 | 16.2 | 17.3 | | | | |
| Excess | | | | 1.6 | -1.9 | -1.9 | -2.9 | | | | |

Note:

Prior to 6/30/16 the returns of Domestic and International Equity were not reported as a Total Public Equity return. For additional information regarding historical asset class performance and benchmarks, please refer to the Combined Funds Performance Report.

## Combined Funds Asset Class Performance Summary

### Total Fixed Income

The Combined Funds Fixed Income program includes Core/Core Plus, Return Seeking Fixed Income, Treasuries and Laddered Bond + Cash.

The Total Fixed Income benchmark is 40% Bloomberg U.S. Aggregate Index/ 40% Bloomberg Treasury 5+ Years Index/ 20% ICE BofA US 3-Month Treasury Bill.

| | Market Value | Actual Weight | Policy Weight | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Fixed Income | $25.1 | 24.8% | 25.0% | 1.1% | 5.8% | 5.8% | 2.8% | -0.8% | 2.4% | 3.6% | 4.8% |
| Total Fixed Income Benchmark | | | | 0.8 | 5.1 | 5.1 | 1.7 | -1.5 | 1.9 | 3.1 | 4.4 |
| Excess | | | | 0.4 | 0.7 | 0.7 | 1.1 | 0.7 | 0.6 | 0.5 | 0.4 |
| | | | | | | | | | | | |
| Core/Core Plus | $5.7 | 5.6% | 5.0 | 1.5 | 6.5 | 6.5 | 3.4 | -0.1 | 2.3 | 3.6 | 4.7 |
| Core Bonds Benchmark | | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 3.1 | 4.3 |
| Excess | | | | 0.2 | 0.4 | 0.4 | 0.9 | 0.7 | 0.6 | 0.5 | 0.4 |
| | | | | | | | | | | | |
| Return Seeking Fixed Income | $4.9 | 4.9% | 5.0 | 2.8 | 8.6 | 8.6 | 6.9 | | | | |
| Bloomberg U.S. Aggregate | | | | 1.2 | 6.1 | 6.1 | 2.5 | | | | |
| Excess | | | | 1.6 | 2.5 | 2.5 | 4.4 | | | | |
| | | | | | | | | | | | |
| Treasury Protection | $9.6 | 9.5% | 10.0 | 0.2 | 4.4 | 4.4 | -0.6 | -4.4 | | | |
| Bloomberg Treasury 5+ Year | | | | 0.2 | 4.2 | 4.2 | -0.7 | -4.6 | | | |
| Excess | | | | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | | | |
| | | | | | | | | | | | |
| Laddered Bond + Cash | $4.9 | 4.8% | 5.0 | 1.1 | 5.0 | 5.0 | 4.7 | 2.8 | 2.0 | 1.9 | 3.0 |
| ICE BofA US 3-Month Treasury Bill | | | | 1.0 | 4.7 | 4.7 | 4.6 | 2.8 | 2.0 | 1.7 | 2.5 |
| Excess | | | | 0.0 | 0.3 | 0.3 | 0.2 | 0.0 | 0.1 | 0.2 | 0.5 |

Note:

Since 12/1/2020 the Total Fixed Income includes allocations to Core/Core Plus Bonds, Return Seeking Bonds, Treasuries and Laddered Bond + Cash. From 7/1/2020 to 11/30/2020 Total Fixed Income was Core Bonds, Treasuries and Cash. From 2/1/2018-6/30/20 Total Fixed Income was Core Bonds and Treasuries. Prior to 2/1/2018, Total Fixed Income was Core Bonds. For additional information regarding historical asset class performance and benchmarks, please refer to the Combined Funds Performance Report.

## Combined Funds Asset Class Performance Summary

### Private Markets

| | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 25 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|
| Private Markets - Invested | 0.6% | 6.1% | 6.1% | 5.2% | 14.9% | 11.5% | 12.5% | 11.9% | 13.4% |
| Private Markets -Uninvested(1) | 0.9% | 4.1% | 4.1% | 5.2% | | | | | |
| Private Equity | 1.4% | 8.3% | 8.3% | 6.5% | 17.1% | 14.8% | 14.6% | 12.7% | 15.6% |
| Private Credit | -1.9% | 4.8% | 4.8% | 7.9% | 12.5% | 11.5% | 12.2% | 11.6% | |
| Resources | -2.6% | -1.9% | -1.9% | 1.7% | 10.5% | 2.0% | 10.3% | 12.2% | 12.2% |
| Real Estate | -0.3% | -1.6% | -1.6% | -3.9% | 7.8% | 8.0% | 7.7% | 8.4% | 9.1% |

### Private Markets

The time-weighted rates of return for the Private Markets portfolio are shown here. Private Markets included Private Equity, Private Credit, Resources, and Real Estate. Some of the existing investments are relatively immature and returns may not be indicative of future results.

**Private Equity Investments -** The objectives of the Private Equity portfolio, which may include leveraged buyouts, growth equity, venture capital and special situations, are to achieve attractive returns and to provide overall portfolio diversification to the total plan.

**Private Credit Investments -** The objectives of the Private Credit portfolio, which may include mezzanine debt, direct lending, and other forms of non-investment grade fixed income instruments, are to achieve a high total return over a full market cycle and to provide some degree of downside protection and typically provide current income in the form of a coupon. In certain situations, investments in the Private Credit portfolio also provide an equity component of return in the form of warrants or re-organized equity.

**Resource Investments -** The objectives of the Resources portfolio, which may include energy, infrastructure, and other hard assets, are to provide protection against the risks associated with inflation and to provide overall portfolio diversification to the total plan.

**Real Estate Investments -** The objectives of the Real Estate portfolio, which may include core and non-core real estate investments, are to achieve attractive returns, preserve capital, provide protection against risks associated with inflation, and provide overall portfolio diversification to the total plan.

The SBI also monitors Private Markets performance using money-weighted return metrics such as Internal Rate of Return and Multiple of Invested Capital. For money-weighted return metrics please refer to the Combined Funds Performance Report.

(1) The Uninvested Private Markets is currently cash. Prior to 11/02/2022, the Uninvested portion of the Private Markets allocation was invested in a combination of a passively managed S&P 500 Index strategy and a cash overlay strategy invested in equity derivatives and cash.

Source: State Street Bank

## SBI Combined Funds Strategic Allocation Category Framework

| | 06/30/2025 ($ millions) | 06/30/2025 Weights | Category Range | |
|---|---|---|---|---|
| **Growth - Appreciation** | | | | |
| Public Equity | $ 52,605.8 | 52.0% | | |
| Private Equity | $ 16,141.7 | 15.9% | | |
| Non-Core Real Assets | $ 3,757.9 | 3.7% | | |
| | **$ 72,505.5** | **71.6%** | *50%* | *75%* |
| **Growth - Income-oriented** | | | | |
| Core Fixed Income | $ 5,709.6 | 5.6% | | |
| Private Credit | $ 1,911.3 | 1.9% | | |
| Return-Seeking Fixed Income | $ 4,927.6 | 4.9% | | |
| | **$ 12,548.6** | **12.4%** | *15%* | *30%* |
| **Real Assets** | | | | |
| Core Real Estate | | 0.0% | | |
| Real Assets | $ 412.2 | 0.4% | | |
| | **$ 412.2** | **0.4%** | *0%* | *10%* |
| **Inflation Protection** | | | | |
| TIPS | | 0.0% | | |
| Commodities | | 0.0% | | |
| | | **0.0%** | *0%* | *10%* |
| **Protection** | | | | |
| U.S. Treasuries | $ 9,566.8 | 9.5% | | |
| | **$ 9,566.8** | **9.5%** | *5%* | *20%* |
| **Liquidity** | | | | |
| Cash | $ 6,188.1 | 6.1% | | |
| | **$ 6,188.1** | **6.1%** | *0%* | *5%* |
| **Opportunity** | | | | |
| Opportunity | | **0.0%** | | |
| | | **0.0%** | *0%* | *10%* |
| **Total** | **$ 101,221.3** | **100%** | | |
| **Illiquid Asset Exposure** | **$ 22,223.2** | **22.0%** | *0%* | *32%* |

## Volatility Equivalent Benchmark Comparison

| | As of June 30, 2025 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *1-year* | *3-year* | *5-year* | *10-year* | *15-year* | *20-year* | *25-year* | *30-year* |
| **SBI Combined Funds Return** | **10.9%** | **10.7%** | **10.6%** | **8.9%** | **10.0%** | **8.3%** | **7.1%** | **8.6%** |
| **Volatility Equivalent Benchmark Return** | | | **5.9%** | **6.3%** | **7.0%** | **6.2%** | **5.5%** | **6.7%** |
| **Value Added** | | | **4.7%** | **2.6%** | **3.0%** | **2.1%** | **1.6%** | **1.9%** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Standard Deviation: Benchmark = Combined Funds** | | | **9.5%** | **9.2%** | **8.7%** | **9.4%** | **9.5%** | **9.6%** |
| **Benchmark Stock Weight** | | | **46%** | **54%** | **55%** | **56%** | **58%** | **60%** |
| **Benchmark Bond Weight** | | | **51%** | **46%** | **44%** | **44%** | **42%** | **40%** |

The Volatility Equivalent Benchmark stock and bond weights are adjusted to equal the standard deviation of the SBI Combined Funds portfolio. Then a return is calculated. The bond return used is the Bloomberg U.S. Aggregate. The stock return used is the MSCI AC World Net Return Index. Prior to 12/31/98 it was the MSCI ACWI Total Return Index and pre-11/1/1993 it was the Wilshire 5000 adjusted for various SBI divestment mandates.

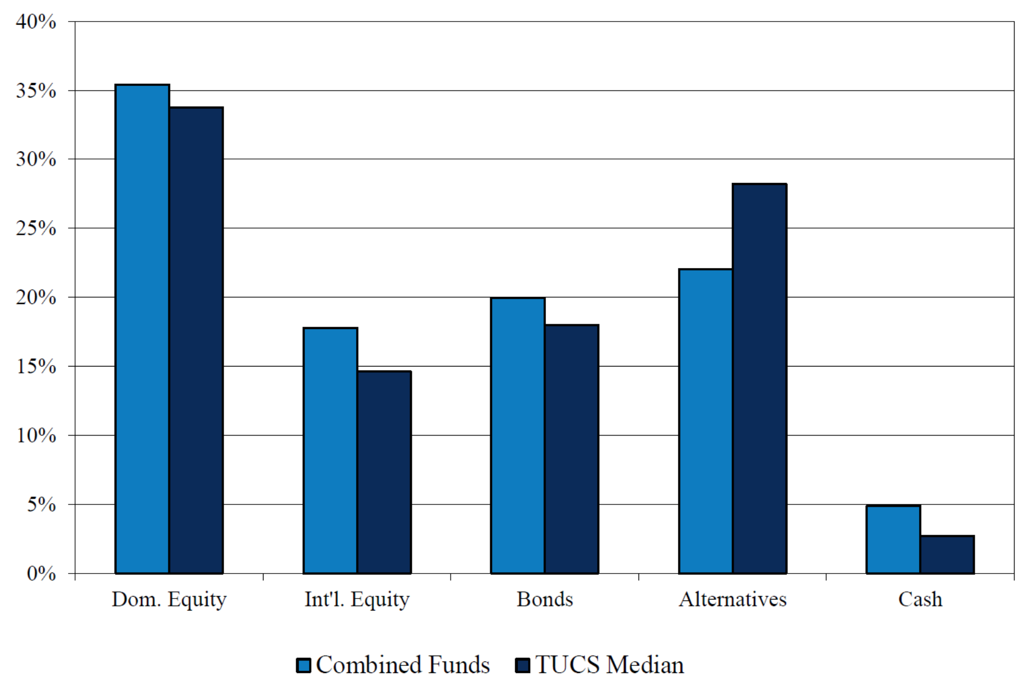
## Combined Funds Summary

### Asset Mix Compared to Other Pension Funds

The comparison universe used by the SBI is the Trust Universe Comparison Service (TUCS). Only funds with assets over **$20 billion** are included in the comparisons shown in this section.

Comparisons of the Combined Funds' asset mix to the median allocation to stocks, bonds and other assets of the public funds in TUCS over **$20 billion** are shown below:

| | (Millions) | Actual Mix |
|---|---|---|
| Public Equity | $52,596 | 52.0% |
| Total Fixed Income | $25,111 | 24.8% |
| Private Markets - Total | $23,514 | 23.2% |
| Private Markets - Invested | $22,306 | 22.0% |
| Private Markets - Uninvested | $1,208 | 1.2% |
| | | |
| **TOTAL** | **$101,221** | **100.0%** |




| | Domestic Equity | International Equity | Bonds | Alternatives | Cash |
|---|---|---|---|---|---|
| Combined Funds | 35.4% | 17.8% | 20.0% | 22.0% | 4.9% |
| Median in TUCS | 33.8% | 14.6% | 18.0% | 28.2% | 2.7% |

Universe allocation may not total to 100% due to different exposure methods.

## Combined Funds Summary

### Performance Compared to Other Pension Funds

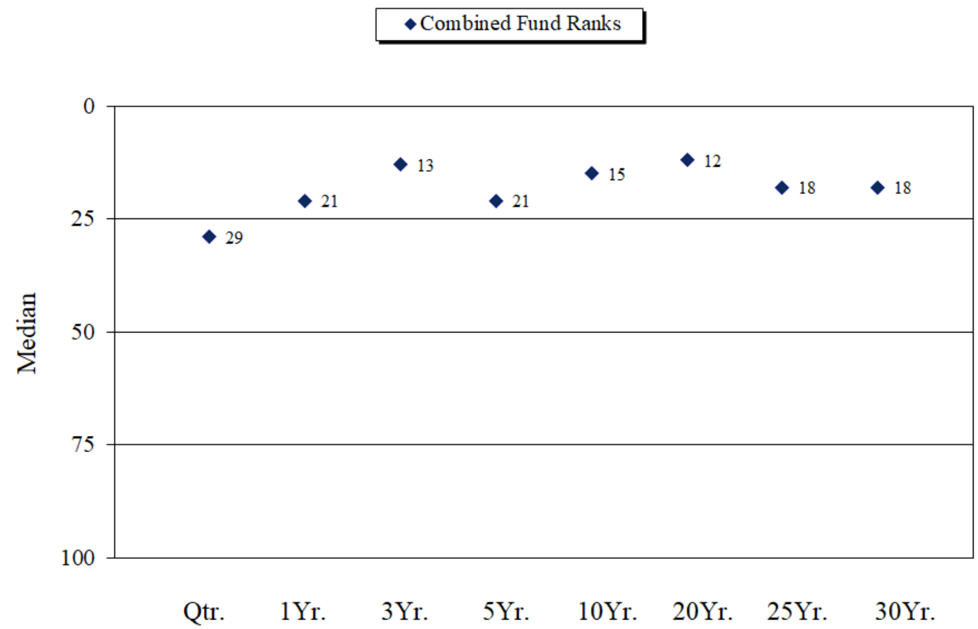
While the SBI is concerned with how its returns compare to other pension investors, universe comparisons should be used with great care. There are several reasons why such comparisons will provide an "apples to oranges" look at performance:

- Differing Allocations. Asset allocation will have a dominant effect on return. The allocation to stocks among the funds in TUCS typically ranges from 20-90%, a very wide range for meaningful comparison. This further distorts comparisons among funds.

- Differing Goals/Liabilities. Each pension fund structures its portfolio to meet its own liabilities and risk tolerance. This will result in different asset mix choices. Since asset mix will largely determine investment results, a universe ranking is not relevant to a discussion of how well a plan sponsor is meeting its long-term liabilities.

With these considerations in mind, the performance of the Combined Funds compared to other public pension funds in Trust Universe Comparison Service (TUCS) are shown below.

The SBI's returns are ranked against public plans with over **$20 billion** in assets. All funds in TUCS report their returns gross of fees.



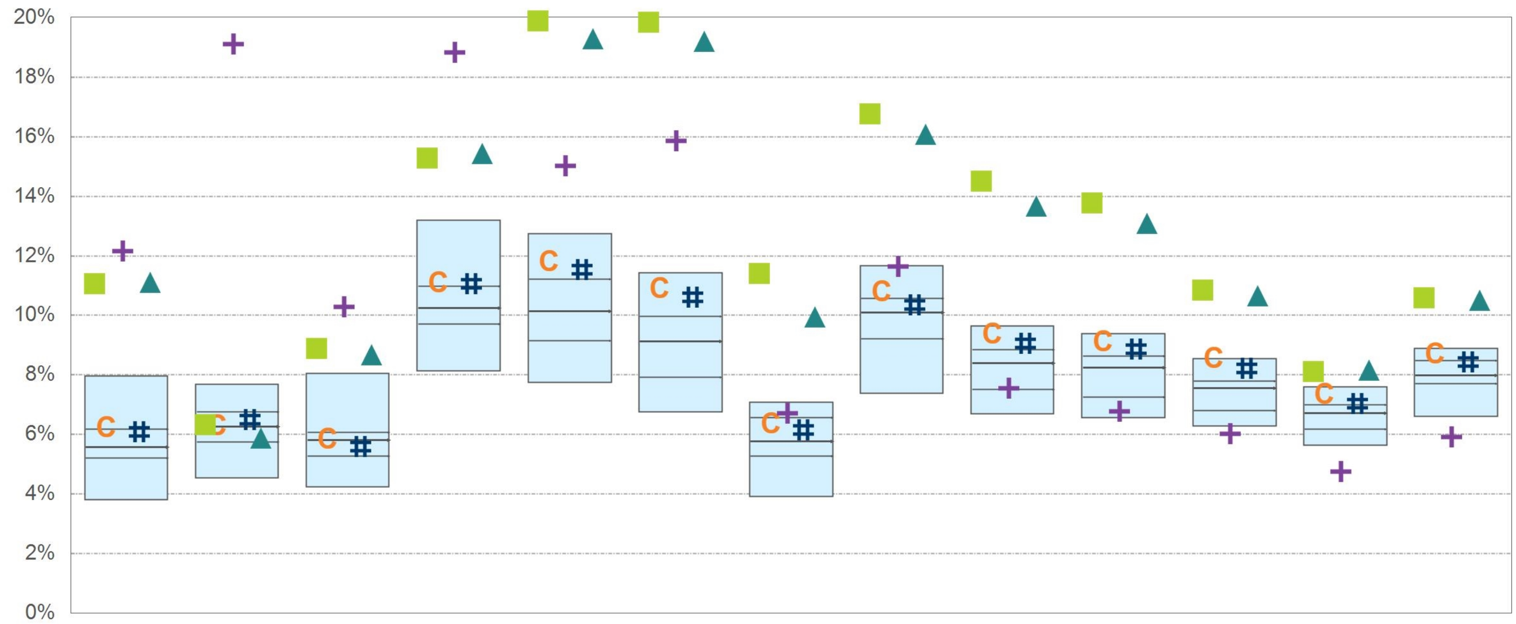

**Periods Ended 06/30/2025**

| | Qtr | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 20 Yrs | 25 Yrs | 30 Yrs |
|---|---|---|---|---|---|---|---|---|
| Combined Funds Percentile Rank in TUCS | 29th | 21st | 13th | 21st | 15th | 12th | 18th | 18th |

# Minnesota State Board of Investments
# Performance Comparison

***Total Returns of Master Trusts - Public : Plans > $20 Billion***

*Cumulative Periods Ending : June 30, 2025*



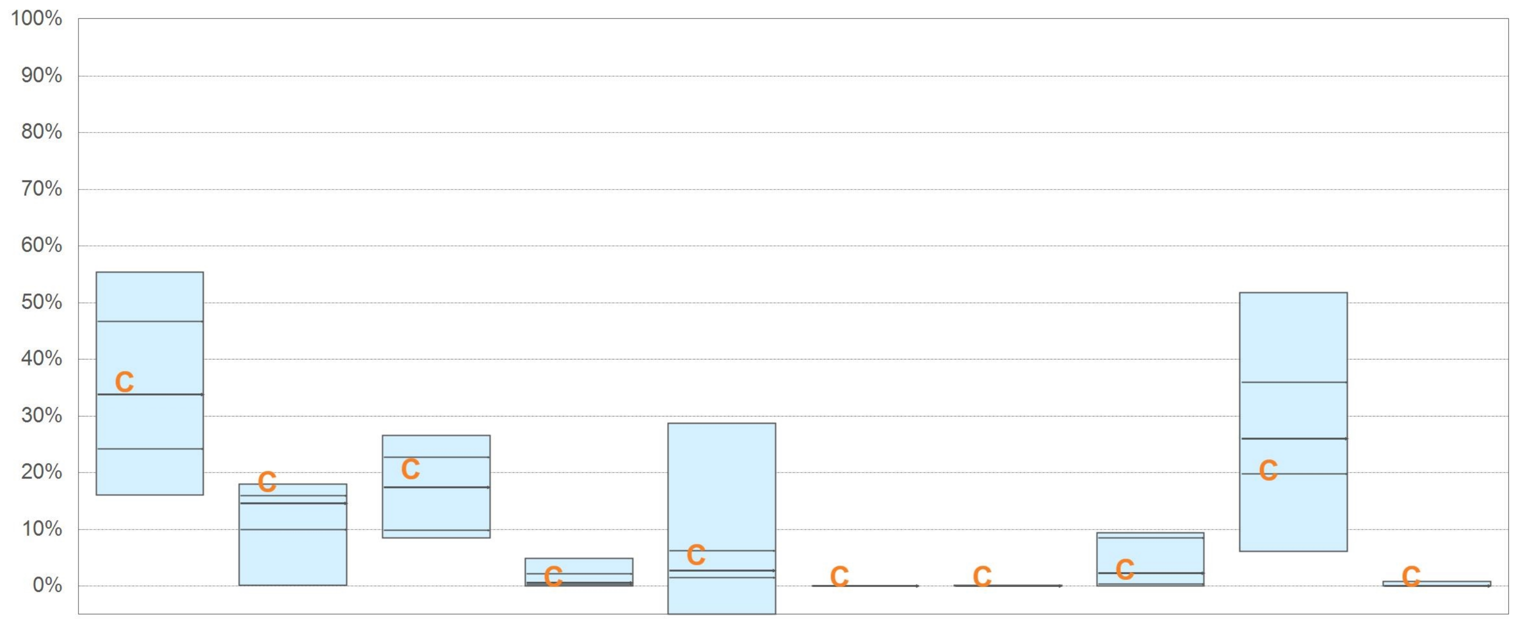

| Percentile Rankings | 1 Qtr | 2 Qtrs | 3 Qtrs | 1 Year | 2 Years | 3 Years | 4 Years | 5 Years | 7 Years | 10 Years | 20 Years | 25 Years | 30 Years |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th | 7.97 | 7.68 | 8.05 | 13.19 | 12.74 | 11.44 | 7.09 | 11.67 | 9.65 | 9.38 | 8.55 | 7.60 | 8.90 |
| 25th | 6.18 | 6.76 | 6.07 | 10.98 | 11.22 | 9.97 | 6.57 | 10.56 | 8.85 | 8.63 | 7.79 | 6.99 | 8.49 |
| 50th | 5.58 | 6.27 | 5.81 | 10.25 | 10.13 | 9.13 | 5.77 | 10.10 | 8.39 | 8.24 | 7.55 | 6.71 | 7.98 |
| 75th | 5.22 | 5.75 | 5.27 | 9.72 | 9.16 | 7.92 | 5.28 | 9.21 | 7.52 | 7.25 | 6.80 | 6.18 | 7.71 |
| 95th | 3.82 | 4.55 | 4.24 | 8.13 | 7.74 | 6.75 | 3.92 | 7.39 | 6.69 | 6.56 | 6.28 | 5.64 | 6.60 |
| No. Of Obs | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 23 | 23 | 20 | 20 | 18 |

| | 1 Qtr | 2 Qtrs | 3 Qtrs | 1 Year | 2 Years | 3 Years | 4 Years | 5 Years | 7 Years | 10 Years | 20 Years | 25 Years | 30 Years |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C Combined Funds | 6.13 (29) | 6.21 (54) | 5.75 (54) | 11.01 (21) | 11.71 (9) | 10.81 (13) | 6.26 (37) | 10.69 (21) | 9.28 (20) | 9.02 (15) | 8.46 (12) | 7.25 (18) | 8.62 (18) |
| # SBI Combined Funds Ind | 5.96 (37) | 6.38 (41) | 5.46 (62) | 10.93 (25) | 11.40 (9) | 10.48 (17) | 6.02 (37) | 10.23 (37) | 8.94 (20) | 8.74 (20) | 8.10 (12) | 6.90 (25) | 8.32 (31) |
| S&P 500 | 10.94 (1) | 6.20 (54) | 8.76 (1) | 15.16 (1) | 19.77 (1) | 19.71 (1) | 11.28 (1) | 16.64 (1) | 14.39 (1) | 13.65 (1) | 10.73 (1) | 7.98 (1) | 10.47 (1) |
| Russell 3000 | 10.99 (1) | 5.75 (75) | 8.54 (1) | 15.30 (1) | 19.15 (1) | 19.08 (1) | 9.81 (1) | 15.96 (1) | 13.55 (1) | 12.96 (1) | 10.53 (1) | 8.04 (1) | 10.37 (1) |
| + MSCI Wld Ex US (Net) | 12.04 (1) | 18.99 (1) | 10.16 (1) | 18.70 (1) | 14.90 (1) | 15.73 (1) | 6.58 (21) | 11.51 (5) | 7.43 (79) | 6.65 (94) | 5.90 (99) | 4.63 (100) | 5.79 (100) |

Wilshire Trust Universe Comparison Service® (TUCS®)

Wilshire

# Minnesota State Board of Investments
## Asset Allocation of Master Trusts - Public : Plans > $20 Billion
*Quarter Ending June 30, 2025*




| Percentile Rankings | US Equity | Non-US Equity | US Fixed | Non-US Fixed | Cash | Convertible | GIC GAC | Real Estate | Alternative Investments | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 5th | 55.33 | 18.00 | 26.57 | 4.89 | 28.67 | 0.02 | 0.12 | 9.37 | 51.77 | 0.81 |
| 25th | 46.72 | 15.99 | 22.72 | 2.10 | 6.25 | 0.00 | 0.00 | 8.51 | 35.93 | 0.05 |
| 50th | 33.75 | 14.62 | 17.41 | 0.57 | 2.69 | 0.00 | 0.00 | 2.24 | 25.96 | 0.00 |
| 75th | 24.19 | 9.92 | 9.78 | 0.19 | 1.42 | 0.00 | 0.00 | 0.30 | 19.79 | 0.00 |
| 95th | 16.05 | 0.10 | 8.50 | 0.00 | -4.97 | 0.00 | 0.00 | 0.04 | 6.05 | 0.00 |
| C Combined Funds | 35.38 (45) | 17.78 (12) | 19.96 (35) | 0.00 (100) | 4.85 (35) | 0.00 (100) | 0.00 (100) | 2.24 (50) | 19.79 (75) | 0.00 (100) |

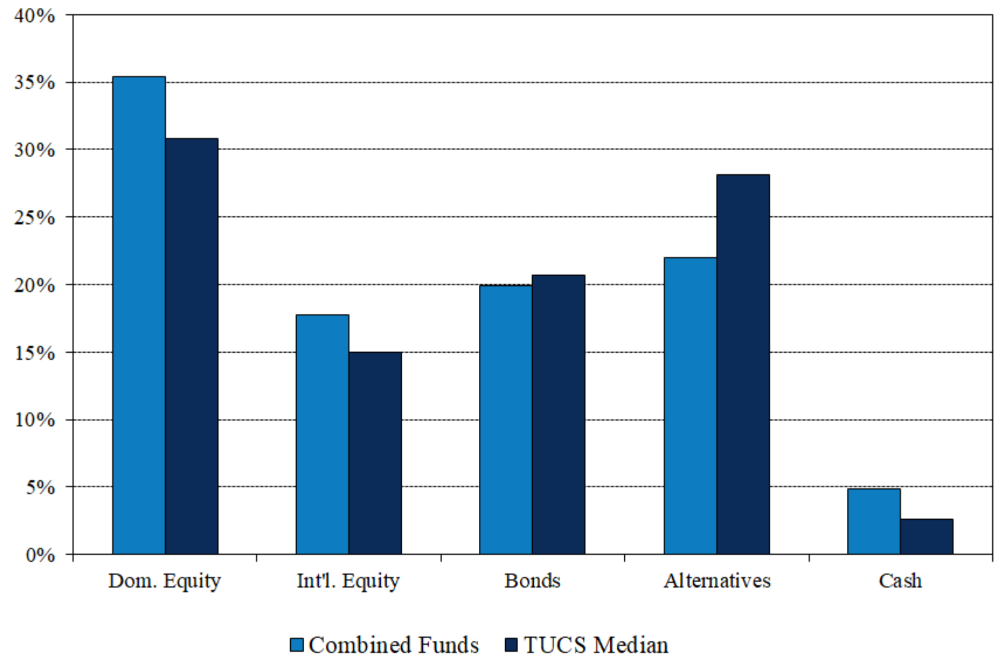
## Combined Funds Summary

### Asset Mix Compared to Other Pension Funds

The comparison universe used by the SBI is the Trust Universe Comparison Service (TUCS). Only funds with assets over **$50 billion** are included in the comparisons shown in this section.

Comparisons of the Combined Funds' asset mix to the median allocation to stocks, bonds and other assets of the public funds in TUCS over **$50 billion** are shown below:

| | (Millions) | Actual Mix |
|---|---|---|
| Public Equity | $52,596 | 52.0% |
| Total Fixed Income | $25,111 | 24.8% |
| Private Markets - Total | $23,514 | 23.2% |
| Private Markets - Invested | $22,306 | 22.0% |
| Private Markets - Uninvested | $1,208 | 1.2% |
| | | |
| **TOTAL** | **$101,221** | **100.0%** |




| | Domestic Equity | International Equity | Bonds | Alternatives | Cash |
|---|---|---|---|---|---|
| Combined Funds | 35.4% | 17.8% | 20.0% | 22.0% | 4.9% |
| Median in TUCS | 30.9% | 15.0% | 20.7% | 28.3% | 2.6% |

Universe allocation may not total to 100% due to different exposure methods.

## Combined Funds Summary

### Performance Compared to Other Pension Funds

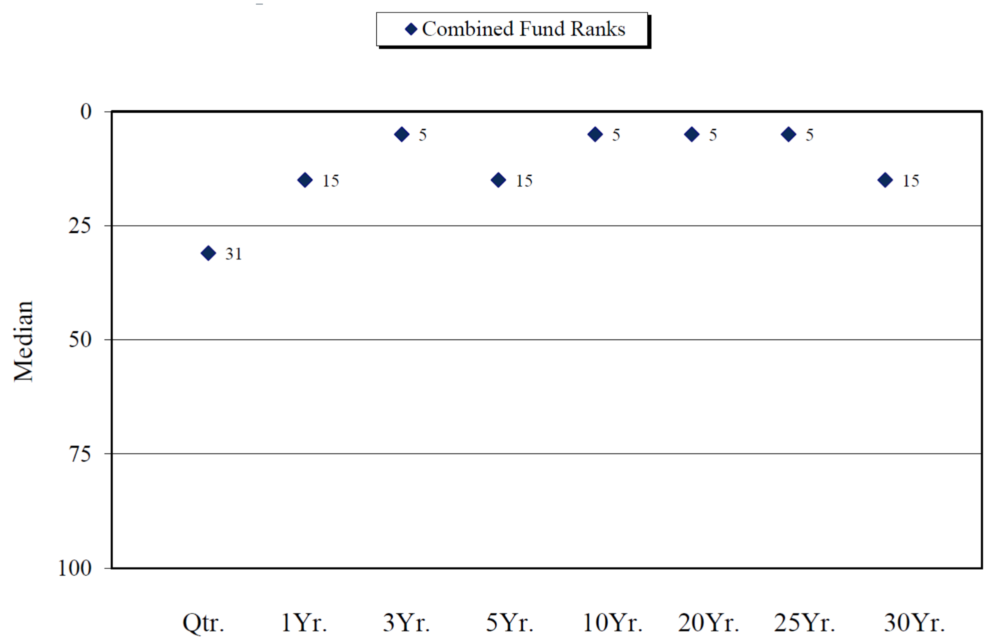
While the SBI is concerned with how its returns compare to other pension investors, universe comparisons should be used with great care. There are several reasons why such comparisons will provide an "apples to oranges" look at performance:

- Differing Allocations. Asset allocation will have a dominant effect on return. The allocation to stocks among the funds in TUCS typically ranges from 20-90%, a very wide range for meaningful comparison. This further distorts comparisons among funds.

- Differing Goals/Liabilities. Each pension fund structures its portfolio to meet its own liabilities and risk tolerance. This will result in different asset mix choices. Since asset mix will largely determine investment results, a universe ranking is not relevant to a discussion of how well a plan sponsor is meeting its long-term liabilities.

With these considerations in mind, the performance of the Combined Funds compared to other public pension funds in Trust Universe Comparison Service (TUCS) are shown below.

The SBI's returns are ranked against public plans with over **$50 billion** in assets. All funds in TUCS report their returns gross of fees.



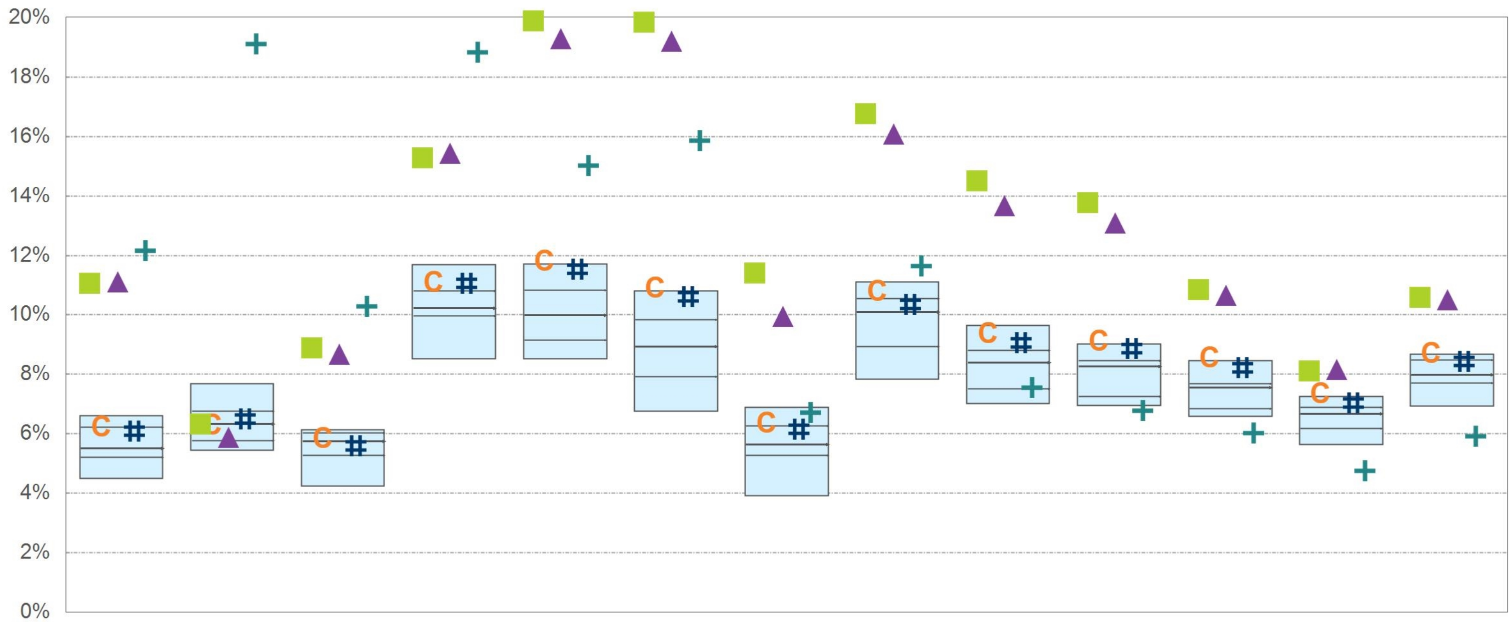

**Periods Ended 06/30/2025**

| | Qtr | 1 Yr | 3 Yrs | 5 Yrs | 10 Yrs | 20 Yrs | 25 Yrs | 30 Yrs |
|---|---|---|---|---|---|---|---|---|
| Combined Funds | 31st | 15th | 5th | 15th | 5th | 5th | 5th | 15th |
| Percentile Rank in TUCS | | | | | | | | |

# Minnesota State Board of Investments
# Performance Comparison

***Total Returns of Master Trusts - Public : Plans > $50 Billion***

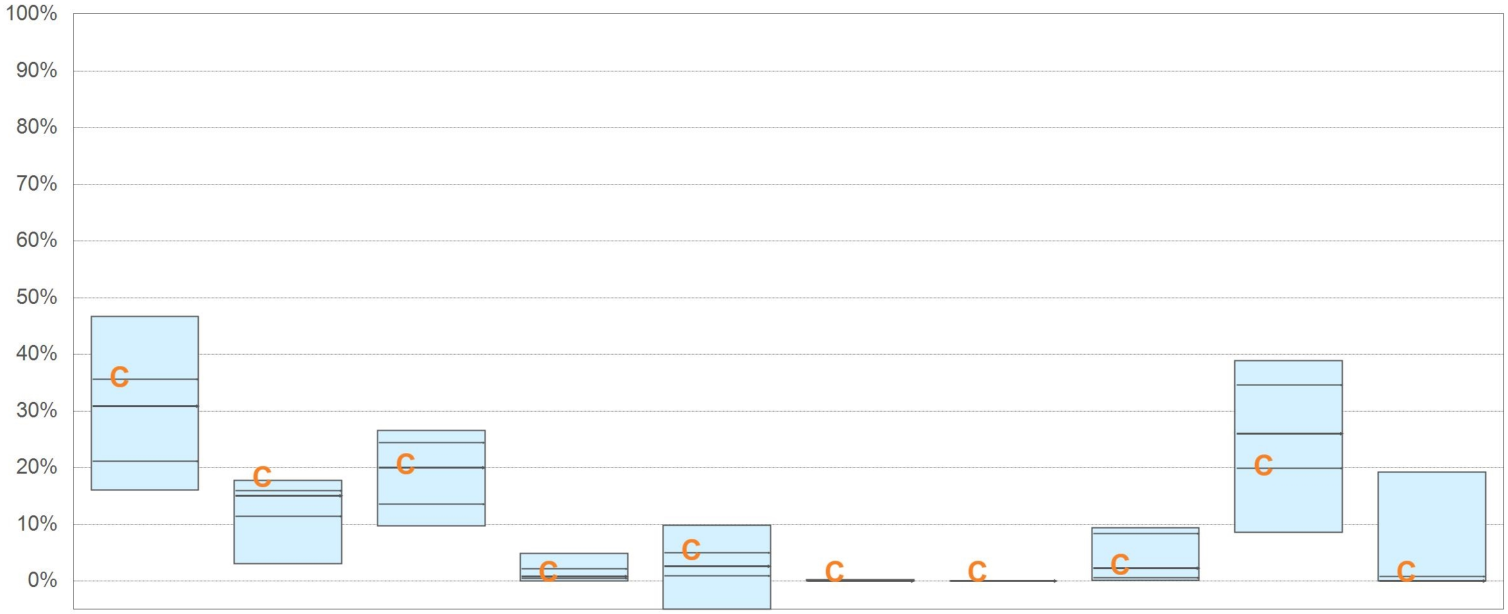
*Cumulative Periods Ending : June 30, 2025*




| Percentile Rankings | 1 Qtr | 2 Qtrs | 3 Qtrs | 1 Year | 2 Years | 3 Years | 4 Years | 5 Years | 7 Years | 10 Years | 20 Years | 25 Years | 30 Years |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5th | 6.60 | 7.68 | 6.14 | 11.70 | 11.71 | 10.81 | 6.88 | 11.11 | 9.64 | 9.02 | 8.46 | 7.25 | 8.67 |
| 25th | 6.22 | 6.76 | 6.03 | 10.80 | 10.82 | 9.84 | 6.26 | 10.54 | 8.81 | 8.46 | 7.69 | 6.89 | 8.49 |
| 50th | 5.52 | 6.34 | 5.75 | 10.22 | 9.98 | 8.94 | 5.63 | 10.10 | 8.39 | 8.26 | 7.55 | 6.68 | 7.98 |
| 75th | 5.22 | 5.76 | 5.27 | 9.97 | 9.16 | 7.92 | 5.28 | 8.94 | 7.52 | 7.25 | 6.84 | 6.18 | 7.71 |
| 95th | 4.49 | 5.44 | 4.24 | 8.53 | 8.53 | 6.75 | 3.92 | 7.83 | 7.01 | 6.95 | 6.59 | 5.64 | 6.93 |
| No. Of Obs | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 15 | 15 | 14 | 14 | 13 |
| C Combined Funds | 6.13 (31) | 6.21 (62) | 5.75 (50) | 11.01 (15) | 11.71 (5) | 10.81 (5) | 6.26 (25) | 10.69 (15) | 9.28 (15) | 9.02 (5) | 8.46 (5) | 7.25 (5) | 8.62 (15) |
| # SBI Combined Funds Ind | 5.96 (37) | 6.38 (43) | 5.46 (62) | 10.93 (15) | 11.40 (5) | 10.48 (15) | 6.02 (25) | 10.23 (31) | 8.94 (15) | 8.74 (15) | 8.10 (5) | 6.90 (15) | 8.32 (33) |
| S&P 500 | 10.94 (1) | 6.20 (62) | 8.76 (1) | 15.16 (1) | 19.77 (1) | 19.71 (1) | 11.28 (1) | 16.64 (1) | 14.39 (1) | 13.65 (1) | 10.73 (1) | 7.98 (1) | 10.47 (1) |
| + MSCI Wld Ex US (Net) | 12.04 (1) | 18.99 (1) | 10.16 (1) | 18.70 (1) | 14.90 (1) | 15.73 (1) | 6.58 (5) | 11.51 (1) | 7.43 (75) | 6.65 (99) | 5.90 (99) | 4.63 (100) | 5.79 (100) |
| Russell 3000 | 10.99 (1) | 5.75 (83) | 8.54 (1) | 15.30 (1) | 19.15 (1) | 19.08 (1) | 9.81 (1) | 15.96 (1) | 13.55 (1) | 12.96 (1) | 10.53 (1) | 8.04 (1) | 10.37 (1) |

Wilshire Trust Universe Comparison Service® (TUCS®)

# Minnesota State Board of Investments
## Asset Allocation of Master Trusts - Public : Plans > $50 Billion
*Quarter Ending June 30, 2025*




| Percentile Rankings | US Equity | Non-US Equity | US Fixed | Non-US Fixed | Cash | Convertible | GIC GAC | Real Estate | Alternative Investments | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 5th | 46.72 | 17.78 | 26.57 | 4.89 | 9.84 | 0.18 | - | 9.37 | 38.90 | 19.16 |
| 25th | 35.61 | 15.99 | 24.41 | 2.10 | 4.97 | 0.00 | - | 8.32 | 34.54 | 0.81 |
| 50th | 30.85 | 15.03 | 19.96 | 0.76 | 2.64 | 0.00 | - | 2.24 | 25.96 | 0.05 |
| 75th | 21.08 | 11.41 | 13.58 | 0.42 | 0.96 | 0.00 | - | 0.56 | 19.87 | 0.00 |
| 95th | 16.05 | 3.05 | 9.72 | 0.00 | -4.97 | 0.00 | - | 0.16 | 8.62 | 0.00 |
| C Combined Funds | 35.38 (33) | 17.78 (5) | 19.96 (50) | 0.00 (100) | 4.85 (31) | 0.00 (100) | 0.00 (1) | 2.24 (50) | 19.79 (83) | 0.00 (100) |

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# TAB B

# Executive Director's Administrative Report

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DATE: October 13, 2025

TO: Members, State Board of Investment

**FROM: Jill E. Schurtz**
**Executive Director and Chief Investment Officer**

**1. Report on SBI's Administrative Budget**

A report on the SBI's administrative budget for the fiscal year to date through June 30, 2025, is included as **Attachment A**.

**2. Russia/Belarus Update**

Each quarter, staff provides a report to the Board on steps taken to implement *Minnesota Statutes*, section 11A.245 that requires SBI actions concerning companies with operations in Russia and Belarus.

During the 2022 legislative session, the Minnesota Legislature passed a bill requiring the SBI to liquidate its holdings in companies with their principal place of business in Russia or Belarus. The bill was signed into law and became effective on April 2, 2022. The statute prohibits any new investment in target companies and requires the SBI to identify and liquidate, to the extent practicable, 50% of its direct holdings in target companies within nine months of the effective date; and 100% of its holdings within 15 months of the effective date. SBI utilizes information from data service providers, including MSCI, Factset, and Bloomberg, to develop a list of target companies with their principal place of business in Russia or Belarus. Staff receives monthly reports from the SBI's custodian bank concerning SBI holdings of companies on the restricted list.

In the second calendar quarter of 2025, no Russian holdings were sold. As of June 30, 2025, eight Russian holdings and currencies remained on the divestment list. The liquidation manager indicated that, except for sporadic trading in foreign-listed depository receipts, the market for equity trading remained effectively closed to foreign investors during the quarter due to sanctions imposed by the United States and its allies as well as retaliatory actions taken by the Russian government to restrict foreign capital flows. Due to these sanctions and actions, it was not possible to liquidate 100% of the holdings within 15 months of the effective date. Going forward, the liquidation manager will sell as opportunities allow.

On June 23, 2025, staff sent a letter to each applicable external manager containing the most recent restricted list.

**3. Iran Update**

Each quarter, staff provides a report to the Board on steps taken to implement *Minnesota Statutes*, section 11A.244, which requires certain SBI actions concerning companies with operations in Iran.

SBI receives information on companies with Iran operations from Institutional Shareholder Services, Inc. (ISS). Staff receives monthly reports from the SBI's custodian bank concerning SBI holdings of companies on the restricted list and undertakes the required communication.

Under the statute, if after 90 days following the SBI's communication, a company continues to have scrutinized business operations, the SBI must divest all publicly traded securities of the company according to the following schedule:

- at least 50% shall be sold within nine months after the company appeared on the scrutinized list; and

- 100% within fifteen months after the company appeared on the scrutinized list.

At the end of the second quarter, the SBI Combined Funds portfolio held no companies with operations in Iran.

On June 23, 2025, staff sent a letter to each applicable external manager containing the most recent restricted list.

**4. Thermal Coal Update**

The Minnesota State Board of Investment approved a resolution at its May 2020 meeting requiring the removal of any publicly traded company deriving more than 25% of its revenue from thermal coal production (exploration/mining). The SBI has contracted with Moody's ESG and Institutional Shareholder Services, Inc. (ISS) to identify companies that meet the criteria set forth in the resolution.

The resolution required removal of companies initially identified in a prudent and expeditious manner by December 31, 2020. Beginning with the Board's regularly scheduled third quarter 2020 meeting and continuing each quarter thereafter, staff reports to the Board on updates and the status of any action authorized by this resolution.

For the quarter ending June 30, 2025, the MSBI portfolio held no thermal coal-connected assets.

On June 23, 2025, staff sent a letter to each applicable external manager containing the most recent restricted list.

**5. Litigation Update**

SBI legal counsel will give a verbal update on the status of any litigation at the meeting.

ATTACHMENT A

# STATE BOARD OF INVESTMENT
## FISCAL YEAR 2025 ADMINISTRATIVE BUDGET REPORT
## FISCAL YEAR TO DATE THROUGH JUNE 30, 2025

| ITEM | FISCAL YEAR 2025 BUDGET | FISCAL YEAR 2025 6/30/2025 |
|---|---|---|
| **PERSONNEL SERVICES** | | |
| FULL TIME EMPLOYEES | $ 12,500,000 | $ 10,325,550 |
| PART TIME EMPLOYEES | 50,000 | 41,053 |
| MISCELLANEOUS PAYROLL | 200,000 | 60,912 |
| **SUBTOTAL** | **$ 12,750,000** | **$ 10,427,515** |
| | | |
| **STATE OPERATIONS** | | |
| RENTS & LEASES | $ 693,102 | $ 372,348 |
| REPAIRS/ALTERATIONS/MAINTENANCE | 2,211,869 | 1,997,493 |
| PRINTING & BINDING | 2,500 | 2,175 |
| PROFESSIONAL/TECHNICAL SERVICES/IT PROF | 383,940 | 255,345 |
| COMPUTER SYSTEMS SERVICES | 385,296 | 285,085 |
| COMMUNICATIONS | 25,000 | 6,681 |
| TRAVEL, IN-STATE | 3,000 | 1,126 |
| TRAVEL, OUT-STATE | 181,500 | 165,626 |
| SUPPLIES | 58,000 | 52,368 |
| EQUIPMENT | 464,401 | 408,902 |
| EMPLOYEE DEVELOPMENT | 208,400 | 104,310 |
| OTHER OPERATING COSTS | 241,855 | 173,817 |
| INDIRECT COSTS | 427,537 | 401,237 |
| **SUBTOTAL** | **$ 5,286,400** | **$ 4,226,513** |
| | | |
| **TOTAL ADMINISTRATIVE BUDGET** | **$ 18,036,400** | **$ 14,654,028** |

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# TAB C

# Private Markets Investment Program Report

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DATE: October 13, 2025

TO: Members, Investment Advisory Council

FROM: SBI Staff

**SUBJECT: Private Markets Commitments for Consideration**

Staff has reviewed the following action agenda item:

A. Status of SBI Current Private Markets Commitments
B. Consideration of New Investment Commitments

**Existing Managers:**

| | | | |
|---|---|---|---|
| Private Equity | Blackstone | Strategic Partners X | up to $250 million |
| Private Equity | Blackstone | Blackstone Supplemental Account – M, L.P. | up to $300 million |
| Private Equity | Bridgepoint Advisers Limited | Bridgepoint Europe VIII | up to $200 million |
| Private Credit | Merit Capital Partners | Merit Capital Fund VIII, L.P. | up to $125 million |
| Private Equity | Nordic Capital | Nordic Capital XII | up to $150 million |
| Private Equity | Permira | Permira IX | up to $250 million |
| Private Equity | Wind Point Partners | Wind Point Partners XI | up to $200 million |

**SBI action is required on item B.**

## A) Status of SBI Current Private Markets Commitments

***Combined Funds***
***June 30, 2025***

Combined Funds Market Value $101,221,386,065

| | % of Combined Funds | Current Level | Target Level [1] | Difference |
|---|---|---|---|---|
| Market Value (MV) | 22.0% | $22,305,668,201 | $25,305,346,516 | $2,999,678,315 |
| *Policy Target* | *25%* | | | |
| *Statutory Limit* | *35%* | | | |
| MV +Unfunded | 33.5% | $33,864,574,407 | $50,610,693,032 | $16,746,118,625 |
| *Policy Limit* | *50.0%* | | | |

| Asset Class | % of Combined Funds | Market Value | Unfunded Commitment | Total |
|---|---|---|---|---|
| Private Equity | 15.9% | $16,141,709,172 | $8,347,754,056 | $24,489,463,228 |
| Private Credit | 1.9% | $1,911,326,772 | $1,307,949,515 | $3,219,276,287 |
| Real Assets | 1.9% | $1,901,043,527 | $602,670,341 | $2,503,713,868 |
| Real Estate | 2.2% | $2,269,213,895 | $1,300,532,295 | $3,569,746,190 |
| Other[2] | | $82,374,834 | | $82,374,834 |
| **Total** | | $22,305,668,201 | $11,558,906,206 | $33,864,574,407 |

***Cash Flows***
***June 30, 2025***

| Calendar Year | Capital Calls | Distributions | Net Invested |
|---|---|---|---|
| 2025 | $1,209,367,646 | ($2,508,964,131) | ($1,299,596,485) |
| 2024 | $2,768,967,097 | ($3,849,135,502) | ($1,080,168,405) |
| 2023 | $2,744,167,005 | ($2,162,823,326) | $581,343,680 |
| 2022 | $3,945,092,895 | ($3,140,446,870) | $804,646,025 |
| 2021 | $4,556,450,698 | ($3,672,823,834) | $883,626,864 |
| 2020 | $2,786,134,001 | ($2,318,825,278) | $467,308,723 |
| 2019 | $2,543,614,503 | ($2,080,037,860) | $463,576,642 |
| 2018 | $1,992,000,341 | ($2,049,733,815) | ($57,733,474) |
| 2017 | $2,021,595,780 | ($2,383,863,711) | ($362,267,931) |

[1] There is no target level for MV + Unfunded. This amount represents the maximum allowed by policy
[2] Represents in-kind stock distributions from the liquidating portfolio managed by T.Rowe Price and cash accruals.

## B. Consideration of New Investment Commitments

**ACTION ITEMS:**

**1) Investment with an existing Private Equity manager, The Blackstone Group ("Blackstone"), in Strategic Partners Fund X ("Fund" or "SP X").**

Blackstone is forming Strategic Partners Fund X to seek capital appreciation primarily through the purchase of secondary interests in mature, high-quality buyout funds from investors seeking liquidity prior to the termination of these funds, with secondary interests in mezzanine, venture capital, distressed securities, fund of funds and other asset classes also considered. SP X may also, to a lesser extent, make investments in concentrated general partner-led secondaries, primary investments in underlying vehicles and direct equity, equity-like and debt investments. While SP X will have a global investment mandate, it is anticipated that most of its commitments will be made to funds and assets located in the U.S. and Western Europe. Blackstone's team is able to underwrite transactions that range in size and complexity, and it believes that the team's in-depth secondary market expertise and relationships with both limited partners and fund managers will enable it to source, evaluate and close attractive secondary investments for SP X.

In addition to reviewing the attractiveness of the Strategic Partners Fund X investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the Fund's potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Strategic Partners Fund X is included as **Attachment A beginning on page 11.**

**RECOMMENDATION:**

**Staff is recommending a commitment of <u>up to $250 million</u> to Strategic Partners Fund X and requests the IAC's endorsement of this recommendation for the Board's approval. It is understood that 1) such a commitment will not exceed 20% of Strategic Partners Fund X and 2) an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by The Blackstone Group upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on The Blackstone Group or a reduction or termination of the commitment.**

**2) Investment with an existing private equity manager, The Blackstone Group ("Blackstone"), in Blackstone Supplemental Account - M, L.P. ("Fund").**

In 2020, the Minnesota State Board of Investment ("SBI") approved the establishment of the Blackstone Supplemental Account ("The Partnership"), a vehicle designed to co-invest in certain investments made by Blackstone funds in which the SBI is also a Limited Partner, and which will invest in a manner consistent with philosophies around portfolio construction and discretion agreed upon by both Blackstone and the SBI. The initial commitment to the Partnership was $125 million. To date, SBI has funded $113.6 million to co-investments through the Partnership. In May of 2025 the IAC endorsed an additional commitment amount of $175 million that has not yet been approved by the Board. To facilitate SBI's participation in potential co-investment opportunities through the Partnership going forward, staff recommends revising the commitment from $175 million to an amount of up to $300 million, bringing SBI's total commitment amount to up to $425 million.

In addition to reviewing the attractiveness of the Blackstone Supplemental Account - M, L.P. investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the underlying strategies' potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Blackstone Supplemental Account - M, L.P. is included as **Attachment B beginning on page 15.**

**RECOMMENDATION:**

**Staff is recommending a revised commitment of <u>up to $300 million</u> to Blackstone Supplemental Account - M, L.P. and requests the IAC's endorsement of this recommendation for the Board's approval. The approval of this recommendation will bring the total commitment to this Partnership since inception to $425 million. It is understood that an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by The Blackstone Group upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on The Blackstone Group or a reduction or termination of the commitment.**

3) **Investment with an existing Private Equity manager, Bridgepoint Advisers Limited ("Bridgepoint"), in Bridgepoint Europe VIII ("Fund" or "BE VIII").**

Bridgepoint is raising Bridgepoint Europe VIII to continue its strategy of investing in middle-market buyouts of growth-oriented European businesses through control-oriented investments. The Fund will target companies with enterprise values typically between €300 million and €1 billion, without prescriptive country allocations, allowing flexibility to deploy capital across Europe and capture relative value opportunities. BE VIII will focus on four sectors: business and financial services, healthcare, advanced industrials, and technology. Within these sectors, Bridgepoint seeks established companies with sustainable demand, high-quality earnings, and strong recurring revenues, as well as businesses with potential for consolidation in fragmented markets. The Fund will pursue opportunities that combine operational improvements with growth initiatives, aiming to generate premium returns irrespective of macroeconomic conditions.

In addition to reviewing the attractiveness of the Bridgepoint Europe VIII investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the Fund's potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Bridgepoint Europe VIII is included as **Attachment C beginning on page 19.**

**RECOMMENDATION:**

**Staff is recommending a commitment of <u>up to $200 million</u> to Bridgepoint Europe VIII and requests the IAC's endorsement of this recommendation for the Board's approval. It is understood that 1) such a commitment will not exceed 20% of Bridgepoint Europe VIII and 2) an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by Bridgepoint Advisers Limited upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on Bridgepoint Advisers Limited or a reduction or termination of the commitment.**

4) **Investment with an existing Private Credit manager, Merit Capital Partners ("Merit"), in Merit Capital Fund VIII, L.P. ("Fund").**

Merit Capital Partners is establishing Merit Capital Fund VIII to make direct, privately negotiated junior capital investments (subordinated debt and equity) in lower middle-market companies in the United States and Canada. The Fund expects to invest in a combination of junior capital securities, aiming to provide a consistent current yield from its mezzanine debt, along with meaningful equity upside through the investment of preferred and common equity. Merit pursues recapitalization and fundless sponsor deals by targeting profitable, lower-middle-market companies in defensible industries, sourcing transactions primarily through non-traditional channels, and maintaining control over deal structures with conservative leverage and significant equity ownership. Merit Capital Fund VIII is expected to emphasize subordinated debt investments complemented by preferred and common equity to provide strong current yields with meaningful upside. This approach is supported by active portfolio management and close partnerships with management teams to drive value creation and optimize exits.

In addition to reviewing the attractiveness of the Merit Capital Fund VIII, L.P. investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the Fund's potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Merit Capital Fund VIII, L.P. is included as **Attachment D beginning on page 23.**

**RECOMMENDATION:**

**Staff is recommending a commitment of <u>up to $125 million</u> to Merit Capital Fund VIII, L.P. and requests the IAC's endorsement of this recommendation for the Board's approval. It is understood that 1) such a commitment will not exceed 20% of Merit Capital Fund VIII, L.P. and 2) an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by Merit Capital Partners upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on Merit Capital Partners or a reduction or termination of the commitment.**

**5) Investment with an existing Private Equity manager, Nordic Capital, in Nordic Capital XII ("Fund").**

Nordic Capital is raising Nordic Capital XII to continue its strategy of investing in control-oriented, upper-middle-market growth buyouts, primarily in Northern Europe, with an additional focus on healthcare growth buyouts across Europe and North America. The Fund will target companies with enterprise values between €300 million and €2 billion across four sectors: Healthcare, Technology & Payments, Services and Industrial Tech, and Financial

Services. Within these sectors, Nordic Capital seeks resilient businesses supported by long-term secular growth, pursuing both transformational and growth acceleration opportunities. Nordic Capital XII will focus on operational improvements and revenue growth, supported by the Firm's Ownership Excellence Framework, its advisor network, and an integrated ESG approach.

In addition to reviewing the attractiveness of the Nordic Capital XII investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the Fund's potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Nordic Capital XII is included as **Attachment E beginning on page 27.**

**RECOMMENDATION:**

**Staff is recommending a commitment of <u>up to $150 million</u> to Nordic Capital XII and requests the IAC's endorsement of this recommendation for the Board's approval. It is understood that 1) such a commitment will not exceed 20% of Nordic Capital XII and 2) an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by Nordic Capital upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on Nordic Capital or a reduction or termination of the commitment.**

**6) Investment with an existing Private Equity manager, Permira, in Permira IX ("Fund" or "P9").**

Permira is raising Permira IX to continue its long-established strategy of sector-focused investing in large-scale, transformational growth opportunities through control-oriented buyouts primarily across Europe and North America, with flexibility to pursue attractive opportunities globally. The Fund will focus on four core sectors: consumer, healthcare, services, and technology. Within these sectors, Permira seeks market-leading companies with resilient business models supported by strong secular growth, often in enterprise technology, digital platforms, iconic consumer brands, and scale growers in healthcare and services. P9 expects to pursue both complex transformational opportunities and high-growth acceleration opportunities, with an emphasis on operational improvements and revenue growth. Permira's experienced team and dedicated value creation resources provide sector-specific expertise to drive ambitious transformation plans and sustainable growth.

In addition to reviewing the attractiveness of the Permira IX investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the Fund's potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Permira IX is included as **Attachment F beginning on page 31.**

**RECOMMENDATION:**

**Staff is recommending a commitment of <u>up to $250 million</u> to Permira IX and requests the IAC's endorsement of this recommendation for the Board's approval. It is understood that 1) such a commitment will not exceed 20% of Permira IX and 2) an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by Permira upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on Permira or a reduction or termination of the commitment.**

**7) Investment with an existing Private Equity manager, Wind Point Partners, in Wind Point Partners XI ("Fund" or "WPP XI").**

Wind Point Partners is raising Wind Point Partners XI to continue its long-established strategy of investing in North American middle-market companies through control-oriented buyouts. The Fund will target businesses with enterprise values between $100 million and $1 billion in the business services, consumer products, and industrial products sectors. WPP XI will focus on established companies that require leadership enhancement and operational or strategic support to accelerate growth. The Fund seeks to generate value by pairing portfolio companies with top-caliber CEOs from Wind Point's extensive executive network and by implementing tailored value creation plans centered on operational improvements, profitability enhancements, and organic growth initiatives. Growth will also be pursued through targeted add-on acquisitions, supported by Wind Point's sector specialization and active ownership approach.

In addition to reviewing the attractiveness of the Wind Point Partners XI investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, the manager's approach to talent and culture, risk framework, stewardship, and governance, and, to the extent available, a review of the Fund's potential investor base. The staff's diligence process will continue as additional data and documentation become available.

More information on Wind Point Partners XI is included as **Attachment G beginning on page 35.**

**RECOMMENDATION:**

**Staff is recommending a commitment of <u>up to $200 million</u> to Wind Point Partners XI and requests the IAC's endorsement of this recommendation for the Board's approval. It is understood that 1) such a commitment will not exceed 20% of Wind Point Partners XI and 2) an additional amount not to exceed one percent of the total commitment for the payment of required charges at closing may be required and is approved. Approval of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and none of the State of Minnesota, the Investment Advisory Council, the State Board of Investment, or its Executive Director have any liability for reliance by Wind Point Advisors LLC upon this approval. Until the Executive Director, on behalf of the SBI, executes a formal agreement, further due diligence and negotiations may result in the imposition of additional terms and conditions on Wind Point Advisors LLC or a reduction or termination of the commitment.**

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**ATTACHMENT A**

**PRIVATE EQUITY MANAGER SUMMARY PROFILE**

## I. Background Data

| | |
|---|---|
| ***Name of Fund:*** | Strategic Partners X L.P. |
| ***Type of Fund:*** | Private Equity |
| ***Target Fund Size:*** | $22.5 billion |
| ***Fund Manager:*** | Blackstone Strategic Partners |
| ***Manager Contact:*** | William Rosener<br>Blackstone Strategic Partners<br>Blackstone Inc.<br>345 Park Avenue<br>New York, NY 10154 |

## II. Organization and Staff

Blackstone Inc. ("Blackstone" or the "Firm"), through its secondary platform, Blackstone Strategic Partners, is forming Strategic Partners X ("SP X" or "the Fund") to continue its strategy of investing in the private equity secondary market. With over 25 years of experience, Blackstone Strategic Partners is recognized as an innovative and market-leading secondary private equity investor, with broad transaction capabilities on a global scale through its network of strong relationships, as well as a leading reputation for executing transactions on a fair, timely and confidential basis.

Blackstone Strategic Partners was established in 2000 as Donaldson, Lufkin and Jenrette's ("DLJ") dedicated secondary private equity manager prior to the acquisition of DLJ by Credit Suisse. In 2013, Blackstone acquired the Strategic Partners business from Credit Suisse. Blackstone Strategic Partners utilizes Blackstone's global capabilities, relationships, and expertise to provide significant competitive advantages in sourcing and executing secondary transactions and ultimately strengthen Blackstone Strategic Partners' investment offering. Blackstone Strategic Partners believes that leveraging the Blackstone platform, while still preserving its investment philosophy and focus, translates into enhanced investment returns for its limited partners. Since its founding in 2000, Blackstone Strategic Partners has raised over $96 billion across its platform. Strategic Partners X will be the fifth secondary private equity fund sponsored by Blackstone and the tenth managed and led by the Strategic Partners team.

Blackstone Strategic Partners has 154 professionals located in New York, London, San Francisco, Paris, Los Angeles, Singapore and Nashville. The team is led by Verdun Perry, who has been with Blackstone Strategic Partners since its inception in 2000. In addition to the dedicated investment professionals, Blackstone Strategic Partners is supported by the full resources and infrastructure of Blackstone's central corporate functions.

## III. Investment Strategy

Like its predecessor funds, SP X will seek significant capital appreciation primarily through the purchase of secondary interests in mature buyout funds from investors seeking liquidity prior to the termination of these funds, with secondary interests in mezzanine, venture capital, distressed securities, fund of funds and other asset classes also considered. The Fund may also, to a lesser extent, make investments in concentrated general partner-led secondaries, primary investments in underlying vehicles and direct equity, equity-like and debt investments. SP X will invest opportunistically in transactions that can range from a single fund interest with original commitments of less than $1 million to a large, complex portfolio of funds valued at billions of dollars with several hundred underlying fund interests. While the Fund will have a global investment mandate, it is anticipated that most of its commitments will be made to funds and assets located in North America and Western Europe.

Blackstone Strategic Partners is able to underwrite transactions of all sizes and complexities, from single assets to multi-asset portfolios across buyout, venture/growth capital, fund of funds, real estate and infrastructure funds. Blackstone Strategic Partners' consistent and cohesive team intends to leverage its extensive database and investment experience to re-price complex transactions, which can often contain 50-100 or more underlying funds with speed and accuracy.

SP X expects to seek opportunities in both non-competitive and competitive transactions. Blackstone Strategic Partners believes that the team's in-depth secondary market expertise and relationships with both limited partners and fund managers will enable it to source, evaluate and close attractive secondary investments for the Fund. 60% of the prior fund's completed deals are from repeat sellers.

Blackstone is one of the world's largest alternatives managers across private equity, real estate, credit, secondary funds, tactical opportunities, infrastructure, insurance solutions, hedge fund solutions and close-ended mutual funds. Blackstone Strategic Partners believes that it benefits significantly from the position that Blackstone occupies as a leading global alternative asset manager. Blackstone's scale and institutional reputation and franchise should allow Blackstone Strategic Partners to gain access to incremental and proprietary opportunities.

## IV. *Investment Performance*

Previous fund performance as of March 31, 2025 for Blackstone Strategic Partners and the SBI's investments with previous funds and SBI's specific performance is shown below:

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| SP I | 2001 | $832 million | $100 million | 17% | 1.6x | 1.6x |
| SP II | 2003 | $ 1,625 million | $100 million | 35% | 1.8x | 1.8x |
| SP III | 2005 | $ 1,900 million | $100 million | 6% | 1.4x | 1.4x |
| SP IV | 2008 | $ 2,073 million | $100 million | 13% | 1.6x | 1.6x |
| SP V | 2011 | $ 2,429 million | $100 million | 18% | 1.6x | 1.6x |
| SP VI | 2014 | $ 4,363 million | $150 million | 14% | 1.5x | 1.3x |
| SP VII | 2016 | $ 7,490 million | $150 million | 16% | 1.7x | 1.3x |
| SP VIII | 2019 | $11,414 million | $150 million | 22% | 1.6x | 0.8x |
| SP IX | 2021 | $22,706 million | $100 million | 21% | 1.3x | 0.1x |

* Previous Fund investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, Net MOIC, and DPI provided by the manager.

## V. *Investment Period and Term*

The fund will have a four year investment period from the final closing subject to a one year extension with the consent of the Advisory Committee. The term of the fund will be ten years after the final closing, subject to two, one-year extensions at the discretion of the General Partner and two additional one-year extensions with the consent of the Advisory Committee or a majority in interest of Combined Limited Partners.

*This document is a summary of more detailed information provided in the Confidential Private Placement Memorandum (the "PPM"). It is qualified in its entirety by the more detailed information provided in the PPM and any supplemental thereto.*

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## ATTACHMENT B

**PRIVATE EQUITY MANAGER SUMMARY PROFILE**

### *I. Background Data*

| | |
|---|---|
| ***Name of Fund:*** | Blackstone Supplemental Account |
| ***Type of Fund:*** | Private Equity |
| ***Target Fund Size:*** | $300 million |
| ***Fund Manager:*** | Blackstone Management Partners L.L.C.<br>Blackstone Growth Advisors L.L.C. |
| ***Manager Contact:*** | Kelly Stephens<br>345 Park Avenue<br>New York, NY 10154 |

### *II. Organization and Staff*

Blackstone Inc. (together with its affiliates "Blackstone" or the "Firm") was founded in 1985 by Stephen A. Schwarzman and Peter G. Peterson and is headquartered in New York, NY. Blackstone's alternative asset management businesses include investment vehicles focused on private equity, real estate, hedge fund solutions, credit, secondary funds, opportunistic, growth, infrastructure, insurance solutions and life sciences. As of June 30, 2025, Blackstone had approximately 260 Senior Managing Directors, and roughly 5,000 employees across 27 offices globally, and the Firm's total assets under management was approximately $1,211 trillion.

### *III. Investment Strategy*

In 2020, the Minnesota State Board of Investment ("SBI") approved the establishment of the Blackstone Supplemental Account ("Partnership"), a vehicle designed to co-invest in certain investments made by Blackstone funds in which the SBI is also a Limited Partner, and which will invest in a manner consistent with philosophies around portfolio construction and discretion agreed upon by both Blackstone and the SBI. The initial commitment to the Partnership was $125 million. To date, SBI has funded $113.6 million to co-investments through the Partnership. Accordingly, to facilitate SBI's participation in potential co-investment opportunities through the Partnership going forward, staff recommends an additional commitment of up to $300 million to the Partnership, bringing SBI's total commitment amount to up to $425 million.

It is expected that co-investment opportunities that the Partnership may invest in will arise from corporate private equity, growth equity, and secondary transactions in Blackstone strategies in which the SBI is an existing Limited Partner and strategies the SBI may approve in the future. Accordingly, the SBI will have already performed due diligence on the relevant strategy, investment team and investment process prior to the Partnership participating in any investment. These strategies include, but are not limited to, Blackstone's Growth, Capital Partners Asia, Energy Transition Partners, Strategic Partners and Capital Partners strategies. There can be no guarantee that any capital committed to a co-investment partnership will ultimately be invested.

## IV. *Investment Performance*

Previous fund performance as of June 30, 2025 for Blackstone and the SBI's investments with previous funds, where applicable is shown below. Strategic Partners Performance as of March 31, 2025.

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| Blackstone Capital Partners IV | 2002 | $6.5 Billion | $70 million | 36.1% | 2.5x | 2.5x |
| Blackstone Capital Partners V | 2006 | $20.4 Billion | $140 million | 8.2% | 1.7x | 1.7x |
| Blackstone Capital Partners VI | 2011 | $15.1 Billion | $100 million | 12.3% | 1.8x | 1.6x |
| Blackstone Capital Partners VII | 2016 | $18.0 Billion | $130 million | 12.8% | 1.7x | 0.9x |
| Blackstone Capital Partners VIII | 2019 | $24.5 Billion | $150 million | 10.3% | 1.3x | 0.2x |
| Blackstone Capital Partners IX | 2024 | $21.1 Billion | $150 million | N/A | 1.0x | N/A |

* Investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net MOIC, and net DPI provided by Blackstone.

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| Blackstone Growth Equity | 2020 | $4.6 Billion | $250 million | 1.1)% | 1.0x | 0.1x |
| Blackstone Growth Equity II | 2025 | $4.2 Billion | $150 million | N/A | N/A | N/A |

* Investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net MOIC, and net DPI provided by Blackstone.

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| Blackstone Capital Partners Asia | 2017 | $2.3 Billion | -- | 23.9% | 2.0x | 1.0x |
| Blackstone Capital Partners Asia II | 2021 | $6.4 Billion | $270 million | 40.8% | 1.8x | 0.3x |
| Blackstone Capital Partners Asia III | TBD | N/A | $300 million | N/A | N/A | N/A |

* Investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net MOIC, and net DPI provided by Blackstone.

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| Blackstone Energy Partners I | 2011 | $2.4 Billion | | 11.6% | 1.7x | 1.5x |
| Blackstone Energy Partners II | 2015 | $4.6 Billion | -- | 8.3% | 1.5x | 0.8x |
| Blackstone Energy Partners III | 2020 | $4.2 Billion | -- | 25.0% | 1.7x | 0.5x |
| Blackstone Energy Transition Partners IV | 2024 | $5.6 Billion | $200 million | N/A | 1.3x | N/A |

* Investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net MOIC, and net DPI provided by Blackstone.

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| SP I | 2001 | $832 million | $100 million | 17% | 1.6x | 1.6x |
| SP II | 2003 | $ 1,625 million | $100 million | 35% | 1.8x | 1.8x |
| SP III | 2005 | $ 1,900 million | $100 million | 6% | 1.4x | 1.4x |
| SP IV | 2008 | $ 2,073 million | $100 million | 13% | 1.6x | 1.6x |
| SP V | 2011 | $ 2,429 million | $100 million | 18% | 1.6x | 1.6x |
| SP VI | 2014 | $ 4,363 million | $150 million | 14% | 1.5x | 1.3x |
| SP VII | 2016 | $ 7,490 million | $150 million | 16% | 1.7x | 1.3x |
| SP VIII | 2019 | $11,414 million | $150 million | 22% | 1.6x | 0.8x |
| SP IX | 2021 | $22,706 million | $100 million | 21% | 1.3x | 0.1x |

* Investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net MOIC, and net DPI provided by Blackstone.

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| Blackstone Supplemental Account | 2021 | $125 Million | $125 Million | (5.2)% | 0.9x | N/A |

* Investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net MOIC, and net DPI provided by Blackstone.

## V. *Investment Period and Term*

The terms of the Partnership will be negotiated between Blackstone and the Minnesota State Board of Investment, but it is expected that non-economic terms will be similar to those of the underlying Blackstone funds.

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**ATTACHMENT C**

**PRIVATE EQUITY MANAGER SUMMARY PROFILE**

## *I. Background Data*

| | |
|---|---|
| ***Name of Fund:*** | Bridgepoint Europe VIII |
| ***Type of Fund:*** | Private Equity |
| ***Target Fund Size:*** | €7.5 billion |
| ***Fund Manager:*** | Bridgepoint Advisers Limited |
| ***Manager Contact:*** | Martin Dunn<br>5 Marble Arch Place<br>London W1H 7EJ<br>United Kingdom |

## *II. Organization and Staff*

Bridgepoint Advisers Limited ("Bridgepoint" or "Firm") is forming Bridgepoint Europe VIII ("BE VIII" or "Fund") to continue Bridgepoint's history of investing in middle-market, growth-oriented European businesses. Bridgepoint has invested across Europe since the early 1990s and has delivered strong and consistent investment performance over an extended period.

From its establishment in 1984 to 2000, Bridgepoint operated as a subsidiary of the European banking group, NatWest. During the 1990s, it gradually increased the proportion of external funds under management and in 1998 it raised Bridgepoint Europe I ("BE I"), its first external fund, with commitments of £1bn. In June 2000, the Bridgepoint Partners and employees completed the acquisition of the management company of the business from NatWest and the secondary sale of NatWest's interests in the underlying portfolio. The business was owned by Bridgepoint Partners and employees until 2018 when a minority stake was sold to Blue Owl Capital (fka Dyal Capital Partners). Blue Owl's investment facilitated the expansion of the platform with the acquisition of EQT Credit in October 2020. In July 2021, Bridgepoint listed on the London Stock Exchange. Proceeds from the listing have been used to continue investing in the Firm's platform to strengthen and enhance it to drive investment returns. In August 2024, Bridgepoint completed the acquisition of Energy Capital Partners, a specialist global infrastructure investor focused on the energy transition and power generation sector. In addition to the flagship Bridgepoint Europe funds, Bridgepoint also manages two additional private equity fund series: Bridgepoint Development Capital (focused on lower middle market companies with enterprise values between €100 million and €300 million) and Bridgepoint Growth (Bridgepoint's small cap buyout strategy, targeting companies with enterprise values of less than €100 million).

Currently, the Bridgepoint private equity team has approximately 140 investment professionals, 90 of whom are focused solely on the Bridgepoint Europe ("BE") fund series. The Bridgepoint Europe investment team is led by an experienced team of 28 Partners. The investment professionals are complemented by the Portfolio Support Group, a group of approximately 40 professionals that provides an operations-focused resource for adding value across the portfolio.

### *III. Investment Strategy*

Bridgepoint Europe VIII intends to create a portfolio of middle market companies headquartered or with significant operations in Europe. The Fund will focus on established businesses with enterprise values typically between €300m and €1bn. As with Bridgepoint's existing funds, there will be no prescriptive country allocations, thereby providing the Fund with flexibility in deploying capital within Europe to exploit regional volatility and capture 'best value' and relative return opportunities.

BE VIII will target two specific high-growth sub-sectors within each of the four core sectors: Services, Healthcare, Advanced Industrials, and Technology. The sub-sectors identified within each sector have been selected based on structural growth and where Bridgepoint believes that Bridgepoint Europe has built a competitive edge over time, leveraging its playbook to originate and create value. BE VIII aims to deploy approximately 80% of its capital across these niches, with the remaining 20% allocated opportunistically elsewhere.

Within these sub-sectors, Bridgepoint focuses on companies with sustainable end market growth and high quality of earnings. Bridgepoint looks for assets in growth niches that have the potential to deliver premium returns irrespective of macroeconomic conditions. Bridgepoint targets market leaders with leading intellectual property and service provision, companies accessing growing global markets, and businesses with high levels of recurring revenues. In addition, BE VIII will target market leading businesses operating in fragmented markets to use as platforms for consolidation at accretive valuations. Generating 'internal growth' through operational improvement will also be an important driver of value creation for the Fund.

Bridgepoint has dedicated sector teams who are responsible for identifying the most attractive sub-segments, mapping the market and identifying the most interesting targets, and executing transactions hand-in-hand with the local teams. These sector teams are led by investment team Partners and operate on a pan-European basis, with investment professionals working closely together across offices and across Bridgepoint's different private equity strategies. This targeted origination strategy provides Bridgepoint with full visibility into a broad pool of potential targets, allowing the firm to cultivate relationships well ahead of any formal sale process, which often leads to bilateral transactions or positions Bridgepoint well in auction processes.

As mentioned above, Bridgepoint applies a sector and geographic matrix to the deployment of its investment resources. Transaction teams typically combine local team members with colleagues with relevant sector and functional expertise from other offices. This provides a compelling mix of skills and experience to execute transactions and drive subsequent value creation initiatives.

Bridgepoint Europe draws on a substantial operational toolkit to build better, bigger, more efficient, and more sustainable growth businesses. While each investment is unique, certain key elements common to a typical Bridgepoint investment case are incorporated into value creation plans for each asset. These include organic revenue development initiatives, add-on acquisitions, operational improvements, and other relevant selective strategies. Selective strategies may include international expansion, business repositioning, enhancing management teams, digital impact strategies, and ESG upgrade plans.

Bridgepoint considers its ability to exit investments in both favorable and more challenging market conditions to be a great strength and among its key attributes. All investments are considered regularly as possible realizations, both in the context of asset-specific and fund-as-a-whole dynamics. The Fund will carefully balance its priorities of returning material capital to investors regularly and maximizing overall returns, basing the selection of potential exit candidates on their performance to date and an assessment of their capacity to maintain growth in capital appreciation.

## IV. *Investment Performance*

Previous fund performance as of June 30, 2025 for Bridgepoint and the SBI's investments with previous funds, where applicable, is shown below:

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI*[(2)] |
|---|---|---|---|---|---|---|
| Bridgepoint Europe I | 1998 | £1.0 billion | -- | 10.0% | 1.6x | 1.6x |
| Bridgepoint Europe II | 2001 | €2.0 billion | -- | 23.5% | 1.7x | 1.7x |
| Bridgepoint Europe III | 2005 | €2.5 billion | -- | 3.6% | 1.4x | 1.3x |
| Bridgepoint Europe IV | 2008 | €4.8 billion | -- | 12.1% | 1.8x | 1.7x |
| Bridgepoint Europe V | 2015 | €4.0 billion | -- | 16.5% | 2.0x | 1.5x |
| Bridgepoint Europe VI | 2019 | €5.8 billion | €150 million | 17.5% | 1.8x | 0.5x |
| Bridgepoint Europe VII | 2022 | €7.0 billion | €100 million | 18.0% | 1.1x | n/m |

* Previous Fund investments may be relatively immature and, therefore, returns may not be indicative of future results. Performance data was provided by Bridgepoint.

## V. *Investment Period and Term*

The investment period is up to five years (Bridgepoint targets four years) and the term is ten years from the final close, with one additional one-year period at the discretion of the Manager (after consultation with the LPAC) and up to two further one-year periods by the Manager with the approval of a majority in interest of the Limited Partners.

*This document is a summary of more detailed information provided in the Confidential Private Placement Memorandum (the "PPM"). It is qualified in its entirety by the more detailed information provided in the PPM.*

**ATTACHMENT D**

**PRIVATE CREDIT MANAGER SUMMARY PROFILE**

## *I. Background Data*

| | |
|---|---|
| ***Name of Fund:*** | Merit Capital Fund VIII, L.P. |
| ***Type of Fund:*** | Private Credit |
| ***Target Fund Size:*** | $600 million |
| ***Fund Manager:*** | Merit Capital Partners VIII, L.L.C. |
| ***Manager Contact:*** | Daniel Pansing<br>Managing Director<br>191 North Wacker Drive, Suite 1100<br>Chicago, IL 60606 |

## *II. Organization and Staff*

Merit Capital ("Merit" or the "Firm") is establishing Merit Capital Fund VIII ("Fund VIII") for the purpose of making direct, privately-negotiated junior capital (subordinated debt and equity) investments in lower middle-market companies in the United States and Canada.

The Firm was founded in 1993 as William Blair Mezzanine Capital Partners. In 2005, several members of William Blair Mezzanine Capital Partners established Merit Mezzanine as an independent entity, while retaining responsibility for managing the first three William Blair Mezzanine funds. Merit Capital Partners is wholly owned by its current leadership team and certain retired former leadership.

Merit Capital operates out of a single office in Chicago, Illinois and is led by five senior managers: John J. Darguzas, Evan R. Gallinson, Daniel E. Pansing, Joseph A. Polaneczky, and Benjamin W. Yarbrough. These investment professionals have an average of over 20 years of private investment experience, most of which has been earned working together on prior Merit funds. The firm's 11-person investment team functions as generalists, each involved in deal sourcing, execution, and portfolio monitoring.

## *III. Investment Strategy*

Consistent with seven prior funds, Merit is expected to invest a combination of junior capital securities in an effort to provide consistent current yield from its mezzanine debt along with meaningful equity upside through the investment of preferred and common equity. Merit anticipates that approximately 65% of the committed capital in Fund VIII will be invested in the form of fixed rate subordinated debt, and approximately 35% in preferred stock and common stock. The resulting portfolio is expected to generate attractive current yields (8% to 10% on average for each portfolio company) combined with upside available through meaningful equity ownership positions. Fund VIII is expected to invest in approximately 18 separate companies, with an average total investment of approximately $30 million per company.

The Firm focuses on transactions falling into two broad categories. The first involves investments completed in partnership with the existing owners and executives of companies. These recapitalization-oriented deals typically involve a meaningful financial reinvestment and management commitment by the existing management team in partnership with Merit. In many of these cases, Merit is the first institutional investor in the company. The second broad category involves independent/fundless sponsor transactions. These transactions are often originated by small investor groups that pursue leveraged buyout transactions without committed capital from a traditional organized buyout fund. The groups often find deals "off the beaten path" and/or in situations where they can add value through particular industry knowledge or expertise.

As Merit pursues these recapitalization and independent/fundless sponsor transactions, it will follow an investment strategy guided by four principles:

**Disciplined Investing:** The team that will invest Fund VIII is responsible for the investment of prior funds across multiple market cycles. The Fund intends to focus on the relatively inefficient North American lower middle-market, which Merit defines as companies with sales of $20 to $200 million, and enterprise values of $25 to $200 million. The Firm will target established, profitable businesses in industries with significant barriers to entry such as manufacturing and specialty distribution. The Fund does not intend to invest in certain industries such as real estate development or oil and gas exploration, nor in companies with perceived excessive business risk, such as high-technology companies, turnarounds or start-ups.

**Established Origination Capabilities:** The Firm has concentrated origination efforts on non-traditional channels where there is less competition, including: (i) direct origination of transactions with management (through relationships with company executives on their boards, attorneys, senior lenders, accountants and wealth managers, among others); (ii) independent/fundless sponsor transactions; and (iii) boutique M&A advisors (small business intermediaries who typically do not have the same level of resources to bear on a given transaction that one sees from traditional investment banks, thus offering opportunities to meaningfully fewer capital providers). The vast majority of Merit Capital's 108 platform investments to date have been sourced through these non-traditional channels.

**Transaction Control:** Merit intends to be the lead investor in substantially all Fund VIII investments. This is consistent with the Firm's approach in prior funds. Serving as lead investor provides control of the transaction, which gives Merit enhanced flexibility to develop the capital structure, set transaction terms, and obtain favorable pricing which includes significant equity or other upside in each investment opportunity. Traditional mezzanine investors who invest alongside equity funds generally have less control of their transaction structures and pricing, and meaningfully less upside opportunity. Control of the transaction also allows Merit to establish a conservative capital structure. In prior funds, Merit has used modest amounts of senior debt (less than 2.0x EBITDA on average, compared to an industry average of between 3.5x to 4x). In addition, Merit generally provides approximately 2.5x EBITDA of subordinated debt, resulting in a total leverage level (~4.5x EBITDA) that is meaningfully lower than industry averages. Finally, transaction control allows Merit to obtain high levels of equity ownership. In Funds I-III, average equity ownership was approximately 30%, while Funds IV – VII have averaged over 60% equity ownership.

**Active Portfolio Management:** Merit believes that active and thorough portfolio management is essential to its strategy, especially given the high level of equity ownership in most transactions. The Firm believes that it must develop a close relationship with company management and be respected as an integral part of the strategic decision-making process. At least one principal of Merit is or was a member of the Board of Directors in substantially all portfolio companies in prior funds. While not directly involved in day-to-day operations, Merit expects to assist management in a number of key areas, such as recruitment and retention of management; refinancing of senior debt; evaluation of potential mergers, acquisitions and divestitures; and the approval of operating and capital budgets. Because Merit is generally not investing alongside an equity fund, the Firm is able to be integrally involved in the investment exit process, including decisions on timing and means of exit, as well as selecting and engaging investment bankers and negotiating with prospective purchases. Merit believes this proactive approach to the exit process should enhance realized returns.

## *IV. Investment Performance*

Previous fund performance as of June 30, 2025 are shown below:

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| William Blair Mezzanine Capital Fund | 1993 | $115 million | - | 14.0% | 1.8x | 1.8x |
| William Blair Mezzanine Capital Fund II | 1997 | $190 million | - | 11.9% | 1.7x | 1.7x |
| William Blair Mezzanine Capital Fund III | 2000 | $311 million | $60 million | 15.4% | 2.0x | 2.0x |
| Merit Mezzanine Fund IV | 2005 | $455 million | $75 million | 11.5% | 2.0x | 2.0x |
| Merit Mezzanine Fund V | 2010 | $613 million | $75 million | 10.5% | 1.8x | 1.6x |
| Merit Mezzanine Fund VI | 2016 | $536 million | $100 million | 15.8% | 1.8x | 1.2x |
| Merit Mezzanine Fund VII | 2021 | $550 million | $100 million | 7.9% | 1.2x | 0.1x |

* Previous Fund investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, Net MOIC, and Net DPI provided by the manager.

## *V. Investment Period and Term*

The investment period will last 5 years. The Fund will have a term of 10 years, subject to not more than three one-year extensions with the approval of the Advisory Committee or a majority of Limited Partner interests.

*This document is a summary of more detailed information provided in the Confidential Private Placement Memorandum (the "PPM"). It is qualified in its entirety by the more detailed information provided in the PPM. Any capitalized terms used herein and not otherwise defined shall have the meaning attributed to them in the PPM.*

**ATTACHMENT E**

**PRIVATE EQUITY MANAGER SUMMARY PROFILE**

## I. Background Data

| | |
|---|---|
| ***Name of Fund:*** | Nordic Capital Fund XII |
| ***Type of Fund:*** | Private Equity |
| ***Target Fund Size:*** | €10 billion |
| ***Fund Manager:*** | Nordic Capital<br>(Nordic Capital DPM XII, L.P., acting by its general partner, Nordic Capital DPM XII Limited) |
| ***Manager Contact:*** | Daniel Kanak<br>Head of Investor Relations<br>Nordic Capital Advisors<br>32 Duke Street, St James's, London, SW1Y 6DF, UK |

## II. Organization and Staff

Nordic Capital ("Nordic Capital" or "Firm") is establishing Nordic Capital XII ("Fund XII" or the "Fund") to make growth buyouts across healthcare, technology & payments, services and industrial tech, and financial services, primarily in Northern Europe, as well as healthcare and technology & payments in North America.

Nordic Capital is one of the oldest Nordic region private equity investors and is supported by a strong local presence and long-standing industry relationships in Northern Europe. Nordic Capital Fund I was established in 1989. Across its eleven flagship private equity funds and Nordic Capital Evolution Fund I, Nordic Capital has invested over €30 billion in 155 portfolio companies as of June 30, 2025. The Firm has ten offices including eight investment advisory offices in Stockholm, Copenhagen, Oslo, Helsinki, Frankfurt, London, New York, and Seoul. In September 2019, Nordic Capital sold a passive, minority stake of the Firm to a U.S.-based family office. The partners of Nordic Capital retain a significant majority stake in the business and full discretion over the management of the firm.

Nordic Capital Fund XII will leverage over 250 professionals employed by the Firm, which includes 94 investment professionals and dedicated professionals supporting Ownership Excellence, Capital Markets, ESG, Investor Relations, Legal, Controlling & Valuation, and Fund Operations. The investment team at Nordic Capital is split into sector teams where each senior investment professional typically leads a subsector or segment. The investment advisory organization of Nordic Capital is led by Managing Partner Kristoffer Melinder, who has been with Nordic Capital since 1998. Kristoffer became co-Managing Partner in 2010 and sole Managing Partner in 2016. During his leadership, Nordic Capital has made significant refinements to its operating model including sharpening its sector-based focus and developing dedicated operational capabilities, which the Firm refers to as Ownership Excellence resources.

### *III. Investment Strategy*

Fund XII intends to focus primarily on control or co-control buyouts of attractive upper middle-market businesses in Northern Europe and healthcare and technology & payments investments in North America. The Fund intends to make equity investments of between €250 million and €1 billion in businesses with an enterprise value of €300 million to €2 billion.

Nordic Capital focuses primarily on growth buy-outs and seeks to accelerate earnings growth and drive business transformation. The Firm will target what it believes are robust, difficult to replicate businesses operating within non-cyclical and resilient sectors, benefitting from long term secular drivers and strong downside protections. In particular, the Firm will seek to pursue investments in selected subsectors where specific structural growth trends, transformational dynamics or disruptive market developments have been identified.

The Firm seeks to implement its strategy through a sector-based approach which is core to its investment philosophy and informs the way companies are targeted, deals are sourced, and value is created. The Firm's sector teams are responsible for developing extensive knowledge about the trends and growth drivers in their sectors, tracking investment companies over the long term, and working across the Firm's local advisory offices to unlock targets. Nordic Capital believes this approach provides key competitive advantages, supporting conviction-based sourcing, conversion, and value creation.

Over time the Firm has refined its specialist investment model to focus on sectors it believes are characterized by:

(i) Strong secular growth, with assets well-positioned to benefit from macro and market trends;

(ii) Limited cyclicality, strong downside protections and controllable risks;

(iii) Nordic Capital's accumulated knowledge and experience, extensive industry network and established track record from prior investments; and

(iv) Specialists with stronger historical performance than generalists.

Each sector team conducts extensive sector mapping and analyzes specific subsectors for attractive segments and companies to identify priority assets for investments. Once identified, Nordic Capital will often track businesses for many years as a prospect in its Shadow Portfolio, during which time it will seek to develop strong conviction around the equity story for an asset. Notably within Funds X and XI, 81% of companies acquired were tracked by Nordic Capital in its Shadow Portfolio prior to investment.

Nordic Capital predominantly employs a control or co-control approach and has extensive experience supporting the rapid expansion of portfolio companies. Its typical key objective is to accelerate the growth profile of its investments to seek to deliver attractive assets at exit. This is often achieved through a mix of organic growth, industry consolidation and/or strategic positioning implemented through the Firm's structured playbooks. Nordic Capital's sector teams and well-developed ownership excellence framework and resources are leveraged in the planning and execution of these concrete improvement agendas.

## *IV. Investment Performance*

Previous fund performance as of June 30, 2025 for Nordic Capital Flagship Funds and the SBI's investments with such funds, where applicable, is shown below:

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| Fund I | 1990 | €55 million | - | 69.3% | 4.0x | 4.0x |
| Fund II | 1993 | €110 million | - | 85.1% | 4.6x | 4.6x |
| Fund III | 1998 | €350 million | - | 30.5% | 3.3x | 3.3x |
| Fund IV | 2000 | €760 million | - | 24.1% | 2.2x | 2.2x |
| Fund V | 2003 | €1.5 billion | - | 20.0% | 2.7x | 2.7x |
| Fund VI | 2006 | €1.9 billion | - | 8.6% | 1.7x | 1.7x |
| Fund VII | 2008 | €4.3 billion | - | 8.2% | 1.6x | 1.6x |
| Fund VIII | 2013 | €3.6 billion | €150 million | 13.7% | 1.7x | 1.4x |
| Fund IX | 2019 | €4.3 billion | €150 million | 15.8% | 1.8x | 0.6x |
| Fund X | 2021 | €6.1 billion | €135 million | 14.7% | 1.4x | 0.3x |
| Fund XI | 2023 | €9.0 billion | €90 million | 18.2%[1] | 1.1x | - |

* Past performance is not necessarily indicative, or a guarantee of future results. Returns information provided by Nordic Capital.

## *V. Investment Period and Term*

The investment period of the Fund is expected to be six years. The term of the Fund is expected to be ten years, subject to two one-year extensions with Advisory Committee consent, and an additional one-year period subject to investor majority consent.

*This document is a summary of more detailed information provided in the Confidential Private Placement Memorandum (the "PPM"), as supplemented or amended from time to time. It is qualified in its entirety by the more detailed information provided in the PPM (and any disclaimers thereto, including with respect to methodology for calculation of performance metrics). Any capitalized terms used herein and not otherwise defined shall have the meaning attributed to them in the PPM.*

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## ATTACHMENT F

**PRIVATE EQUITY MANAGER SUMMARY PROFILE**

### I. Background Data

| | |
|---|---|
| ***Name of Fund:*** | Permira IX |
| ***Type of Fund:*** | Private Equity |
| ***Target Fund Size:*** | €17 billion |
| ***Fund Manager:*** | Permira |
| ***Manager Contact:*** | Molly Wilson<br>320 Park Avenue, 23 Floor<br>New York, NY 10022 |

### II. Organization and Staff

Permira Advisers, L.P. ("Permira" or the "Firm") is a global investment firm with private equity and credit businesses, operating from 17 offices across 15 countries and comprising approximately 440 professionals worldwide. The private equity business, established in 1985 with its first country-specific funds in Europe, raised its first pan-European fund in 1997 and opened its first U.S. office in 2002. It operates as a matrix organization, combining local, sector, and functional expertise across four core sectors: consumer, healthcare, services, and technology. The private equity business is led by 27 investment partners, including two Co-Chief Executive Officers and an Executive Chairman.

To date, the Firm has raised more than €64 billion of committed capital for its private equity funds, investing over €50 billion across 156 companies through June 30, 2025, in both buyout and growth opportunities. In addition to its private equity funds, Permira has raised over €17 billion of committed capital across its credit platform, encompassing both private and liquid credit. In April 2020, Goldman Sachs's Petershill acquired a single-digit minority stake in the Firm. In September 2024, Dipan Patel and Brian Ruder assumed the roles of Co-Chief Executive Officers, with Kurt Björklund transitioning to Executive Chairman. Permira is controlled by its Partners, with economic interests broadly distributed.

The Permira private equity team comprises 180 investment professionals within a broader group of 350 professionals across 15 offices on three continents. Its 27 Investment Partners[1] are highly experienced, supported by a stable partnership, and the investment team is long tenured, with an average of 17 years for the Partners and seven years for the Managing Directors.

[1] Shown for investment partners only. Excludes COO/CFO, CHRO and Head of Capital Formation.

## *III. Investment Strategy*

Permira IX (the "Fund" or "P9") seeks to invest in upper mid-market and large-scale, transformational growth opportunities. It will target market-leading, often market-creating companies with resilient business models that benefit from strong, underlying secular growth trends. Permira's long-established, sector-thematic approach will identify businesses that are operating on the right side of disruption, typically leveraging Permira's core expertise in enterprise technology and digital businesses, as well as a continued focus on iconic consumer brands, and extending capabilities into scale growers in the healthcare and services sectors. The Fund will then seek to help those companies achieve their maximum efficient growth rate – typically an acceleration of revenue – through ambitious, sector-specific business transformation plans, utilizing well-honed value creation capabilities.

The Fund will take a broad approach across sectors and geographies to ensure that capital is deployed into the most attractive, risk-adjusted opportunities at any point, with no pressure to invest in geographies or sectors that are at a less attractive stage in the cycle, and no pre-allocation of capital. The P9 portfolio is currently expected to comprise 20 to 25 investments in businesses with an expected enterprise value of between €500 million and €5 billion+. Permira's four sector teams – consumer, healthcare, services, and technology – develop long-term perspectives on resilient growth themes, which are then developed into investable opportunities. Investment teams work to identify what they consider to be particularly rich verticals of investment opportunity within their themes and establish a dedicated origination effort and resources around them. This enables the development of strong pattern recognition of what a best-in-class business model looks like in each theme, focusing on market positioning, growth enablers, unit economics, and prior analogous investments.

An ambition to amplify and accelerate growth through business transformation is at the core of Permira's investment philosophy. Over the last decade, the firm has made significant investments in its dedicated Value Creation group to support the investment teams in delivering growth initiatives throughout the portfolio. The team, led by Riccardo Basile (Head of Value Creation), comprises 25 total professionals, which includes 17 senior professionals, supplemented by three horizontal initiatives: sustainability, talent, and cybersecurity. The Value Creation team has five sector-specialized resources within sector teams, with individual specialization and global coverage, and is fully integrated with the investment team. The investment in the Portfolio Group has yielded an increasingly systematized and effective set of value creation toolkits, driving repeatability, more intensive engagement with portfolio companies, more sophisticated performance tracking, and more effective knowledge sharing. Examples of value creation toolkits include sector-specialized approaches such as pricing, channel management, strategy, marketing, brand development, and AI/data analytics integration. They also encompass horizontal capabilities such as supply chain optimization, procurement, process improvement, manufacturing optimization, M&A, post-merger integration, carve-out support, IT, talent management, and sustainability.

P9 is expected to follow a robust and well-established investment process, refined through multiple cycles, and coordinated by a strong Investment Committee ("IC") process. A high level of integration and collaboration exists among the sectors, local offices, and functional groups, characterizing the process. Notably, the investment team driving the origination of a deal maintains responsibility through to exit, with support throughout the investment lifecycle from dedicated internal specialists and expert external networks. Exit planning commences pre-acquisition during the due diligence phase and continues throughout the life of the investment during discussions. Teams begin detailed work on an exit once the investment they support is considered to have materially completed its value creation plan or has attracted meaningful interest from a potential buyer. The IC remains the formal forum for exit discussions first in the form of a Preliminary Exit Recommendation and thereafter in a Final Exit Recommendation, before making an exit recommendation to the Portfolio Manager.

## IV. *Investment Performance*

Previous fund performance as of June 30, 2025, is shown below:

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR[2] | Net MOIC[2] | Net DPI[2] |
|---|---|---|---|---|---|---|
| Permira I | 1997 | €890 million | -- | 84% | 2.5x | 2.5x |
| Permira II | 2000 | €3.3 billion | -- | 17% | 1.7x | 1.7x |
| Permira III | 2003 | €5.0 billion | -- | 23% | 1.7x | 1.7x |
| Permira IV[1] | 2006 | €9.4 billion | -- | 11% | 2.0x | 1.7x |
| Permira V | 2014 | €5.0 billion | €150 million | 22% | 3.0x | 2.5x |
| Permira VI | 2016 | €7.3 billion | €120 million | 15% | 2.0x | 1.0x |
| Permira VII | 2019 | €10.6 billion | €135 million | 8% | 1.3x | 0.1x |
| Permira VIII | 2022 | €15.7 billion | €150 million | 11% | 1.1x | 0.0x |

* Past performance is not necessarily indicative, or a guarantee of future results. Returns information provided by Permira.

## V. *Investment Period and Term*

The fund will have a six-year investment period and a ten-year term, with the potential to extend for up to three additional one-year periods with the consent of investors representing at least a majority of the total commitments.

*This document is a summary of more detailed information provided in the Fund's Confidential Private Placement Memorandum (the "PPM"). It is qualified in its entirety by the more detailed information provided in the PPM and the Fund's Agreement of Limited Partnership.*

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**ATTACHMENT G**

**PRIVATE EQUITY MANAGER SUMMARY PROFILE**

## I. *Background Data*

| | |
|---|---|
| ***Name of Fund:*** | Wind Point Partners XI |
| ***Type of Fund:*** | Private Equity – Buyout |
| ***Target Fund Size:*** | $2.5 billion |
| ***Fund Manager:*** | Wind Point Advisors LLC |
| ***Manager Contact:*** | Ron Liberman<br>676 N. Michigan Avenue<br>Suite 3700<br>Chicago, IL 60611 |

## II. *Organization and Staff*

Wind Point Partners ("Wind Point" or the "Firm") is forming Wind Point Partners XI (the "Fund" or "WPP XI") to continue the Firm's successful history of making private equity investments in North American middle-market companies. Wind Point focuses on companies in the business services, consumer products and industrial products sectors, typically with $100 million - $1 billion of total enterprise value at the time of acquisition. Since its inception in 1984, Wind Point has invested over $7 billion in more than 125 portfolio companies, generating strong performance across multiple economic cycles.

The Firm is led by Managing Directors Nathan Brown, Paul Peterson, Alex Washington, Konrad Salaber, and Joe Lawler who have an average tenure at Wind Point of 22 years. The five managing directors began taking over leadership of the firm in 2009. They are joined by 22 additional investment professionals and 24 operations professionals, all working from a single office in Chicago.

Ownership of Wind Point is split between managing partners, Nathan Brown, Paul Peterson, Alex Washington and Konrad Salaber and Goldman Sachs Petershill Partners ("Petershill"). Petershill acquired a minority, non-voting equity stake in the Wind Point management company in December of 2021. Petershill is not involved in the governance or management of Wind Point nor does their ownership interest involve any participation on Wind Point's investment committee or any Limited Partner Advisory Committees.

## III. *Investment Strategy*

Wind Point intends to continue its strategy of identifying well-positioned middle-market businesses it believes need leadership enhancement or additional investment, operational, or strategic support. The Firm seeks to generate value by pursuing businesses with strong fundamental attributes and momentum, and then invest behind the platform and team to dramatically enhance leadership, upgrade systems and operations, improve profitability and accelerate growth organically and via M&A.

Since 2007, all platforms have been represented by Wind Point's "Core Sectors" which consists of business services, consumer products and industrial products. To execute its value creation, Wind Point seeks to bring together three key elements in each transaction:

1) A top-caliber CEO: The core of Wind Point's investment strategy is focused on identifying and partnering with a top-caliber CEO. Wind Point senior investment professionals and Wind Point's Chief Talent Officer ("CTO") dedicate significant time to developing an extensive network of potential CEO candidates. Once an investment opportunity is identified, the diligence process typically involves a potential CEO candidate and one or more members of Wind Point's Executive Advisor Partner ("EAP") network. EAP members are senior executives with deep ties to Wind Point who are typically retired but looking to play an active advisory role in Wind Point's process. Wind Point believes the enthusiasm, experience base, and knowledge represented by its EAPs contribute significant benefits in CEO identification and recruiting, deal sourcing, and enhancing Wind Point's competitive edge. The Wind Point EAP group includes more than 40 former CEOs, of whom nearly half are former CEOs for a Wind Point portfolio company. EAPs will serve as Chair or Lead Director on all Wind Point deals.

2) A well-positioned middle-market company: The Wind Point team has extensive experience sourcing unique opportunities in the middle market by leveraging its reputation as an attractive partner to companies that Wind Point believes need upgraded executive talent or a full leadership transition. These opportunities may include family or entrepreneur-held businesses with no succession plan, corporate divestitures without an experienced leader, or simply businesses with weak leadership. Additional characteristics of opportunities Wind Point pursues are businesses with solid fundamentals, multiple organic growth opportunities, and attractive add-on acquisition opportunities. Considerable time is spent developing relationships with business owners, executives, investment bankers, and others to source investment opportunities potentially well-suited for Wind Point's approach. Deal team members spend time building relationships with businesses nearing a leadership transition, proactively networking with corporate development staff and key executives at larger organizations, attending trade shows and conferences, and regularly meeting with investment bankers to update them on current CEO candidates and industry niches of interest.

3) A value creation plan ("VCP"): The goal of Wind Point's VCP is to build a fundamentally better business by improving the company's team, growth rate, operations, effectiveness, and strategic position. During the diligence process, Wind Point works side-by-side with the current CEO or CEO candidate and executive partners to develop and quantify specific initiatives to drive sales, improve operations, and pursue add-on acquisitions that they compile into a tactical VCP to execute during its ownership period. Participating throughout the diligence process allows the CEO to begin implementing the value creation plan immediately following the close of the transaction. The VCP provides an ownership "game plan", which Wind Point uses as a collaborative and dynamic tool for measuring progress throughout the investment.

Wind Point remains very active throughout the ownership period, with the key areas of focus being pursuing add-on acquisitions, top-grading the management team, creating a value-add board of directors, and evolving the VCP if needed.

Wind Point establishes a VCP for each portfolio company that is intended to optimize the positioning of the business for exit. Historically, the Firm's exits have been to a combination of financial sponsors (~70%) and strategic acquirers (~30%). Wind Point seeks to drive a fundamental transformation of its companies through consistent application of an investment strategy that's been refined over nearly three decades and involves driving real changes in the leadership, strategy and operations of portfolio companies. Wind Point portfolio companies, at exit, are typically larger, growing faster, more profitable, and have incorporated leadership team enhancements that increase the portfolio company's appeal to potential buyers.

## IV. Investment Performance

Previous fund performance as of June 30, 2025 is shown below. Historical Wind Point performance is provided here:

| Fund | Vintage Year | Total Commitments | SBI Investment | Net IRR* | Net MOIC* | Net DPI* |
|---|---|---|---|---|---|---|
| WPP II | 1987 | $90 million | - | 19% | 3.2x | 3.2x |
| WPP III | 1997 | $215 million | - | 23% | 2.3x | 2.3x |
| WPP IV | 1999 | $405 million | - | 10% | 1.8x | 1.8x |
| WPP V | 2002 | $476 million | - | 5% | 1.1x | 1.1x |
| WPP VI | 2006 | $715 million | - | 4% | 1.2x | 1.2x |
| WPP VII | 2009 | $915 million | - | 18% | 1.9x | 1.9x |
| WPP VIII | 2016 | $985 million | - | 23% | 1.9x | 1.6x |
| WPP IX | 2019 | $1.5 billion | $100 million | 16% | 1.6x | 0.5x |
| WPP X | 2022 | $2.3 billion | $100 million | 24% | 1.3x | 0.1x |

* Previous Fund investments may be relatively immature and, therefore, returns may not be indicative of future results. Performance data was provided by Wind Point. Excludes Wind Point I because it primarily made venture investments and the majority of the fund was not comprised of third-party institutional capital.

## V. Investment Period and Term

The fund will have a six-year investment period and a ten-year term, with the potential of one additional one-year extension at the discretion of the General Partner, one additional one-year extension with the consent of the Advisory Board and an additional one-year extension with the consent of a majority of the aggregate commitments of the Limited Partners.

*This document is a summary of more detailed information provided in the Fund's Confidential Private Placement Memorandum (the "PPM"). It is qualified in its entirety by the more detailed information provided in the PPM and the Fund's Agreement of Limited Partnership.*

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# TAB D

Memo
Regarding
Asset Allocation
Study

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DATE: October 17, 2025

TO: Members, Investment Advisory Council

FROM: SBI Staff

**SUBJECT: 2025 Combined Funds Asset Allocation Study**

## EXECUTIVE SUMMARY

SBI Staff worked with Aon during calendar years 2024 and 2025 to conduct an asset allocation study for the Combined Funds. A summary of the study is presented in **Appendix A**. SBI Staff and representatives from Aon will present the asset allocation study at the October 20, 2025 Investment Advisory Council (IAC) meeting. A copy of the presentation is provided in **Appendix B**.

Based on the asset allocation study, SBI Staff recommends that the SBI adopt the proposed asset allocation and ranges shown below and requests the IAC's endorsement of this recommendation for the Board's approval. The proposed asset allocation policy changes are also incorporated into the proposed Investment Policy Statement included in **Tab E**.

| | Current | Proposed | |
|---|---|---|---|
| | Asset Allocation | Asset Allocation | Ranges |
| **Public Equity** | **50%** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 5% | 6% | 4-8% |
| Return Seeking Fixed Income | 5% | 6% | 4-8% |
| Treasury Protection | 10% | 10% | 5-15% |
| *U.S. Treasury – 5+ Year* | *10%* | *---* | *---* |
| *U.S. Treasury (Broad Maturity)* | *---* | *8%* | *5-15%* |
| *U.S. Treasury – Long* | *---* | *2%* | *0-5%* |
| Cash Equivalents | 5% | 3% | 0-5% |
| **Private Markets** | **25%[2]** | **25%[3]** | **20-32%[4, 5]** |
| Private Equity | | 18% | 15-25% |
| Private Credit | | 3% | 0-6% |
| Private Real Assets | | 2% | 0-4% |
| Private Real Estate | | 2% | 0-4% |
| **Opportunistic Allocation** | | | **0-10%** |

*[1] Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*
*[2] Uninvested Private Markets Allocation benchmarked to Domestic Equity (S&P 500) when activated, or Cash (U.S. 3-Month Treasury Bill Index).*
*[3] Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*
*[4] The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*
*[5] Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

Importantly, a key finding of the asset allocation study is that many aspects of the Combined Funds current asset allocation policy continue to be appropriate to achieve the Funds long-term investment objectives.

Accordingly, the proposal recommends modest changes to the Combined Funds asset allocation. These modifications are designed to improve implementation while maintaining similar risk and return expectations relative to the current asset allocation policy. The primary changes proposed are:

- **Reduce Duration of the Treasury Protection Portfolio –** shifting the composition of the Treasury Protection Portfolio to emphasize shorter maturity securities is intended to normalize the portfolio's duration exposure and reduce the potential impact of higher-than-expected inflation, or a rise in the Treasury term premium due to debt sustainability concerns.

- **Optimize Portfolio Liquidity –** a modest shift in the portfolio's cash allocation in favor of an incremental increase to Fixed Income results in a modest increase in portfolio expected return and risk while maintaining a robust liquidity cushion.

- **Establish Target Weights and Ranges to Private Markets Sub-Asset Classes –** adopting target allocations and ranges for the four Private Markets sub-asset classes in which the Combined Funds primarily invests establishes a framework to support diversification within Private Markets and allows for clearer comparison of investment opportunities within each sub-asset class.

- **Update the Asset Mix for the Uninvested Private Markets Allocation to 80% Public Equity and 20% Core/Core Plus Fixed Income –** the revised allocation better reflects the underlying mix of factors within the Private Markets target allocation.

Taken together, the proposed changes to the Combined Funds asset allocation are expected to have a modest impact on portfolio return and risk expectations, diversification, and liquidity.

In addition to the Combined Funds asset allocation changes outlined above, SBI Staff is recommending updates to Asset Class Target Benchmarks and the Combined Funds Policy Benchmark to reflect the proposed changes to the Combined Funds asset mix.

The proposed asset mix yields a nominal expected return which supports the participating plans' actuarial assumed rate of return of 7.0%. Importantly, the asset class return expectations used in this analysis generally reflect asset class beta only and do not include the potential for incremental positive return, or alpha, from active management that the SBI has historically achieved across the Combined Funds portfolio overall.

**RECOMMENDATION:**

**As the result of the 2025 Asset Allocation Study, Staff requests the IAC's endorsement of the following recommendation as it relates to updating the Combined Funds asset allocation policy:**

1. **Adopt the Proposed Policy Asset Allocation and Ranges for the Combined Funds shown below.**

| | Combined Funds Asset Allocation | Combined Funds Ranges |
|---|---|---|
| **Public Equity** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 6% | 4-8% |
| Return Seeking Fixed Income | 6% | 4-8% |
| Treasury Protection | 10% | 5-15% |
| *U.S. Treasury (Broad Maturity)* | *8%* | *5-15%* |
| *U.S. Treasury – Long* | *2%* | *0-5%* |
| Cash Equivalents | 3% | 0-5% |
| **Private Markets** | **25%[2]** | **20-32%[3, 4]** |
| Private Equity | 18% | 15-25% |
| Private Credit | 3% | 0-6% |
| Private Real Assets | 2% | 0-4% |
| Private Real Estate | 2% | 0-4% |
| **Opportunistic Allocation** | | **0-10%** |

[1] *Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*
[2] *Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*
[3] *The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*
[4] *Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

2. **The Uninvested Private Markets Allocation will be benchmarked to a composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Bond Index. The Executive Director will be authorized to allocate the Uninvested Private Markets funds among (i) dedicated account(s) and/or (ii) portfolios within the Public Equity and Fixed Income + Cash allocations.**

3. **The Asset Class Target for Fixed Income and Cash will be a composite index comprising 24% Bloomberg U.S. Aggregate Bond Index, 24% Blended Return Seeking Benchmark, 40% Blended Treasury Protection Benchmark, and 12% ICE BofA U.S. 3-Month Treasury Bill Index.**

4. **The Return-Seeking Fixed Income ("RSFI") portion of the Fixed Income + Cash allocation will be benchmarked to a composite index comprising 25% ICE BofA U.S.**

**Cash Pay High Yield Constrained Index, 25% S&P UBS Leveraged Loan Index, 25% JPM EMBI Global Diversified Index, and 25% ICE BofA AA-BBB U.S. Fixed and Floating Rate Asset Backed Securities Index. The objective of the RSFI program shall be to match or exceed the return of this composite benchmark, net of fees and expenses. Further, the Executive Director is authorized to invest in, and benchmark RSFI managers against, any combination of the indices comprising the composite benchmark, or another benchmark deemed appropriate in the Executive Director's reasonable judgment.**

5. **The Treasury Protection portion of the Fixed Income + Cash allocation will be benchmarked to a composite index comprising 80% Bloomberg U.S. Treasury Index and 20% Bloomberg U.S. Long Treasury Index. The objective of the Treasury Protection program shall be to match or exceed the return of this composite benchmark, net of fees and expenses.**

6. **The Asset Class Target for Private Markets will be a composite index comprising the sub-asset class benchmarks for Private Equity, Private Credit, Private Real Assets, and Private Real Estate weighted by their market values within the Combined Funds, measured at the beginning of the month.**

7. **The Private Equity portion of the Private Markets allocation will be benchmarked to the MSCI Global Buyout Closed-End Fund Index (USD), lagged 1 quarter.**

8. **The Private Credit portion of the Private Markets allocation will be benchmarked to the MSCI Global Private Credit Closed-End Fund Index (USD), lagged 1 quarter.**

9. **The Private Real Assets portion of the Private Markets allocation will be benchmarked to a composite index comprising 75% MSCI Global Private Infrastructure Closed-End Fund Index (USD), lagged 1 quarter and 25% MSCI Global Private Natural Resources Closed-End Fund Index (USD), lagged 1 quarter.**

10. **The Private Real Estate portion of the Private Markets allocation will be benchmarked to a composite index comprising 50% Custom MSCI Global Private Opportunistic Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter and 50% Custom MSCI Global Private Value-Added Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter.**

# APPENDIX A

## ASSET ALLOCATION STUDY SUMMARY

SBI Staff worked with Aon to conduct an asset allocation study for the Combined Funds. The last formal asset allocation study was completed in 2016. In 2020, the Board adopted changes to the Combined Funds asset allocation as outlined in the May 2020 Resolution Concerning Management of Combined Funds Asset Allocation and Liquidity. The current study was conducted in three phases. Phase I was designed to confirm the methodology and assumptions used for the study, and to gather and review key data inputs to be used in the study. Phase II focused on the analysis of various asset mixes to highlight the potential trade-offs between varying asset allocations and support the conclusions. Phase III focused on evaluating the modeling results through a qualitative overlay of key market considerations and the SBI's guiding investment principles to generate the final recommendations.

### PHASE I – METHODOLOGY, ASSUMPTIONS, AND DATA COLLECTION

The first phase of the study began by determining the scope of the asset allocation study and establishing the key objectives for this study. Aon and SBI Staff reviewed the four major underlying plans – MSRS General, PERA General, TRA, and PERA Police & Fire – to validate that a single asset mix policy continued to be appropriate for all plans. While a full asset-liability analysis was out of scope for this study, Aon compared the plans in terms of actuarial discount rates, funded ratios, expected cashflow profiles, and liability growth rates. Aon's analysis found that a single asset mix policy remained appropriate.

Plan Cashflow Assumptions:
Historical net benefit payment information, combined with updated future benefit payment information provided by the individual pension plans reflecting 2025 legislatively approved funding and benefits changes, formed the basis of the Combined Funds projected benefits payments for the study.

Key Objectives:
The key objective of the study was to identify an appropriate long-term asset allocation policy that enables the Combined Funds to meet its long-term objectives. The study also sought to assess the portfolio's liquidity profile and calibrate the appropriate level of cash to support both investment flexibility and benefit payments. Additional objectives included seeking to enhance portfolio diversification without diminishing expected returns, maintaining or improving the portfolio's overall risk-reward balance, downside protection, and resilience to key macroeconomic shocks such as unexpected inflation or periods of weak economic growth.

Peer Comparisons and Analysis:
Aon and SBI Staff conducted a review of the asset allocation policies, historical performance and investment return assumptions of a peer universe of large public plans as available in the Public Plans Data database and the Trust Universe Comparison Service (TUCS). SBI Staff analyzed peer information for benchmarking purposes. The peer analysis confirmed that the Combined Funds ranks among the strongest performing Funds over time among its large plan peers, driven in part

by a higher-than-median allocation to Public Equities. In addition, the Combined Funds above-peer allocation to Private Equity, and a below-peer allocation to Real Estate and Hedge Funds, also contributed positively to historical performance relative to peers.

Role of Asset Classes:
As part of Phase I of the study, SBI Staff evaluated the intended role of each asset class within the Combined Funds current allocation policy, as well as several additional asset classes to be considered for possible future inclusion. Staff worked closely with consultants, investment managers and other industry experts to formulate a deeper understanding of the key economic drivers of risk and return for each asset class under consideration.

Capital Markets Assumptions:
SBI Staff used Aon's December 2024 10-year Capital Markets Assumptions along with similar projections gathered from a range of industry sources to develop the final expected return, risk and correlation assumptions for the asset classes. Aon's capital markets assumptions covered inflation and most asset classes considered within the study. To arrive at the final inputs used in the study, SBI Staff applied its judgment to make modest refinements, where appropriate.

| Asset Class | *Expected Return (Nominal)%* | *Expected Volatility %* |
|---|---|---|
| U.S. Equity | 6.80% | 17.25% |
| International Equity* | 6.95% | 18.00% |
| Core Bonds (U.S. Aggregate) | 4.60% | 4.70% |
| Return Seeking Fixed Income | 5.80% | 9.10% |
| U.S. Treasury - 5+ Year | 4.30% | 9.00% |
| U.S. Treasury | 4.10% | 4.80% |
| U.S. Treasury – Long | 4.60% | 13.50% |
| Private Equity | 9.30% | 20.50% |
| Private Credit | 7.40% | 13.20% |
| Private Real Assets | 7.65% | 17.70% |
| Private Real Estate | 7.20% | 20.00% |
| Cash Equivalents | 3.40% | 1.50% |
| Inflation | 2.50% | 1.50% |

** SBI CMAs for International equities proxied the impact of a dynamic currency hedging strategy by using a customized MSCI ACWI ex USA Index 50% hedged to USD return series reflecting hedging of developed markets currencies only. Emerging markets currencies are unhedged.*

**PHASE II - ASSET MIX MODELING AND CONCLUSIONS**

The objective of Phase II was to conduct a series of robust modeling across a range of potential asset mixes to highlight the potential trade-offs between various asset classes and portfolio mixes to select the most appropriate asset mix for the Combined Funds.

Both Aon and SBI Staff conducted a series of mean-variance optimizations using expected returns and expected risk (standard deviation) of a broad range of asset classes, as well as the expected correlations between the asset classes to assess the relative attractiveness of potential asset mixes and determine the composition of a series of potential asset mixes located on the efficient frontier.

In addition, Aon performed a liquidity analysis stress test using a multi-year deterministic modeling approach. The analysis incorporated the profile of the liabilities as well as expected future contributions. The model subjected the portfolio to three economic scenarios ranging from a benign "Base Case" to a severe recession "Dark Skies" scenario to evaluate how the portfolio's liquidity profile could evolve with a given asset allocation mix.

SBI Staff also performed stress testing analysis using a sampling of historical return episodes to assess the potential performance of various asset allocation mixes. Using a 20+ year monthly return history, Staff analyzed individual asset classes and various asset allocation mixes along quantitative dimensions including upside-downside capture, equity beta, maximum drawdown and Sharpe ratio. Finally, Staff developed a "CPI beta" measure of each asset class's sensitivity to changes in realized inflation based on a regression model using historical returns. The CPI beta measure was used to evaluate the potential inflation sensitivity of various asset allocation mixes.

## PHASE III – EVALUATION AND REVIEW

Phase III focused on evaluating the modeling results through a qualitative overlay of key current market considerations and the SBI's guiding investment principles to generate the final recommendations.

Based on a series of discussions with industry experts, consultants and internal Staff analysis, Staff focused on several current market considerations which influenced the study's final asset allocation recommendations:

**Outlook for equity risk premium –** Staff noted that market estimates of the equity risk premium have trended lower in recent years, driven in part by P/E multiple expansion, particularly among U.S. large cap technology stocks. Staff noted that the final CMAs used in the study were appropriately conservative relative to historical experience.

**Outlook for private equity return premium –** Staff noted that the return premium for Private Equity relative to public equities has declined in the most recent decade relative to the prior decade. Nonetheless, Staff believes there are compelling reasons that the return premium for Private Equity should persist, even if at potentially lower levels due to the growth of the asset class and increased competition for deal flow.

**Outlook for U.S. vs. non-U.S. equities –** Staff noted the relative dominance of U.S. equity market performance relative to international equities (developed and emerging market) over the last decade. While U.S. valuations may appear rich, Staff observed that the U.S. companies' earnings growth, particularly in the technology sector, remains strong.

**Fixed income yields are more attractive –** Staff noted that the recent increase in yields experienced since the Fed began normalizing interest rates in 2022 has significantly improved the attractiveness of the asset class relative to equities.

**Potential Risks to U.S. Treasuries from the Fiscal Outlook –** Staff noted that rising Treasury issuance and growing concerns about long-term debt sustainability may lead to persistently higher yield volatility and increased tail-risk scenarios, potentially reducing the effectiveness of long-duration Treasuries as a hedge during economic downturns.

## OBSERVATIONS AND CONCLUSIONS

- Current Policy Mix: The study found that many aspects of the Combined Funds current asset allocation policy continue to be appropriate to achieve the portfolio's long-term investment objectives. Accordingly, the proposal recommends modest changes to the Combined Funds asset allocation that are designed to improve implementation while maintaining similar risk and return expectations relative to the current asset allocation policy.

- Liquidity: The study found that both the current and proposed asset allocation can support expected net participant cashflows across a range of economic and market scenarios. In addition, liquidity stress testing confirms that the portfolio can support the current allocation to illiquid assets.

- Expected Returns: The modeled asset mixes, including the current policy, proposed policy, and three portfolios along the constrained efficient frontier, show relatively modest differences in expected returns but a wider dispersion in expected volatility.

- Interest Rate Duration: While the mean variance optimization tends to favor longer duration U.S. Treasuries, the results are highly dependent on the stock-bond correlation assumption. The study finds that shifting the composition of the Treasury Protection Portfolio to emphasize shorter maturity securities can reduce the portfolio's susceptibility to tail risks related to unexpected inflation or U.S. debt sustainability without sacrificing return.

- Private Markets Ranges: Adopting target allocations and ranges to the four Private Markets sub-asset classes in which the Combined Funds primarily invests establishes a framework to support diversification within Private Markets and allows for clearer comparison of investment opportunities within each sub-asset class.

- Fixed Income: The study supported increasing the allocation to fixed income asset classes, including Return-Seeking Fixed Income, Core/Core Plus Fixed Income and Private Credit. At the same time, the results of the mean-variance optimization favored maintaining the current allocation to U.S. Treasuries and while reducing the allocation to cash.

- Uninvested Private Markets Allocation: Allocating the Uninvested Private Markets Allocation to a combination of 80% Public Equity and 20% Fixed Income instead of 100% Public Equity better reflects the underlying mix of factors within the Private Markets target allocation.

## PROPOSAL

### Combined Funds Asset Allocation Policy

Based on the asset allocation study, Staff recommends that the Combined Funds Policy Asset Allocation change to the Proposed Asset Allocation and Ranges shown below.

| | Current | Proposed | |
|---|---|---|---|
| | Asset Allocation | Asset Allocation | Ranges |
| **Public Equity** | **50%** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 5% | 6% | 4-8% |
| Return Seeking Fixed Income | 5% | 6% | 4-8% |
| Treasury Protection | 10% | 10% | 5-15% |
| *U.S. Treasury – 5+ Year* | *10%* | --- | --- |
| *U.S. Treasury (Broad Maturity)* | --- | *8%* | *5-15%* |
| *U.S. Treasury – Long* | --- | *2%* | *0-5%* |
| Cash Equivalents | 5% | 3% | 0-5% |
| **Private Markets** | **25%[2]** | **25%[3]** | **20-32%[4, 5]** |
| Private Equity | | 18% | 15-25% |
| Private Credit | | 3% | 0-6% |
| Private Real Assets | | 2% | 0-4% |
| Private Real Estate | | 2% | 0-4% |
| **Opportunistic Allocation** | | | **0-10%** |

*[1] Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*
*[2] Uninvested Private Markets Allocation benchmarked to Domestic Equity (S&P 500) when activated, or Cash (U.S. 3-Month Treasury Bill Index).*
*[3] Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*
*[4] The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*
*[5] Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

### Expected Return

The proposed asset mix yields a nominal expected return which supports the participating plans' actuarial assumed rate of return of 7.0%.

### Expected Risk (Unsmoothed)

The expected risk of the proposed asset mix is 13.48%, modestly higher than the 13.41% expected risk of the current asset mix 13.41%). It is important to note that this risk measure is estimated based on unsmoothed private markets returns, which produces a higher risk measure than observed portfolio volatility.

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

**Implementation Considerations**

1. The proposal recommends benchmarking the Uninvested Private Markets Allocation to a composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Bond Index, and that the Executive Director be authorized to allocate the Uninvested Private Markets funds among (i) dedicated account(s) and/or (ii) portfolios within the Public Equity and Fixed Income + Cash allocations.

2. The proposal recommends benchmarking the Return-Seeking Fixed Income ("RSFI") portion of the Fixed Income + Cash allocation to a composite index comprising 25% ICE BofA U.S. Cash Pay High Yield Constrained Index, 25% S&P UBS Leveraged Loan Index, 25% JPM EMBI Global Diversified Index, and 25% ICE BofA AA-BBB U.S. Fixed and Floating Rate Asset Backed Securities Index. The objective of the RSFI program shall be to match or exceed the return of this composite benchmark, net of fees and expenses. Further, the proposal recommends that the Executive Director be authorized to invest in, and benchmark RSFI managers against, any combination of the indices comprising the composite benchmark, or another benchmark deemed appropriate in the Executive Director's reasonable judgment.

3. The proposal recommends that Treasury Protection portion of the Fixed Income + Cash allocation be benchmarked to a composite index comprising 80% Bloomberg U.S. Treasury Index and 20% Bloomberg U.S. Long Treasury Index, and that the objective of the Treasury Protection program shall be to match or exceed the return of the composite benchmark, net of fees and expenses.

4. The proposal recommends setting the Asset Class Target for Private Markets as a composite index comprising the sub-asset class benchmarks for Private Equity, Private Credit, Private Real Assets and Private Real Estate weighted by their market values within in the Combined Funds, measured at the beginning of the month.

5. The proposal recommends that the Private Equity portion of the Private Markets allocation be benchmarked to the MSCI Global Buyout Closed-End Fund Index (USD), lagged 1 quarter.

6. The proposal recommends that the Private Credit portion of the Private Markets allocation be benchmarked to the MSCI Global Private Credit Closed-End Fund Index (USD), lagged 1 quarter.

7. The proposal recommends that the Private Real Assets portion of the Private Markets allocation be benchmarked to a composite index comprising 75% MSCI Global Private Infrastructure Closed-End Fund Index (USD), lagged 1 quarter and 25% MSCI Global Private Natural Resources Closed-End Fund Index (USD), lagged 1 quarter.

8. The proposal recommends that the Private Real Estate portion of the Private Markets allocation be benchmarked to a composite index comprising 50% Custom MSCI Global Private Opportunistic Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter and 50% Custom MSCI Global Private Value-Added Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter.

# TAB D

## Asset Allocation Study Executive Summary

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# SBI Combined Funds

## Asset Allocation Study

## October 2025

# Combined Funds Asset Allocation Study

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# Executive Summary

## Today's Goals

I. Approve Strategic Asset Allocation (SAA)

II. Approve Investment Policy Statement

# Executive Summary

## Key Objectives For This Study

Identify appropriate asset allocation policy to achieve the SBI's long-term objectives and formalize into Investment Policy Statement.

I. Evaluate changes in market environment and expected returns since the last asset allocation study

II. Ensure the portfolio's asset allocation policy can achieve the plan's actuarial assumed rate of return

III. Assess and calibrate portfolio liquidity (cash allocation)

IV. Improve portfolio diversification without sacrificing expected return
   - i. Maintain/improve portfolio risk-to-reward profile
   - ii. Maintain/improve downside protection
   - iii. Maintain/improve portfolio resiliency to key risks (unexpected inflation, growth shock)

# Asset Allocation Study Steps

## Data Collection & Education

- Collect CMAs from industry sources
- Presentations from key experts
- Finalize capital markets assumptions
- Review optimization inputs and process
- Peer comparison

## Analytics

- Identify modeling objectives & constraints
- Define risk parameters
- Optimization analysis
- Scenario analysis
- Liquidity modeling
- Benchmarking

## Evaluation & Review

- Evaluate model results with qualitative overlay
- Team discussion and debate
- Receive and incorporate feedback
- Model refinement

## Recommendation

- Updated SAA Recommendation
- Rebalancing Ranges
- Policy and Asset Class Benchmarks
- Updated Investment Policy Statement

# Executive Summary

## Key Observations on SBI's Current Asset Allocation:

**Current asset allocation continues to be appropriate to achieve the SBI's long-term investment objectives**

- Return-oriented portfolio built on a foundation of equity exposure driving returns
- Diversification mitigates equity risk exposure and protects in stressed markets
- Dedicated protection assets offer safety net
- Appropriate exposure to illiquidity premium across equity and debt asset classes
- Ample liquidity for benefit payments and private markets commitments in normal and stressed markets
- Strong historical investment results driven by both public and private equity exposure and commitment to long-term strategic asset allocation

**Modest updates to sub-asset class targets resulting from this study seek to improve execution while maintaining similar risk and return expectations and liquidity profile**

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# Executive Summary
## Asset Allocation Recommendations

| Asset Class | Current SAA | Proposed SAA | Range |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 5% | 6% | 4-8% |
| Return Seeking Fixed Income | 5% | 6% | 4-8% |
| Treasury Protection | 10% | 10% | 5-15% |
| *U.S. Treasury – 5+ Year* | *10%* | -- | -- |
| *U.S. Treasury (Broad Maturity)* | -- | *8%* | *5-15%* |
| *U.S. Treasury – Long* | -- | *2%* | *0-5%* |
| Cash Equivalents | 5% | 3% | 0-5% |
| **Private Markets** | **25%**[2] | **25%**[3] | **20-32%**[4, 5] |
| Private Equity | *17.5%** | 18% | 15-25% |
| Private Credit | *2.5%** | 3% | 0-6% |
| Private Real Assets | *2.5%** | 2% | 0-4% |
| Private Real Estate | *2.5%** | 2% | 0-4% |
| **Opportunistic Allocation** | | | **0-10%** |
| **Portfolio Metrics** | | | |
| Expected Return | **7.08%** | **7.10%** | |
| Expected Volatility | **13.41%** | **13.48%** | |
| Sharpe Ratio | **0.27** | **0.27** | |

1. **Reduce Duration of the Treasury Protection Portfolio**
   - Improves balance between liquidity and growth hedge goals
   - Lowers volatility and tail risk exposure to rising interest rates
2. **Optimize Portfolio Liquidity By Reducing Cash Allocation**
   - Incremental allocations to Core Fixed Income and Return Seeking Fixed Income reflects improved risk-return outlook
   - Proposed Cash allocation still provides a robust cushion
   - Results in a modest increase in portfolio expected return and risk
3. **Adopt Target Weights to Private Markets Sub-Asset Classes**
   - Modest increases to Private Equity and Private Credit
4. **Update Asset Mix for Uninvested Private Markets Allocation to 80% Equity + 20% Fixed Income**
   - Revised allocation better reflects underlying asset class risk exposures

***Proposed SAA changes expected to have a modest impact on portfolio risk and return while enhancing execution***

[1] *Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*

[2] *Uninvested Private Markets allocated to Passive Domestic Equity (S&P 500).* [3] *Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*

[4] *The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*

[5] *Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

** Reflects staff's internal asset class targets. Previous SAAs did not specify targets for Private Markets sub-asset classes.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# Executive Summary
## Proposed Policy and Asset Class Benchmarks

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***Bold Blue*** *reflects new or updated benchmark compared to current policy.*

| Asset Class | Proposed SSA | Policy Benchmark Weight | Benchmark |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **Public Equity Benchmark: 67% Russell 3000 Index and 33% MSCI ACWI ex USA Net Return Index (USD)** |
| U.S. Equity | 33.5% | 33.5% | Russell 3000 Index |
| International Equity | 16.5%[1] | 16.5% | MSCI ACWI ex USA Net Return Index (USD) |
| **Fixed Income & Cash** | **25%** | **25%** | **Total Fixed Income Benchmark: 24% Bloomberg U.S. Aggregate Bond Index, 24% Return-Seeking Fixed Income Benchmark, 40% Treasury Protection Benchmark, 12% ICE BofA U.S. 3-Mth Treasury Bill Index** |
| Core/Core Plus Fixed Income | 6% | 6% | Bloomberg U.S. Aggregate Bond Index |
| Return-Seeking Fixed Income | 6% | 6% | **Return-Seeking Fixed Income Benchmark: 25% ICE BofA U.S. Cash Pay High Yield Constrained Index, 25% S&P UBS Leveraged Loan Index, 25% JPM EMBI Global Diversified Index, 25% ICE BofA AA-BBB U.S. Fixed and Floating Rate Asset-Backed Securities Index** |
| Treasury Protection | 10% | 10% | **Treasury Protection Benchmark: 80% Bloomberg U.S. Treasury Index and 20% Bloomberg U.S. Long Treasury Index** |
| *U.S. Treasury (Broad Maturity)* | 8% | 8% | **Bloomberg U.S. Treasury Index** |
| *U.S. Treasury - Long* | 2% | 2% | **Bloomberg U.S. Long Treasury Index** |
| Cash | 3% | 3% | ICE BofA U.S. 3-Month Treasury Bill Index |
| **Private Markets** | **25%[2, 3]** | **Actual Wgt.** | **Total Private Markets Benchmark: Composite of Sub-Asset Class Benchmarks Weighted by Actual Portfolio Weights at Beginning of Each Period** |
| Private Equity | 18% | *Actual Weight, Beginning of Period* | **MSCI Global Buyout Closed-End Fund Index (USD), lagged 1 quarter** |
| Private Credit | 3% | | **MSCI Global Private Credit Closed-End Fund Index (USD), lagged 1 quarter** |
| Private Real Assets | 2% | | **Private Real Assets Benchmark: 75% MSCI Global Private Infrastructure Closed-End Fund Index (USD), lagged 1 quarter and 25% MSCI Global Private Natural Resources Closed-End Fund Index (USD), lagged 1 quarter** |
| Private Real Estate | 2% | | **Private Real Estate Benchmark: 50% Custom MSCI Global Private Opportunistic Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter and 50% Custom MSCI Global Private Value-Added Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter** |
| **Opportunistic** | | | **Relevant blended benchmark, as applicable** |

[1] *Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*

[2] *Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*

[3] *The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*

# Executive Summary

## Next Steps

I. SAA Implementation Update

II. Private Markets Pacing Model

III. Private Markets Reporting Update

IV. Currency Hedging Program Review

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# TAB D

## Asset Allocation Study Presentation

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MINNESOTA STATE BOARD OF INVESTMENT

# SBI Combined Funds

## Asset Allocation Study

## October 2025

# Combined Funds Asset Allocation Study

# Executive Summary

## Today's Goals

I. Approve Strategic Asset Allocation (SAA)

II. Approve Investment Policy Statement

# Executive Summary

## Key Objectives For This Study

Identify appropriate asset allocation policy to achieve the SBI's long-term objectives and formalize into Investment Policy Statement.

I. Evaluate changes in market environment and expected returns since the last asset allocation study

II. Ensure the portfolio's asset allocation policy can achieve the plan's actuarial assumed rate of return

III. Assess and calibrate portfolio liquidity (cash allocation)

IV. Improve portfolio diversification without sacrificing expected return
   - i. Maintain/improve portfolio risk-to-reward profile
   - ii. Maintain/improve downside protection
   - iii. Maintain/improve portfolio resiliency to key risks (unexpected inflation, growth shock)

## Asset Allocation Study Steps

### Data Collection & Education

- Collect CMAs from industry sources
- Presentations from key experts
- Finalize capital markets assumptions
- Review optimization inputs and process
- Peer comparison

### Analytics

- Identify modeling objectives & constraints
- Define risk parameters
- Optimization analysis
- Scenario analysis
- Liquidity modeling
- Benchmarking

### Evaluation & Review

- Evaluate model results with qualitative overlay
- Team discussion and debate
- Receive and incorporate feedback
- Model refinement

### Recommendation

- Updated SAA Recommendation
- Rebalancing Ranges
- Policy and Asset Class Benchmarks
- Updated Investment Policy Statement

# Executive Summary

## Key Observations on SBI's Current Asset Allocation:

Current asset allocation continues to be appropriate to achieve the SBI's long-term investment objectives

- Return-oriented portfolio built on a foundation of equity exposure driving returns
- Diversification mitigates equity risk exposure and protects in stressed markets
- Dedicated protection assets offer safety net
- Appropriate exposure to illiquidity premium across equity and debt asset classes
- Ample liquidity for benefit payments and private markets commitments in normal and stressed markets
- Strong historical investment results driven by both public and private equity exposure and commitment to long-term strategic asset allocation

Modest updates to sub-asset class targets resulting from this study seek to improve execution while maintaining similar risk and return expectations and liquidity profile

1

# Executive Summary
## Asset Allocation Recommendations

| Asset Class | Current SAA | Proposed SAA | Range |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 5% | 6% | 4-8% |
| Return Seeking Fixed Income | 5% | 6% | 4-8% |
| Treasury Protection | 10% | 10% | 5-15% |
| *U.S. Treasury – 5+ Year* | *10%* | -- | -- |
| *U.S. Treasury (Broad Maturity)* | -- | *8%* | *5-15%* |
| *U.S. Treasury – Long* | -- | *2%* | *0-5%* |
| Cash Equivalents | 5% | 3% | 0-5% |
| **Private Markets** | **25%**[2] | **25%**[3] | **20-32%**[4, 5] |
| Private Equity | *17.5%** | 18% | 15-25% |
| Private Credit | *2.5%** | 3% | 0-6% |
| Private Real Assets | *2.5%** | 2% | 0-4% |
| Private Real Estate | *2.5%** | 2% | 0-4% |
| **Opportunistic Allocation** | | | **0-10%** |
| **Portfolio Metrics** | | | |
| Expected Return | **7.08%** | **7.10%** | |
| Expected Volatility | **13.41%** | **13.48%** | |
| Sharpe Ratio | **0.27** | **0.27** | |

1. **Reduce Duration of the Treasury Protection Portfolio**
   - Improves balance between liquidity and growth hedge goals
   - Lowers volatility and tail risk exposure to rising interest rates
2. **Optimize Portfolio Liquidity By Reducing Cash Allocation**
   - Incremental allocations to Core Fixed Income and Return Seeking Fixed Income reflects improved risk-return outlook
   - Proposed Cash allocation still provides a robust cushion
   - Results in a modest increase in portfolio expected return and risk
3. **Adopt Target Weights to Private Markets Sub-Asset Classes**
   - Modest increases to Private Equity and Private Credit
4. **Update Asset Mix for Uninvested Private Markets Allocation to 80% Equity + 20% Fixed Income**
   - Revised allocation better reflects underlying asset class risk exposures

***Proposed SAA changes expected to have a modest impact on portfolio risk and return while enhancing execution***

*[1] Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*

*[2] Uninvested Private Markets allocated to Passive Domestic Equity (S&P 500). [3] Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*

*[4] The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*

*[5] Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

** Reflects staff's internal asset class targets. Previous SAAs did not specify targets for Private Markets sub-asset classes.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

1

# Executive Summary
## Proposed Policy and Asset Class Benchmarks

***Bold Blue*** *reflects new or updated benchmark compared to current policy.*

| Asset Class | Proposed SSA | Policy Benchmark Weight | Benchmark |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **Public Equity Benchmark: 67% Russell 3000 Index and 33% MSCI ACWI ex USA Net Return Index (USD)** |
| U.S. Equity | 33.5% | 33.5% | Russell 3000 Index |
| International Equity | 16.5%[1] | 16.5% | MSCI ACWI ex USA Net Return Index (USD) |
| **Fixed Income & Cash** | **25%** | **25%** | **Total Fixed Income Benchmark: 24% Bloomberg U.S. Aggregate Bond Index, 24% Return-Seeking Fixed Income Benchmark, 40% Treasury Protection Benchmark, 12% ICE BofA U.S. 3-Mth Treasury Bill Index** |
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# Executive Summary

## Next Steps

I. SAA Implementation Update

II. Private Markets Pacing Model

III. Private Markets Reporting Update

IV. Currency Hedging Program Review

# Combined Funds Asset Allocation Study

2

# Our Mission is our North Star

**The primary mission of the SBI is to provide investment returns to support the retirement security of over 850,000 Minnesota public employees and their families.**

We are entrusted with this mission on behalf of PERA, MSRS, and TRA, whose plan members contribute a meaningful portion of their salaries in return for their retirement security.

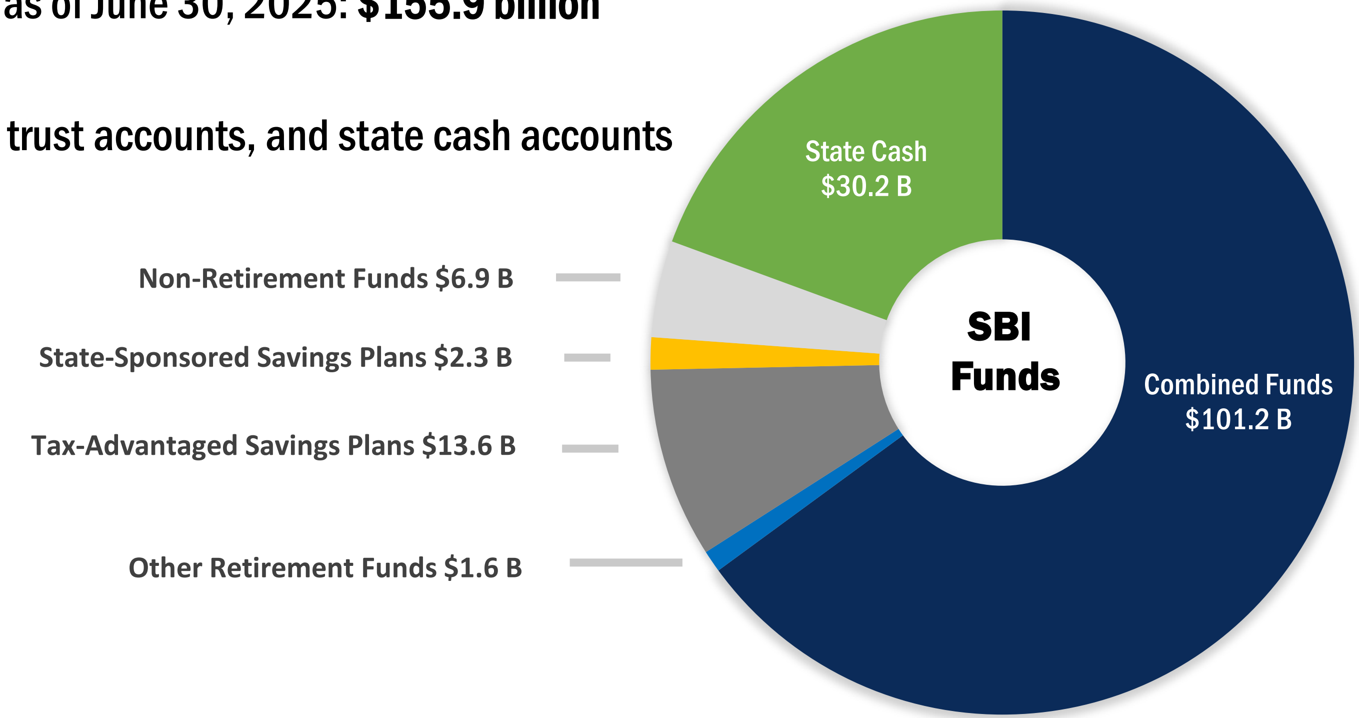
We are fiduciaries and stewards of capital. Plan benefits and policy decisions are the sole responsibility of PERA, MSRS, and TRA, which are separate and independent organizations.

2

# SBI Funds Under Management

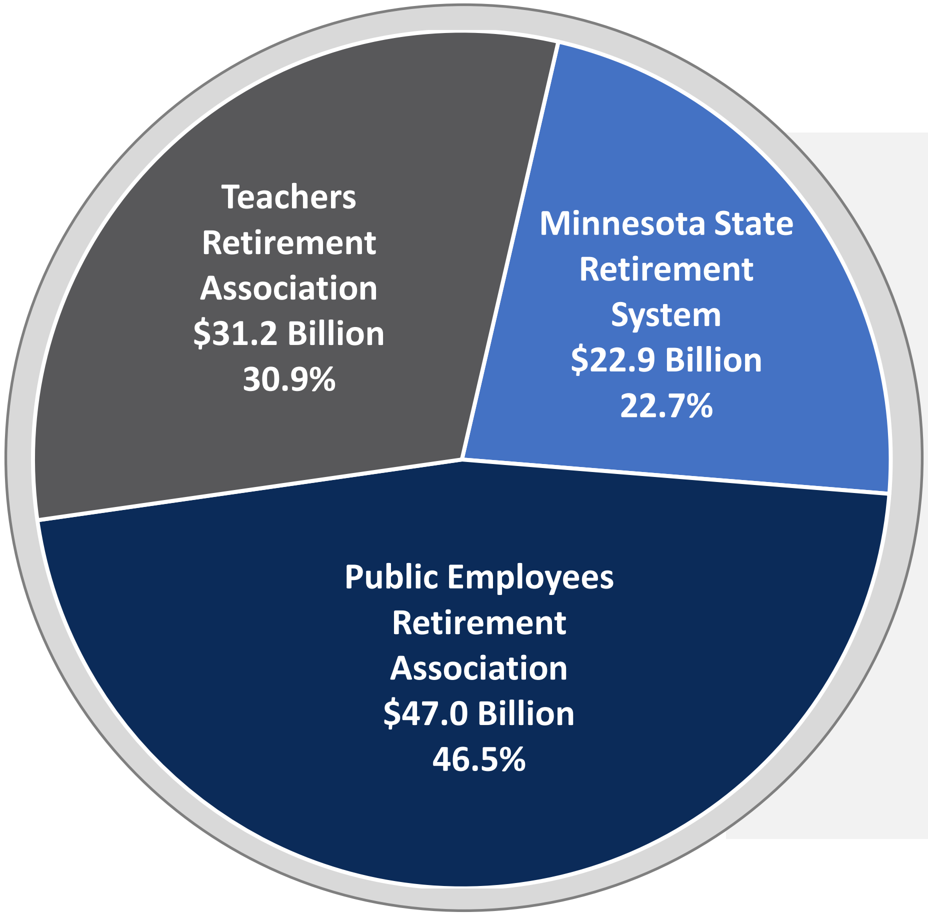
## Total Assets as of June 30, 2025 (in $ Billions)

- Total assets under management as of June 30, 2025: **$155.9 billion**
- Assets include retirement plans, trust accounts, and state cash accounts




- Non-Retirement Funds include State Trust Funds, Other Post Employment Benefits Accounts (OPEB), and Qualifying Governmental Entities.
- State-Sponsored Savings Plans include Minnesota College Savings Plan, and the Minnesota Achieving a Better Life Experience (ABLE) Plan.
- Tax-Advantaged Savings Plans Include Health Care Savings Plan, Hennepin County Supplemental Retirement Plan, and State Deferred Compensation Plan.
- Other Retirement Funds include the PERA Defined Contribution Plan, St. Paul Teachers' Retirement Fund, Statewide Volunteer Firefighter Plan, Unclassified Employees Retirement Plan, and Volunteer Fire Relief Associations.

# Combined Funds
## Participating Retirement Systems




- Represents pooled investments of the three statewide pension systems
- Long-term investment horizon
- Common 7.0% actuarial assumed rate of return[1]
- Pooling of assets leverages scale and reduces investment costs
- Assets are 100% externally managed by professional asset managers selected and overseen by SBI

*Market value data as of June 30, 2025.*

*[1] The Minnesota legislature is responsible for setting the actuarial assumed rate of return for each plan overseen by the Retirement Systems. The current assumption, which was most recently adjusted by the legislature in 2023, is 7.0%.*

2

# Guiding Principles of Our Investment Philosophy

## Sources of Return

- **Asset allocation** is the most important determinant of long-term returns.
- **Patient, long-term investing** – including a disciplined process of rebalancing to a portfolio's strategic asset allocation – produces superior results.
- **The equity risk premium is significantly positive** over a long-term investment horizon and is a primary driver of investment returns over time.
- **Less efficient asset classes offer investment opportunities** that skilled active managers harness to generate excess returns.
- **Private markets have an illiquidity premium** that the SBI can capture.

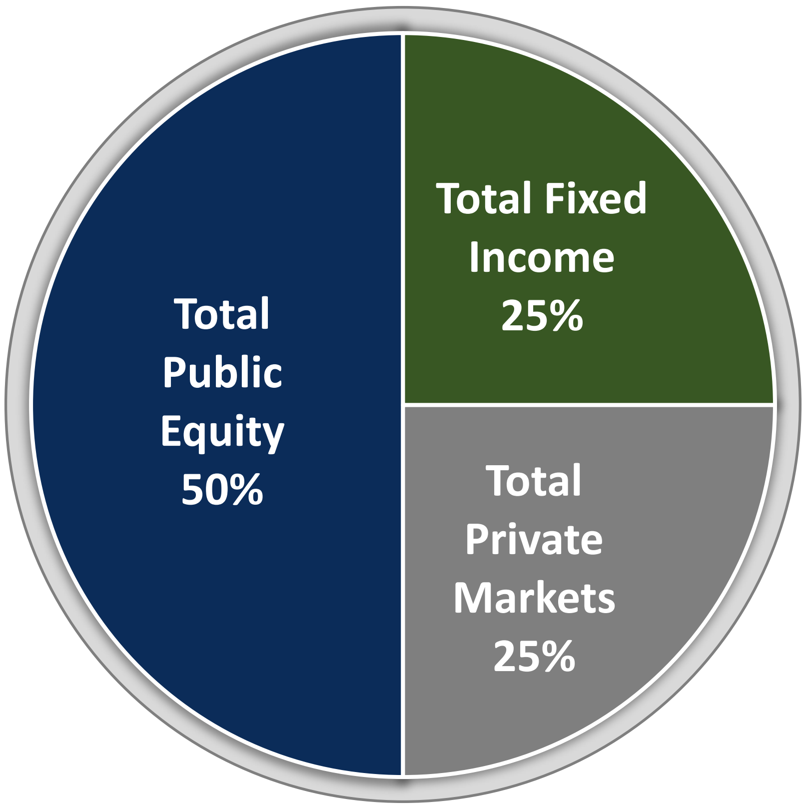
## Risk Mitigation

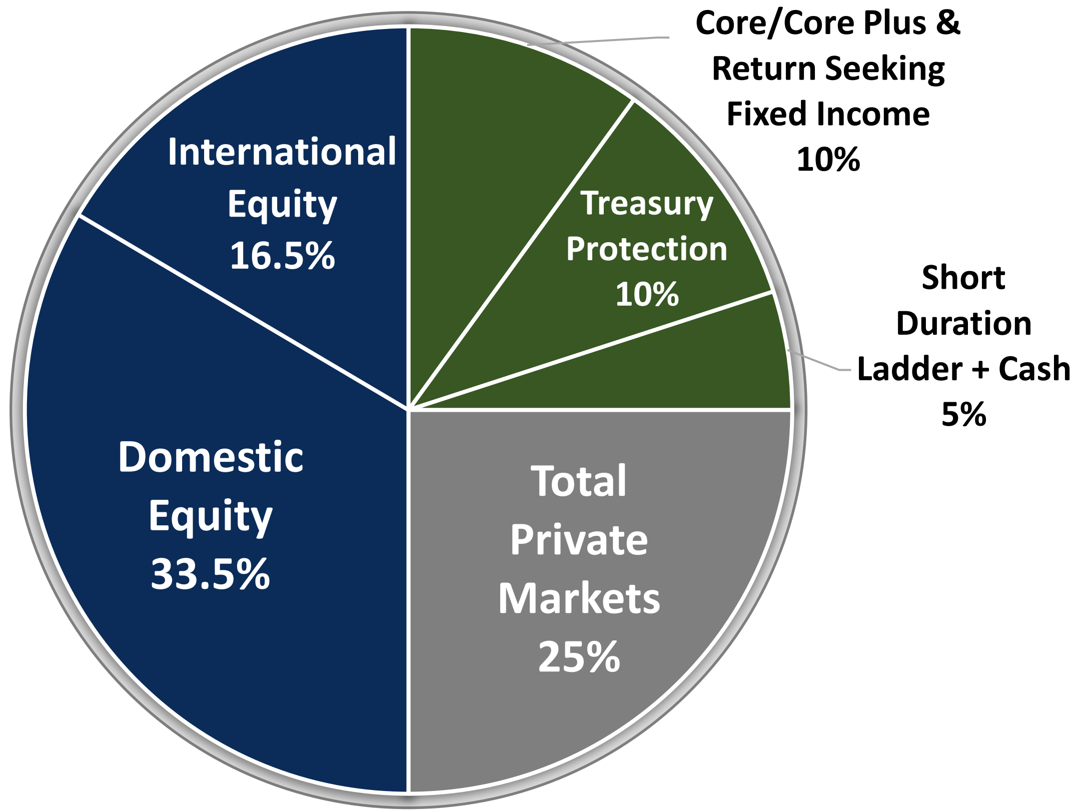
- **Diversifying the sources of risk and return** can improve the portfolio's investment experience.
- **Simplicity** in investment program design supports effective risk management. Complexity should only be introduced when it provides a demonstrable benefit to expected outcomes.
- **Effective liquidity management** is a key risk management function and helps maximize investment outcomes across market cycles.

2

# SBI Combined Funds Asset Allocation

## as of June 30, 2025



2

# SBI Combined Funds

## SAA Policy Evolution Since 2008

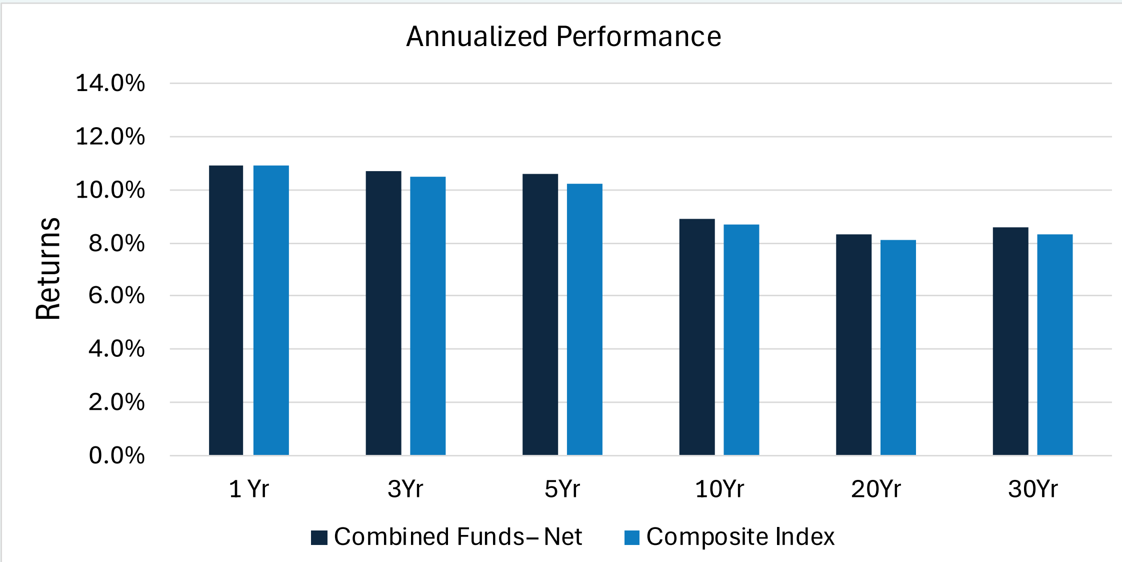
| Asset Class | 2008 AA Study | 2016 AA Study | 2017 Strategic Framework | 2020 Resolution | *2025 Proposed SAA* |
|---|---|---|---|---|---|
| | Target % | Target % | Target % | Target % | Target % |
| **Public Equity** | **60%** | **58%** | **53%** | **50%** | **50%** |
| *Domestic Equity* | *45%* | *39%* | *35.5%* | *33.5%* | *33.5%* |
| *International Equity* | *15%* | *19%* | *17.5%* | *16.5%* [1] | *16.5%* [1] |
| **Fixed Income & Cash** | **20%** | **22%** | **22%** | **25%** | **25%** |
| *Core/Core Plus Fixed Income* | *18%* | *20%* | *10%* | *10% †* | *6%* |
| *Return-Seeking Fixed Income* | -- | -- | -- | | *6%* |
| *Treasury Protection* | -- | -- | *10%* | *10%* | *10%* |
| *U.S. Treasury 5+ Year* | -- | -- | *10%* | *10%* | -- |
| *U.S. Treasury (Broad Maturity)* | -- | -- | -- | -- | *8%* |
| *U.S. Treasury - Long* | -- | -- | -- | -- | *2%* |
| *Cash & Ladder Portfolio* | *2%* | *2%* | *2%* | *5%* | *3%* |
| **Private Markets** | **20%** [2] | **20%** [3] | **25%** [3] | **25%** [3] | **25%** [4] |
| *Private Equity* | -- | -- | -- | -- | *18%* |
| *Private Credit* | -- | -- | -- | -- | *3%* |
| *Real Assets* | -- | -- | -- | -- | *2%* |
| *Real Estate* | -- | -- | -- | -- | *2%* |

**Guided by the SBI's enduring investment beliefs, the Combined Funds' policy asset allocation has evolved thoughtfully over time, maintaining a steady alignment with the Funds' long-term investment objectives.**

*† Resolution added Core Plus and Return-Seeking as allocation within Fixed Income [1] Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure. [2] Uninvested Private Markets allocated to Fixed Income [3] Uninvested Private Markets allocated to Public Equity [4] Uninvested Private Markets benchmarked to a composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Bond Index.*

2

# SBI Combined Funds Performance
## as of June 30, 2025




| | 1 Yr | 3Yr | 5Yr | 10Yr | 20Yr | 30Yr |
|---|---|---|---|---|---|---|
| **Combined Funds – Net** | **10.9%** | **10.7%** | **10.6%** | **8.9%** | **8.3%** | **8.6%** |
| Composite Index | 10.9% | 10.5% | 10.2% | 8.7% | 8.1% | 8.3% |
| Difference | +0.0% | +0.2% | +0.4% | +0.2% | +0.2% | +0.3% |

### 10-Year Return Meets or Exceeds Policy Benchmark

| Combined Funds – Net | Composite Index |
|---|---|
| 8.9% | 8.7% |

### 20-Year Return Meets or Exceeds Inflation by 3-5% Annualized

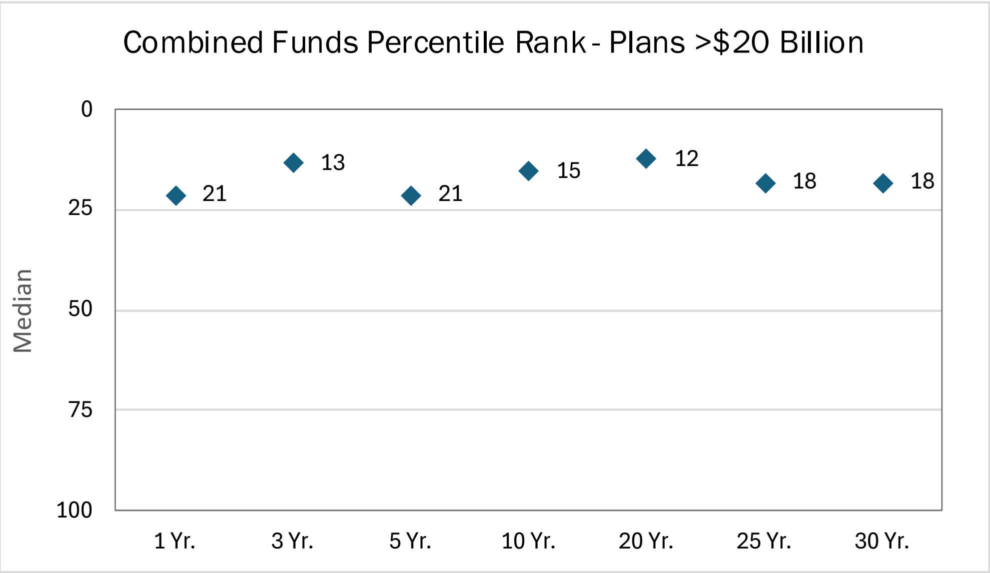
| Combined Funds – Net | CPI-U |
|---|---|
| 8.3% | 2.6% |

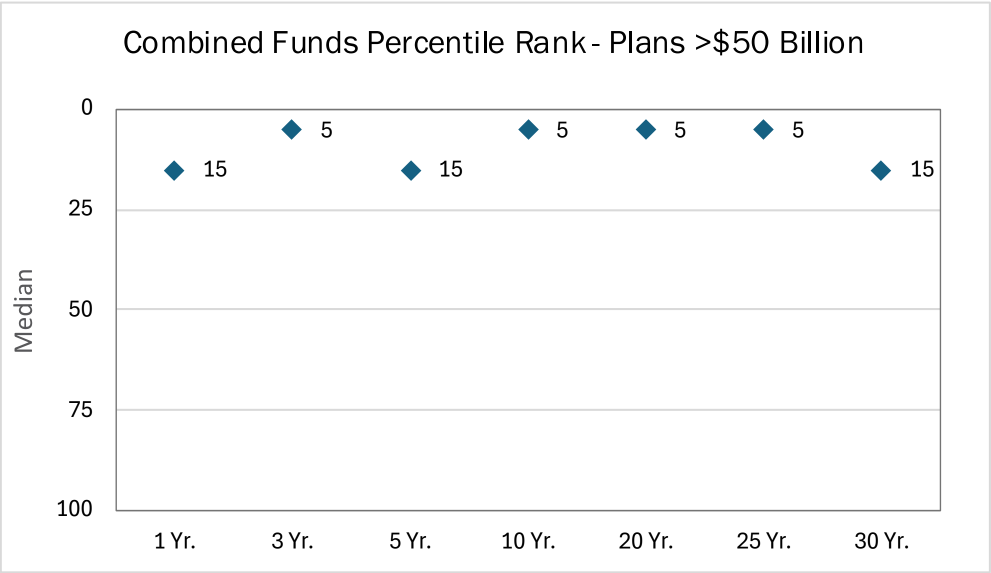
**The Combined Funds Has Consistently Met or Exceeded Its Long-Term Return Objectives Over Time.**

*Note: Performance is presented net of investment management fees and the effect of any profit-sharing arrangements.*

2

# Peer Comparison
## TUCS Performance Rank as of June 30, 2025



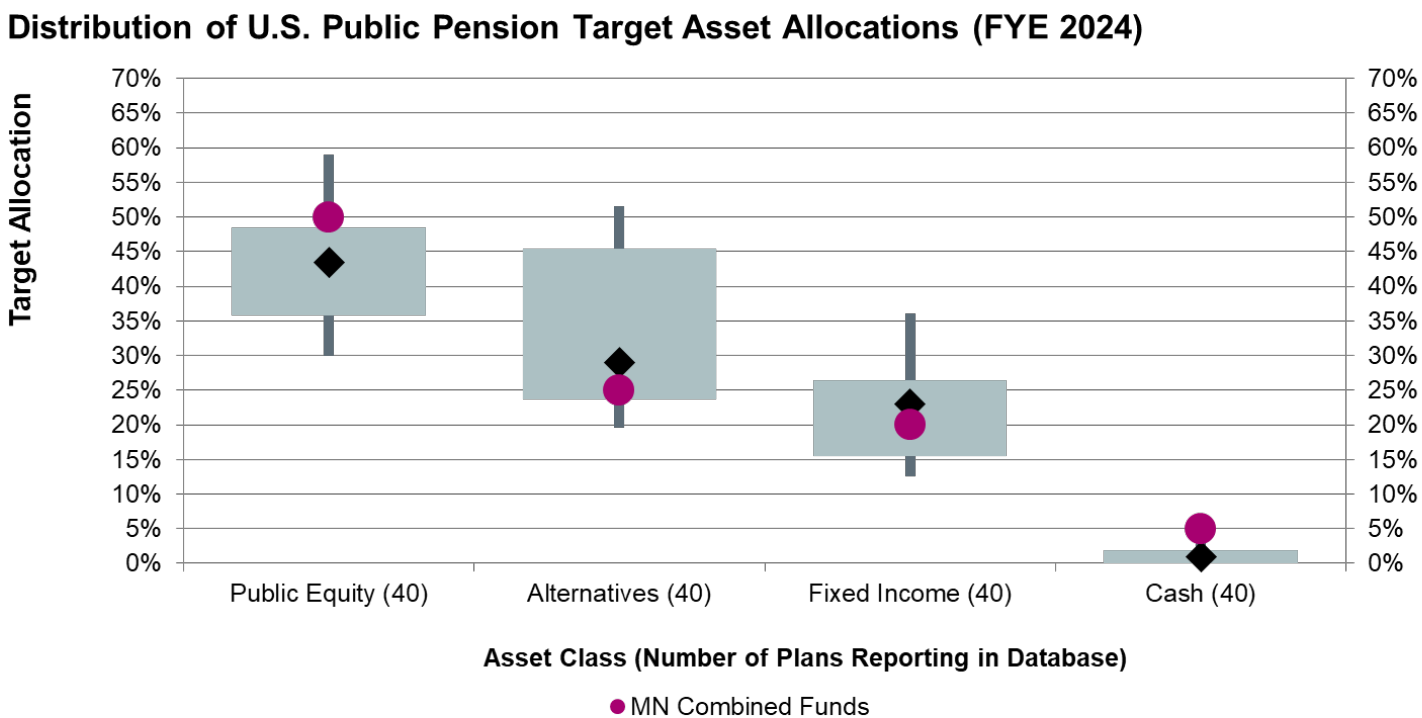

**The Combined Funds' Performance Consistently Ranks in the Top Quartile Among Large Plan Peers over time.**

*Source : Wilshire Trust Universe Comparison Service (TUCS)*

*Note: Performance is presented net of investment management fees and the effect of any profit-sharing arrangements.*

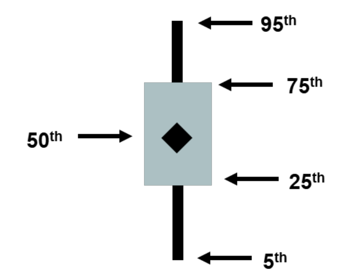
# Peer Comparison

## Asset allocation peer analysis (greater than $25B in Plan assets)




**Key Takeaways:**

- SBI's public equity exposure is higher than the public peer median allocation
- SBI's alternatives exposure is below the peer median
- Within alternatives,* SBI's real estate allocation is below the peer median while the allocation to private equity/debt is above median
- SBI holds a higher level of cash than peer plans




**Source:** Public Plans Data (publicplansdata.org) as of FYE 2024. Data accessed from website in July 2025.
**Notes:** Number of plans meeting criteria are shown in parentheses; Alternatives consists of the following asset classes noted in the database: private equity, real estate, hedge funds, commodities, miscellaneous alternatives, and other
* See Appendix for detailed breakdown of Alternatives allocation

# Combined Funds Asset Allocation Study

# SBI Asset Allocation Inputs

**After defining inputs, both quantitative and qualitative tools are used to evaluate current and alternative asset allocations relative to investment objectives.**

**INPUTS**

- Capital Markets Assumptions
- Objectives and Constraints
- Investment Strategy Views and Principles

**Quantitative & Qualitative Analysis**

**Common Quantitative tools include:**
- Mean-variance optimization
- Drawdown/historical analysis
- Deterministic scenarios and/or stochastic analysis
- Liquidity stress testing

**Common Qualitative inputs include:**
- Implementation considerations
- Investment views
- Materiality
- Peer practices

AON

## SBI's Approach to Setting CMAs

**Anchor Analysis:**
Use Aon's 10-yr capital market assumptions as a foundational reference and starting point.

**Comprehensive Data Collection:**
Gather capital market assumptions from a diverse set of consultants and providers.

**Identify Key Differences:**
Compare assumptions, highlight differences and pinpoint outliers.

**Evaluate Alignment:**
Assess which sources best reflect our views on asset classes across return, risk and correlation.

**Refine:**
Implement changes only where they are essential to enhancing the process and adding meaningful value.

CMA Sources:

- Aon • Meketa • Albourne • UBS • Bank of New York Mellon
- State Street • Goldman Sachs • JPMorgan • Blackrock • Horizon
- PIMCO • Franklin Templeton • Callan • Wilshire • SBI Staff Views

3

# Capital Market Assumptions
## SBI Final CMA Inputs – Refinements

| | Expected Return | | | Expected Volatility | | |
|---|---|---|---|---|---|---|
| | SBI Final CMA | Aon 6/30/25 | Horizon 12/31/24 | SBI Final CMA | Aon 6/30/25 | Horizon 12/31/24 |
| U.S. Large Cap Equity | 6.75% | 6.70% | 6.46% | 17.00% | 18.00% | 16.52% |
| U.S. Small Cap Equity | 7.20% | 6.90% | 7.07% | 22.00% | 24.00% | 20.57% |
| Int'l Developed Equity* | 6.85% | 6.30% | 7.08% | 17.50% | 18.50% | 18.06% |
| Emerging Mkts Equity | 7.20% | 6.70% | 7.70% | 23.00% | 21.00% | 23.61% |
| Equity Risk Premium | 2.65% | 2.40% | 2.78% | | | |
| Inflation | 2.50% | 2.40% | 2.42% | 1.50% | 1.70% | 1.86% |
| Cash | 3.40% | 3.70% | 3.68% | 1.50% | 1.20% | 1.10% |
| US Treasury | 4.10% | 4.30% | 4.38% | 4.80% | 4.30% | 6.10% |
| US Aggregate | 4.60% | 4.90% | 4.93% | 4.70% | 5.00% | 5.90% |
| High Yield | 5.80% | 5.80% | 6.13% | 10.00% | 10.50% | 9.94% |
| Emerging Markets Debt | 6.00% | 6.50% | 6.17% | 11.00% | 11.00% | 10.76% |
| Private Equity | 9.30% | 9.60% | 9.09% | 20.50% | 17.90% | 22.57% |
| Private Credit | 7.40% | 7.30% | 8.32% | 13.20% | 9.70% | 12.00% |
| Real Assets | 7.65% | 9.20% | 7.26% | 17.70% | 16.00% | 16.02% |
| Real Estate | 7.20% | 7.60% | 6.06% | 20.00% | 24.90% | 16.61% |

** SBI CMAs for International Developed equities proxied the impact of a dynamic currency hedging strategy by using a customized MSCI World ex USA Index 50% hedged to USD return series where applicable.*

Horizon Actuarial Services, LLC, conducts an annual capital markets survey of investment firms. For the 2024 survey, 41 investment advisors participated. See the appendix for more information.

### Notable Refinements to SBI CMAs vs AON/Horizon

- Modestly higher expected return for **U.S. Small Cap** based on starting valuation, long-term return premium.
- **Cash** return modeled based on inflation plus an expected real return on cash of +0.9%.
- **U.S. Treasury** return lowered to reflect recent sharp decline in high quality bond yields.
- **U.S. Aggregate Bond** return lowered to reflect recent sharp decline in high quality bond yields.
- **EM Debt** expected return lowered to reflect more conservative estimates for sovereign defaults and recoveries.
- **Real Assets**
  - Return lowered to maintain consistency with other private asset classes (return per unit of risk).
  - Volatility modeled with 25% exposure to natural resources, which raises expected volatility vs. other real assets like core infrastructure.

SBI Final CMA Higher than Aon 10-yr CMA
SBI Final CMA Lower than Aon 10-yr CMA

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# SBI Asset Allocation Study
## Key Objectives and Constraints That Guide the Modeling

### Return

- Earn an average annual net rate of return greater than the Combined Funds Composite Benchmark over a 10-year period
- Earn a net rate of return exceeding inflation by 3-5% on an annualized basis over a 20-year period
- Meet or exceed the Retirement Systems' actuarial assumed rate of return target over appropriate periods of time.[1]

### Risk

- Diversify across asset classes and active managers to avoid excess concentration
- Target realized volatility consistent with a moderately aggressive asset allocation (9-11% realized, 13-15% unsmoothed)
- Limit risk of severe drawdown
- Target an efficient balance between return and risk (Sharpe ratio)

### Constraints - Key statutory limits

| | |
|---|---|
| Maximum 35% | Private Markets |
| Maximum 85% | Equities + Private Markets + Non-U.S. Fixed Income + Bank Loans |

***All investments must be authorized under 11A.24***

### Liquidity

- Ensure timely payment of benefits under all market conditions
- Ensure adequate liquidity for private markets capital commitments
- Maintain sufficient liquidity to avoid selling risk assets in a drawdown

*[1] The Minnesota legislature is responsible for setting the actuarial assumed rate of return for each plan overseen by the Retirement Systems. The current assumption, which was most recently adjusted by the legislature in 2023, is 7.0%.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# SAA Study Final Inputs
## Risk/Return Expectations and Constraints

| | Current SAA | Capital Market Assumptions: Expected Return | Capital Market Assumptions: Expected Volatility | Modeling Constraints: Min | Modeling Constraints: Max |
|---|---|---|---|---|---|
| **Public Equity** | **50.0%** | | | 35% | 60% |
| U.S. Equity | 33.5% | 6.80% | 17.25% | 25% | 60% |
| International Equity[1] | 16.5% | 6.95% | 18.00% | 5% | 30% |
| **Fixed Income & Cash** | **25.0%** | | | 15% | n/a |
| U.S. Aggregate | 5.0% | 4.60% | 4.70% | 0% | 15% |
| Return Seeking Fixed Income | 5.0% | 5.80% | 9.10% | 0% | 15% |
| U.S. Treasury - 5+ Year | 10.0% | 4.30% | 9.00% | n/a | n/a |
| U.S. Treasury | --- | 4.10% | 4.80% | 0% | 100% |
| U.S. Treasury – Long | --- | 4.60% | 13.50% | 0% | 10% |
| Cash Equivalents | 5.0% | 3.40% | 1.50% | 3% | 5% |
| **Private Markets** | **25.0%** | | | n/a | 25% |
| Private Equity | 17.5%* | 9.30% | 20.50% | 15% | 19% |
| Private Credit | 2.5%* | 7.40% | 13.20% | 2% | 6% |
| Private Real Assets | 2.5%* | 7.65% | 17.70% | 2% | 5% |
| Private Real Estate | 2.5%* | 7.20% | 20.00% | 2% | 5% |
| **Portfolio Metrics** | | | | | |
| Expected Return | **7.08%** | | | | |
| Expected Volatility | **13.41%** | | | | |
| Sharpe Ratio | **0.27** | | | | |

**Realistic constraints necessitated by statutory limits, prudent diversification and emphasis on sufficient liquidity through a market cycle:**

- **Min 3% Cash Allocation**
- **Min 15% Investment Grade Fixed Income + Cash**
- **Max 25% Private Markets**
- **Min 35% Public Equity**
- **Max 60% Public Equity**
- **Min 2% Allocations to Private Credit, Real Assets and Real Estate**

*[1] SBI CMAs for International equities proxied the impact of a dynamic currency hedging strategy by using a customized MSCI ACWI ex USA Index 50% hedged to USD return series reflecting hedging of developed markets currencies only. Emerging markets currencies are unhedged.*

** Reflects staff's internal asset class targets. Previous SAAs did not specify targets for Private Markets sub-asset classes.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

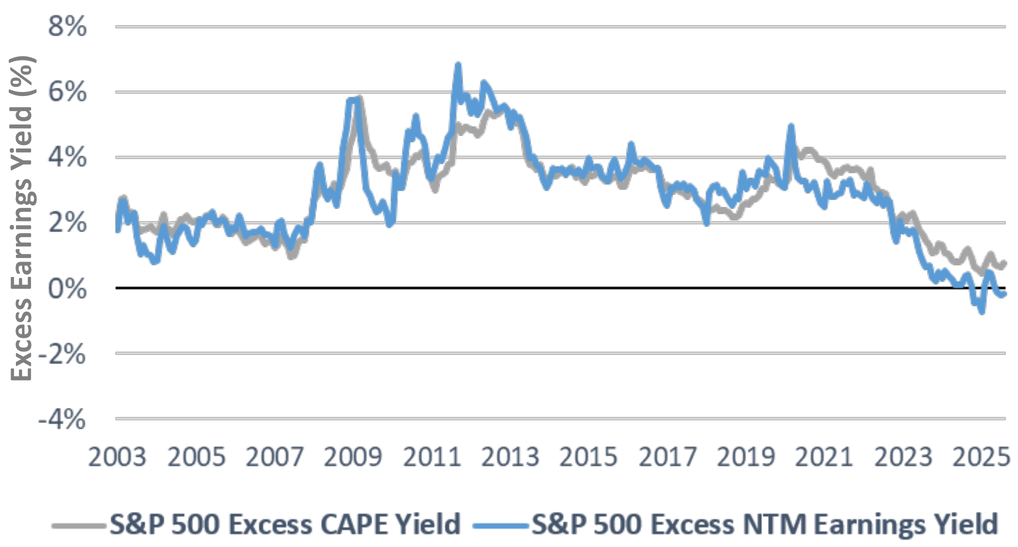
# Current Market Assessment & Implications for SAA

1. **Equity Risk Premium: Elevated Valuations May Imply Lower Future Return Potential**
2. **Private Equity Return Premium: Compressed But Remains Attractive**
3. **U.S. Equities vs. Rest of World: Will Superior Earnings Growth Sustain U.S. Equity Valuations?**
4. **Fixed Income Yields Are Now More Attractive**
5. **U.S. Fiscal Trajectory Amplifies Inflation and Debt Sustainability Tail Risk for U.S. Treasuries**

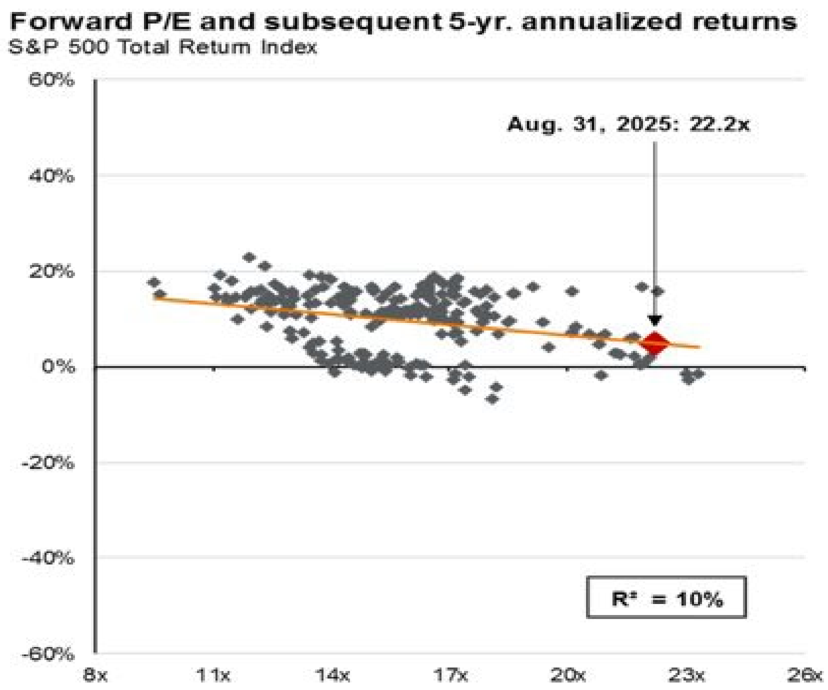
## 1. Equity Risk Premium – Elevated Valuations May Imply Lower Future Return Potential

- The high level of current equity valuations suggests go-forward return expectations should be tempered.
- However, improvements in productivity have the potential to generate returns beyond valuation-implied return premium.

**Valuation-Implied Equity Risk Premium for S&P 500**
January 2003 – August 2025




*Data through August 31, 2025. Source: Bloomberg, S&P Dow Jones Indices, SBI Staff calculations. Excess CAPE Yield is the earnings yield, calculated as the inverse of the Case-Shiller Cyclically Adjusted Price-to-Earnings Ratio (price divided by the 10-year average of CPI-deflated earnings), minus the 10-year real (inflation-adjusted) Treasury yield. Excess NTM Earnings Yield refers to the earnings yield, calculated as the inverse of the price-to-next 12 months earnings, minus the nominal 10-year Treasury yield.*

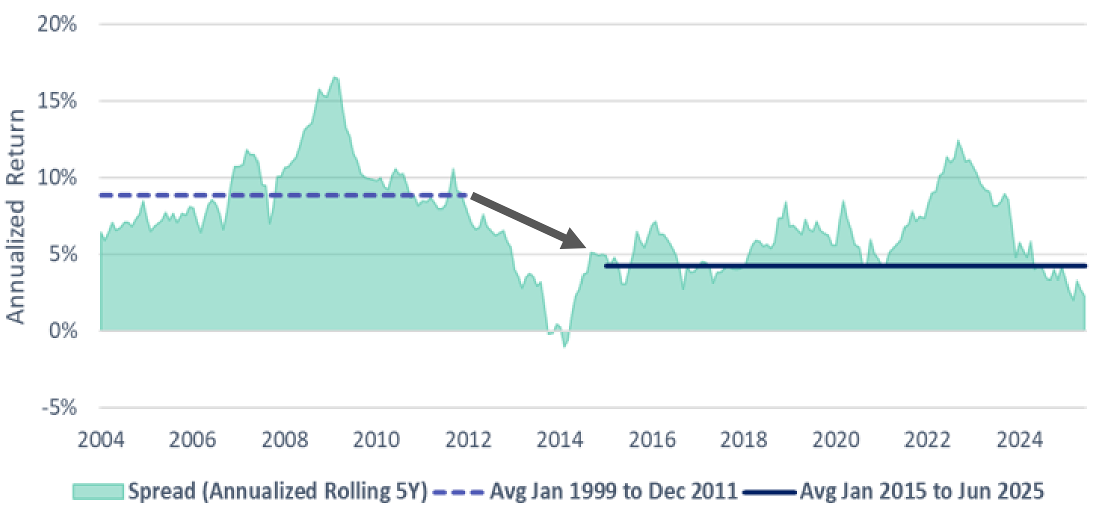



*Source: JPMorgan Guide to the Markets, August 2025*

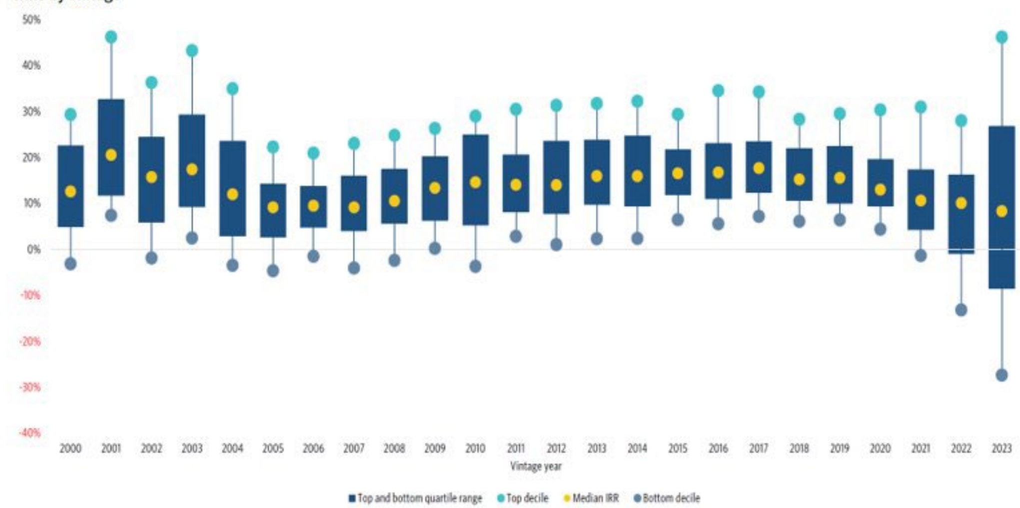
## 2. Private Equity Return Premium – Compressed But Still Attractive

- **The Private Equity average return premium over public markets has moderated over time as the industry has grown and private capital has become more abundant. Despite this moderation an attractive return premium persists.**
- **As the number of publicly listed companies decreases and public equity markets become more concentrated, private markets provide the potential for diversification.**
- **We continue to believe that leading private markets managers can generate meaningful alpha versus public markets.**

**Private Equity Rolling 5-year Excess Return to Public Equities**
January 1999 – June 2025




*Source: Bloomberg, MSCI, SBI Staff calculations. Private equity returns reflect MSCI Global Buyout Closed-End Fund Index (USD). Public equity returns reflect MSCI ACWI Index (USD).*

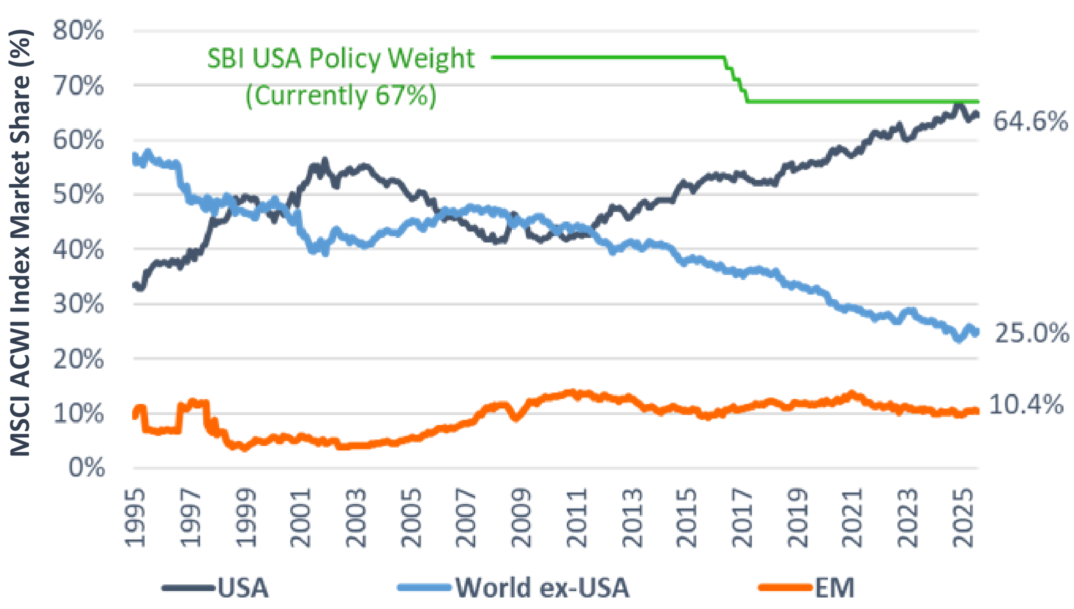



*Source: Pitchbook Global Benchmarks Q1 2025 with preliminary Q2 2025 data.*

## 3. U.S. Equities vs. Rest of World – Will Superior Earnings Growth Sustain U.S. Equity Valuations?

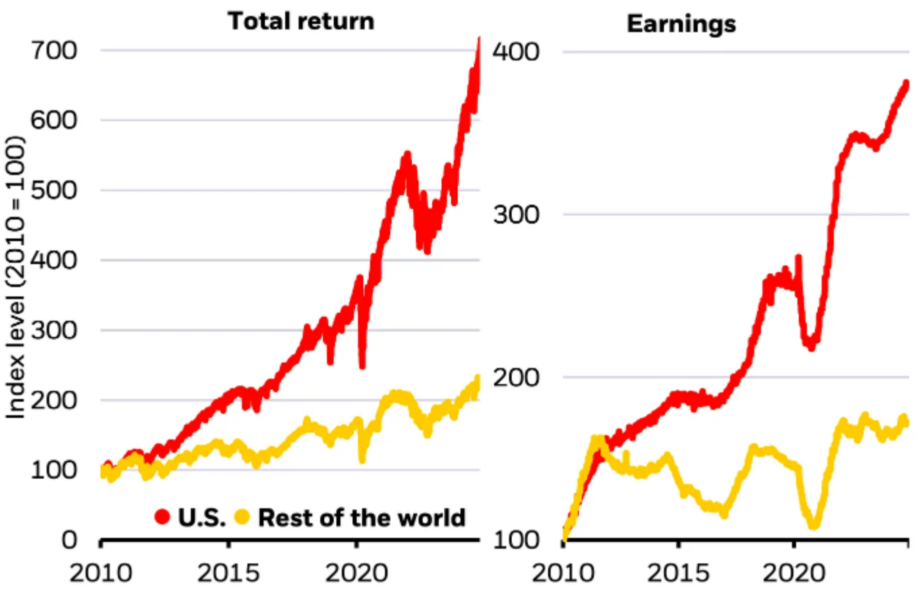
- U.S. stocks have dominated international stocks over the last 15 years, leading to a surge in the U.S. market capitalization as a percent of the overall MSCI ACWI Index.
- Earnings growth has supported U.S. equity valuations so far, but caution is warranted.

**MSCI ACWI Index Market Capitalization By Region**
January 1995 – August 2025




*Source: Bloomberg, MSCI, SBI Staff calculations*

**Hardening divergence**
U.S. equity performance vs. the rest of the world, 2010-2024

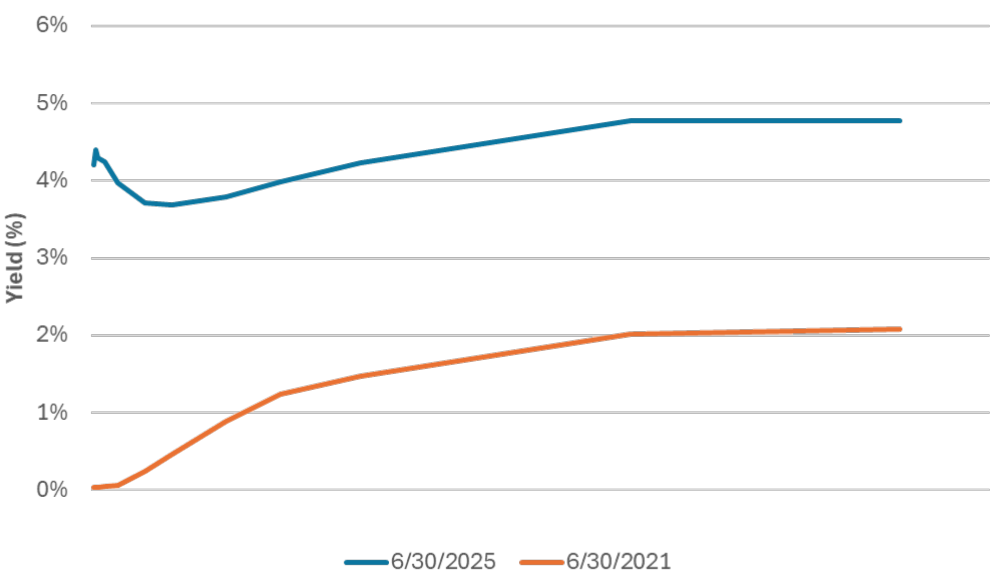



*Source: Blackrock*

## 4. Fixed Income Yields Are Now More Attractive

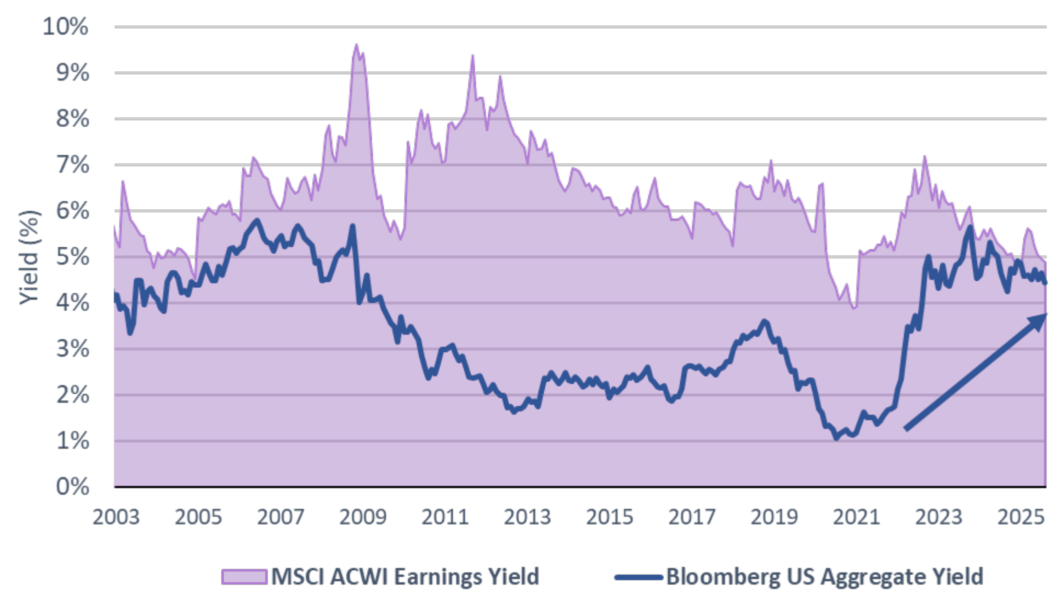
- **The significant rise in interest rates observed since the Federal Reserve began normalizing its policy rate in 2022 has made fixed income assets more attractive compared to recent history.**
- **At the same time, rising equity valuations have compressed forward-looking return expectations for stocks, further bolstering the attractiveness of fixed income from an asset allocation perspective.**

**U.S. Treasury Yield Curve Changes**
6/30/21 to 6/30/25




*Source: Bloomberg*

**Core Bond Yields vs. MSCI ACWI Earnings Yield**



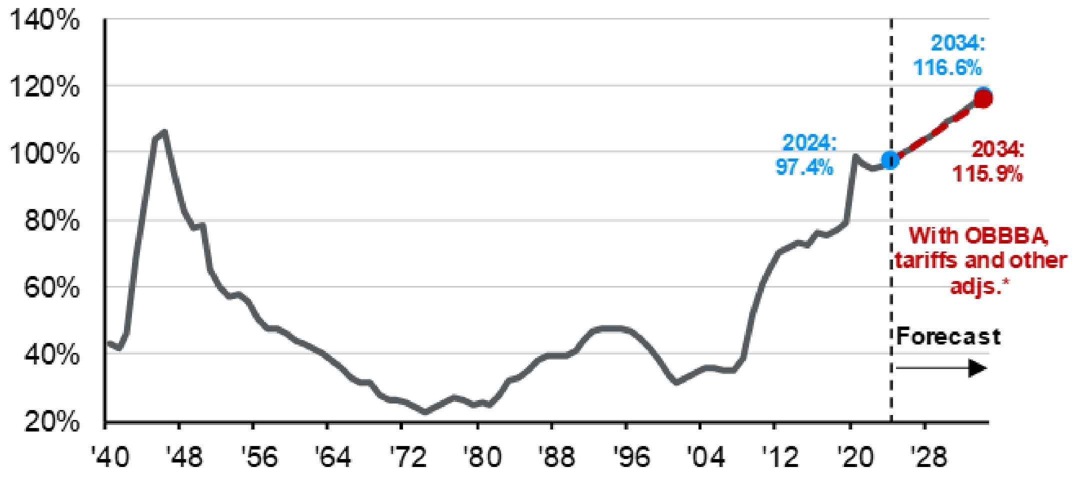

*Data through September 30, 2025. Earnings yield is calculated as 1/ [price-to-earnings ratio] for the MSCI ACWI, using trailing 12-month earnings. Source: Bloomberg, MSCI, SBI Staff calculations.*

# Current Market Assessment & Implications for SAA

## 5. U.S. Fiscal Trajectory Amplifies Inflation and Debt Sustainability Tail Risks to U.S. Treasuries

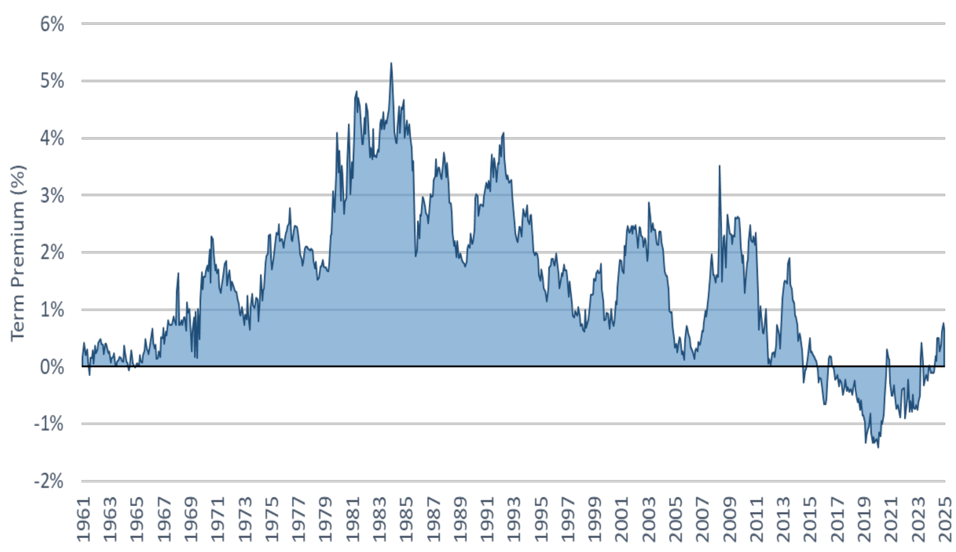
- **The U.S. Fiscal Outlook remains somewhat challenged, with CBO baseline estimates projecting Federal Net Debt rising to 116% of GDP by 2034.**
- **Reduced investor demand for longer-term U.S. Treasuries—combined with rising supply—could lead to a material increase in the term premium, reflecting the incremental yield investors require to hold longer maturity bonds.**

**Federal net debt (accumulated deficits)**
% of GDP, 1940 - 2034, CBO Baseline Forecast, end of fiscal year




*Source: J.P. Morgan Asset Management Guide to the Markets, September 2025.*
** See source report footnote for more information.*

**Estimated Term Premium Required for Holding a 10-Year U.S. Treasury Bond (1961-2025)**




*Data through August 30, 2025. Reflects Adrian, Crump, and Moench (ACM) 10-Year Term Premium Model. Source: Bloomberg, Federal Reserve Bank of New York, SBI Staff calculations*

# Combined Funds Asset Allocation Study

# Quantitative Analysis Results Summary

**Mean Variance Optimization – Applied real-world constraints to study an optimized efficient frontier**

- Current SAA portfolio is largely efficient
- Within return-seeking assets, the model favors private equity, private credit, return-seeking fixed income and international equity
- Within diversifying assets, model favors core fixed income and longer duration U.S. Treasuries, although results are sensitive to stock-bond correlation assumptions
- Statutory limits and liquidity considerations prevent greater allocation to private markets

**Historical Stress Testing – Evaluated "what-if" portfolio performance using historical return periods**

- Proposed SAA portfolio performed within expectations during historical stress periods
- Proposed SAA improved average upside capture and inflation responsiveness, and improved performance in periods of rising interest rates
- Treasury Protection Portfolio: lowering interest rate duration improves stress-case outcomes without sacrificing expected return, and increases the expected stress-case liquidity of the portfolio

**Liquidity Analysis – Stressed portfolio liquidity in normal and stressed markets**

- Proposed SAA portfolio has sufficient liquidity in normal and stressed markets

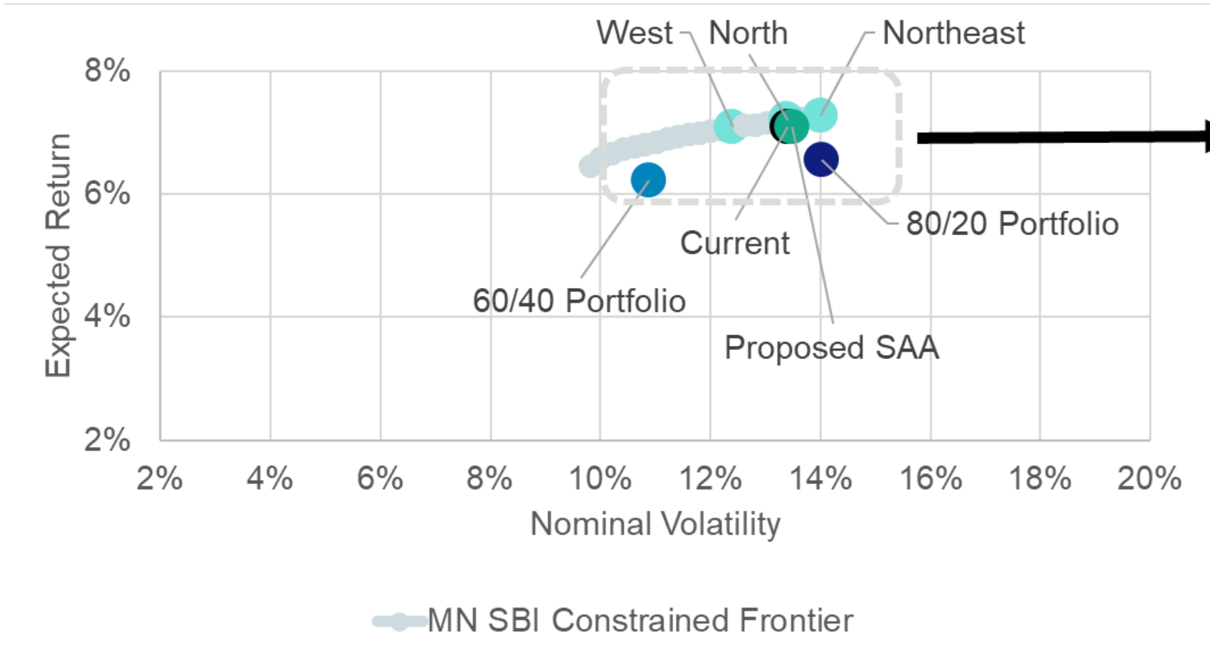


*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

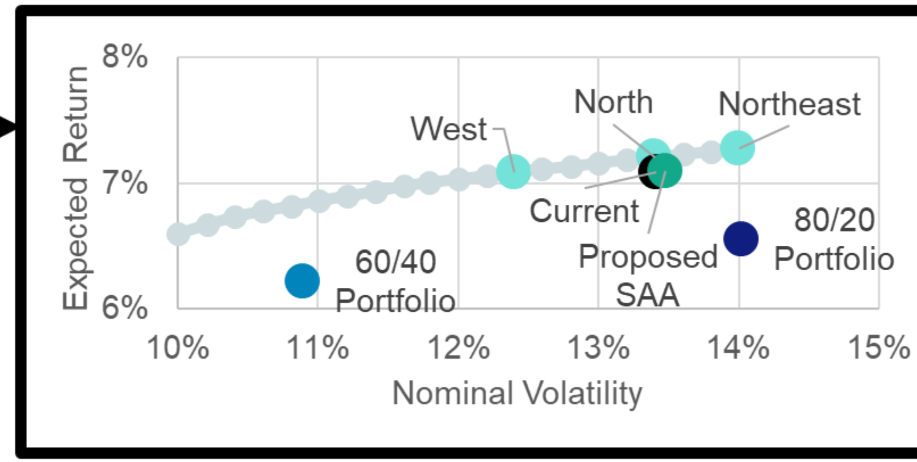
# Mean-Variance Optimization Analysis
## Constrained Efficient Frontier Results

- The optimization generates a cluster of efficient portfolios consistent with the Combined Funds objectives
- Both Current and Proposed Allocations are efficient and plot close to the Constrained Efficient Frontier

**SBI Constrained Efficient Frontier**




**SBI Constrained Efficient Frontier – Zoomed In**




| | Expected Return | Nominal Volatility | Sharpe Ratio |
|---|---|---|---|
| **Current Policy** | **7.08%** | **13.41%** | **0.27** |
| Mean-Variance Optimization (“MVO”) (West) | 7.09% | 12.40% | 0.30 |
| MVO (North) | 7.21% | 13.40% | 0.28 |
| MVO (Northeast) | 7.28% | 14.00% | 0.28 |
| 60/40 Portfolio | 6.22% | 10.89% | 0.26 |
| 80/20 Portfolio | 6.56% | 14.02% | 0.23 |
| **Proposed SAA** | **7.10%** | **13.48%** | **0.27** |

***60/40 Portfolio** reflects 60% Russell 3000 Index and 40% Bloomberg U.S. Aggregate Bond Index.*
***80/20 Portfolio** reflects 80% Russell 3000 Index and 20% Bloomberg U.S. Aggregate Bond Index.*



*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

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# Mean-Variance Optimization Analysis

## Constrained Efficient Frontier Results

SBI

### SBI Constrained Efficient Frontier – Asset Mix Details

| | | | Public Equity | | | Fixed Income | | | | | Private Markets | | | | | Liquidity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Expected Return | Nominal Volatility | Total Public Equity | U.S. Equity | Int'l Equity (50% hedged dev only) | Total Fixed Income | U.S. Treasury | U.S. Treasury Long* | U.S. Aggregate | Return Seeking Fixed Income | Total Private Markets | Private Equity | Private Credit | Private Real Assets | Private Real Estate | Cash |
| Current SAA | 7.08% | 13.41% | 50.0% | 33.5% | 16.5% | 20.0% | 0.0% | 10.0% | 5.0% | 5.0% | 25.0% | 17.5% | 2.5% | 2.5% | 2.5% | 5.0% |
| Proposed SAA | 7.10% | 13.48% | 50.0% | 33.5% | 16.5% | 22.0% | 0.0% | 10.0% | 6.0% | 6.0% | 25.0% | 18.0% | 3.0% | 2.0% | 2.0% | 3.0% |
| Optimized Frontier Portfolios | | | | | | | | | | | | | | | | |
| #1 | 6.45% | 9.80% | 35.0% | 25.0% | 10.0% | 40.8% | 40.8% | 0.0% | 0.0% | 0.0% | 21.0% | 15.0% | 2.0% | 2.0% | 2.0% | 3.2% |
| #2 | 6.60% | 10.00% | 35.0% | 25.0% | 10.0% | 40.1% | 30.1% | 10.0% | 0.0% | 0.0% | 21.9% | 15.0% | 2.9% | 2.0% | 2.0% | 3.0% |
| #3 | 6.67% | 10.21% | 35.0% | 25.0% | 10.0% | 37.8% | 27.8% | 10.0% | 0.0% | 0.0% | 24.2% | 15.0% | 5.2% | 2.0% | 2.0% | 3.0% |
| #4 | 6.73% | 10.40% | 35.0% | 25.0% | 10.0% | 37.0% | 17.8% | 10.0% | 9.2% | 0.0% | 25.0% | 15.0% | 6.0% | 2.0% | 2.0% | 3.0% |
| #5 | 6.78% | 10.61% | 35.0% | 25.0% | 10.0% | 37.0% | 12.0% | 10.0% | 15.0% | 0.0% | 25.0% | 16.3% | 4.7% | 2.0% | 2.0% | 3.0% |
| #6 | 6.82% | 10.81% | 35.0% | 25.0% | 10.0% | 37.0% | 12.0% | 10.0% | 15.0% | 0.0% | 25.0% | 18.3% | 2.7% | 2.0% | 2.0% | 3.0% |
| #7 | 6.86% | 11.00% | 35.0% | 25.0% | 10.0% | 37.0% | 10.1% | 10.0% | 15.0% | 1.9% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #8 | 6.90% | 11.21% | 35.0% | 25.0% | 10.0% | 37.0% | 7.0% | 10.0% | 15.0% | 5.0% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #9 | 6.94% | 11.41% | 35.0% | 25.0% | 10.0% | 37.0% | 4.0% | 10.0% | 15.0% | 8.0% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #10 | 6.97% | 11.61% | 35.0% | 25.0% | 10.0% | 37.0% | 1.1% | 10.0% | 15.0% | 10.9% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #11 | 7.00% | 11.79% | 35.9% | 25.0% | 10.9% | 36.1% | 0.0% | 10.0% | 14.5% | 11.6% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #12 | 7.03% | 12.00% | 37.5% | 25.0% | 12.5% | 34.5% | 0.0% | 10.0% | 13.5% | 11.0% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #13 | 7.06% | 12.20% | 39.1% | 25.0% | 14.1% | 32.9% | 0.0% | 10.0% | 12.6% | 10.4% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| West | 7.09% | 12.40% | 40.6% | 25.0% | 15.6% | 31.4% | 0.0% | 10.0% | 11.6% | 9.8% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #15 | 7.11% | 12.60% | 42.1% | 25.0% | 17.1% | 29.9% | 0.0% | 10.0% | 10.7% | 9.2% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #16 | 7.14% | 12.80% | 43.7% | 25.0% | 18.7% | 28.3% | 0.0% | 10.0% | 9.8% | 8.6% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #17 | 7.16% | 13.00% | 45.2% | 25.0% | 20.2% | 26.8% | 0.0% | 10.0% | 8.8% | 8.0% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #18 | 7.19% | 13.20% | 46.7% | 25.0% | 21.7% | 25.3% | 0.0% | 10.0% | 7.9% | 7.4% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| North | 7.21% | 13.40% | 48.2% | 25.0% | 23.2% | 23.8% | 0.0% | 10.0% | 7.0% | 6.8% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #20 | 7.23% | 13.60% | 49.7% | 25.0% | 24.7% | 22.3% | 0.0% | 10.0% | 6.1% | 6.2% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| #21 | 7.25% | 13.80% | 51.2% | 25.0% | 26.2% | 20.8% | 0.0% | 10.0% | 5.2% | 5.7% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |
| Northeast | 7.28% | 14.00% | 52.7% | 25.0% | 27.7% | 19.3% | 0.0% | 10.0% | 4.2% | 5.1% | 25.0% | 19.0% | 2.0% | 2.0% | 2.0% | 3.0% |

- **The optimized results favor increased allocations to Core Bonds and Return-Seeking Fixed Income.**
- **The model favors International Equities over U.S. Equities based on lower expected volatility and potential correlation benefit.**
- **The model expressed a clear preference for longer maturity U.S. Treasuries, but this result is highly sensitive to the stock-bond correlation assumption.**
- **Within Private Markets, the model clearly favors Private Equity, particularly as portfolio risk increases.**
- **Cash is not favored in the model relative to other assets.**

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*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# Stress Testing

## Historical Risk-Return 21.5 Years Ended June 30, 2025

| Jan 1, 2004 to Jun 30, 2025 | Annualized Return | Standard Deviation Port | Downside Deviation | Max Drawdown Port | Sharpe Ratio Port | CPI Return Beta | Equity Beta (ACWI) | Upside Market Capture (ACWI) | Downside Market Capture (ACWI) |
|---|---|---|---|---|---|---|---|---|---|
| Current SAA | 8.60% | 11.5% | 13.1% | -40.2% | 0.60 | 0.38 | 0.74 | 76.2% | 72.6% |
| Equal Risk Optimal (North) | 8.48% | 11.4% | 13.0% | -39.9% | 0.59 | 0.27 | 0.74 | 74.9% | 71.7% |
| Equal Return Optimal (West) | 8.30% | 10.6% | 12.1% | -36.4% | 0.62 | 0.16 | 0.68 | 69.2% | 65.5% |
| High Risk Optimal (Northeast) | 8.58% | 11.9% | 13.6% | -41.9% | 0.57 | 0.34 | 0.77 | 78.3% | 75.3% |
| 60/40 Equity/Fixed | 7.71% | 9.7% | 11.1% | -32.7% | 0.62 | 0.10 | 0.60 | 62.3% | 59.5% |
| 80/20 Equity /Fixed | 9.07% | 12.4% | 14.6% | -42.6% | 0.59 | 0.48 | 0.78 | 81.5% | 76.7% |
| Proposed SAA | 8.63% | 11.6% | 13.2% | -40.4% | 0.60 | 0.44 | 0.75 | 76.5% | 72.9% |
| Russell 3000 | 10.34% | 15.2% | 17.5% | -51.2% | 0.57 | 0.85 | 0.96 | 101.9% | 92.8% |
| MSCI AC World ex USA 50% Hedged USD | 6.81% | 15.0% | 16.7% | -54.9% | 0.34 | 1.05 | 0.94 | 89.9% | 96.6% |
| Return-Seeking Fixed Income | 5.85% | 7.2% | 9.3% | -25.4% | 0.58 | 0.59 | 0.37 | 34.4% | 27.6% |
| US Aggregate | 3.19% | 4.2% | 4.2% | -17.2% | 0.36 | -1.01 | 0.07 | 11.0% | 0.6% |
| US Treasury | 2.75% | 4.6% | 4.1% | -18.3% | 0.23 | -1.33 | -0.02 | 4.8% | -9.8% |
| US Treasury 5+ | 3.39% | 8.1% | 7.4% | -32.0% | 0.21 | -2.30 | -0.03 | 5.3% | -13.5% |
| US Treasury 10+ | 3.63% | 12.0% | 11.0% | -45.4% | 0.16 | -3.23 | -0.05 | 4.0% | -18.4% |
| Private Equity - Unsmoothed | 13.33% | 17.1% | 17.7% | -48.3% | 0.68 | 0.63 | 1.06 | 120.0% | 97.1% |
| Private Credit - Unsmoothed | 7.45% | 9.8% | 12.0% | -38.2% | 0.58 | 0.90 | 0.55 | 52.0% | 46.2% |
| Real Estate - Unsmoothed | 3.27% | 25.4% | 27.3% | -71.8% | 0.06 | 0.61 | 1.33 | 108.5% | 128.3% |
| Real Asset - Unsmoothed | 9.67% | 11.7% | 12.1% | -32.7% | 0.68 | 1.01 | 0.63 | 69.6% | 58.6% |
| Cash | 1.70% | 0.6% | 0.0% | - | - | 0.03 | 0.00 | 3.6% | -4.7% |

*See Appendix for model methodology and a description of source data used.*

- **Both the modeled Current and Proposed Allocations display efficient historical risk-return characteristics**
- **The Proposed Allocation exhibits slightly higher upside and downside market capture**
- **The Proposed Allocation exhibits a higher CPI Return Beta, suggesting the potential for greater responsiveness to inflation.**

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# Stress Testing
## Selected Historical Return Episodes

| Scenarios | 2006-07 Bull Market | Great Financial Crisis | Taper Tantrum 2013 | Q4 2018 Market Selloff | COVID-19 Pandemic Drawdown | 2022 Inflation and Rate Hikes |
|---|---|---|---|---|---|---|
| Current SAA | 29.1% | -37.4% | -0.8% | -8.1% | -15.9% | -12.5% |
| Equal Risk Optimal (North) | 30.2% | -36.8% | -1.8% | -7.6% | -15.4% | -13.3% |
| Equal Return Optimal (West) | 28.0% | -33.3% | -1.8% | -6.8% | -14.2% | -13.1% |
| High Risk Optimal (Northeast) | 31.6% | -38.8% | -1.7% | -8.1% | -16.1% | -13.3% |
| 60/40 Equity/Fixed | 18.5% | -31.1% | 0.7% | -8.0% | -12.3% | -16.5% |
| 80/20 Equity /Fixed | 21.3% | -41.5% | 2.1% | -11.2% | -16.6% | -17.8% |
| Proposed SAA | 28.9% | -37.6% | -0.5% | -8.2% | -16.2% | -12.3% |
| Russell 3000 | 24.2% | -50.5% | 3.6% | -14.3% | -20.8% | -19.2% |
| MSCI AC World ex USA 50% Hedged USD | 39.1% | -51.0% | -3.1% | -11.0% | -20.4% | -12.9% |
| Return-Seeking Fixed Income | 12.2% | -20.0% | -3.9% | -3.0% | -13.3% | -9.6% |
| US Aggregate | 10.1% | 9.8% | -3.7% | 1.6% | 1.2% | -13.0% |
| US Treasury | 10.4% | 18.5% | -3.4% | 2.6% | 5.6% | -12.5% |
| US Treasury 5+ | 12.1% | 22.8% | -7.8% | 3.7% | 9.1% | -20.3% |
| US Treasury 10+ | 12.7% | 23.2% | -11.6% | 4.2% | 13.2% | -29.3% |
| Private Equity - Unsmoothed | 55.7% | -43.7% | 0.6% | -7.7% | -22.0% | -5.7% |
| Private Credit - Unsmoothed | 20.1% | -33.5% | 1.9% | -4.4% | -16.3% | 3.9% |
| Real Assets - Unsmoothed | 38.7% | -22.6% | -2.4% | -6.1% | -21.2% | 12.2% |
| Real Estate - Unsmoothed | 52.5% | -70.3% | -17.0% | -4.6% | -34.3% | -10.2% |
| Cash | 6.9% | 4.9% | 0.0% | 0.6% | 0.4% | 1.5% |

*See Appendix for model methodology and a description of source data used.*

### Historical Return Episodes Overview

**2006-07 Bull Market:** Late-cycle surge on easy credit, housing boom, and liquidity before cracks appeared.

**Global Financial Crisis 2007-09:** Late-cycle surge on easy credit, housing boom, and liquidity before cracks appeared.

**Taper Tantrum 2013:** Yields spiked after Fed Chair Bernanke hinted at slowing Fed bond purchases; EM assets sold off, volatility jumped.

**Q4 2018 Market Selloff:** Fed hikes + balance-sheet runoff and growth fears; S&P –~20% into the "Christmas Eve" low.

**COVID-19 Pandemic Drawdown (Feb–Mar 2020):** Sudden global shutdown; fastest bear market, followed by massive policy backstop.

**2022 Inflation & Rate Hikes:** Multi-decade-high inflation met by the Fed's aggressive tightening; bonds and equities repriced lower, then partially recovered.

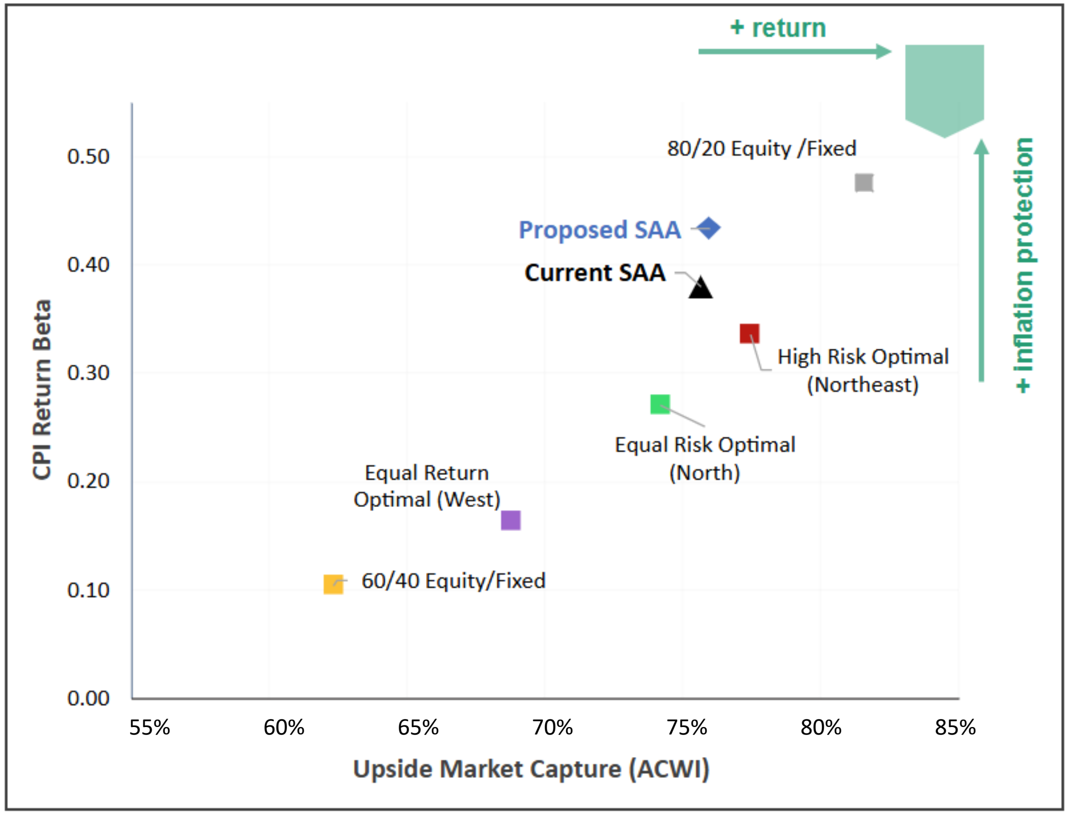
- **The modeled Current and Proposed Allocations both capture appropriate equity market upside (*2006-07 Bull Market*)**
- **The Proposed Allocation experiences slightly greater downside in equity selloffs (*GFC, Pandemic Drawdown*) relative to the Current Allocation, but exhibits greater downside protection in risk-off periods where stock-bond correlation is elevated (*2013 Taper Tantrum, 2022 Inflation and Rate Hikes*)**



***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# Stress Testing
## Historical Return Analysis – Risk-Return Plots

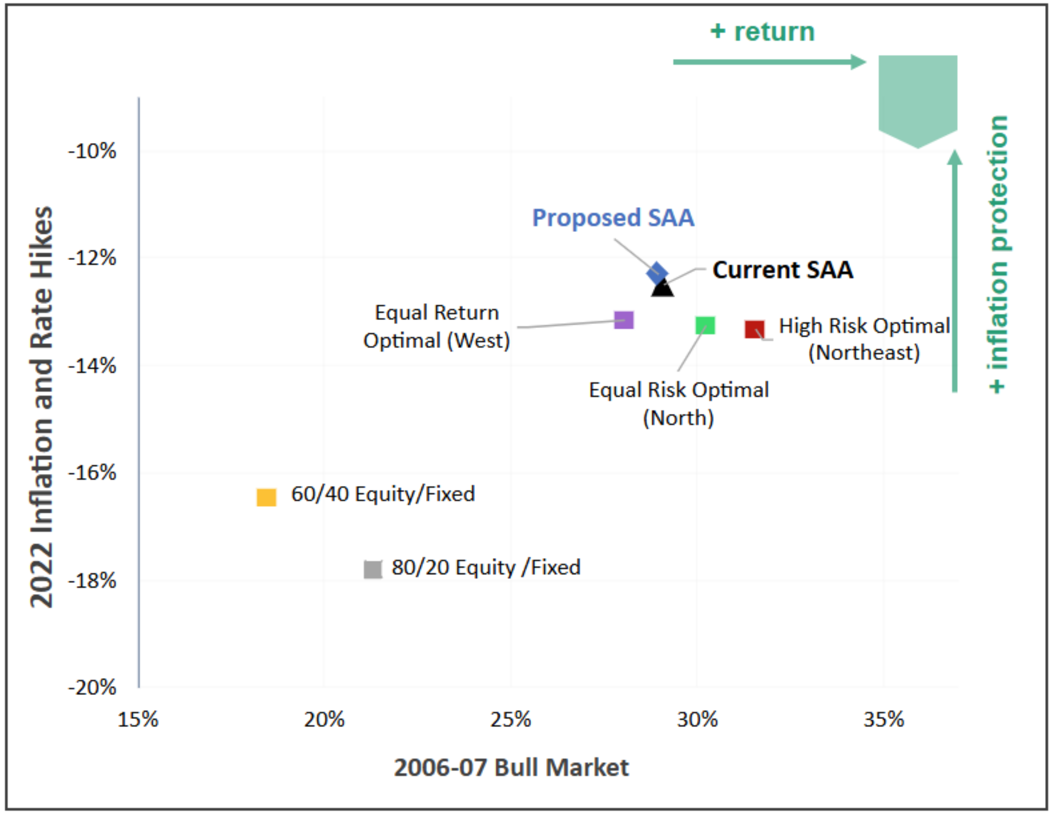
### CPI Return Beta vs. Upside Market Capture
21.5 years ended 6/30/25




*See Appendix for model methodology and a description of source data used.*

- **Both the modeled Current and Proposed Allocations exhibit strong CPI Return Beta and upside market capture.**

### Modeled Historical Return Episode Trade-offs
2022 Inflation and Rate Hikes vs. 2006-07 Bull Market




- **Both the modeled Current and Proposed Allocations evidenced better downside protection during the 2022 Inflation and Rate Hikes episode than the highlighted efficient frontier portfolios.**

*60/40 Portfolio reflects 60% Russell 3000 Index and 40% Bloomberg U.S. Aggregate Index. 80/20 Portfolio reflects 80% Russell 3000 Index and 20% Bloomberg U.S. Aggregate Index.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# Stress Testing

## Interest Rate Duration in the Treasury Protection Portfolio

**The proposed update to the Treasury Protection Portfolio asset mix reduces interest rate exposure, or duration, by shifting the balance of the allocation from longer-maturity bonds to shorter-maturity bonds.**

### Portfolio Risk Statistics Comparison as of 6/30/25

| Portfolio Comparison: Treasury Protection Allocation | Mkt Value % | % Market Value by Maturity Bucket (years) | | | | | Duration | Key Rate Duration (years) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0-2 | 2-5 | 5-10 | 10-20 | 20-30 | | 6 Mth | 2 Yr | 5 Yr | 10 Yr | 20 Yr | 30 Yr |
| Current SAA | 100% | 0% | 0% | 53% | 22% | 26% | 9.9 | 0.0 | 0.2 | 2.1 | 2.8 | 3.2 | 1.6 |
| Proposed SAA | 100% | 15% | 30% | 19% | 17% | 20% | 7.4 | 0.1 | 0.7 | 1.4 | 1.6 | 2.5 | 1.2 |
| Change (Proposed - Current) | -- | +15% | +30% | -34% | -5% | -6% | -2.5 | +0.1 | +0.5 | -0.7 | -1.2 | -0.7 | -0.4 |

*Source: Factset, SBI Staff calculations*

### Expected Return/Risk and Historical Stress Testing Comparison

| Portfolio Comparison: Treasury Protection Allocation | Expected Return | Expected Risk | Maximum Drawdown | CPI Return Beta | Scenario: 2022 Inflation & Rate Hikes |
|---|---|---|---|---|---|
| Current SAA | 4.3% | 9.0% | -32.0% | -2.3% | -20.3% |
| Proposed SAA | 4.2% | 6.5% | -24.4% | -1.7% | -16.0% |
| Change (Proposed - Current) | -0.1% | -2.5% | +7.6% | +0.6% | +4.3% |

*See Appendix for model methodology and a description of source data used.*

- The Proposed Treasury Protection Portfolio asset mix has a similar expected return to the Current asset mix but exhibits significantly lower expected risk.
- Consistent with its materially lower duration profile, the Proposed asset mix outperforms the Current asset mix in terms of Max. Drawdown and performance during the 2022 Inflation & Rate Hikes episode.



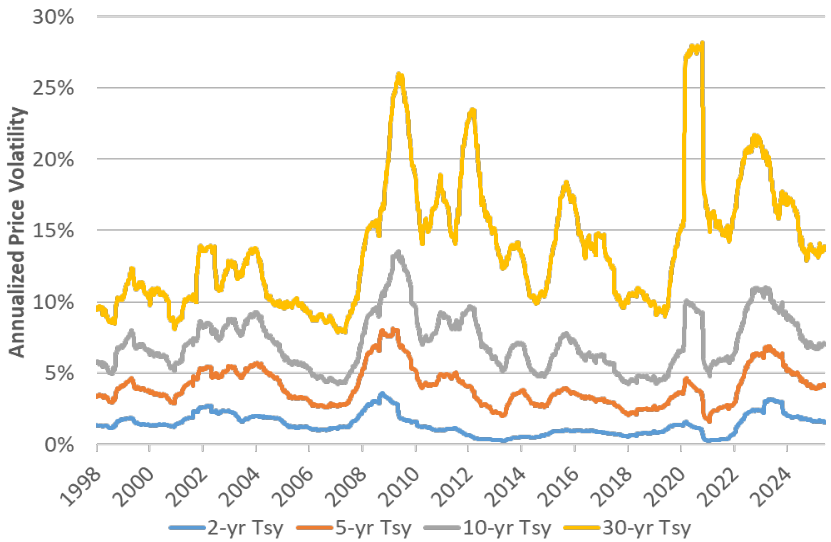
***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# Stress Testing

## Interest Rate Duration in the Treasury Protection Portfolio

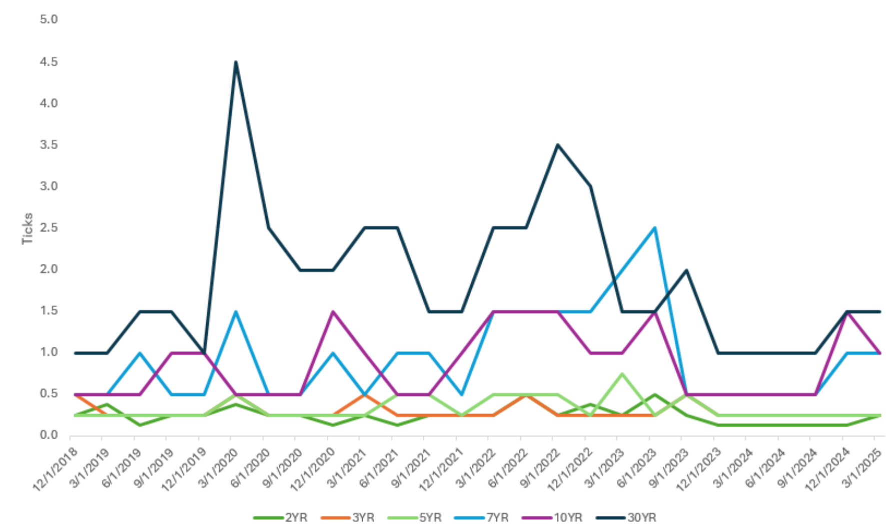
**A more balanced duration profile and greater emphasis on shorter-maturity bonds within the Treasury Protection Portfolio is expected to improve the liquidity characteristics of this portfolio by reducing average bid-ask spreads (trading costs) and reducing the potential impact of increased volatility in the long-end of the Treasury market.**

**U.S. Treasury Bellwether Indexes Rolling 6-Mth Price Volatility**
May 1997 to June 2025




*Source: Factset, SBI Staff calculations*

**U.S. Treasury Bid-Ask Spreads**
December 2018 to March 2025




*Source: Goldman Sachs, Bloomberg as of 3/31/25*

# Liquidity Analysis

## Overview

### Liquidity Analysis conducted for both the current and proposed asset allocation policy

- Intended as a stress-testing model, incorporating the profile of the liabilities as well as expected future contributions
- Investments are categorized by liquidity into buckets
- Uses different scenarios for economic environments and other relevant inputs
- Demonstrates how the portfolio's liquidity profile could evolve with a given investment strategy

### Economic Scenarios

**Base Case**

- Markets perform consistent with Aon's Capital Markets Assumptions (~50$^{th}$ percentile)

**Recession**

- Pessimistic outlook for markets
- Return-seeking assets decline in the first two years with a modest rebound in later years

**Dark Skies**

- Very pessimistic outlook for markets
- Return-seeking assets decline significantly
- The value of public equities declines approximately 50% over three years, without an immediate rebound

# Liquidity Analysis
## Summary of Results

### Sufficient Liquidity in Base Case, Recession, and Dark Skies Scenario

| | Current SAA | | Proposed SAA | |
|---|---|---|---|---|
| | Max Illiquid Allocation | Ratio of Max Illiquids to Base Case | Max Illiquid Allocation | Ratio of Max Illiquids to Base Case |
| **Base Case** | 25% | 1.00 | 25% | 1.00 |
| **Recession** | 30% | 1.20 | 30% | 1.20 |
| **Dark Skies** | 41% | 1.64 | 42% | 1.64 |

**Key Takeaways**

- SBI has sufficient liquidity in the modeled Base Case, Recession, and Dark Skies economic scenarios
- The modeled scenarios show no interruption of paying benefits to participants
- In a Dark Skies economic scenario, assets are projected to decline, increasing the proportion of illiquid assets
- Potential portfolio remedies if the Dark Skies scenario occurs include:
  - Accepting this risk as self-correcting over time
  - Cutting back future illiquid assets commitments more than assumed in the analysis
  - Selling illiquid assets on the secondary market

**Note:** This analysis is highly sensitive to the assumed contributions. If SBI receives less contributions than assumed, especially in a Dark Skies environment, then illiquid and quasi-liquid investments would drift further from target and the potential for liquidity issues increases

AON



*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# Combined Funds Asset Allocation Study

# Asset Allocation Recommendations

- **Affirm Our Current Allocation to Broad Asset Classes:**
  - 50% Public Equity
  - 25% Private Markets
  - 25% Fixed Income and Cash
- **Maintain Current Target Allocation Split Between U.S. and Non-U.S. Equities (67% U.S., 33% International)**
- **Key Changes:**

I. Reduce Interest Rate Duration of the Treasury Protection Portfolio to Improve Balance Between Liquidity and Ability to Protect in Downturns

II. Reduce Cash Allocation to Fund Increases to Core Bonds and Return-Seeking Fixed Income Allocations

III. Adopt Target Allocation Ranges for Sub-Asset Classes within Private Markets Allocation to Formalize Diversification Objective

IV. Update Asset Mix for Uninvested Private Markets Allocation to Better Reflect Balance of Risk Factors within Private Markets Target Allocation

# 5 Asset Allocation Recommendations

| Asset Class | Current SAA | 1. Treasury Duration | 2. Cash/ Liquidity | 3. Private Markets | Proposed SAA |
|---|---|---|---|---|---|
| **Public Equity** | 50% | | | | 50% |
| *Domestic Equity* | 33.5% | | | | 33.5% |
| *International Equity* | 16.5%[1] | | | | 16.5%[1] |
| **Fixed Income & Cash** | 25% | | | | 25% |
| *Core/Core Plus Fixed Income* | 5% | | +1% | | 6% |
| *Return-Seeking Fixed Income* | 5% | | +1% | | 6% |
| *Treasury Protection* | 10% | | | | 10% |
| *U.S. Treasury - 5+ Year* | 10% | -10% | | | -- |
| *U.S Treasury (Broad Maturity)* | -- | +8% | | | 8% |
| *U.S. Treasury - Long* | -- | +2% | | | 2% |
| *Cash* | 5% | | -2% | | 3% |
| **Private Markets** | 25%[2] | | | | 25%[3] |
| *Private Equity* | 17.5%* | | | 18% | 18% |
| *Private Credit* | 2.5%* | | | 3% | 3% |
| *Private Real Assets* | 2.5%* | | | 2% | 2% |
| *Private Real Estate* | 2.5%* | | | 2% | 2% |
| **Opportunistic** | 0-10% | | | | 0-10% |
| *Expected Return (Geo %)* | 7.08% | -0.02% | +0.03% | +0.01% | 7.10% |
| *Risk (Std Dev %, unsmoothed)* | 13.41% | -0.01% | +0.09% | -0.01% | 13.48% |
| *Expected Sharpe Ratio* | 0.34 | – | – | – | 0.34 |
| *Max Drawdown (since 1/1/03)* | -39.9% | -0.1% | -0.1% | +0.1% | -40.0% |
| *Portfolio Duration (yrs)* | 1.53 | -0.25 | +0.04 | – | 1.31 |
| *Liquidity (mths)* | 15 | +4 | -6 | – | 13 |

1. **Reduce Duration of the Treasury Protection Portfolio**
   - Improves balance between liquidity and growth hedge goals
   - Lowers volatility and tail risk exposure to rising interest rates
2. **Optimize Portfolio Liquidity By Reducing Cash Allocation**
   - Incremental allocations to Core/Core Plus and Return-Seeking Fixed Income reflects improved risk-return outlook
   - Resulting Cash allocation still provides a robust cushion
   - Results in modest increase in expected portfolio return and risk
3. **Adopt Target Weights to Private Markets Sub-Asset Classes**
   - Modest increases to Private Equity and Private Credit
4. **Update Asset Mix for Uninvested Private Markets Allocation to 80% Equity + 20% Fixed Income**
   - Revised allocation better reflects underlying asset class risk exposures

***Proposed SAA changes expected to have a modest impact on portfolio risk and return while enhancing execution***

***Denotes noteworthy change in total portfolio risk/return metrics***

*[1] Including currency hedging with a hedge ratio of up to 100% of the International Equity portfolio's hedgeable currency exposure.*
*[2] Uninvested Private Markets Allocation benchmarked to Domestic Equity (S&P 500) when activated, or Cash (U.S. 3-Month Treasury Bill Index).*
*[3] Uninvested Private Markets benchmarked to a composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*
** Reflects staff's internal asset class targets. Previous SAAs did not specify targets for Private Markets sub-asset classes.*



***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# Asset Allocation Recommendations

## Proposed Policy and Asset Class Benchmarks

***Bold Blue*** *reflects new or updated benchmark compared to current policy.*

| Asset Class | Proposed SSA | Policy Benchmark Weight | Benchmark |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **Public Equity Benchmark: 67% Russell 3000 Index and 33% MSCI ACWI ex USA Net Return Index (USD)** |
| U.S. Equity | 33.5% | 33.5% | Russell 3000 Index |
| International Equity | 16.5%[1] | 16.5% | MSCI ACWI ex USA Net Return Index (USD) |
| **Fixed Income & Cash** | **25%** | **25%** | ***Total Fixed Income Benchmark: 24% Bloomberg U.S. Aggregate Bond Index, 24% Return-Seeking Fixed Income Benchmark, 40% Treasury Protection Benchmark, 12% ICE BofA U.S. 3-Mth Treasury Bill Index*** |
| Core/Core Plus Fixed Income | 6% | 6% | Bloomberg U.S. Aggregate Bond Index |
| Return-Seeking Fixed Income | 6% | 6% | ***Return-Seeking Fixed Income Benchmark: 25% ICE BofA U.S. Cash Pay High Yield Constrained Index, 25% S&P UBS Leveraged Loan Index, 25% JPM EMBI Global Diversified Index, 25% ICE BofA AA-BBB U.S. Fixed and Floating Rate Asset-Backed Securities Index*** |
| Treasury Protection | 10% | 10% | ***Treasury Protection Benchmark: 80% Bloomberg U.S. Treasury Index and 20% Bloomberg U.S. Long Treasury Index*** |
| *U.S. Treasury (Broad Maturity)* | 8% | 8% | ***Bloomberg U.S. Treasury Index*** |
| *U.S. Treasury - Long* | 2% | 2% | ***Bloomberg U.S. Long Treasury Index*** |
| Cash | 3% | 3% | ICE BofA U.S. 3-Month Treasury Bill Index |
| **Private Markets** | **25%[2, 3]** | **Actual Wgt.** | ***Total Private Markets Benchmark: Composite of Sub-Asset Class Benchmarks Weighted by Actual Portfolio Weights at Beginning of Each Period*** |
| Private Equity | 18% | *Actual Weight, Beginning of Period* | ***MSCI Global Buyout Closed-End Fund Index (USD), lagged 1 quarter*** |
| Private Credit | 3% | | ***MSCI Global Private Credit Closed-End Fund Index (USD), lagged 1 quarter*** |
| Private Real Assets | 2% | | ***Private Real Assets Benchmark: 75% MSCI Global Private Infrastructure Closed-End Fund Index (USD), lagged 1 quarter and 25% MSCI Global Private Natural Resources Closed-End Fund Index (USD), lagged 1 quarter*** |
| Private Real Estate | 2% | | ***Private Real Estate Benchmark: 50% Custom MSCI Global Private Opportunistic Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter and 50% Custom MSCI Global Private Value-Added Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter*** |
| **Opportunistic** | | | ***Relevant blended benchmark, as applicable*** |

*[1] Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*

*[2] Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*

*[3] The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*

5

# Asset Allocation Recommendations

| Asset Class | Current SAA | Proposed SAA | Range |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 5% | 6% | 4-8% |
| Return Seeking Fixed Income | 5% | 6% | 4-8% |
| Treasury Protection | 10% | 10% | 5-15% |
| *U.S. Treasury – 5+ Year* | *10%* | -- | -- |
| *U.S. Treasury (Broad Maturity)* | -- | *8%* | *5-15%* |
| *U.S. Treasury – Long* | -- | *2%* | *0-5%* |
| Cash Equivalents | 5% | 3% | 0-5% |
| **Private Markets** | **25%[2]** | **25%[3]** | **20-32%[4, 5]** |
| Private Equity | *17.5%** | 18% | 15-25% |
| Private Credit | *2.5%** | 3% | 0-6% |
| Private Real Assets | *2.5%** | 2% | 0-4% |
| Private Real Estate | *2.5%** | 2% | 0-4% |
| **Opportunistic Allocation** | | | **0-10%** |
| **Portfolio Metrics** | | | |
| Expected Return | **7.08%** | **7.10%** | |
| Expected Volatility | **13.41%** | **13.48%** | |
| Sharpe Ratio | **0.27** | **0.27** | |

1. **Reduce Duration of the Treasury Protection Portfolio**
   - Improves balance between liquidity and growth hedge goals
   - Lowers volatility and tail risk exposure to rising interest rates
2. **Optimize Portfolio Liquidity By Reducing Cash Allocation**
   - Incremental allocations to Core Fixed Income and Return Seeking Fixed Income reflects improved risk-return outlook
   - Proposed Cash allocation still provides a robust cushion
   - Results in a modest increase in portfolio expected return and risk
3. **Adopt Target Weights to Private Markets Sub-Asset Classes**
   - Modest increases to Private Equity and Private Credit
4. **Update Asset Mix for Uninvested Private Markets Allocation to 80% Equity + 20% Fixed Income**
   - Revised allocation better reflects underlying asset class risk exposures

***Proposed SAA changes expected to have a modest impact on portfolio risk and return while enhancing execution***

*[1] Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*

*[2] Uninvested Private Markets allocated to Passive Domestic Equity (S&P 500). [3] Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*

*[4] The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*

*[5] Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

** Reflects staff's internal asset class targets. Previous SAAs did not specify targets for Private Markets sub-asset classes.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

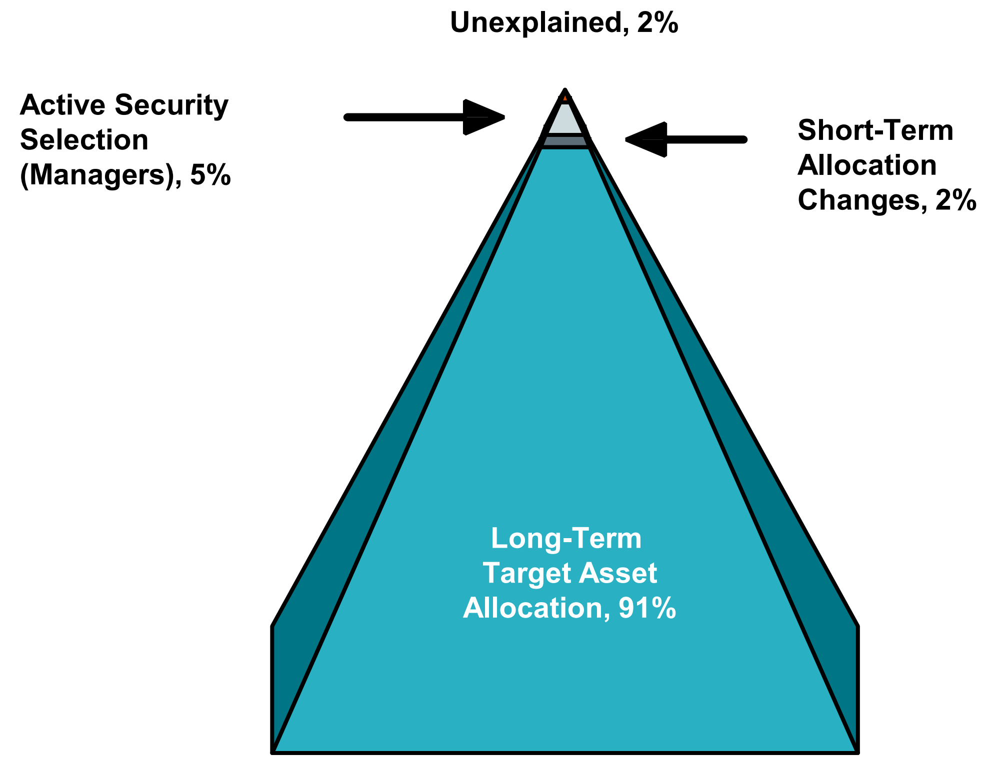
# Combined Funds Asset Allocation Study

# Appendix
## The Importance of Setting a Strategic Asset Allocation

**Setting long-term asset allocation is the most important decision.**

**Policy Drives Results**

- Long-term asset allocation (i.e., which asset classes to use and in what percent) explains more than 90% of the difference in returns between institutional funds
- Selecting investments that are appropriately diversified and aligned to achieve the long-term goals of the program is paramount

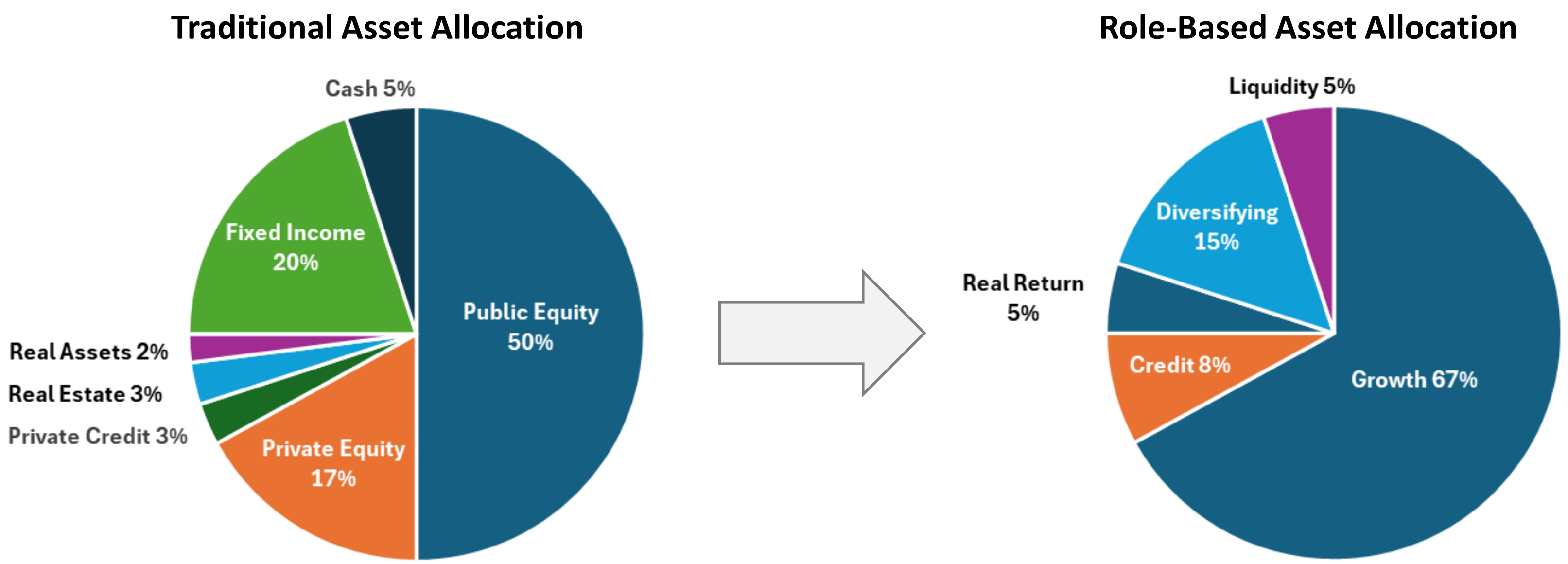



The chart outlines research done by Brinson, Singer and Beebower in their 1991 research paper “Determinants of Portfolio Performance II: An Update” outlines that 91% of the difference in returns among investors is driven by differences in the long-term target asset allocation.

# Appendix

## Roles-Based Portfolio Risk Framework

**Supplementing the traditional asset class-based allocation model with a roles-based risk framework can help identify portfolio's true diversification to a range of economic outcomes.**




- **The traditional asset allocation model defines allocations to asset classes based on their fundamental characteristics and historical return/risk profiles.**
- **A roles-based framework seeks to group assets based on the key economic drivers of risk and return for each asset and the intended role in the portfolio.**

# Appendix
## Roles-Based Portfolio Risk Framework

**Understanding the role that assets play in a portfolio can improve diversification and portfolio balance.**

| | | Diversification Benefit | | | |
|---|---|---|---|---|---|
| **Asset Class** | **Return** | **Normal** | **Tail** | **Inflation** | **Liquidity** |
| U.S. Equity | High | Low | Low | Moderate | High |
| Non-U.S. Equity | High | Moderate | Low | Moderate | High |
| EM Equity | High | Moderate | Low | High | Moderate |
| Private Equity | Very High | Moderate | Moderate | Moderate | Low |
| Private Credit | Very High | High | Moderate | High | Low |
| Liquid Credit | High | Moderate | Low | High | Moderate |
| Real Estate | High | High | Moderate | High | Low |
| Real Assets | Very High | High | Moderate | Very High | Low |
| Commodities | Low | Very High | High | Very High | Very High |
| TIPS | Low | Very High | High | Very High | High |
| Core Bond | Low | High | Moderate | Moderate | Very High |
| U.S. Govt | Low | Very High | High | Low | Very High |
| Long Treasury | Low | High | Very High | Low | High |
| Low Vol Hdg Fds | Moderate | Moderate | High | Moderate | Moderate |
| Cash | Low | Very High | Very High | High | Very High |

Very High | High | Moderate | Low

**Return – does the asset's expected return help or hurt achieve the required rate of return?**

**Diversification Benefit**

*Normal* – does the asset help to diversify the economic drivers of the portfolio's return?

*Tail* – is this asset likely to protect during an extreme risk-off event (growth shock)

*Inflation* – is the asset expected to benefit from higher-than-expected inflation?

**Liquidity** – in a stress event, is the asset expected to be a source of liquidity?



*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# Appendix
## Combined Funds Strategic Allocation Category Framework Categories

**The objective of the Strategic Allocation Category Framework is to provide additional insights into the portfolio's overall risk exposures, including expected volatility under different economic conditions.**

### Allocation Categories

**Growth-Appreciation**

Represents the primary reason for investing, which is to achieve attractive rates of return. Growth is the primary return-seeking strategic allocation category with the objective of generating long-term capital appreciation by participating in global economic growth driven primarily by exposure to the equity risk premium.

**Growth-Income**

This category includes assets that can provide stable levels of current income and moderate capital appreciation potential at lower levels of risk than Growth-Appreciation assets. Such assets may better protect the value of invested principal and/or provide additional diversification relative to the primary drivers of return as compared with assets in the Growth category.

**Real Assets**

Provides diversification through investments in "hard" assets that have inflation-sensitive characteristics or the ability to provide a hedge against inflation.

**Inflation Protection**

Provides diversification through investments in financial or real assets (e.g., inflation-linked securities, commodities) that have a direct link to inflation. These assets provide a potential hedge against inflation.

**Protection**

Provides stability and protection during crises and can act as a hedge against deflation.

**Liquidity**

Provides liquidity to meet regular obligations, primarily benefit payments and capital calls. Consists of cash and cash equivalents.

**Opportunistic**

Allows for investments in compelling opportunities or new strategies that do not clearly fit in the other asset categories, providing enhanced flexibility to access attractive investment opportunities.

# Appendix

## Combined Funds Strategic Allocation Category Framework as of June 30, 2025

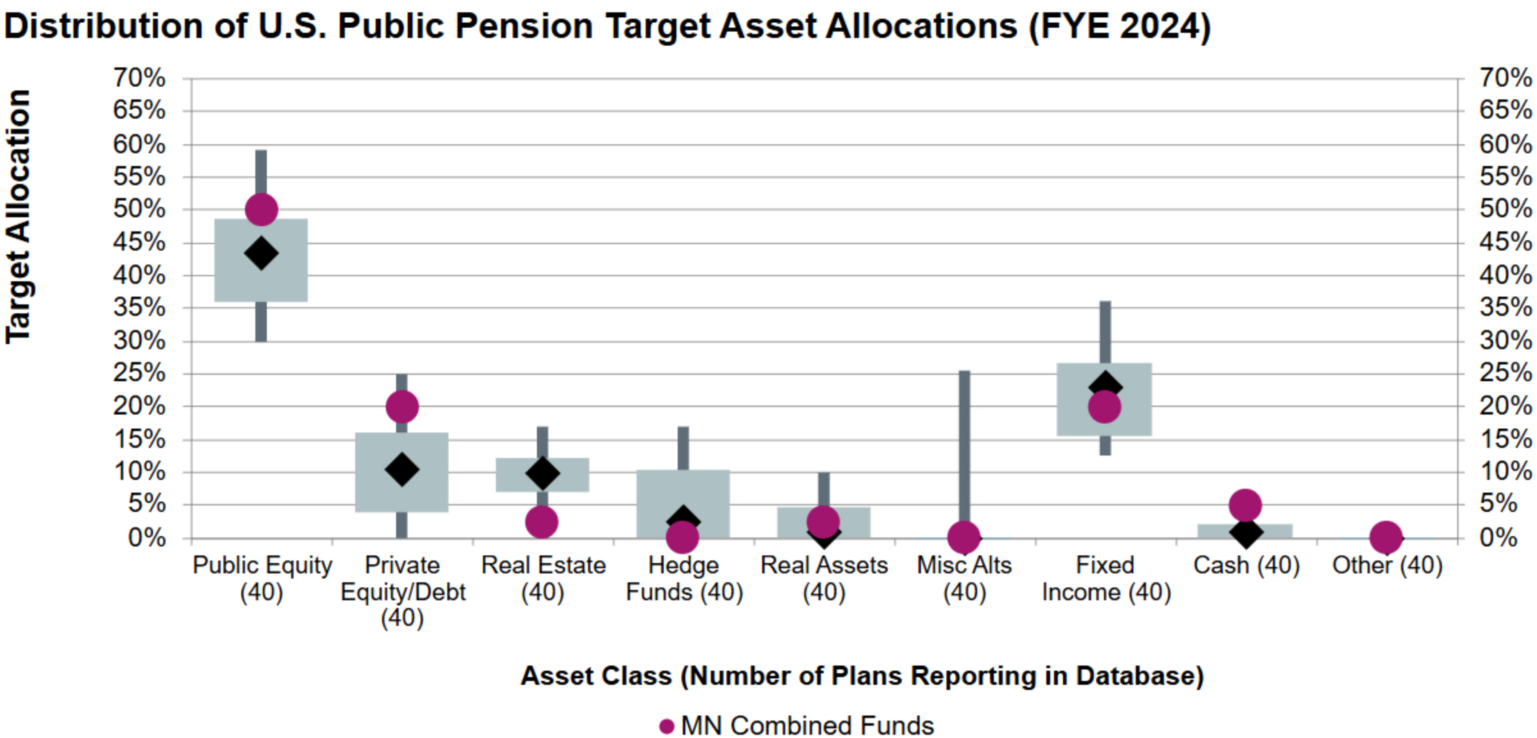
**Reflecting the Combined Funds' long-term investment horizon, the current asset mix features a meaningful exposure to Growth assets, balanced by diversification across income-oriented investments, U.S. Treasuries, and cash.**

Strategic Allocation Category Framework as of 6/30/2025

| | 6/30/2025 ($ millions) | 6/30/2025 Weights | Category Range | | | 6/30/2025 ($ millions) | 6/30/2025 Weights | Category Range | |
|---|---|---|---|---|---|---|---|---|---|
| **Growth - Appreciation** | | | | | **Inflation Protection** | | | | |
| Public Equity | $ 52,605.8 | 51.8% | | | TIPS | $ - | 0% | | |
| Private Equity | $ 16,141.7 | 15.9% | | | Commodities | $ - | 0% | | |
| Non-Core Real Assets | $ 3,758.0 | 3.7% | | | | **$ -** | **0%** | *0%* | *10%* |
| | **$ 72,505.5** | **71.5%** | *50%* | *75%* | **Protection** | | | | |
| **Growth - Income-oriented** | | | | | U.S. Treasuries | $ 9,566.8 | 9.4% | | |
| Core/Core Plus Fixed Income | $ 5,709.6 | 5.6% | | | | **$ 9,566.8** | **9.4%** | 5% | 20% |
| Private Credit | $ 1,911.3 | 1.9% | | | **Liquidity** | | | | |
| Return-Seeking Fixed Income | $ 4,927.7 | 4.9% | | | Cash | $ 6,188.1 | 6.1% | | |
| | **$ 12,548.7** | **12.4%** | *15%* | *30%* | | **$ 6,188.1** | **6.1%** | *0%* | *5%* |
| **Real Assets** | | | | | **Opportunistic** | | | | |
| Core Real Estate | $ - | 0% | | | Opportunistic | $ - | **0%** | *0%* | *10%* |
| Real Assets | $ 412.3 | 0.4% | | | | | | | |
| | **$ 412.3** | **0.4%** | *0%* | *10%* | | | | | |
| **Total** | **$ 101,221.4** | **100%** | | | | | | | |
| **Illiquid Asset Exposure** | **$ 23,114.6** | **22.8%** | *0%* | *32%* | | | | | |

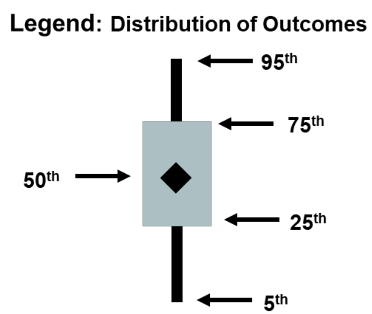
# Appendix

## Asset Allocation Peer[1] Comparison




### Key Takeaways:

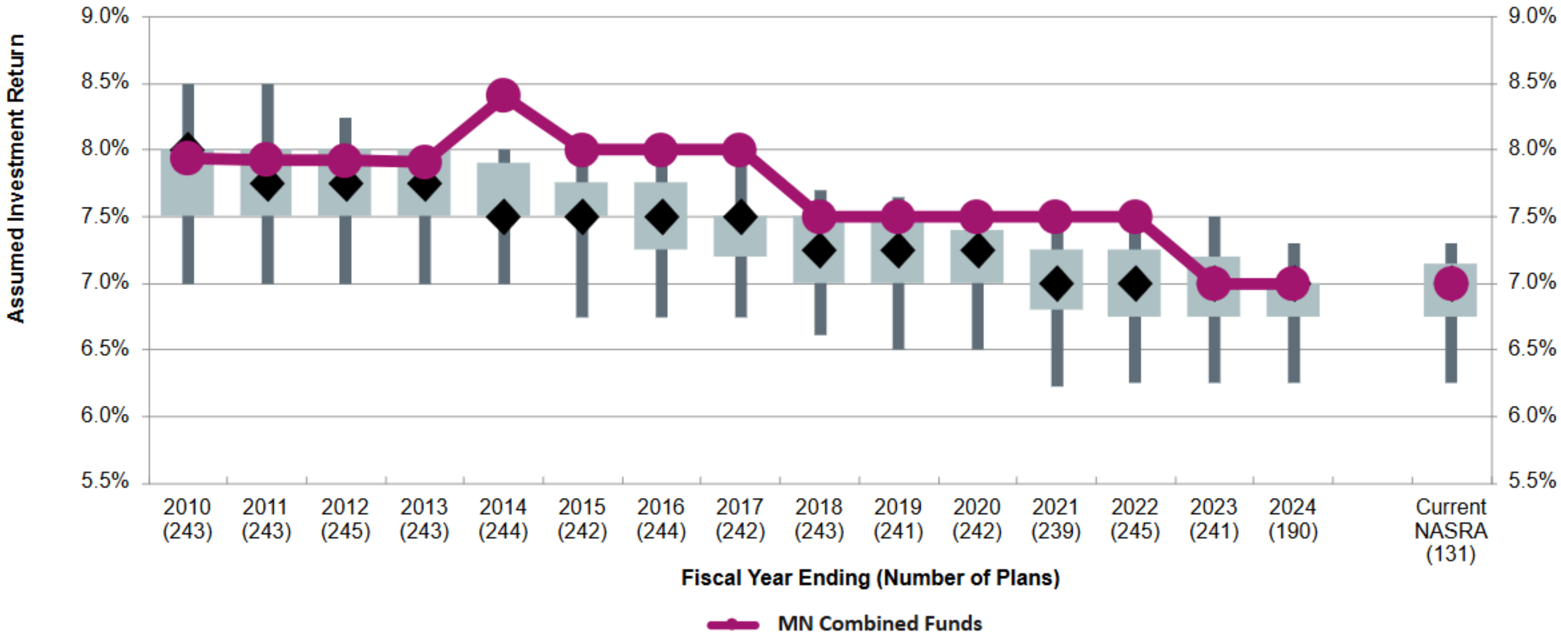
- SBI's equity exposure, both public and private is higher than the public peer median allocation
- SBI's real estate exposure is below the peer median
- SBI's hedge fund exposure (0%) is below the peer median
- SBI holds a higher level of cash than peer plans




**Source:** Public Plans Data (publicplansdata.org) as of FYE 2024. Data accessed from website in July 2025.
**Note:** Number of plans meeting criteria are shown in parentheses
[1] Peers defined as public funds with plan assets greater than $25 billion published within publicplansdata.org as of July 2025

# Appendix
## Actuarial Investment Return Assumption vs. Peers[1]

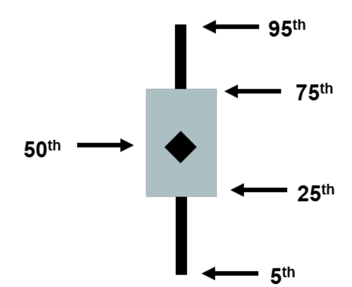
**Distribution of U.S. Public Pension Investment Return Assumptions**




## Key Takeaways:

- Current actuarial assumptions across plans tracked by NASRA as of August 2025, have a median actuarial assumed rate of return of 7.0%.
- The Combined Funds plans' current actuarial assumed rate of return of 7.0% is at the median relative to public peers.

**Legend: Distribution of Outcomes**




A plan's actuarial investment return assumption is set by numerous factors including investment return assumptions, actuarial experience study recommendations, financial outcomes through asset-liability analysis, how the assumed rate of return is used, consideration to an acceptable return assumptions range to promote contribution stability, industry trends (e.g., Horizon survey), and peer data (e.g., NASRA assumptions)

Sources: Public Plans Data (publicplansdata.org) as of FYE 2024. Data was accessed from website in July 2025. NASRA downloadable investment return assumptions as of August 2025.

[1] Peers defined as public funds published within publicplansdata.org as of July 2025; Number of plans per year are shown in parentheses

NASRA stands for stands for the National Association of State Retirement Administrators.

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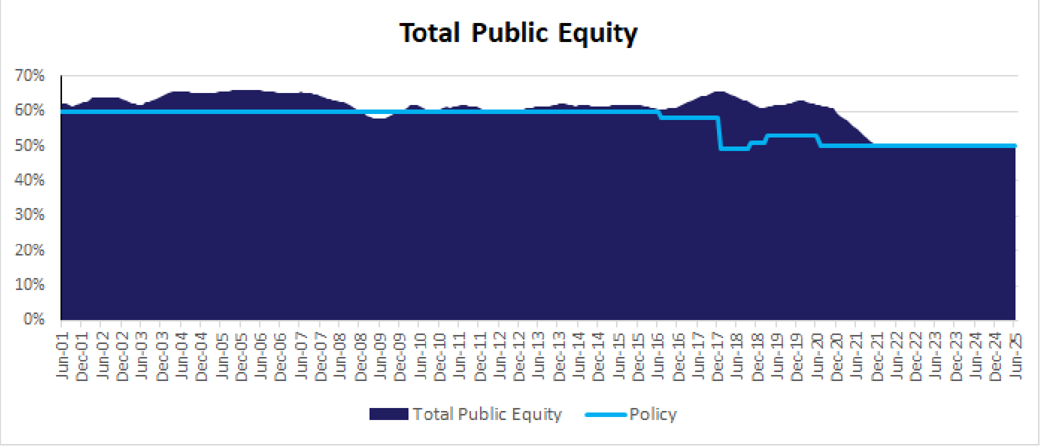
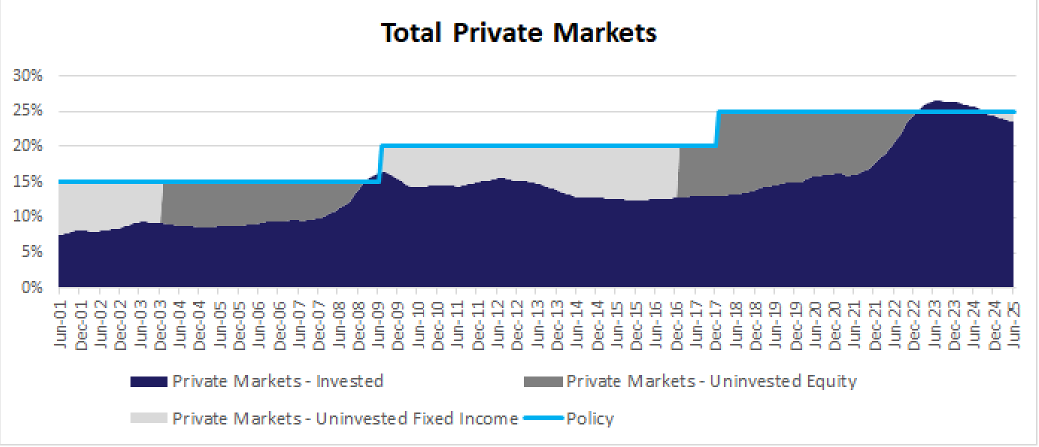
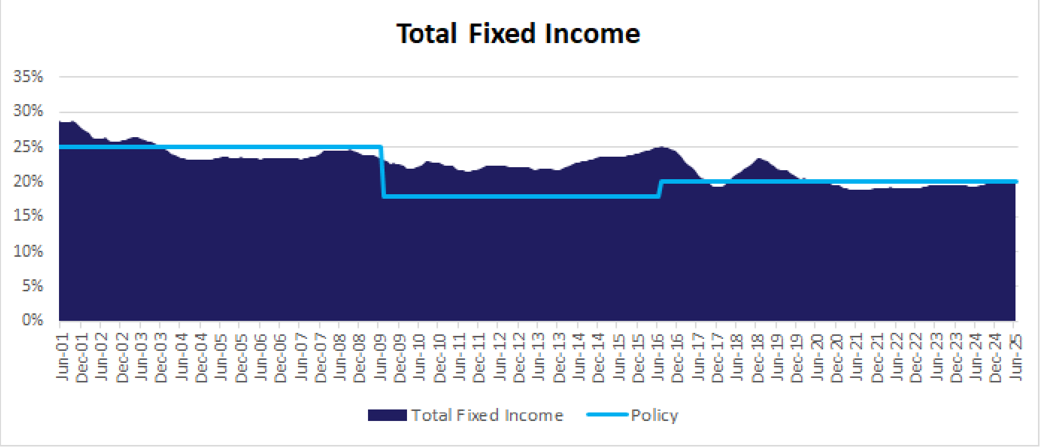
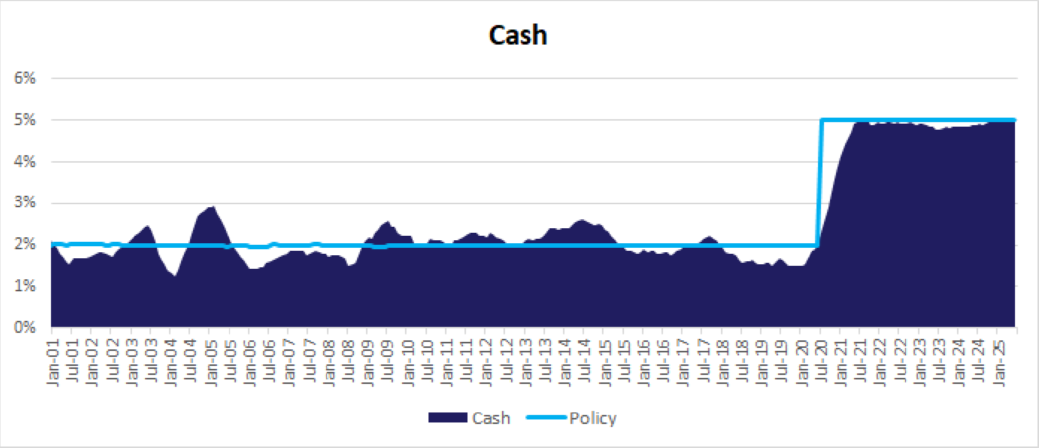
*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

### Combined Funds Historical Asset Class Weightings and Policy Targets
June 30, 2001 to June 30, 2025



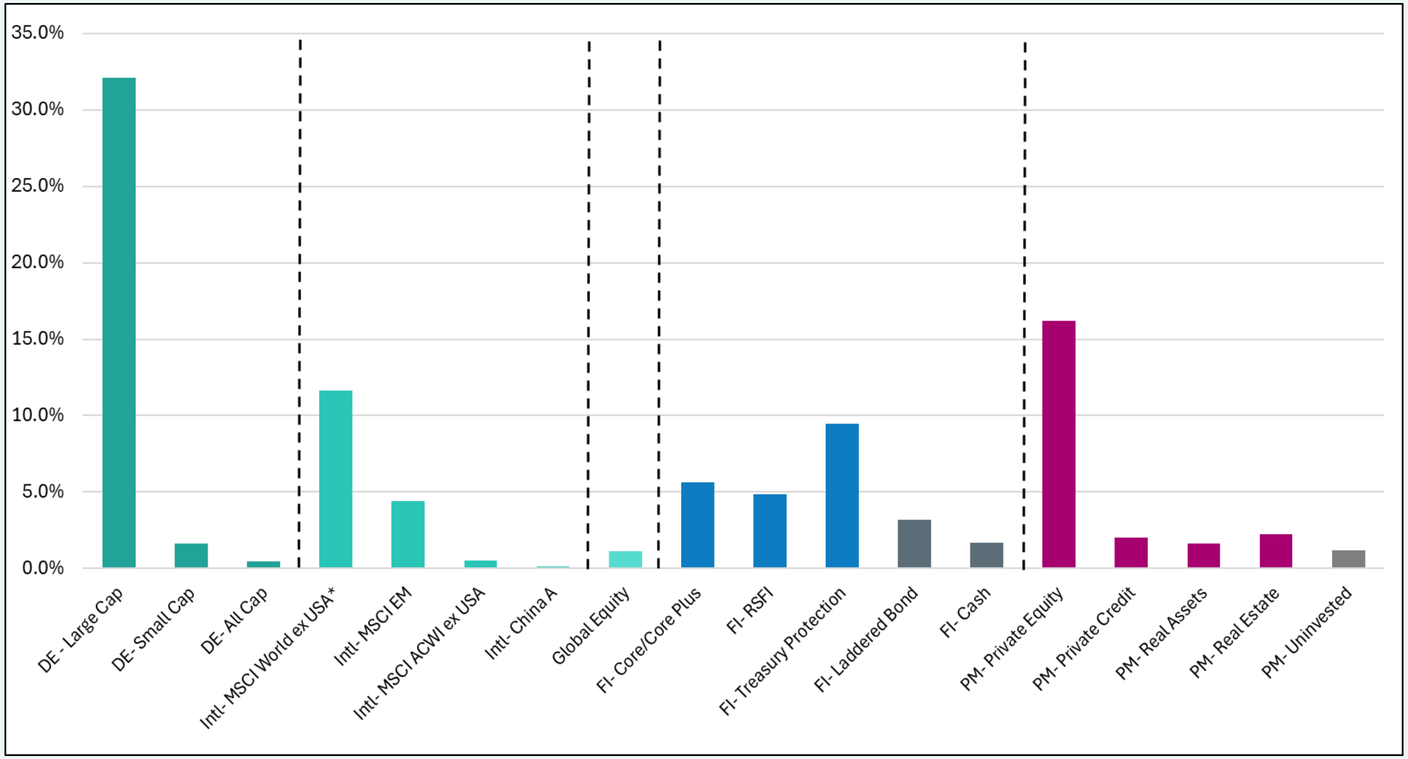



# Appendix
## Combined Funds Allocation Detail as of June 30, 2025

| Current Portfolio & Policy Mapping as of 6/30/25 | | |
|---|---|---|
| **Asset Class** | **Policy** | **Portfolio** |
| Domestic Equity | 33.50% | 34.18% |
| *Large Cap - Russell 1000* | | *32.11%* |
| *Small Cap - Russell 2000* | | *1.60%* |
| *All Cap - Russell 3000* | | 0.47% |
| International Equity | 16.50% | 16.64% |
| *Intl Developed - MSCI World ex USA** | | *11.65%* |
| *Emerging Markets - MSCI EM* | | *4.40%* |
| *Int'l DM+EM - MSCI ACWI ex USA* | | *0.49%* |
| *China Only - MSCI China A* | | *0.10%* |
| Global Equity | 0.00% | 1.14% |
| *Global Equity - MSCI ACWI* | | 1.14% |
| Core/Core Plus/Return-Seeking (RSFI) | 10.00% | 10.51% |
| *Core/Core Plus - BB Aggregate* | | *5.64%* |
| *RSFI - BB Aggregate* | | *4.87%* |
| Treasury Protection | 10.00% | *9.45%* |
| *Treasury Protection - BB Tsy 5+ Yrs* | | 9.45% |
| Laddered Bond + Cash | 5.00% | *4.85%* |
| *Laddered Bond - ICE BofA 3 Mo T-Bill* | | *3.19%* |
| *Cash - ICE BofA 3 Mo T-Bill* | | *1.66%* |
| Private Markets | 25.00% | 23.23% |
| *Private Equity* | | *16.18%* |
| *Private Credit* | | *2.01%* |
| *Private Real Assets* | | *1.61%* |
| *Private Real Estate* | | *2.24%* |
| *Uninvested Private Markets Account* | | *1.19%* |

**Portfolio Asset Class and Sub-Asset Class Allocations as of June 30, 2025**

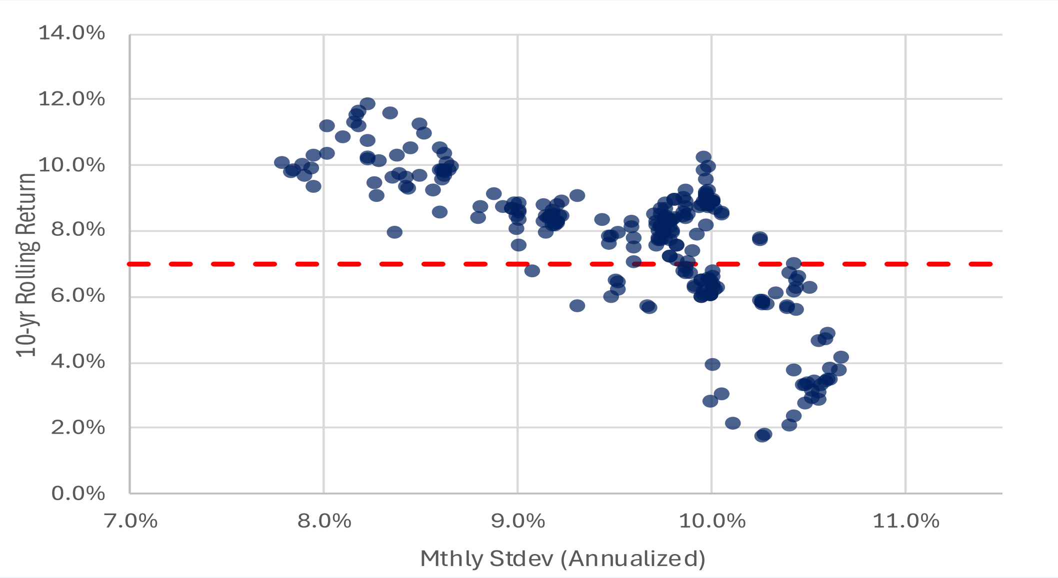



* *Includes dynamic currency hedging strategy with hedge ratio range of 0-100% of the Developed International Equity portfolio's hedgeable currency exposure.*

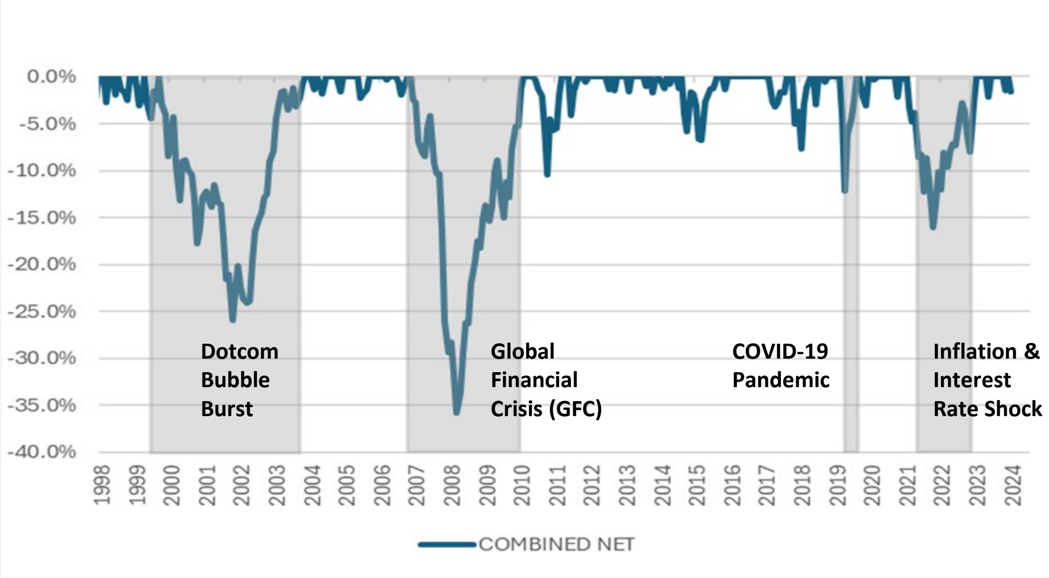
# Appendix

## Combined Funds Volatility Measures as of June 30, 2025

### 10-Year Rolling Return-Risk Distribution (Dec 2004 – June 2025)




### Historical Drawdown Since 12/1/1998




- The Combined Funds Portfolio's realized risk profile varies over time.
- The portfolio has experienced seven major drawdowns (greater than -5%) since the end of 1998, with an average drawdown of -12.2%.

*Note: Performance is presented net of investment management fees and the effect of any profit-sharing arrangements.*

# Appendix

## Capital Market Assumptions: Expected Return and Risk

### SBI CMA Inputs – Expected Return/Risk

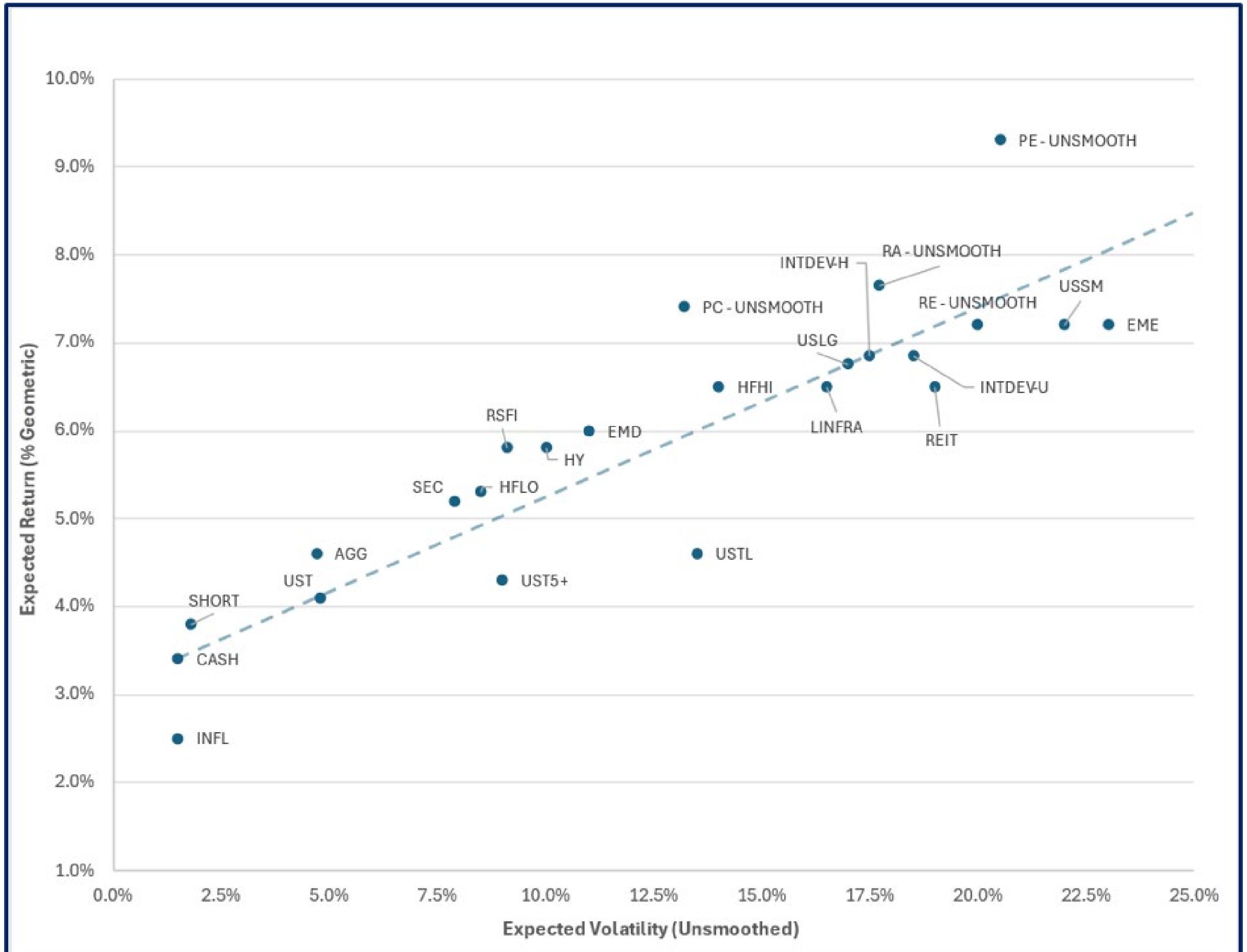
| | Asset Class | Abbrev | Primary Role/Risk Factor | Exp. Return (Geometric) | Exp Vol - Unsmoothed | Exp Vol - Smoothed |
|---|---|---|---|---|---|---|
| Public Equity | U.S. Equity | USEQ | Growth | 6.80% | 17.25% | |
| | U.S. Large Cap | USLG | Growth | 6.75% | 17.00% | |
| | U.S. Small Cap | USSM | Growth | 7.20% | 22.00% | |
| | Int'l Equity (unhedged) | INTEQ-U | Growth | 6.95% | 19.00% | |
| | Int'l Developed (unhedged) | INTDEV-U | Growth | 6.85% | 18.50% | |
| | Emerging Mkts | EME | Growth | 7.20% | 23.00% | |
| | Int'l Equity (50% hedged dev only) | INTEQ-H | Growth | 6.95% | 18.00% | |
| | Int'l Developed (50% hedged) | INTDEV-H | Growth | 6.85% | 17.50% | |
| Fixed Income | U.S. Treasury | UST | Diversifying/Risk-Mitigating | 4.10% | 4.80% | |
| | U.S. Treasury - 5+ Year | UST5+ | Diversifying/Risk-Mitigating | 4.30% | 9.00% | |
| | U.S. Treasury - Long | USTL | Diversifying/Risk-Mitigating | 4.60% | 13.50% | |
| | U.S. Aggregate | AGG | Diversifying/Risk-Mitigating | 4.60% | 4.70% | |
| | Return Seeking Fixed Income | RSFI | Credit | 5.80% | 9.10% | |
| | U.S. Sec. Credit | SEC | Credit | 5.20% | 7.90% | |
| | U.S. High Yield | HY | Credit | 5.80% | 10.00% | |
| | Emerging Markets | EMD | Credit | 6.00% | 11.00% | |
| Private Markets | Private Equity | PE | Growth | 9.30% | 20.50% | 11.40% |
| | Private Credit | PC | Credit | 7.40% | 13.20% | 8.90% |
| | Private Real Assets | RA | Sensitive | 7.65% | 17.70% | 9.70% |
| | Private Real Estate | RE | Sensitive | 7.20% | 20.00% | 11.80% |
| Liquid Alternatives | Global REITs | REIT | Growth | 6.50% | 19.00% | |
| | Global Listed Infrastructure | LINFRA | Sensitive | 6.50% | 16.50% | |
| | Liquid Hedge Funds - Low Beta | HFLO | Diversifying/Risk-Mitigating | 5.30% | 8.50% | |
| | Liquid Hedge Funds - High Beta | HFHI | Growth | 6.50% | 14.00% | |
| Liquidity | Cash Equivalents | CASH | Liquidity | 3.40% | 1.50% | |
| | Short Duration | SHORT | Liquidity | 3.80% | 1.80% | |

- As part of the Asset Allocation study, SBI Staff evaluated a range of asset classes, including each asset class within the Combined Funds current allocation policy, as well as several additional asset classes to be considered for possible inclusion.
- SBI Staff evaluated the intended role of each asset class and developed capital markets assumptions to be used within a mean-variance optimization (MVO) model.
- Following a series of preliminary optimization runs and iterative analysis, Staff applied its judgement to remove assets from consideration in the Final MVO model.
- This list of all asset classes considered in this Study is presented here for the reader's information.



*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

### SBI CMA Inputs – Graph of Expected Return/Risk

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# Appendix

## Capital Markets Assumptions: Correlations Between Select Asset Classes

**Correlations used reflected conservative estimates based on 20+ years of historical returns data.**
**Correlation data for Private markets asset classes was estimated using unsmoothed returns.**

### SBI CMA Inputs – Correlations Between Asset Classes

| Asset Class | Code | USEQ | INTEQ-H | UST | AGG | RSFI | PE | PC | RA | RE | REIT | LINFRA | HFLO | HFHI | CASH | INFL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U.S. Equity | USEQ | | 0.89 | -0.10 | 0.20 | 0.72 | 0.93 | 0.70 | 0.77 | 0.77 | 0.81 | 0.78 | 0.06 | 0.89 | -0.08 | 0.00 |
| Int'l Equity (50% hedged dev only) | INTEQ-H | 0.89 | | -0.11 | 0.21 | 0.76 | 0.93 | 0.74 | 0.83 | 0.77 | 0.82 | 0.82 | 0.12 | 0.92 | -0.03 | 0.00 |
| U.S. Treasury | UST | -0.10 | -0.11 | | 0.90 | 0.07 | -0.06 | -0.13 | -0.09 | 0.09 | 0.08 | 0.11 | -0.01 | -0.17 | 0.15 | -0.27 |
| U.S. Aggregate | AGG | 0.20 | 0.21 | 0.90 | | 0.44 | 0.24 | 0.23 | 0.20 | 0.36 | 0.38 | 0.39 | -0.07 | 0.16 | 0.09 | -0.23 |
| Return Seeking Fixed Income | RSFI | 0.72 | 0.76 | 0.07 | 0.44 | | 0.72 | 0.87 | 0.72 | 0.74 | 0.77 | 0.75 | -0.07 | 0.75 | -0.08 | 0.05 |
| Private Equity | PE | 0.93 | 0.93 | -0.06 | 0.24 | 0.72 | | 0.74 | 0.85 | 0.84 | 0.81 | 0.81 | 0.11 | 0.88 | -0.04 | -0.02 |
| Private Credit | PC | 0.70 | 0.74 | -0.13 | 0.23 | 0.87 | 0.74 | | 0.70 | 0.74 | 0.73 | 0.67 | -0.13 | 0.71 | -0.12 | 0.10 |
| Private Real Assets | RA | 0.77 | 0.83 | -0.09 | 0.20 | 0.72 | 0.85 | 0.70 | | 0.74 | 0.73 | 0.85 | 0.15 | 0.80 | -0.04 | 0.07 |
| Private Real Estate | RE | 0.77 | 0.77 | 0.09 | 0.36 | 0.74 | 0.84 | 0.74 | 0.74 | | 0.92 | 0.75 | 0.07 | 0.70 | -0.02 | 0.00 |
| Global REITs | REIT | 0.81 | 0.82 | 0.08 | 0.38 | 0.77 | 0.81 | 0.73 | 0.73 | 0.92 | | 0.82 | 0.10 | 0.76 | -0.05 | 0.02 |
| Global Listed Infrastructure | LINFRA | 0.78 | 0.82 | 0.11 | 0.39 | 0.75 | 0.81 | 0.67 | 0.85 | 0.75 | 0.82 | | 0.12 | 0.74 | -0.05 | 0.05 |
| Liquid Hedge Funds - Low Beta | HFLO | 0.06 | 0.12 | -0.01 | -0.07 | -0.07 | 0.11 | -0.13 | 0.15 | 0.07 | 0.10 | 0.12 | | 0.16 | 0.04 | -0.05 |
| Liquid Hedge Funds - High Beta | HFHI | 0.89 | 0.92 | -0.17 | 0.16 | 0.75 | 0.88 | 0.71 | 0.80 | 0.70 | 0.76 | 0.74 | 0.16 | | -0.07 | 0.05 |
| Cash Equivalents | CASH | -0.08 | -0.03 | 0.15 | 0.09 | -0.08 | -0.04 | -0.12 | -0.04 | -0.02 | -0.05 | -0.05 | 0.04 | -0.07 | | 0.01 |
| U.S. Inflation (CPURNSA) | INFL | 0.00 | 0.00 | -0.27 | -0.23 | 0.05 | -0.02 | 0.10 | 0.07 | 0.00 | 0.02 | 0.05 | -0.05 | 0.05 | 0.01 | |

As part of the Asset Allocation study, SBI Staff evaluated a range of asset classes, including each asset class within the Combined Funds current allocation policy and several additional asset classes to be considered for possible inclusion. SBI Staff evaluated the intended role of each asset class and developed capital markets assumptions to be used within a mean-variance optimization (MVO) model. Following a series of preliminary optimization runs and iterative analysis, Staff applied its judgement to remove assets from consideration in the Final MVO model. This correlation matrix of all asset classes considered in this Study is presented here for the reader's information.

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# Appendix
## Capital Markets Assumptions: Unsmoothing Private Markets CMAs

**Private markets returns appear smooth when compared to public markets. In developing its CMAs, the SBI used a process of "unsmoothing" returns for Capital Markets Assumptions to strengthen its asset allocation process.**

### Why are private markets returns "smooth"?

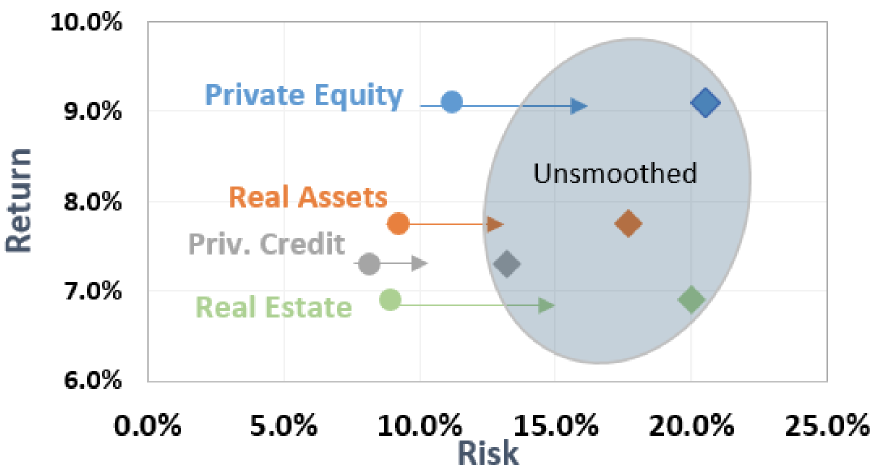
Private market returns are typically reported using quarterly valuations or infrequent transactions, creating relatively low volatility in observed returns compared to public markets. This "smoothing" makes risk measures such as volatility and correlations appear lower and more stable than if private markets were marked-to-market daily in the same way as publicly traded assets.

### How do we adjust for this?

Elroy Dimson (1979) showed that when returns are autocorrelated due to reporting lags, you can estimate a mark-to-market return series by regressing the smoothed series against the current and lagged returns of a public benchmark. Summing coefficients across lags gives an "unsmoothed" beta, which can be used to generate an unsmoothed return series for Capital Markets Assumptions ("CMAs").

### Results: Unsmoothed CMAs

Unsmoothing results in volatility and correlation estimates that more closely align with those observed in public markets. As a result, unsmoothed private markets CMAs provide a more consistent basis for comparison between public and private assets.

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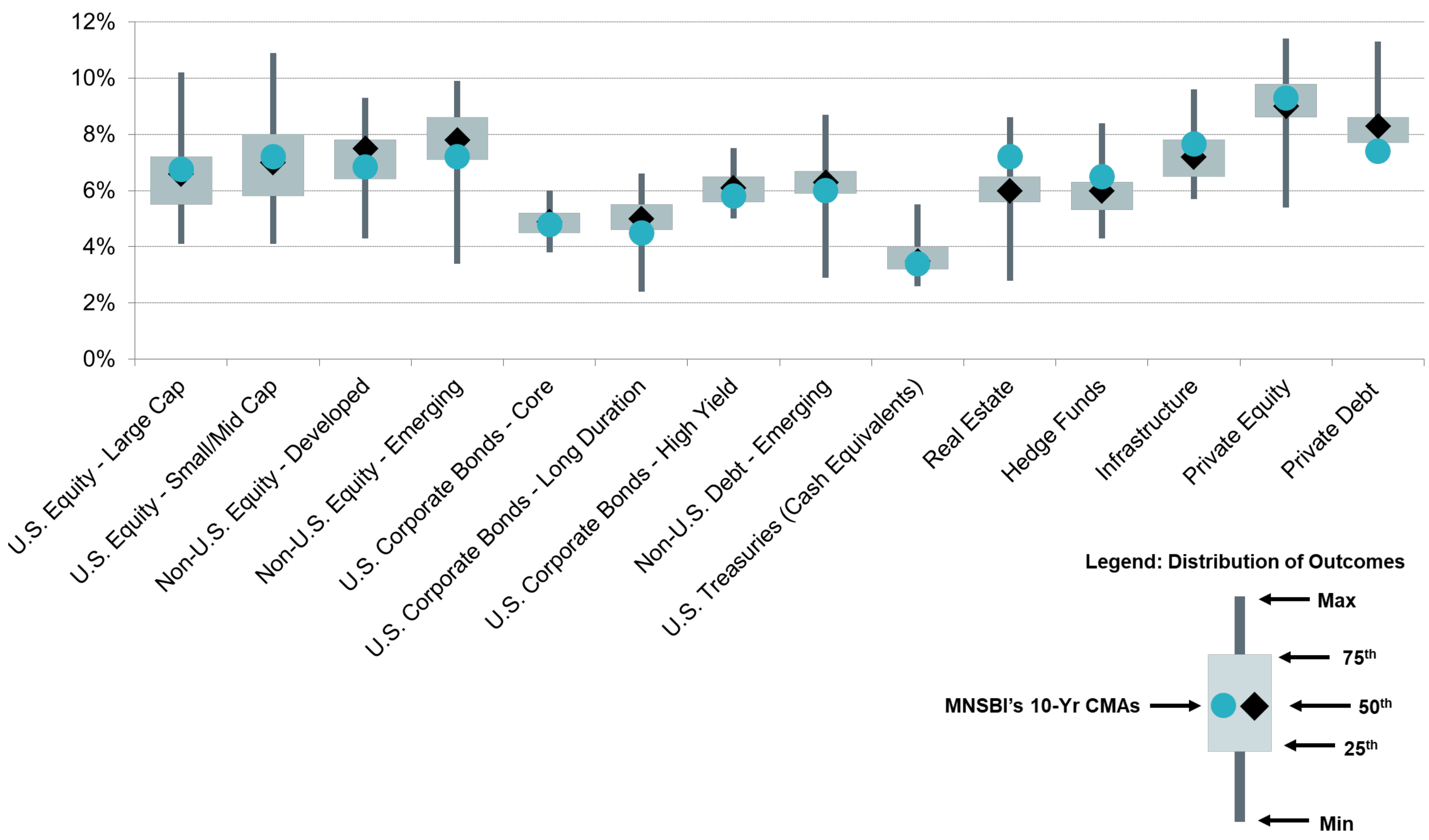
# Appendix
## Capital Markets Assumptions: SBI CMAs vs. 2025 Horizon CMA Survey

**Expected Geometric Returns of 41 Investment Advisors (10-Year Forecast)**




**Source:** Horizon Actuarial Solutions, LLC survey of 2025 capital market assumptions from 41 independent investment advisors
MNSBI's expected returns are annualized over 10-years as of December 2024

### What is the Horizon Survey?

- Since 2010, Horizon Actuarial Services, LLC has conducted a capital market assumption survey of investment firms to aid in determining reasonable assumptions for a pension plan's expected return on assets
  - The survey is a helpful double-check with others in the industry
- For the 2025 survey, 41 investment advisors participated.
- A description of the methodology used by Horizon Actuarial Services, LLC in conducting their survey is outlined in the 2025 version of the report found online at the link below:
  - https://www.horizonactuarial.com/survey-of-capital-market-assumptions

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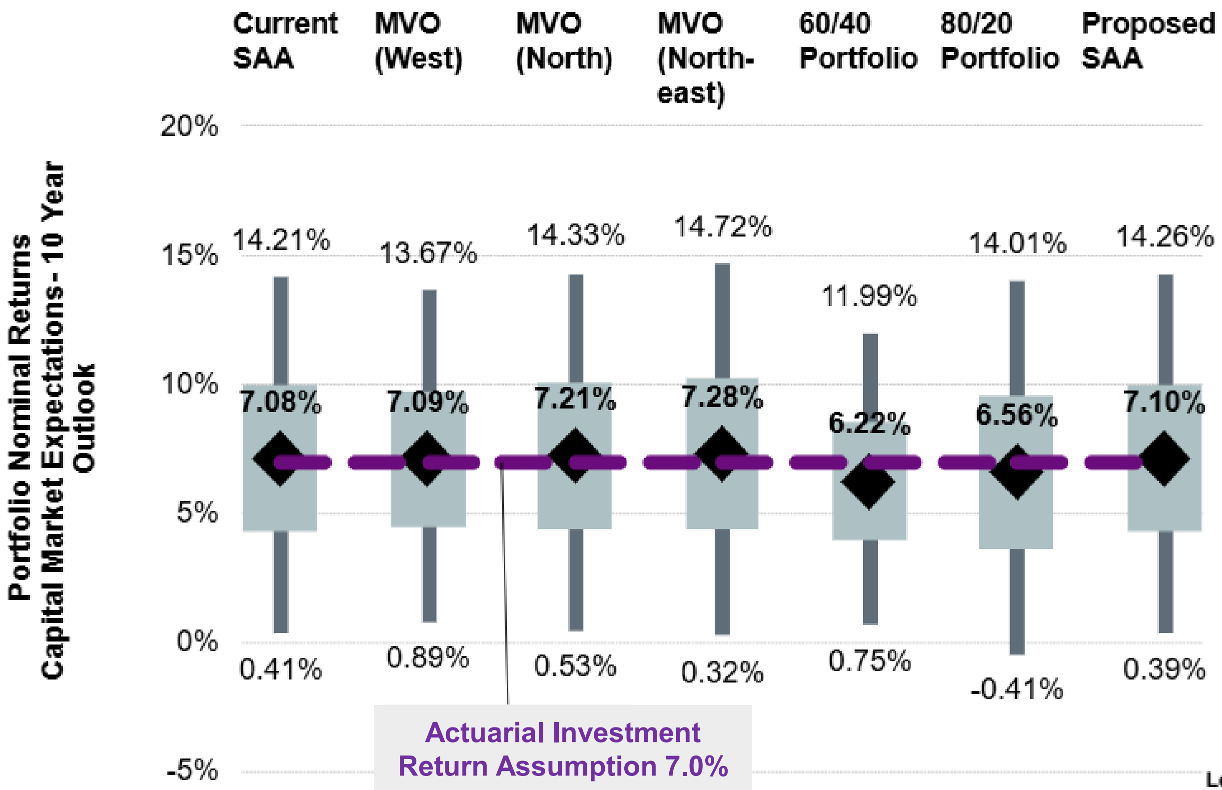
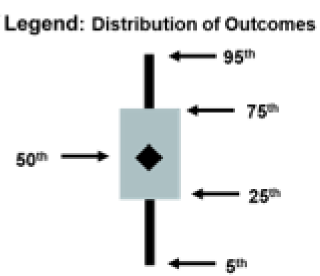
# Appendix
## Mean-Variance Optimization Analysis

- Expected returns are similar across Current, Proposed and sample efficient portfolios.
- Both the 60/40 and 80/20 portfolios exhibit lower than desired expected return

### 10-Year Expected Return Ranges – Highlighted Portfolios




***60/40 Portfolio*** *reflects 60% Russell 3000 Index and 40% Bloomberg U.S. Aggregate Bond Index.*
***80/20 Portfolio*** *reflects 80% Russell 3000 Index and 20% Bloomberg U.S. Aggregate Bond Index.*

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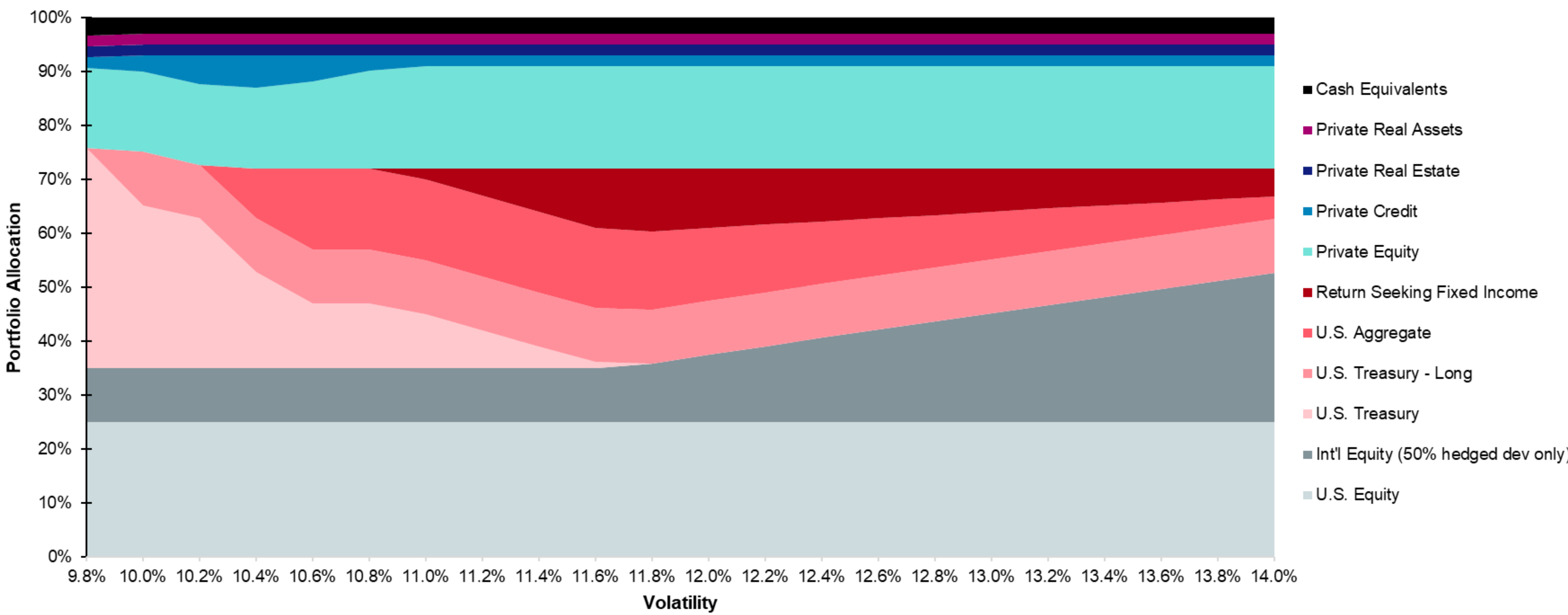
# Appendix
## Mean-Variance Optimization Analysis

### Results of Constrained Mean-Variance Optimization: Efficient Portfolio Asset Mixes at Varying Volatility Levels

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# Appendix
## Liquidity Analysis Overview

### MNSBI's liquidity analysis was performed under the modeled Current SAA and Proposed SAA

Intended as a stress-testing model, incorporating the profile of the liabilities as well as expected future contributions

Uses different scenarios for economic environments and other relevant events

Shows how the portfolio's liquidity profile could evolve with a given investment strategy

### We categorized investments by liquidity into five buckets

**Liquid (Risk-Reducing Assets):** Less than 3 months needed for return of capital (e.g., publicly traded securities)

**Liquid (Return-Seeking Assets):** Less than 3 months needed for return of capital (e.g., publicly traded securities)

**Quasi-Liquid:** Assume a 1-year lock-up in most economic environments, 2 years in a Recession scenario, and 3 years in a Dark Skies scenario (e.g., hedge funds, open-end real assets)

**Illiquid: Potential lock-up of 5–10 years**, depending on economic environment (e.g., private credit)

**Illiquid: Potential lock-up of 10+ years** (e.g., typical private equity)

### This is intended to be a conservative approximation of the actual liquidity properties of the assets

**Actuarial Assumptions and Methods:**

Starting monthly net outflow of $235 million, increasing 3% annually thereafter, comprised of:
- Estimated Contributions starting at $225 million per month, increasing 3% annually thereafter
- Estimated Benefits Payments: starting at $460 million per month, increasing 3% annually thereafter

Estimated starting market value of assets of the Combined Funds of $101,221 million as of June 30, 2025

AON

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# Appendix
## Liquidity Analysis Overview

SBI

## Asset allocation, liquidity category, and economic scenarios

| Liquidity Category | Asset Class | Current SAA | Proposed SAA | Aon CMA Mapping |
|---|---|---|---|---|
| **Liquid (Risk-Reducing Assets)** | Treasuries | 10.0% | --- | 70% Long Duration Gov't / 30% Interm. Duration Gov't |
| | Treasuries | --- | 10.0% | 20% Long Duration Gov't / 80% Interm. Duration Gov't |
| | Core Fixed Income | 5.0% | 6.0% | Core Fixed Income |
| | Cash | 5.0% | 3.0% | Cash |
| | **Subtotal** | **20.0%** | **19.0%** | |
| **Liquid (Return-Seeking Assets)** | U.S. Equity | 33.5% | 33.5% | U.S. Equity |
| | International Equity | 16.5% | 16.5% | 70% Int'l Developed / 30% Emerging Market |
| | Multi-Asset Credit | 5.0% | 6.0% | 1/3 HYB, Bank Loans, and Emerging Market Debt |
| | **Subtotal** | **55.0%** | **56.0%** | |
| **Quasi-Liquid Assets** | N/A | 0.0% | 0.0% | |
| | **Subtotal** | **0.0%** | **0.0%** | |
| **Illiquid 5-10 Years** | Private Debt | 2.5% | 3.0% | Private Debt |
| | **Subtotal** | **2.5%** | **3.0%** | |
| **Illiquid 10+ Years** | Private Equity | 17.5% | 18.0% | Private Equity |
| | Real Assets | 2.5% | 2.0% | 50% Closed-End Infra / 50% Non-Core Real Estate |
| | Real Estate | 2.5% | 2.0% | Non-Core Real Estate |
| | **Subtotal** | **22.5%** | **22.0%** | |
| **Totals** | Asset Allocation | 100.0% | 100.0% | |
| | **Quasi + Illiquid Assets** | **25.0%** | **25.0%** | |

### Base Case Scenario

- Markets preform consistent with Aon's Capital Market Assumptions (~50th percentile)

### Recession Scenario

- Pessimistic outlook for the markets
- Return-seeking assets decline in the first two years with a modest rebound in later years

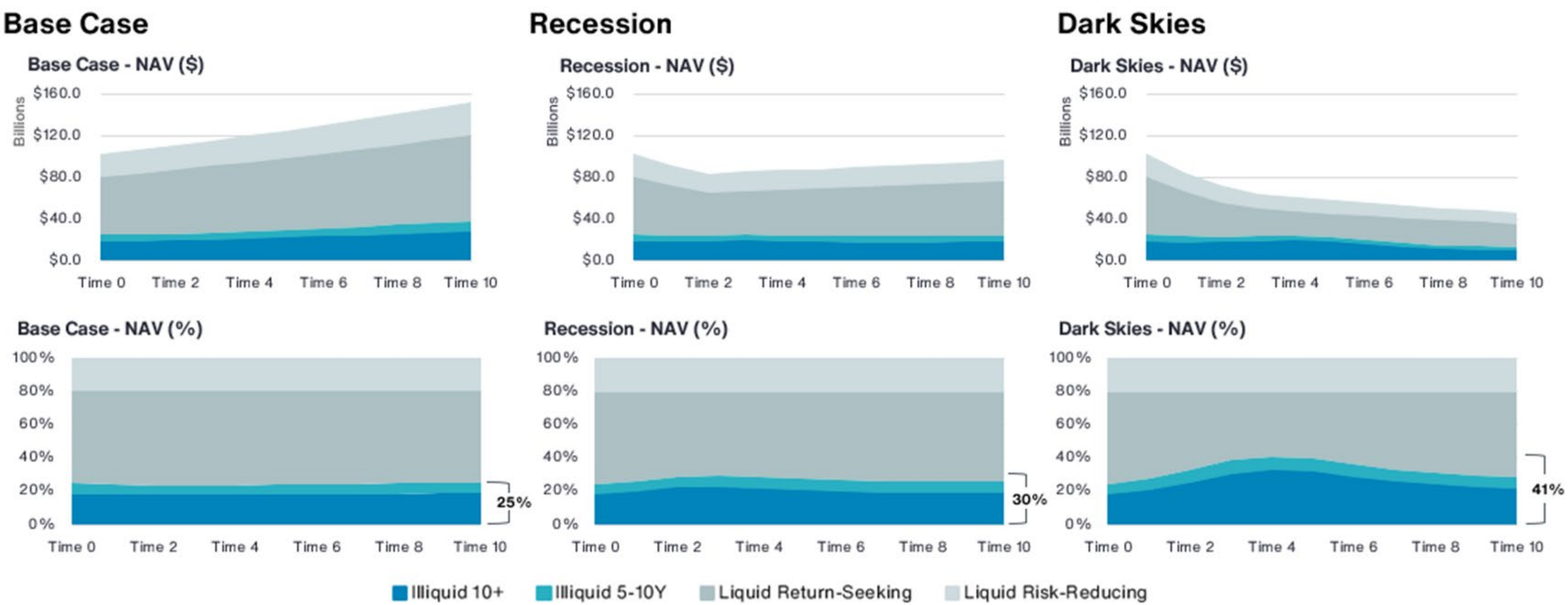
### Dark Skies Scenario

- Very pessimistic outlook for markets
- Return-seeking assets decline significantly
- The value of public equities declines approximately 50% over three years, without an immediate rebound

AON

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

### Current SAA (25% total illiquid assets)

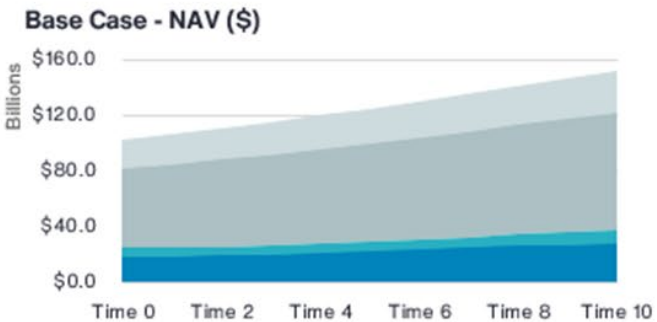


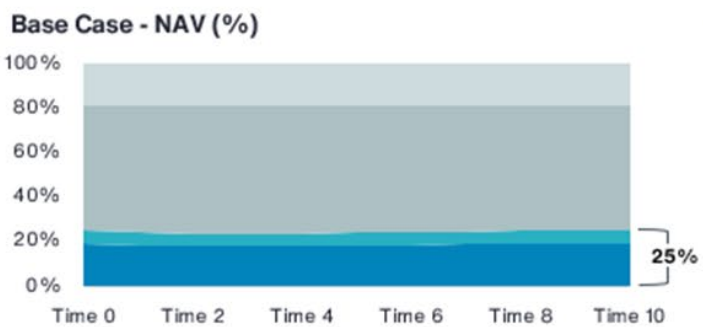

Note: Time 0 represents a starting point of June 30, 2025

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

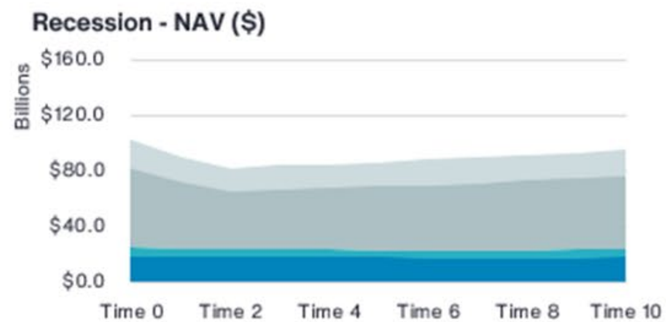
### Proposed SAA (25% total illiquid assets)

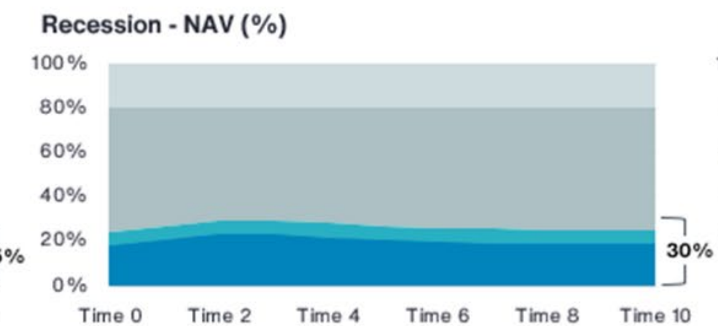
#### Base Case



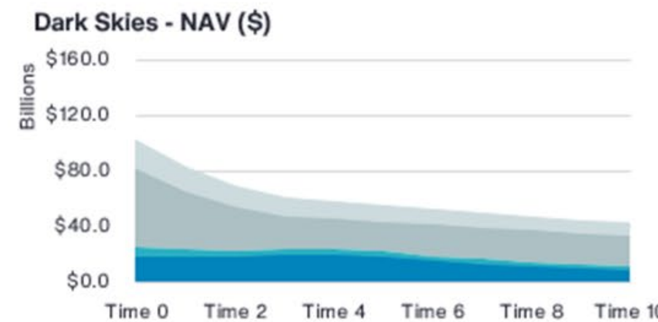



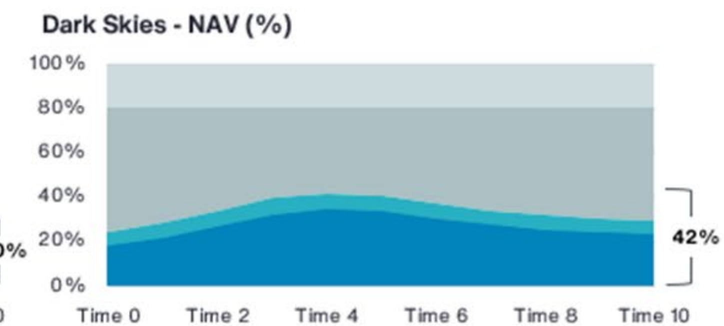

#### Recession




#### Dark Skies




Illiquid 10+ | Illiquid 5-10Y | Liquid Return-Seeking | Liquid Risk-Reducing

Note: Time 0 represents a starting point of June 30, 2025

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

# Appendix
## Liquidity Analysis: Summary of Results

### Sufficient Liquidity in Base Case, Recession, and Dark Skies Scenario

| | Current SAA | | Proposed SAA | |
|---|---|---|---|---|
| | Max Illiquid Allocation | Ratio of Max Illiquids to Base Case | Max Illiquid Allocation | Ratio of Max Illiquids to Base Case |
| Base Case | 25% | 1.00 | 25% | 1.00 |
| Recession | 30% | 1.20 | 30% | 1.20 |
| Dark Skies | 41% | 1.64 | 42% | 1.64 |

**Key Takeaways**

- SBI has sufficient liquidity in the modeled Base Case, Recession, and Dark Skies economic scenarios
- The modeled scenarios show no interruption of paying benefits to participants
- In a Dark Skies economic scenario, assets are projected to decline, increasing the proportion of illiquid assets
- Potential portfolio remedies if the Dark Skies scenario occurs include:
  - Accepting this risk as self-correcting over time
  - Cutting back future illiquid assets commitments more than assumed in the analysis
  - Selling illiquid assets on the secondary market

**Note:** This analysis is highly sensitive to the assumed contributions. If SBI receives less contributions than assumed, especially in a Dark Skies environment, then illiquid and quasi-liquid investments would drift further from target and the potential for liquidity issues increases

AON

*Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.*

## Historical Return Scenarios

Historical return scenarios capture the cumulative returns of the representative historical period. The returns are measured by including the full return of the first day of the period through the end of the last day of the period:

- **2006-07 Bull Market:** 7/1/2006 – 10/31/2007
- **Global Financial Crisis 2007-09:** 6/1/2007 – 2/28/2009
- **Taper Tantrum 2013:** 5/1/2013 – 8/31/2013
- **Q4 2018 Market Selloff:** 10/1/2018 – 12/31/2018
- **COVID-19 Pandemic Drawdown:** 2/1/20120 – 3/31/2020
- **2022 Inflation & Rate Hikes:** 1/1/2022 – 12/31/2022

## Historical Risk and Return Statistics

Historical risk and return using index monthly returns and represented on an annualized basis:

- **Standard Deviation:** Measures an investment's total risk by quantifying the volatility of its returns.
- **Downside Deviation:** Measures an investment's downside risk by quantifying the volatility of negative returns (losses).
- **Maximum Drawdown:** The largest cumulative decline (peak to trough) an investment has experienced over a specified period.
- **Sharpe Ratio:** Measures an investment's risk-adjusted return, calculated by dividing the excess return (investment return minus the risk-free rate) by the investment's standard deviation of excess returns. The risk-free rate is represented by the ICE BofA 3-Month U.S. Treasury Bill Index.
- **Beta to CPI**: Sensitivity of an investment's returns to movements in inflation, as represented by the U.S. Consumer Price Index for Urban Consumers (Seasonally Adjusted).
- **Beta to the MSCI ACWI:** Sensitivity of an investment's returns to movements global equity markets, as represented by the MSCI All Country World Index (ACWI).
- **Upside Market Capture (ACWI):** Measures how well an investment performs relative to global equity markets during periods when global equity markets are *rising*. It is calculated as the annualized return of the fund in all periods in which the benchmark return is positive divided by the return of the MSCI ACWI during those periods.
- **Downside Market Capture (ACWI):** Measures how well an investment performs relative to global equity markets during periods when global equity markets are *falling*. It is calculated as the annualized return of the fund in all periods in which the benchmark return is *negative* divided by the return of the MSCI ACWI during those periods.

# Asset Allocation Recommendations

| Asset Class | Current SAA | Proposed SAA | Range |
|---|---|---|---|
| **Public Equity** | **50%** | **50%** | **45-55%** |
| Domestic Equity | 33.5% | 33.5% | 28-39% |
| International Equity | 16.5%[1] | 16.5%[1] | 14-19% |
| **Fixed Income + Cash** | **25%** | **25%** | **22.5-27.5%** |
| Core/Core Plus Fixed Income | 5% | 6% | 4-8% |
| Return Seeking Fixed Income | 5% | 6% | 4-8% |
| Treasury Protection | 10% | 10% | 5-15% |
| *U.S. Treasury – 5+ Year* | *10%* | *---* | *---* |
| *U.S. Treasury (Broad Maturity)* | *---* | *8%* | *5-15%* |
| *U.S. Treasury – Long* | *---* | *2%* | *0-5%* |
| Cash Equivalents | 5% | 3% | 0-5% |
| **Private Markets** | **25%** [2] | **25%** [3] | **20-32%** [4, 5] |
| Private Equity | *17.5%** | 18% | 15-25% |
| Private Credit | *2.5%** | 3% | 0-6% |
| Private Real Assets | *2.5%** | 2% | 0-4% |
| Private Real Estate | *2.5%** | 2% | 0-4% |
| **Opportunistic Allocation** | | | **0-10%** |
| **Portfolio Metrics** | | | |
| Expected Return | **7.08%** | **7.10%** | |
| Expected Volatility | **13.41%** | **13.48%** | |
| Sharpe Ratio | **0.27** | **0.27** | |

1. **Reduce Duration of the Treasury Protection Portfolio**
   - Improves balance between liquidity and growth hedge goals
   - Lowers volatility and tail risk exposure to rising interest rates
2. **Optimize Portfolio Liquidity By Reducing Cash Allocation**
   - Incremental allocations to Core Fixed Income and Return Seeking Fixed Income reflects improved risk-return outlook
   - Proposed Cash allocation still provides a robust cushion
   - Results in a modest increase in portfolio expected return and risk
3. **Adopt Target Weights to Private Markets Sub-Asset Classes**
   - Modest increases to Private Equity and Private Credit
4. **Update Asset Mix for Uninvested Private Markets Allocation to 80% Equity + 20% Fixed Income**
   - Revised allocation better reflects underlying asset class risk exposures

***Proposed SAA changes expected to have a modest impact on portfolio risk and return while enhancing execution***

[1] *Currency hedging is authorized up to a hedge ratio of 100% of the International Equity Portfolio's hedgeable currency exposure.*

[2] *Uninvested Private Markets allocated to Passive Domestic Equity (S&P 500).* [3] *Uninvested Private Markets Allocation benchmarked to composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Index.*

[4] *The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.*

[5] *Note: the Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.*

** Reflects staff's internal asset class targets. Previous SAAs did not specify targets for Private Markets sub-asset classes.*

***Note: The expected return and volatility figures presented in this study are estimates based on forward-looking assumptions about asset class performance and are subject to uncertainty. Actual results may differ. These figures do not represent guarantees of future performance and are not a substitute for an actuarially determined assumed rate of return.***

# TAB E

# Investment Policy Statement

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DATE: October 17, 2025

TO: Members, Investment Advisory Council

FROM: Jill E. Schurtz
Executive Director and Chief Investment Officer

**SUBJECT: Investment Policy Statement**

The Executive Director is recommending that the Board adopt an Investment Policy Statement to serve as the SBI's principal investment policy. The IPS incorporates the Asset Allocation Study, defines roles and responsibilities with respect to the SBI's investment portfolio, and delegates certain responsibilities to the Executive Director.

**RECOMMENDATION:**

**Staff is recommending adoption of the Investment Policy Statement attached as Exhibit A, and that the Executive Director implement the policy within a reasonable period of time following adoption and requests the IAC's endorsement for the Board's approval.**

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**EXHIBIT A**

## Minnesota State Board of Investment - Investment Policy Statement

**Table of Contents**

## I. <u>Introduction</u>

Established pursuant to Article XI, Section 8 of the Minnesota Constitution, the Minnesota State Board of Investment (SBI) serves the State of Minnesota by investing the assets of state and local employee benefit plans, other public retirement savings plans, tax-advantaged savings plans, and non-retirement assets. All investments undertaken by the SBI are governed by the Prudent Person Rule and other standards codified in Minnesota Statutes, Chapter 11A and Chapter 356A, as applicable.

The Board is responsible for establishing policies governing the SBI's activities and overseeing the Executive Director's implementation of such policies. The Board delegates appropriate investment responsibility through the appointment of the Executive Director and has appropriate resources to support its responsibilities with the assistance of investment consultants, various committees, and the Executive Director.

This Investment Policy Statement ("IPS") incorporates the relevant laws, board policies, resolutions, and standards that guide the management of the SBI's investments. In addition to the statutory fiduciary rule framework described above, in 2017, the SBI adopted a set of Investment Beliefs that provide additional context for SBI actions. The Executive Director is responsible for administering the policies referenced herein and investing the assets under management pursuant to law and the investment policies adopted by the Board. This document is intended to be binding upon all persons with authority over SBI assets, including external investment managers/advisors, custodians, consultants, and SBI staff.

This IPS is designed to provide clear parameters for managing the SBI's various investment portfolios while maintaining sufficient flexibility in the management and oversight processes, considering the dynamic nature of the investment environment. Further, this IPS is designed to ensure prudence and care in the execution of the investment programs under the SBI's management.

## II. <u>Purpose</u>

The purpose of this document is to:

- Delineate the roles and responsibilities of the parties involved with the oversight and management of the SBI's investment programs.

- Set forth the investment policies, asset allocation, performance objectives, and guidelines the Board determines to be appropriate, prudent, and to comply with relevant laws.

- Establish criteria to evaluate investment performance compared to appropriate and pre-determined objectives and benchmarks.

- Serve as a framework and review document to guide ongoing oversight of the SBI's investments for compliance with the laws of the State of Minnesota and applicable federal laws.

## III. Roles and Responsibilities

The SBI was established under Article XI, Section 8 of the Minnesota Constitution and is governed by MN Statutes Chapter 11A and Chapter 356A, and other federal and state laws.

**SBI Board**

The primary responsibility of the Board is to monitor and evaluate the SBI's investment programs as a fiduciary with the goal of making sound investment decisions. The Board establishes the governing policies for the SBI's activities and oversees the Executive Director's implementation of such policies. Members of the Board must adhere to the fiduciary standards in Minn. Stat. Ch. 356A for funds subject to that chapter and the prudent person standard established Minn. Stat. §11A.09. The Board's responsibilities include:

- Setting the policies, objectives, and guidelines for investment of SBI assets in a prudent fashion and evaluating compliance with investment policy and applicable laws;

- Appointing the SBI's Executive Director, defining relevant responsibilities, and evaluating the Executive Director's administration and management of the SBI's investment programs;

- Reviewing any material issues impacting the SBI's investments, or the viability of the SBI's investment programs;

- Evaluating the performance of the various funds and accounts under SBI management;

- Reviewing and approving policy documents and decisions, including: the Investment Policy Statement, Strategic Asset Allocation and associated benchmarks, and Investment Advisory Council composition;

- Review Private Markets commitment pacing;

- Selecting Generalist Investment Consultant(s) to the Board; and

- Selecting the SBI's Master Custodian and custodians for other investment funds and accounts, such as the Internally Traded Accounts.

**SBI Executive Director**
The Executive Director of the SBI is responsible for administering the day-to-day activities of the SBI and undertaking activities consistent with Board policies and legal requirements, in accordance with applicable law. The Executive Director must adhere to the fiduciary standards in Minn. Stat. Ch. 356A for funds subject to that chapter and the prudent person standard established in Minn. Stat. §11A.09. The Executive Director's responsibilities include:

- Implementing the Board's investment and administrative policies, including directives and delegations authorized by the Board;

- Employing and supervising appropriate investment and administrative staff;

- Undertaking the day-to-day investment management and oversight of the funds under SBI's management in compliance with relevant laws, including Minn. Stat. §11A.24. Such investment management includes but is not limited to (i) selecting investment managers and funds for investment, subject to the criteria addressed in Board Delegation to the Executive Director; and (ii) implementing and monitoring the SBI's investment management of Internally Traded Accounts.

- Selecting external resources to aid in the management of SBI assets, including third parties for consulting, investment analysis, risk management, and other services;

- Negotiating and approving relevant guidelines and contracts for each investment or investment manager retained by the SBI;

- Executing portfolio rebalancing in accordance with policy;

- Advising the Board on relevant investment matters;

- Reporting quarterly and annual investment results and other pertinent information to the Board, Retirement Systems, and other relevant stakeholders;

- Reviewing the Private Markets commitment pacing model with the Board at least every two (2) years;

- Reviewing this IPS and delegation of authority with the Board at least every three (3) years;

- Conducting a Strategic Asset Allocation study at least every five (5) years and recommending results for Board review; and

- Presenting a strategic investment workplan annually for Board review.

**Board Delegation to Executive Director**

The Executive Director shall implement the Board's investment policy in accordance with this Investment Policy Statement, applicable laws, and any other directives of the Board. In addition to the day-to-day administrative responsibilities and activities of the SBI and other authorities granted by law, the Board hereby delegates to the Executive Director the necessary authority to take the following actions in the discharge of the Executive Director's duties:

I. Hire and terminate investment managers, at the Executive Director's discretion, to manage publicly traded assets in any of the funds or accounts under management by the SBI. The form of any such investments shall be in accordance with applicable law.

II. Make commitments with respect to assets in the Combined Funds to commingled funds, separate accounts, secondary transactions, and dedicated co-investment vehicles that invest in privately owned assets, in an amount up to $750 million per respective vehicle, plus an additional amount of up to one percent of such commitment amount for any required costs at closing. Such commitments must be made in accordance with applicable law.

III. Make direct co-investments alongside commingled funds investing in privately owned assets in which the SBI has made a commitment. The aggregate amount of direct co-investments made alongside a given fund must not exceed the lesser of: (i) 100% of the SBI's primary commitment amount to such fund, or (ii) $500 million. Such co-investments must be made in accordance with applicable law.

IV. Implement appropriate investment programs for Internally Traded Accounts. The form of any such investments shall be in accordance with applicable law.

V. Investments made under paragraphs II and III above are not intended to exceed the Private Markets commitment pacing model amount in a calendar year.

VI. For the avoidance of doubt, the authority contained in paragraphs II and III above includes all related fund decisions, including but not limited to fund extensions, secondary sales, and continuation vehicles.

VII. The Executive Director may execute contracts with service providers to support the administration of the assets under the SBI's management, provided that the Board reserves the sole right to appoint one or more custodians and investment consultants to advise the Board.

VIII. In effectuating these delegated authorities, the Executive Director may execute any necessary contracts and legal documents. Such contracts must conform with all applicable laws.

**Reporting on Implementation of Delegated Authority**
On a quarterly basis, the Executive Director shall, in addition to any other reporting obligations established by the Board, report to the Board:

- A list of any investment managers hired or terminated during the period; and

- A list of any commitments made with respect to assets in the Combined Funds to funds that invest in privately-owned assets.

**Investment Advisory Council**
The Investment Advisory Council (IAC) is established pursuant to Minn. Stat. §11A.08 to advise the Board and Executive Director on certain investment matters. The Council is made up of 17 members: the Executive Directors of the Teachers Retirement Association, Public Employees Retirement Association, and Minnesota State Retirement System (collectively, "the Retirement Systems"); the Commissioner of Minnesota Management and Budget; ten members experienced in general investment matters (appointed by the Board); two active members of the Retirement Systems (appointed by the Governor); and one retired member of the Retirement Systems (appointed by the Governor). Council members must adhere to the fiduciary standards in Minn. Stat. Ch. 356A for funds subject to that chapter and the prudent person standard established Minn. Stat. §11A.09.

**External Investment Managers**
External investment managers selected by the Executive Director will invest SBI assets in accordance with the strategy for which they were hired, as governed by the respective investment management agreement(s), and with adherence to SBI policies and investment guidelines. The Executive Director will monitor and review all investment managers, portfolios, and fees paid.

**Investment Consultants**
Investment consultants hired by the Board or Executive Director shall be fiduciaries and discharge their duties with respect to the SBI investment programs solely in the interest of those programs and their underlying investment objectives with the care, skill, prudence, and diligence under the circumstances then prevailing. Qualified consultants include those professionals with the background, expertise, and demonstrated success as institutional investment consultants, and with research/database access to assist in providing investment program advice.

**Custodians**
Custodians hold, either directly or through agents or sub-custodians, all assets as designated by the Board. Custodians also act as the book of record for the SBI's assets. The Board must select at least one custodian to perform these tasks and other tasks as designated by the Board.

## IV. <u>Asset Allocation and Investment Objectives</u>

This section sets forth the Board's policies on asset allocation and investment selection for the various funds and accounts for which the SBI invests. Strategic asset allocations may vary across the various funds or accounts in accordance with their specific objectives and constraints. Investment decisions will be implemented for the sole benefit of the respective fund or account, for the exclusive purpose of achieving the specific fund or account's investment objectives, and in accordance with the relevant policies and guidelines.

**Combined Funds Asset Allocation Policy**

Minnesota Statutes provide that the SBI is responsible for investing the assets of the Retirement Systems. The SBI invests the Retirement Systems' pension contributions from employees and employers through a pooled vehicle called the Combined Funds. Each plan's ownership interest in the Combined Funds is represented by a participation interest in one or more pooled vehicles. Because the assets of the Combined Funds are intended to accumulate for an extended period of time, the SBI is able to take advantage of the long-term investment return opportunities offered by a diversified investment approach that includes a meaningful allocation to public equities and private markets. This long-term investment approach is expected to generate sufficient asset growth over time to ensure that sufficient funds are available to make all required distributions to the Retirement Systems' plan participants and beneficiaries.

The Combined Funds' long-term investment performance objectives are:

- Earn an average annual net rate of return greater than the Combined Funds Composite Benchmark over a 10-year period;

- Earn a net rate of return exceeding inflation by 3-5% on an annualized basis over a 20-year period; and

- Meet or exceed the Retirement Systems' actuarial assumed rate of return target over appropriate periods of time.[1]

The SBI believes that asset allocation is the most significant contributor to a portfolio's investment performance. Accordingly, setting the Combined Funds' asset allocation is one of the most important fiduciary decisions. The Combined Funds asset allocation, Composite Benchmark, and underlying asset class policy benchmarks are reviewed and recommended by the Executive Director to the Board for approval at least every five (5) years, or more frequently if warranted.

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[1] The Minnesota legislature is responsible for setting the actuarial assumed rate of return for each plan overseen by the Retirement Systems. The current assumption, which was most recently adjusted by the legislature in 2023, is 7.0%.

The recommended targets and rebalancing ranges listed below reflect the results of the Strategic Asset Allocation study recommended to the Board for approval at the October 21, 2025, SBI meeting. It is important to note that, in practice, exact adherence to target allocations is not possible as actual asset weights fluctuate with market movements. Under normal conditions, asset class allocations will be managed within the established ranges, except that asset classes will not be considered "outside of range" during established transition periods, e.g., due to changes in asset allocation policy. Actual allocations relative to targets shall be reported to the Board on a quarterly basis, including, if applicable, the reason(s) for any meaningful deviations from established Range(s) and corrective steps to be taken.

**Combined Funds Asset Allocation: Targets and Rebalancing Ranges**

| Asset Class | Target | Range |
|---|---|---|
| **Public Equity** | **50%** | **45 - 55%** |
| Domestic Equity | 33.5% | 28 - 39% |
| International Equity | 16.5% | 14 - 19% |
| **Fixed Income and Cash** | **25%** | **22.5 – 27.5%** |
| Core/Core Plus Fixed Income | 6% | 4 - 8% |
| Return-Seeking Fixed Income | 6% | 4 - 8% |
| Treasury Protection | 10% | 5 - 15% |
| *U.S. Treasury (Broad Maturity)* | *8%* | *5 - 15%* |
| *U.S. Treasury - Long* | *2%* | *0 - 5%* |
| Cash Equivalents | 3% | 0 - 5% |
| **Private Markets** | **25%**[2] | **20 - 32%**[3, 4] |
| Private Equity | 18% | 15 - 25% |
| Private Credit | 3% | 0 - 6% |
| Private Real Assets | 2% | 0 - 4% |
| Private Real Estate | 2% | 0 - 4% |
| **Opportunistic** | | **0 – 10%** |
| Total | 100% | |

[2] The uninvested portion of the Private Markets Allocation will be benchmarked to a composite index comprising 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Bond Index.
[3] The broader range applied to Private Markets reflects consideration of statutory limitations, constraints of capital pacing, valuation timing, and illiquidity, which make it impractical to maintain precise targets through routine rebalancing.
[4] Note: The Board maintains a policy limiting the market value of private markets assets + the unfunded portion of private markets commitments to 50% of the Combined Funds Portfolio.

**Combined Funds Composite Benchmark**

The Combined Funds Composite Benchmark performance is calculated by multiplying the beginning of period Composite weights and the monthly or quarterly returns of the asset class benchmarks, as appropriate. Benchmarks available only on a quarterly basis are converted to a monthly frequency by decompounding the reported quarterly total return into equal monthly estimates.

**Combined Funds Asset Class Policy Benchmarks**

Policy benchmarks set the standard against which the performance of the Combined Funds' Asset Classes is measured. Differences in portfolio management strategies, portfolio composition, and other factors will result in differences between the benchmark and the Combined Funds' actual results. Policy benchmarks and any subsequent changes may be recommended by the Executive Director and are subject to approval by the Board. The Combined Funds Asset Class Policy Benchmarks are presented in the table below.

| Asset Class | Policy Benchmark |
|---|---|
| **Public Equity** | Public Equity Benchmark: 67% Russell 3000 Index and 33% MSCI ACWI ex USA Net Return Index (USD) |
| Domestic Equity | Russell 3000 Index |
| International Equity | MSCI ACWI ex USA Net Return Index (USD) |
| **Fixed Income and Cash** | Total Fixed Income Benchmark: 24% Bloomberg U.S. Aggregate Bond Index, 24% Return-Seeking Fixed Income Benchmark, 40% Treasury Protection Benchmark, 12% ICE BofA U.S. 3-Month Treasury Bill Index |
| Core/Core Plus Fixed Income | Bloomberg U.S. Aggregate Bond Index |
| Return-Seeking Fixed Income | Return-Seeking Fixed Income Benchmark: 25% ICE BofA U.S. Cash Pay High Yield Constrained Index, 25% S&P UBS Leveraged Loan Index, 25% JPM EMBI Global Diversified Index, 25% ICE BofA AA-BBB U.S. Fixed and Floating Rate Asset-Backed Securities Index |
| Treasury Protection | Treasury Protection Benchmark: 80% Bloomberg U.S. Treasury Index and 20% Bloomberg U.S. Long Treasury Index |
| U.S. Treasury (Broad Maturity) | Bloomberg U.S. Treasury Index |
| U.S. Treasury - Long | Bloomberg U.S. Long Treasury Index |

## Combined Funds Asset Class Policy Benchmarks (continued)

| Asset Class | Policy Benchmark |
|---|---|
| **Private Markets** | Total Private Markets Benchmark: Composite of Sub-Asset Class Benchmarks Weighted by Actual Portfolio Weights at Beginning of Each Period |
| Private Equity | MSCI Global Buyout Closed-End Fund Index (USD), lagged 1 quarter |
| Private Credit | MSCI Global Private Credit Closed-End Fund Index (USD), lagged 1 quarter |
| Private Real Assets | Private Real Assets Benchmark:<br>75% MSCI Global Private Infrastructure Closed-End Fund Index (USD), lagged 1 quarter and 25% MSCI Global Private Natural Resources Closed-End Fund Index (USD), lagged 1 quarter |
| Private Real Estate | Private Real Estate Benchmark:<br>50% Custom MSCI Global Private Opportunistic Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter and 50% Custom MSCI Global Private Value-Added Real Estate Closed-End Fund Benchmark (USD), lagged 1 quarter |
| Cash Equivalents | ICE BofA U.S. 3-Month Treasury Bill Index |
| Uninvested Private Markets | Uninvested Private Markets Benchmark: 80% Public Equity Benchmark and 20% Bloomberg U.S. Aggregate Bond Index |
| **Opportunistic** | Relevant blended benchmark, as applicable |

### Other Public Plan Investment Services

The SBI provides a range of investment services to public retirement and savings programs other than the statewide pension systems, including tax-advantaged savings plans, defined contribution plans, and state-sponsored savings programs. In some cases, participants of these programs may choose investments from a range of options provided by the SBI, either through the SBI's Supplemental Investment Fund platform or other third-party platform. The SBI reviews the performance and suitability of chosen investment options on a periodic basis.

### Non-Retirement Investment Program

The SBI provides investment services for various public non-retirement programs. For these programs, the SBI is regularly tasked with determining a prudent investment allocation based on the individual plan's purpose, risk tolerance, and liquidity needs. The SBI provides a range of investment options for non-retirement programs, either through the SBI's Supplemental Investment Fund platform or other third-party platform. The SBI reviews the performance and suitability of the chosen investment options on a periodic basis.

### Internally Traded Accounts

The SBI manages investments through an internal trading desk for the State of Minnesota Invested Treasurer's Cash pool, other state cash accounts, and other public investment programs utilizing certain debt instruments (collectively “Internally Traded Accounts”).[5] The SBI manages these assets with goals including preserving capital, meeting the state’s liquidity needs without the forced sale of securities at a loss, and earning an appropriate return consistent with safeguarding invested principal. Specific goals and objectives may vary across accounts. Investment decisions made with respect to each account are implemented for the sole benefit of that account. The SBI reviews the performance and suitability of the investment strategies used to manage these assets on a periodic basis.

**Rebalancing**
The Executive Director is responsible for periodic and orderly rebalancing of the portfolios so that asset classes remain within established asset allocation rebalancing ranges and for implementing an orderly rebalancing plan should one or more asset classes fall outside the established range.

**Risk Management**
Risk management is a foundational element of SBI’s asset management framework. Manager and fund selection are evaluated in the context of risk-adjusted return potential. Primary risk objectives focus on maintaining portfolio volatility within a reasonable range as defined through the Strategic Asset Allocation process, and on managing tracking error relative to appropriate benchmarks within acceptable limits. The Executive Director is responsible for implementing the systems, tools, and processes necessary to monitor and manage these risks.

**Additional Investment Considerations**
In effectuating and administering the asset allocation of the foregoing funds and accounts, the Executive Director may employ prudent strategies to mitigate risk and increase returns, including but not limited to currency hedging, derivative transactions, and securities lending. Such activities must be undertaken in accordance with applicable law and other policies established by the Board.

## V. Effective Date

This policy shall be effective as of the date approved by Board resolution and may be amended by Board resolution. This policy shall remain in effect until superseded by Board resolution.

[5] Internally Traded Accounts include accounts for programs referenced in Minn. Stat. §§11A.15 (state bond fund); 11A.20 (invested treasurer’s cash and other state cash); 43A.316-43A.318 (SEGIP insurance); 446A.04 (PFA bonds); 462A.05 (HFA bonds); 471.6175 (OPEBs); and the SBI’s certificate of deposit program within the Combined Investment Funds referenced in Minn. Stat. §11A.14, and other similar programs that may be established under law.

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# TAB F

# Personal Securities Trading Policy

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DATE: October 14, 2025

TO: Members, Investment Advisory Council

FROM: Jill E. Schurtz
Executive Director and Chief Investment Officer

**SUBJECT: Personal Securities Trading Policy**

The SBI maintains a personal securities trading policy for all SBI staff members. The goal of the policy is to prevent conflicts of interest and potential violations of Minnesota and federal laws. The policy outlines rules for purchases and sales of securities and other assets, and the approval process staff must follow when trading certain assets. In addition, the policy requires staff to report quarterly on certain securities they own.

The current policy is outdated and does not provide clear guidance considering the evolution of trading markets. As a result, the Executive Director recommends that the Board adopt the attached personal trading and reporting policy to replace the existing policy.

The proposed policy, which is attached as **Exhibit A**, sets forth the rules that staff and their immediate family members must follow when trading in personal accounts. Among other things, it provides a procedure for pre-clearance of covered assets, reporting requirements, and managing the risk of material non-public information.

**RECOMMENDATION:**

**Staff is recommending adoption of the Personal Securities Trading Policy attached as Exhibit A, and that the Executive Director implement the policy within a reasonable period of time following adoption and requests the IAC's endorsement of this recommendation for the Board's approval.**

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**EXHIBIT A**

# Minnesota State Board of Investment
# Staff Personal Trading and Investments Policy

## 1. POLICY STATEMENT

Minn. Stat. §11A.04(5) requires the Minnesota State Board of Investment ("SBI") to "[p]rescribe policies concerning personal investments of all employees of the [SBI] to prevent conflicts of interest." SBI Employees shall not use their official position to secure personal benefits or privileges for the SBI Employee or the SBI Employee's Immediate Family that are different from those available to the general public. This policy addresses the use of Material Non-Public Information obtained by SBI Employees, required pre-clearance procedures for the trading of certain securities, and reporting requirements for personal investments held by SBI Employees and their Immediate Family. This policy should be read in conjunction with federal securities laws and other state laws and regulations applicable to SBI and its employees, including but not limited to, Minn. Stat. §43A.38, and it shall not be construed to supersede other applicable laws or regulations.

## 2. SCOPE

This policy applies to all SBI Employees and their Immediate Family. All SBI Employees are required to review this policy and comply with the terms set forth herein. SBI Employees are strongly encouraged to contact their manager or Investment Compliance with any questions about the policy.

## 3. DEFINITIONS

A. "SBI Employee" includes all persons currently employed by SBI, whether on a part-time or a full-time basis.

B. "Immediate Family" means the employee's spouse, minor children, and other dependents if living primarily in the household of an SBI Employee.

C. "Covered Persons" means all SBI Employees and their Immediate Family.

D. "Authorized Trading Personnel" means an SBI Employee who is responsible for the direct trading of securities in one or more accounts managed by the SBI. Investment Compliance shall maintain a list of all Authorized Trading Personnel.

E. "Non-Exempt Assets" means any and every type of investment security, including stocks, corporate debt obligations, direct purchase plans, limited partnerships that are considered investment contracts under federal law, joint ventures, private placements, co-investments, leveraged buyouts, purchase agreements, private lending, and other debt instruments, options, futures, forwards, swaps and other derivative instruments related to securities, unless listed in as an Exempt Asset under this Policy.

F. "Exempt Assets" means the following investments:

i. Bank deposits (savings and checking accounts)

ii. Bank certificates of deposit

iii. Money market funds

iv. Direct personal loans that are not part of an investment scheme or pooled lending structure

v. Mutual funds, closed-end funds, collective investment trusts and other unit investment trusts registered under the Investment Company Act of 1940, and any other similar pooled investment structures

vi. Exchange-Traded Funds (ETFs) which are commodity-based or include 10 or more securities

vii. U.S. Government securities (e.g. T-Bills, Treasury notes and bonds, TIPS, savings bonds)

viii. Currencies and currency exchange transactions, including cryptocurrencies and stable coins

ix. U.S. state and local municipal debt securities

x. Real property

xi. Tangible and intangible assets (e.g. precious metals, collectibles, personal property, patents, NFTs)

xii. Physical commodities

xiii. Insurance products (e.g. index, variable or fixed annuities, life insurance products)

xiv. Derivatives based on an Exempt Asset

xv. Securities purchased through an approved automatic investment plan in which the timing of purchases and withdrawals is scheduled, predetermined at regular intervals, and/or has standing instructions, such as Dividend Reinvestment Plans (DRIPs) and Employee Stock Ownership Plans (ESOPs)

xvi. Assets purchased through an approved Managed Account

xvii. An interest in a defined benefit pension plan

xviii. Tax advantaged accounts (e.g. 529 plans, 401k plans, 403b plans, deferred compensation plans, and SEP plans)

With respect to paragraphs xiii and xviii above, to the extent a Covered Person is making a discretionary trade in a Non-Exempt Asset, the employee must follow the Reporting Requirements of Section 4 and Pre-Clearance Procedures of Section 5. Unless otherwise stated, Exempt Assets are not subject to either the Reporting Requirements of Section 4 or the Pre-Clearance Procedures of Section 5.

G. “Investment Compliance” means the Executive Director and any contractor, SBI Employee or Employees designated by the Executive Director to maintain or oversee the compliance program under this policy.

H. “Managed Account” means an account with the ability to trade securities which may be Non-Exempt Assets, when (a) the account is managed by a third party who is not a Covered Person; (b) no Covered Person has the power to affect or control investment decisions; (c) no prior communication occurs between the Covered Person and the person(s) with investment discretion regarding specific trade activity in the account; and (d) assets on the Restricted List are prohibited from being traded in the account. SBI Employees must certify that each of these requirements are met, and must have the Managed Account pre-approved by Investment Compliance before any Non-Exempt Assets may be traded in the Managed Account.

I. “Restricted List” means a list of assets which may not be traded by Covered Persons.

## 4. REPORTING REQUIREMENTS

A. PERIODIC REPORTING

SBI Employes must report all Non-Exempt Assets held by Covered Persons to Investment Compliance on at least a quarterly basis. Reporting must include discretionary activity during the period, which should be indicated with a “+” for purchases and “–” for sales, or +/– if both sales and purchases were made. SBI Employees are responsible for reporting in a method and format as determined by Investment Compliance and shall provide such documentation as required by Investment Compliance. All Authorized Trading Personnel must also report holdings and activities by Covered Persons for all state and local municipal debt obligations, and any other security categories designated by Investment Compliance.

B. ANNUAL ATTESTATION

Annually by January 31st, each SBI Employee shall review and sign the Personal Trading Compliance Statement attesting that they have read and will abide by the requirements of this policy.

C. NEW EMPLOYEES

Within 30 calendar days of the date of hire, new or rehired SBI employees (“New-Employees”) must:

i. Disclose all Non-Exempt Assets in which Covered Persons direct, control, or have a financial interest; and

ii. Sign a Personal Trading Compliance Statement attesting that they have read and will abide by the requirements of this policy.

New Employees will not be required to disgorge any Non-Exempt Assets or assets on the Restricted List upon joining the SBI. New employees will be prohibited from making additional purchases of any securities on the Restricted List, however they may be allowed to sell assets on the Restricted List which they or their Immediate Family owned before joining the SBI subject to the pre-clearance requirements of this policy.

## 5. PRE-CLEARANCE REQUIREMENTS

### A. PRE-CLEARANCE OF CERTAIN TRANSACTIONS

Covered Persons are required to pre-clear any transaction regarding a Non-Exempt Asset. Covered Persons shall request pre-clearance in a form designated by Investment Compliance. Investment Compliance shall have full discretion to make the final pre-clearance determination. Approval or denial of the transaction request will generally be provided on the same business day. Unless rescinded, pre-clearance approvals are valid for a period of ten (10) business days from the date of approval. In the case of non-publicly traded assets, Investment Compliance may allow for additional time for transacting. All Authorized Trading Personnel and their Immediate Family are additionally subject to the pre-clearance requirement for all state and local municipal debt obligations, and any other security category designated by Investment Compliance.

### B. PRE-CLEARANCE FOR INITIAL PUBLIC OFFERINGS OR NEW BOND OFFERINGS

If a Covered Person wishes to participate in an Initial Public Offering (IPO) or a new bond offering which is a Non-Exempt Asset, the Covered Person must submit a pre-clearance request and provide a written statement to Investment Compliance providing full details of the proposed transaction, including an attestation that the investment opportunity did not arise by virtue of the Covered Person’s activities on behalf of the SBI, and the trade is not made on the basis of material non-public information.

## 6. OTHER REQUIREMENTS

### A. RESTRICTED LIST

The Restricted List is established and maintained by Investment Compliance. The Restricted List shall include i) any security representing ownership in, or an obligation of, a publicly traded investment manager doing business with the SBI; and ii) any security which Investment Compliance determines must be included on the Restricted List due to Material Non-Public Information standards or any other reason. If a Covered Person already owns a security prior to it being added to the Restricted List they will not be required to disgorge their holdings, but they may not purchase additional interests. Covered Persons may sell their existing holdings subject to the pre-clearance requirements of this policy.

B. MATERIAL NON-PUBLIC INFORMATION

Material Non-Public Information is information i) whose disclosure would affect the market price of a company's securities or that a reasonable investor is likely to consider significant in making an investment decision; and ii) that has not been generally disclosed or disseminated to the marketplace. Covered Persons who believe they have received Material Non-public Information shall immediately report such instance to Investment Compliance.

Covered Persons are prohibited from trading on the basis of Material Non-Public Information. Covered Persons are further prohibited from directly or indirectly conveying Material Non-Public Information to any other person who could trade on such information.

C. FRONT RUNNING

Front Running may occur when a Covered Person trades a security with the knowledge that the SBI or its investment managers will or is likely to engage in a nonpublic action to buy or sell that security. Covered Persons are prohibited from engaging in front running.

## 7. INVESTMENT COMPLIANCE'S AUTHORITY UNDER THIS POLICY

Investment Compliance shall have discretion to approve or deny any proposed acquisition or sale of a Non-Exempt Asset or Other Investment by a Covered Person or their Immediate Family. Investment Compliance reserves the right to deny a purchase or sale if it believes the transaction may violate federal law, state law, Board policy, or poses a reputation risk to the SBI.

Investment Compliance may require Covered Persons to suspend trading or require pre-clearance of any assets at any time, in Investment Compliance's sole discretion.

## 8. PENALTIES

Covered Persons must immediately report any known violation of this policy to Investment Compliance. Covered Persons are required to adhere to this policy, and failure to comply could result in sanctions, including written reprimand, demotion of job duties, and termination of employment.

Notwithstanding any other provision of this policy, if, upon review of a Covered Persons' quarterly report or annual certification, Investment Compliance identifies a trade, holding, or a pattern of activity that, in Investment Compliance's determination, creates an actual or apparent conflict of interest, Investment Compliance may take any necessary remedial action. Remedial action may include requiring the Covered Person to divest from holdings giving rise to the actual or apparent conflict of interest or take such action as Investment Compliance deems necessary to resolve the actual or apparent conflict of interest. A Covered Person's failure to conform to such direction from Investment Compliance would constitute a violation of this policy and may lead to the imposition of sanctions, up to and including termination of employment.

## 9. CLASSIFICATION OF DATA

Data related to a specific Covered Person that is created pursuant to this policy, including but not limited to data related to pre-clearance requests pursuant to the Pre-clearance Procedure in Section 5 and reports on Covered Securities required by Section 4, are defined as personnel data under Minn. Stat. §13.43, and are considered private data on individuals, pursuant to Minn. Stat. §13.43, subd. 4. Such data may not be released to a third party without the prior consent of Executive Director or the Executive Director's designee. Covered Persons may request that data be redacted from any report or pre-clearance to the extent appropriate.

## 10. APPROVAL AND IMPLEMENTATION

This policy shall be effective on the first day of the calendar quarter following formal approval by the Board. The Executive Director may implement this policy over a reasonable period. This policy shall remain in place until amended or superseded by Board action. Prior to such time, Covered Persons are subject to the policy existing immediately prior to such approval.

# REPORTS

- ❖ Public Markets Investment Program Report
- ❖ Participant Directed Investment Program and Non-Retirement Investment Program Report
- ❖ Aon Market Environment Report
- ❖ Meketa Capital Markets Outlook & Risk Metrics Report
- ❖ SBI Comprehensive Performance Report

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# REPORT

## Public Markets Investment Program Report

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DATE: October 13, 2025

TO: Members, Investment Advisory Council

FROM: SBI Staff

**SUBJECT: SBI Public Markets Program Report**

This report provides a brief review of financial markets and the performance of the Combined Funds portfolio for the quarter and 12-month periods ended June 30, 2025. Included in this section are a market commentary and performance summary for the overall Combined Funds portfolio, performance summaries for the portfolio's public markets managers, and a report of any organizational updates for the public markets managers in the SBI portfolio.

The report includes the following sections:



*<u>Important Notes:</u>*
*All performance figures and market data presented in this report are unaudited and preliminary. Performance is presented net of investment management fees and the effect of any profit-sharing arrangements. Sources for market data: Bloomberg, Factset, MSCI, FTSE Russell, JPMorgan, and ICE BofA.*

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# Review of SBI Combined Funds Performance
# Second Quarter 2025 (CY)

## Market Summary

Global equity markets posted strong gains in the second calendar quarter of 2025, with the MSCI All Country World (ACWI) Index of global stocks rising +11.7% in U.S. dollar terms. Despite sharp early losses after the Trump administration's sweeping "Liberation Day" tariff announcements on April 2nd shocked global markets, a partial rollback of the tariffs later in the month calmed investors, and better-than-expected economic data and strong corporate earnings drove a strong rebound over the rest of the quarter.

U.S. stocks were led during the quarter by strong gains within the technology and consumer discretionary sectors. Strong earnings results and robust forward guidance during the quarter from key tech bellwethers including NVIDIA, Microsoft, Oracle, and Meta boosted investor confidence that the AI and Cloud computing themes remain on-track to deliver strong growth.

For the second quarter in a row, international stocks outperformed domestic shares. In addition to being perceived as less immediately at-risk from any slowdown in U.S. growth caused by the tariff shock, international stocks also received a boost from a sharp decline in the value of the U.S. dollar during the quarter. While the U.S. dollar slid, gold rose over +5% during the quarter, extending its calendar year-to-date gain to over +25%.

The Fed kept its overnight policy rate unchanged during the quarter, targeting a range of 4.25%-4.50%. Fed officials signaled concern over the potential inflationary effects of tariffs and cited significant policy uncertainty as a key reason for their cautious stance. The Fed's Summary of Economic Projections released after the June FOMC meeting indicated a slightly weaker growth outlook, along with higher expected inflation and a modest uptick in the projected unemployment rate.

In the U.S., interest rates were little changed during the quarter. Short-term rates fell modestly on growing expectations that the Fed would cut interest rates in response to slowing growth. However, longer-term yields rose as inflation remained elevated and concerns over the growing fiscal imbalance weakened investor demand for long-term U.S. Treasuries. The U.S. Aggregate Bond Index returned +1.2% during the second quarter.

Outside the U.S., changes in yields were generally modest across most major bond markets, except for Japan, where expectations of continued monetary policy tightening kept upward pressure on interest rates. The sharp decline in the U.S. dollar boosted international bond market returns when expressed in U.S. dollar terms. For the quarter, the Bloomberg Global Aggregate Bond Index returned +4.5%.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

**Overall Combined Funds Portfolio Performance – Quarter and Last 12 Months**

The overall Combined Funds portfolio returned +6.1% during the calendar second quarter, outperforming the composite benchmark's return of +6.0%. During the quarter, the portfolio's modest overweight to equities and underweight to fixed income and private markets helped relative performance, while the portfolio's currency hedging program detracted from performance as the U.S. dollar fell sharply. Active management drove positive performance across the U.S. equity, emerging markets equity, and fixed income segments of the portfolio. Within fixed income, the portfolio's allocation to return-seeking fixed income helped performance as credit-sensitive bond sectors outperformed the broader market. Returns within the private markets portfolio during the quarter lagged the broader market. The private markets invested portfolio gained just +0.6% during the second quarter, led by the Private Equity allocation which returned +1.4%.

For the **one-year period ended June 30, 2025**, the Combined Funds portfolio posted a return of +10.9%, matching the composite benchmark's return. The portfolio benefited from a positive contribution from active management within the core/core plus fixed income, return-seeking fixed income and U.S. large cap growth equity segments. However, this impact was offset by active manager underperformance across the developed international equity, emerging markets equity and U.S. semi-passive equity segments. Mark-to-market gains from the portfolio's currency hedging program detracted from performance as the dollar fell. From an asset allocation perspective, the portfolio's overweight to equities and underweight to fixed income and private markets helped performance over the period. Within equities, an underweight to emerging markets stocks was a positive contributor to performance, while a modest overweight allocation to U.S. small cap stocks detracted. Within fixed income, the portfolio's allocation to return-seeking managers was a positive contributor to performance over the one-year period, and an underweight to the long-duration Treasury protection portfolio held during the period also helped relative performance. The invested private markets portfolio returned +6.1% for the 12 months ended June 30, 2025, led by the Private Equity allocation which returned +8.3% for the one-year period.

*See Page 1 for important notes regarding the performance and market data included in this report.*

## Review of Public Markets Manager Performance
## Second Quarter 2025 (CY)

**Domestic Equity**
Domestic equities, as measured by the Russell 3000 Index, returned an impressive +11.0% during the quarter, more than recovering the prior quarter's losses and ending the calendar year-to-date period in positive territory. Early in the quarter the Trump administration's sweeping "Liberation Day" tariff announcements shocked markets and sparked recession fears. In the panic, U.S. stocks U.S. stocks tumbled, with the Russell 3000 Index plunging about -12% before stabilizing. A partial rollback of tariffs later in the month combined with solid economic data releases and a strong Q1 corporate earnings season for U.S. technology names drove a rebound in investor sentiment that sent U.S. stocks up nearly +25% by the end of the quarter from their Liberation Day lows.

Growth-oriented sectors like information technology (+23.5%) and communication services (+19.0%) led the market higher during the quarter, and eight of eleven sectors posted gains. Energy stocks fell -7.4% over the quarter, driven by a sharp drop in oil prices, and the healthcare sector also underperformed (-5.7%). Within healthcare, managed care stocks struggled with higher costs and regulatory uncertainty, while pharmaceutical stocks were impacted by the Trump administration's call for sweeping drug price cuts for U.S. consumers.

The all-important Magnificent 7 group of stocks returned +20.6% for the quarter. Six of the seven ended the quarter with double-digit gains, with semiconductor chip maker NVIDIA vaulting +45.8% on strong earnings results and forecasted robust demand growth. Only Apple ended in negative territory (-7.6%) as investors questioned whether the dominant mobile device-maker is falling behind in its integration of AI tools into its user ecosystem.

The Combined Funds domestic equity portfolio returned +11.1% for the quarter, outperforming the Russell 3000 Index, which gained +11.0%. Active managers added value for the quarter across large cap growth and value, all cap growth, and semi-passive strategies, while the portfolio's small cap managers lagged.

Across large cap stocks, growth surged ahead of value (+17.8% Russell 1000 Growth vs. +3.8% Russell 1000 Value) during the quarter, with growth stocks benefiting most from the rebound in investor confidence and the strong earnings performance within technology.

Small cap stocks underperformed large cap stocks during the quarter (Russell 2000 Index +8.5% vs. Russell 1000 Index +11.1%). Within small cap stocks, growth outperformed value (Russell 2000 Growth Index +12.0% vs. Russell 2000 Value Index +5.0%). Within small cap, technology names led the market (+21.3%), lifted by a strong rally in datacenter related names, while the real estate (-2.1%) and energy (-1.3%) sectors lagged.

The Combined Funds' large cap growth managers significantly outperformed their benchmark, the Russell 1000 Growth Index, during the quarter (+23.7% Managers vs. +17.8% Benchmark). Stock selection was particularly strong within the technology, communication services, and industrials sectors. Quality growth manager Winslow outperformed during the quarter (+20.1%), driven by strong stock selection in the industrials and communication services sectors. Large-cap growth

*See Page 1 for important notes regarding the performance and market data included in this report.*

manager Sands (+27.8%) significantly outperformed due to strong issue selection in the information technology and communication services sectors. All-cap growth manager Zevenbergen rallied +31.9%, benefitting from strong issue selection across a range of sectors, including industrials, consumer staples, technology, healthcare and financials.

The portfolio's large cap value managers outperformed the Russell 1000 Value Index during the quarter (+4.7% Managers vs. +3.8% Benchmark). Barrow Hanley outperformed (+4.3%), driven by an overweight position in the consumer discretionary sector and good stock selection within the sector. Quantitative deep value manager LSV also outperformed (+5.1%) on strong stock picking in financials, while weak selection in industrials and consumer staples partially offset those gains.

The portfolio's semi-passive large cap managers modestly exceeded their benchmark during the quarter (+11.3% Managers vs. +11.1% Benchmark). Stock selection in industrials and information technology contributed positively. Quantitative manager Blackrock's outperformance (+11.6%) was driven by an overweight to consumer discretionary names resulting from the team's sentiment indicators, which analyze mobile app usage and social media trends to identify investment opportunities.

The portfolio's small cap growth managers lagged the benchmark during the quarter (+10.3% Managers vs. +12.0% Russell 2000 Growth Index). Rice Hall James underperformed the index (+8.8%), driven by poor stock selection in the industrial and technology sectors. Wellington (+9.2%) and Arrowmark (+6.1%) both lagged this quarter due to weak stock selection within the technology sector. In contrast, fundamental manager Hood River outperformed (+17.0%) primarily due to strong stock selection within the industrials and technology sectors.

The portfolio's small cap value managers also underperformed over the quarter (+4.6% Managers vs. +5.0% Russell 2000 Value Index). Hotchkis & Wiley underperformed (+3.2%) due to poor stock selection in the communication services and energy sectors. Peregrine also underperformed (+3.2%), driven primarily by decisions within the technology and financial sectors. In contrast, quantitative manager Martingale outperformed (+7.7%) due to strong selection within financials.

The portfolio's passive domestic equity portfolios performed in-line with their respective benchmarks, posting a combined return of +11.1% during the quarter.

**Developed International Equity and Currency Overlay**

International developed markets equities, as measured by the MSCI World ex USA Index (net), returned +12.0% in U.S. dollar terms during the quarter. Performance in local currency terms was positive across most foreign markets during the quarter, and a sharp decline in the value of the U.S. dollar further boosted returns on foreign shares from the perspective of U.S. dollar-based investors.

Measured in U.S. dollar terms, all 22 of the Index's constituent markets posted positive performance for the quarter. European markets continued their positive momentum from the prior quarter despite the initial shock from U.S. tariff policy announcements that drove global markets sharply lower at the start of the quarter.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

Both the European Central Bank and Bank of England cut rates during the quarter as inflation in Europe moderated, which helped boost interest rate sensitive sectors such as real estate, financials, industrials and utilities. Within Europe, the Netherlands (+18.3%), Spain (+16.9%), Ireland (+16.7%), and Germany (+16.3%) led the region higher. The U.K. (+8.7%) and France (+9.3%), the two largest European index constituents, posted solid returns, but lagged the broader market.

Elsewhere in developed markets, Japan, the index's largest constituent, finished the quarter with a gain of +11.4% in U.S. dollar terms. Japanese stocks rebounded sharply on the news of a partial rollback of U.S. tariffs, continued earnings momentum, and accommodative monetary policy. Canadian stocks also posted strong performance during the quarter (+14.2%), supported by rate cuts from the Bank of Canada, which helped boost shares in the financial sector.

The portfolio's active developed markets managers slightly outperformed the MSCI World ex USA Index (net), returning +12.3% versus the benchmark's +12.0% return. Good stock selection in the three largest index markets, France, Japan and the U.K., drove positive relative performance during the quarter, while poor selection in Germany was the primary performance detractor.

Quantitative manager Acadian outperformed (+13.2% Manager vs. +12.0% Benchmark) as its growth signals were additive to portfolio performance during the quarter. Fundamental core manager Marathon also outperformed (+13.1%) due to strong stock selection in the U.K. and Switzerland. Conversely, quality growth manager J.P. Morgan underperformed (+10.4%) as poor issue selection in Japan and within the communication services sector hurt performance. Fundamental growth manager Columbia Threadneedle (+10.6%) was impacted by poor stock selection in Germany.

The passive developed markets portfolio gained +12.3% during the quarter, slightly outperforming the MSCI World ex USA Index (net), which returned +12.0%.

The U.S. dollar depreciated by over -7% versus a trade-weighted basket of foreign currencies during the quarter. In the first half of 2025, the dollar dropped nearly 11%, its weakest mid-year performance in more than five decades. For the quarter, the portfolio's currency hedging program detracted -1.5% from the performance of the developed international equity portfolio, offsetting some of the underlying appreciation of the portfolio's foreign shares due to currency movements. The dollar fell sharply during the quarter, pressured by tariffs that directly threatened global trade and dollar demand, alongside growing concerns about their broader impact on U.S. economic growth and interest rates. Program losses were concentrated in the Japanese yen, euro, and the Swiss franc. The program is designed to adjust hedge ratios in response to evolving markets, and the portfolio's hedge ratio declined from 21% at the beginning of the quarter to 5% by the end of the quarter.

**Emerging Markets Equity**

Emerging markets equities, as measured by the MSCI Emerging Markets Index (net), rose +12.0% in U.S. dollar terms during the quarter. As with developed international markets during the quarter, a decline in the U.S. dollar versus EM currencies provided a boost to returns for U.S. dollar-based investors. Expressed in local currency terms, the MSCI Emerging Markets Index (net) rose +7.9%.

*See Page 1 for important notes regarding the performance and market data included in this report.*

Of the 24 markets which make up the EM Index, only Saudia Arabia posted a decline for the quarter (-5.0%), where market performance was dragged down by energy, financial and utility names. Performance for the quarter was broadly distributed around the globe, and numerous markets posted strong double-digit returns. Korea (+32.7%) and Taiwan (+26.1%) were among the strongest performing markets. Both countries benefitted from a resurgence in investor sentiment around the AI theme during the quarter. In addition, Korea's market was boosted by the results of its presidential election, which not only marked the end of an extended period of political turmoil in the country but ushered in a new regime which investors viewed as focused on increasing economic growth and corporate governance reforms. Elsewhere, India (+9.2%) lagged the broader market as investors remained wary of high valuations and slowing earnings momentum in that market.

China's equity market, which represents roughly 29% of the Index, rose just +2.0% in U.S. dollar terms during the quarter. Despite the rollback of the most severe tariff threats issued by both governments, the prospect for continued trade tensions between the U.S. and China weighed heavily on sentiment for Chinese shares. Equities were further pressured by persistent structural challenges stemming from China's elevated government debt and prolonged weakness in its real estate market.

The portfolio's active emerging markets managers outperformed the MSCI Emerging Markets Index (net), returning +12.8% vs. the benchmark's +12.0% return. The portfolio benefited from strong security selection in Korea and India, along with an overweight position in Korea. However, stock selection in China was a drag on performance for the quarter.

Growth manager Macquarie significantly outperformed (+21.4% Manager vs. +12.0% Benchmark) as its meaningful overweight to semiconductor names benefited performance. Quality growth manager Morgan Stanley also outperformed (+13.0% Manager vs. +12.0% Benchmark), helped by strong selection in India and Taiwan. Fundamental deep value manager Pzena underperformed (+9.1%), hurt by a significant underweight to Taiwan and poor selection in China. Quality growth manager Martin Currie (+10.6%) likewise suffered from poor selection in China, while fundamental growth manager Fidelity (+9.9%) lagged due to poor selection in Taiwan and Korea.

Earnest Partners' China A-share strategy underperformed the MSCI China A Index during the quarter (-0.7% Manager vs. +3.3% Benchmark). Weak stock selection within the industrials and technology sectors were the primary detractors from performance.

The passive emerging markets portfolio slightly underperformed the MSCI Emerging Markets Index (net) for the quarter (+11.8% Manager vs. +12.0% Benchmark).

**Global Equity and ACWI ex USA Equity**

The MSCI All Country World Index (ACWI) (net) returned +11.5% during the quarter. Performance across sectors was broadly positive, with technology names leading the way and bouncing back from a weak first quarter. Communication services and industrials names also posted strong gains, while the energy and healthcare sectors were the only two sectors in negative territory for the quarter.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

The U.S. market, which comprises 64% of the index, rose +11.3%. In Europe, Germany led among major markets (+16.3%), buoyed by another robust quarter from its industrials sector, while France (+9.3%) and the U.K. (+8.7%) lagged the broader market. In Asian markets, markets such as Korea (+32.7%) and Taiwan (+26.1%) posted strong gains, while China (+2.0%) and India (+9.2%) lagged.

As a group, the portfolio's global equity managers outpaced the MSCI All Country World Index (ACWI) (net) for the quarter (+13.2% Managers vs. +11.5% Benchmark). Growth managers Baillie Gifford and Martin Currie (+21.7% and +12.9%, respectively) benefited from strong selection in the U.S., while value manager Ariel underperformed (+8.0%) as poor selection within the U.S. and China detracted, as did the manager's currency hedging decisions.

**Core/Core Plus and Return Seeking Bonds**

The U.S. investment grade fixed income market, as measured by the Bloomberg U.S. Aggregate Bond Index, posted a return of +1.2% during the quarter. U.S. Treasury yields initially fell sharply early in the quarter as investors sought the safety of government debt in response to the Liberation Day surprise tariff announcement. However, yields retraced much of that decline over the rest of the quarter, as a partial rollback of tariffs and continued strong economic growth fueled a risk-on rally in stocks and credit.

Yields on longer-term U.S. Treasuries rose over the quarter as investors became more focused on the U.S. fiscal imbalance and expectations for increased supply of Treasuries to fund the budget deficit. A series of weak U.S. Treasury auctions and a sharp selloff in Japanese government bonds also put upward pressure on long-term U.S. Treasury yields. The net effect over the quarter was a steepening of the yield curve, as short rates declined while long rates rose.

While the Fed kept interest rate-cut expectations in check during the quarter, citing caution and uncertainty regarding the impact of tariffs on economic growth and inflation, President Trump signaled his displeasure with Fed Chair Powell's reluctance to lower interest rates, and announced his intention to replace Powell when his term as Chair expires in May 2026. Investors are closely following developments to assess the likelihood that Powell's replacement will favor more aggressive rate cuts.

Despite growing geopolitical and economic uncertainty caused by tariffs, corporate fundamentals remained healthy, and credit spreads ultimately narrowed across both investment grade and high yield corporate bond sectors during the quarter. Investment grade corporate bond spreads tightened 11 basis points (bps) during the quarter to end at +83bps over similar maturity U.S. Treasuries. The Bloomberg U.S. Corporate Index of investment grade corporate bonds gained +1.8% during the quarter.

The Bloomberg U.S. MBS Index of agency mortgage securities gained +1.1% during the quarter. Mortgages benefitted from a safe haven bid early in the quarter. Index-eligible ABS and CMBS also gained during the quarter, helped by robust investor demand and strong fundamentals. The ICE BofA AA/BBB ABS Index, a proxy for mid-tier quality securitized credit, gained +1.5% during the quarter.

The Bloomberg U.S. High Yield Corporate Bond Index (HY Index) rose +3.6% during the quarter, outperforming equivalent duration U.S. Treasuries by over +2.0%. Credit spreads on high yield corporates tightened by 57 bps during the quarter, and the HY Index ended June with a yield of 7.05%, reflecting an option-adjusted spread of +290 basis points over comparable U.S. Treasuries. During the quarter, lower-quality (CCC-rated) bonds outperformed higher-quality (BB/B-rated) issues as investors increased their appetite for credit risk alongside the rally in U.S. equities. Floating rate bank loans returned +2.3% for the quarter, lagging the return of fixed rate high yield bonds.

The J.P. Morgan EMBI Global Diversified Index of U.S. dollar-denominated emerging market sovereign debt gained +3.3% during the quarter, while local currency sovereign bonds gained over +7.6% in U.S. dollar terms, aided by a sharp decline in the U.S. dollar. Despite the potential for tariff headwinds, EM debt is currently benefiting from attractive real yields, flexibility for added policy easing from central banks due to low or declining inflation, and strong investor demand based on expectations for continued U.S. dollar weakness.

The portfolio's core/core plus bond managers returned +1.5% during the quarter, outperforming the Bloomberg U.S. Aggregate Bond Index, which returned +1.2%. Managers' performance benefitted from good security selection within investment grade credit, while out-of-benchmark allocations high yield credit also contributed positively to relative performance. Duration positioning and short-term trading strategies around U.S. Treasury auctions also delivered gains during the quarter.

The portfolio's return-seeking bond managers returned +2.8% during the quarter, outperforming the portfolio's policy benchmark (the Bloomberg U.S. Aggregate Bond Index) return of +1.2%. Relative to the weighted composite of the managers' individual benchmarks, as a group, the return-seeking managers also outperformed their composite benchmark (+2.8% Managers vs. +2.5% Benchmark). The managers' overweight exposure to the lower quality segments of the high yield credit sector benefited performance. Manager allocations to and issue selection within emerging market debt and non-agency MBS also helped drive relative performance for the quarter.

**Treasury Protection Portfolio**
The Treasury Protection Portfolio returned +0.2% during the quarter, outperforming the Bloomberg U.S. Treasury 5+ Year Index, which gained +0.1%. Overall, the managers' overweight positioning in the 5-year segment of the yield curve benefited from a rally in intermediate maturity bonds. Managers' tactical trading strategies and an allocation to Treasury Inflation-Protected Securities (TIPS) also contributed to outperformance.

**Laddered Bonds + Cash Portfolio**
The Laddered Bond and Cash Portfolio returned +1.1% during the quarter, outperforming its benchmark, the ICE BofA U.S. 3-Month Treasury Bill Index, which gained +1.0%. The yields on very short maturities (less than six months) were mostly unchanged over the quarter. Both the laddered bond portfolio and the cash portfolio returned +1.1% for the quarter. Overall, the portfolio benefited from positions in high quality spread assets such as commercial paper, short-term corporate bonds and asset-backed securities.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

## Public Markets Managers’ Organizational Updates
## Second Quarter 2025

**Columbia Threadneedle (International Equity)**
Melda Mergen, Global Head of Equities, departed the firm in April 2025. Ms. Mergen’s duties will be split between Nicolas Janvier, Head of U.S. Equity Research, who will assume the role of Head of North American Equities, and Philip Dicken, Head of International Equities, who will retain his current role.

**Goldman Sachs (Domestic Equity)**
Steve Barry, Chief Investment Officer (CIO) of Fundamental Equity, will retire at the end of 2025. At that time, Alexis Deladerrière and Basak Yavuz will become co-CIOs of Fundamental Equity. Mr. Deladerrière and Ms. Yavuz currently serve as co-deputy CIOs of Fundamental Equity. Both are partners of the firm.

**Martin Currie (Emerging Markets Equity & Global Equity)**
Martin Currie announced that parent company Franklin Templeton will be retiring the Martin Currie brand, effective September 2025, and realigning its investment teams under two existing Franklin Templeton subsidiaries. The Emerging Markets investment team will transition to ClearBridge Investments and will report to Clearbridge CIO Scott Glasser. The Global investment team will transition to Franklin Equity Group (FEG) and will report to FEG Executive VP and CIO Jonathan Curtis. SBI Staff have met with both investment teams to assess the impact of the realignment on each strategy.

**Martingale (Domestic Equity)**
Paul Koehler, Ph.D., CFA joined Martingale as SVP, Investments in May 2025. Mr. Koehler is responsible for conducting research and managing client portfolios, building on nearly 15 years of quantitative research and data science experience. Prior to joining Martingale, Mr. Kohler was a Partner and Portfolio Manager at AJO Vista.

John Jacques joined Martingale as Senior Quantitative Engineer in May 2025. Mr. Jacques brings 17 years of industry experience in financial systems, data automation, and investment technology to Martingale. Mr. Jacques previously served as a quantitative developer at AJO Vista and High Vista Strategies and joined Martingale following the retirement of software architect Massimo Grasso.

**Morgan Stanley (Emerging Markets Equity)**
Portfolio Manager Leon Sun departed the firm in March 2025. Mr. Sun was a portfolio manager for Morgan Stanley’s EM Equity platform’s dedicated China-A Share and China Equity strategies. His duties were assumed by Amay Hattangadi, who worked closely with Mr. Sun on the platform’s China strategies. Mr. Hattangadi also serves as Co-lead PM for SBI’s Global Emerging Markets mandate.

**Payden & Rygel (Fixed Income)**
The firm announced the addition of five new members to the investment team and the departure of three investment professionals from the firm. None of the departures directly impacts the SBI's portfolio.

**Zevenbergen (Domestic Equity)**
Dani Blanchard was promoted to Associate Portfolio Manager during the quarter. Ms. Blanchard has been with Zevenbergen since 2014 and worked as an Equity Research Analyst on the strategy prior to her promotion.

## Q2 2025 Manager Meetings

During the quarter, Staff met with the managers below. Note that while staff met with some managers multiple times during the quarter, each manager/strategy is listed only once.

| Investment Manager | Asset Class |
|---|---|
| Ariel | Global Equity |
| Arrowmark | Domestic Equity |
| Ashmore Investment Management Limited | Fixed Income |
| Baillie Gifford | Global Equity |
| Barrow Hanley | Domestic Equity |
| BlackRock Financial Management, Inc. | Fixed Income |
| Columbia Threadneedle Investments | Domestic Equity |
| Dodge and Cox | Fixed Income |
| Earnest Partners | Global ex U.S. Equity |
| Earnest Partners | China Only Equity |
| Fidelity | Developed Markets Equity |
| Goldman Sachs | Domestic Equity |
| Hood River | Domestic Equity |
| Hotchkis & Wiley | Domestic Equity |
| JP Morgan | Developed Markets Equity |
| KKR | Fixed Income |
| LSV | Domestic Equity |
| Martin Currie Inc. | Global Equity |
| Morgan Stanley Investment Management Inc. | Emerging Markets Equity |
| Neuberger Berman Investment Advisors | Fixed Income |
| Oaktree Capital Management | Fixed Income |
| Pacific Investment Management Company | Fixed Income |
| Peregrine | Domestic Equity |
| Pzena | Emerging Markets Equity |
| Record Currency LLC | Currency Overlay |
| Rice Hall James | Domestic Equity |
| Wellington | Domestic Equity |
| Winslow | Domestic Equity |
| Zevenbergen | Domestic Equity |

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# REPORT

## Participant Directed Investment Program and Non-Retirement Investment Program Report

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DATE: October 13, 2025

TO: Members, Investment Advisory Council

FROM: SBI Staff

**SUBJECT: Other Retirement Funds, Tax-Advantaged Savings Plans, and Non-Retirement Investment Program**

This section of the report provides commentary on the investment options and managers for the Other Retirement Funds, Tax-Advantaged Savings Plans, and Non-Retirement Investment Program for the quarter ending June 30, 2025. It includes organizational updates relevant to the strategies used and a list of due diligence meetings staff conducted during the second quarter of calendar year 2025.

The report includes the following sections:



<u>*Important Notes:*</u>

*All performance figures and market data presented in this report are unaudited and preliminary. The performance presented is net of investment management fees. Reported performance for international funds reflects the impact of fair value pricing, which is the process of adjusting the prices of foreign securities to account for market activity that occurs between the time that a security is valued at the close of business in its local market and the close of business in the U.S. (when the fund is valued). Sources for market data: Bloomberg, Factset, Morningstar, MSCI, FTSE Russell, CRSP, ICE BofA, and Investment Managers.*

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## Other Retirement Funds and Tax-Advantaged Savings Plans Fund Commentaries
## Second Quarter 2025 (CY)

**Domestic Equities**

**Vanguard Total Stock Market Index Fund**
The Fund employs an index sampling approach designed to track the performance of the CRSP U.S. Total Market Index, which represents approximately 100% of the investable U.S. stock market and includes large-, mid-, small-, and micro-cap stocks. The Fund's performance matched the benchmark for the quarter with a +11.0% return.

**Vanguard Institutional Index Fund**
The Fund employs a full replication indexing approach designed to track the performance of the S&P 500 Index. The Fund's performance matched the benchmark for the quarter with a +10.9% return. *Note: This option is only available to the Minnesota Deferred Compensation Plan (MNDCP).*

**Vanguard Dividend Growth Fund**
The Fund is actively managed by the subadvisor, Wellington Management. The Fund's strategy is to assemble a concentrated portfolio of large- and mid-cap stocks, emphasizing high-quality companies with a history of paying stable or increasing dividends. The Fund returned +3.5% for the quarter, underperforming the S&P U.S. Dividend Growers Index return of +6.0%. The Fund's stock selection and an underweight position in the information technology sector, which generated strong returns for the quarter, accounted for a majority of the underperformance. The Fund's overweight position in the healthcare sector and weak stock selection with the sector also hurt returns for the quarter.

**Vanguard Mid-Cap Index Fund**
The Fund employs a full replication indexing approach designed to track the performance of the CRSP U.S. Mid-Cap Index, a broadly diversified pool of mid-cap U.S. stocks. The Fund's performance matched the benchmark for the quarter with a +8.7% return.

**T. Rowe Price Institutional Small-Cap Stock Fund**
The Fund's investment process emphasizes fundamental research and active, bottom-up stock selection. The Fund seeks to provide long-term capital growth by investing primarily in stocks of small companies in both growth- and value-oriented market segments. The Fund returned +6.6% for the quarter, underperforming the Russell 2000 Index's return of +8.5%. The Fund outperformed amid April's bout of market volatility but trailed in the subsequent rally due to its underweight exposure to lower-quality, high-beta stocks. Specifically, the Fund's stock selection and an underweight position in the information technology sector accounted for a majority of the underperformance.

*See Page 1 for important notes regarding the performance and market data included in this report.*

## International Equities

**Fidelity Diversified International Trust**
This investment option actively selects the stocks of international companies, primarily within developed markets. The manager focuses on companies with significant long-term earnings potential, durable business models, and attractive growth prospects. The portfolio returned +13.4% for the quarter, outperforming the MSCI EAFE Index, which gained +11.8%. The Fund's relative outperformance was largely attributable to strong stock selection within the industrials sector. Several portfolio holdings in the sector gained on announcement of plans for substantial increases in government spending on defense and infrastructure, particularly among European nations.

**Vanguard Total International Stock Index Fund**
The Fund employs a full replication indexing approach designed to track the FTSE Global All Cap ex U.S. Index, a market-cap weighted index designed to measure the performance of international developed and emerging market companies. For the quarter, the Fund returned +12.1%, underperforming the benchmark's return of +12.3%

## Fixed Income and Capital Preservation Options

**Dodge & Cox Core Bond Account (Previously Dodge & Cox Income Fund)**
This investment option is a diversified portfolio composed primarily of investment-grade debt securities, with a higher allocation to corporate and securitized debt than the benchmark. The portfolio returned +1.4% for the quarter, outperforming the Bloomberg U.S. Aggregate Index return of +1.2%. The portfolio's overweight to the corporate sector and underweight to U.S. Treasuries contributed to positive relative returns for the quarter. Security selection in the corporate sector, primarily in financials, also added to relative outperformance.

**Vanguard Total Bond Market Index Fund**
The Fund employs an index sampling approach designed to track the performance of the Bloomberg U.S. Aggregate Float Adjusted Bond Index. For the quarter, the Fund returned +1.3%, outperforming the benchmark's return of +1.2%.

**Stable Value Account**
Galliard Capital Management manages the Stable Value Account in a separately managed account. The Account's assets are invested in short- and intermediate-duration fixed-income securities combined with investment contracts from financial institutions. The investment contracts have features designed to smooth the impact of changes in interest rates on the value of participant accounts and provide a stable net asset value. The Account returned +0.9% for the quarter compared to a +1.1% return for its benchmark, the 3-Year Constant Maturity Treasury Yield +45 basis points. The Account's underlying fixed income strategies continued to outperform their respective benchmarks. The short-term competitiveness of stable value crediting rates remains under scrutiny, though the gap with money market yields has narrowed.

**Money Market Account**
State Street Global Advisors manages the cash option in a commingled pool called the Short-Term Investment Strategy. The Account returned +1.1% for the quarter, outperforming the +1.0 return of its benchmark, the ICE BofA 3-Month U.S. T-Bill Index.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

## Balanced Option

**Vanguard Balanced Index Fund**
The Fund seeks capital appreciation, current income, and long-term income growth by employing an index sampling approach designed to track the investment performance of a composite benchmark consisting of 60% CRSP U.S. Total Stock Market Index and 40% Bloomberg U.S. Aggregate Float Adjusted Index. The Fund returned +7.4% for the quarter, outperforming the benchmark return of +7.1%.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

**Non-Retirement Investment Program Fund Commentaries**
**Second Quarter 2025 (CY)**

**Non-Retirement Equity Fund**
Mellon Investments Corporation passively manages the Non-Retirement Equity Fund in a separately managed portfolio. The Fund employs a full replication indexing approach designed to track the performance of its benchmark, the S&P 500 Index. The Fund's performance for the quarter matched the benchmark, which returned +10.9%.

**Non-Retirement Bond Fund**
Prudential Global Investment Management (PGIM) actively manages the Non-Retirement Bond Fund in a separately managed portfolio. The Fund's performance for the quarter matched its benchmark, the Bloomberg U.S. Aggregate Bond Index, which returned +1.2%. During the quarter, the portfolio maintained its substantial underweight to U.S. Treasuries and overweight positions to spread sectors, including asset-backed and commercial asset-based securities.

**Assigned Risk Plan Fixed Income Portfolio**
RBC Global Asset Management actively manages the fixed income portfolio for the Assigned Risk Plan relative to the Bloomberg U.S. Government Intermediate Index. RBC emphasizes active security selection and sector allocation decisions in its investment process to attempt to add value relative to the benchmark. The portfolio returned +1.4% during the quarter, slightly underperforming the benchmark, which returned +1.5%. The portfolio maintained its conservative positioning during the quarter, having previously reduced its holdings of agency mortgage securities in favor of U.S. Treasuries.

**Non-Retirement Money Market Fund**
State Street Global Advisors manages the Non-Retirement Money Market Fund against the iMoneyNet Money Fund Average. For the quarter, the Fund returned +1.1%, outperforming the benchmark, which gained +1.0%.

*See Page 1 for important notes regarding the performance and market data included in this report.*

## Organizational Updates
## Other Retirement Funds, Tax-Advantaged Savings Plans, and Non-Retirement Investment Program
## Second Quarter 2025 (CY)

**Galliard (Other Retirement Funds and Tax-Advantaged Savings Plans – Stable Value)**

Galliard's parent company Allspring Global Investments announced effective July 1, 2025, Allspring CEO Joe Sullivan will transition to exclusively focus on his role of executive chair of the Board of Directors. Kate Burke will become CEO and will remain on the Board. Ms. Burke joined the firm in September 2023 to oversee Investments, Engineering & Technology, Finance, Global Operations, Human Resources.

**Manager Meetings**
**Second Quarter 2025 (CY)**

During the quarter, Staff met with the managers below. Note that while staff met with some managers multiple times during the quarter, each manager/strategy is listed only once.

| Investment Manager | Management Style and Asset Class | Investment Program[1] |
|---|---|---|
| Ascensus | Multi-Asset Class Platform | MN ABLE Plan |
| Dodge & Cox | Active, Fixed Income | PDIP |
| Galliard | Active, Stable Value | PDIP |
| T. Rowe Price | Active, Domestic Small Cap Equity | PDIP |
| Fidelity | Active, International Equity | PDIP |
| Mellon | Passive, Domestic Large Cap Equity | Non-Retirement |
| PGIM | Active, Fixed Income | Non-Retirement |
| RBC | Active, Fixed Income | Non-Retirement |
| State Street | Passive, Target Retirement Fund | PDIP |
| | Active, Money Market | PDIP |
| | Active, Money Market | Non-Retirement |
| TIAA | Multi-Asset Class Platform | MN 529 Plan |
| Vanguard | Passive, Domestic Equity, Total | PDIP |
| | Passive, Domestic Equity, Extended Market | MN ABLE Plan |
| | Passive, Domestic Equity, Large Cap | PDIP and ABLE Plan |
| | Passive, Domestic Equity, Mid Cap | PDIP |
| | Passive, International Equity, Total | PDIP |
| | Passive, International Equity, Emerging Markets | MN ABLE Plan |
| | Passive, Fixed Income, Total | PDIP and MN ABLE Plan |
| | Passive, Fixed Income, Short-Term Bond and Short-Term Inflation Protected Securities | MN ABLE Plan |
| | Passive, Balanced Fund | PDIP |
| | Active, Domestic Large Cap Equity (Wellington) | PDIP |
| | Active, Money Market | MN ABLE Plan |
| Wellington | Active, Domestic Large Cap Equity | PDIP |

[1]*PDIP (Participant Directed Investment Program) includes Other Retirement Funds and Tax-Advantaged Savings Plans.*

# REPORT

## AON Market Environment Report

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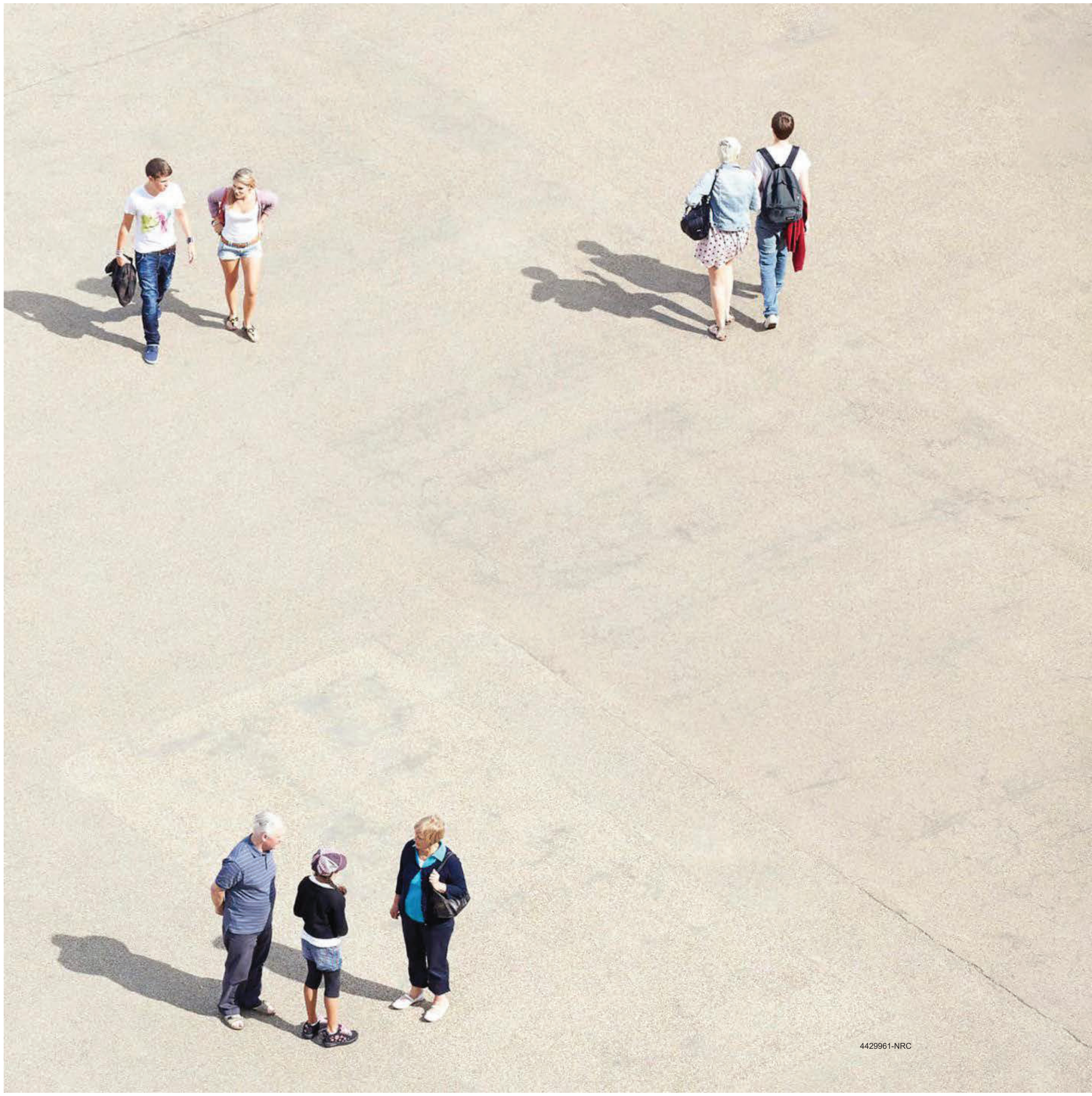
# Market Environment

Second Quarter 2025.

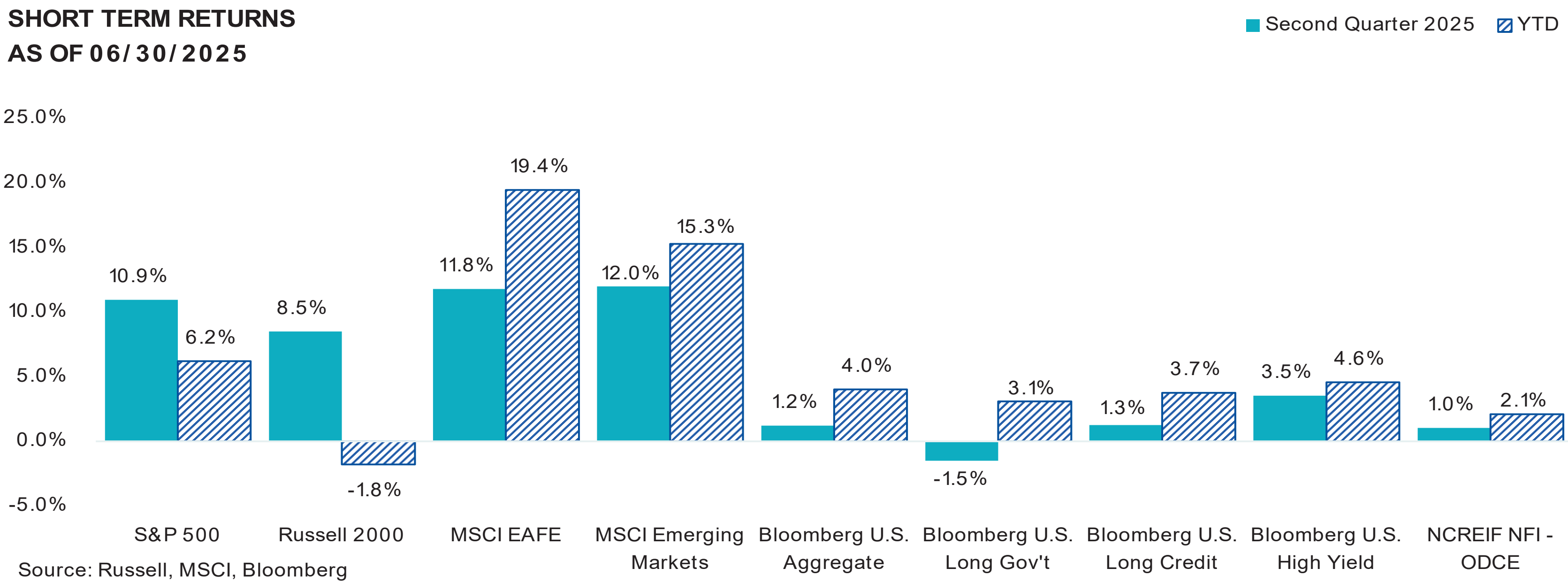
Market Data as of 6/30/2025 unless stated otherwise.







# Market Highlights



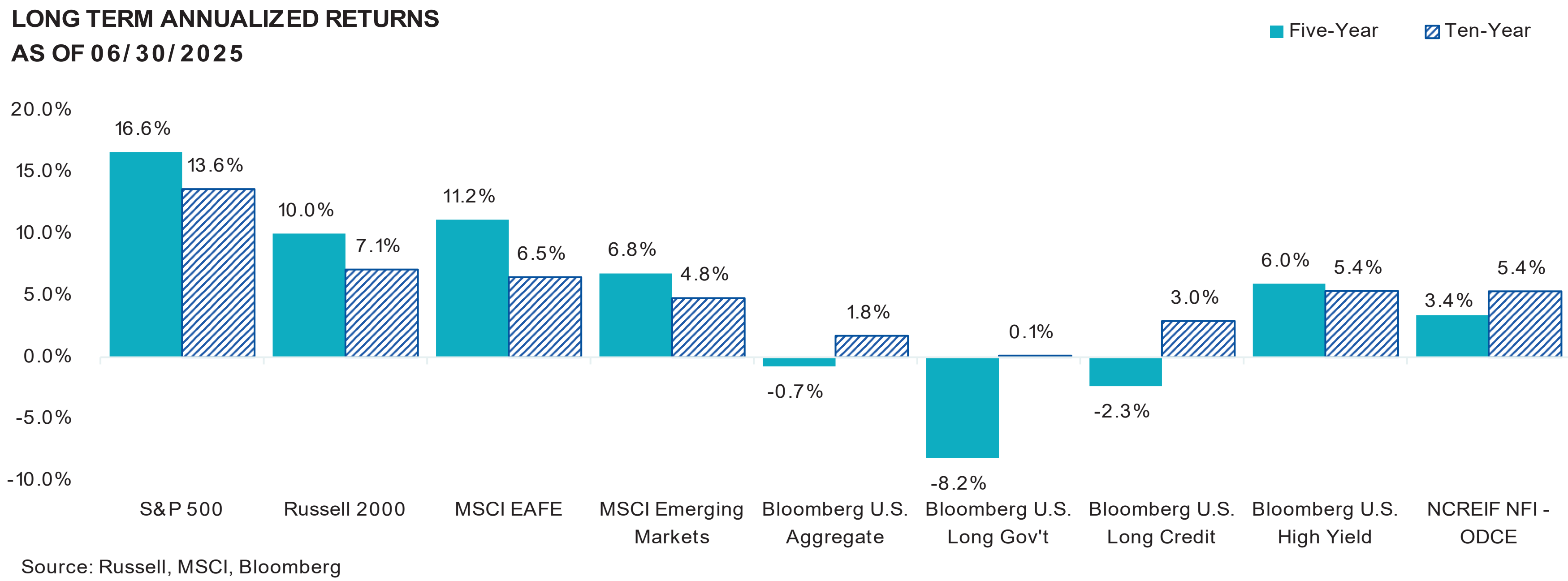

Source: Russell, MSCI, Bloomberg

MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

**Past performance is no guarantee of future results**. Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect fees and expenses. Please see appendix for index definitions and other general disclosures.

**MSCI net return:** deducts assumed foreign tax withholding rate from dividends before investing.

# Market Highlights




**Past performance is no guarantee of future results**. Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect fees and expenses. Please see appendix for index definitions and other general disclosures.
**MSCI net return:** deducts assumed foreign tax withholding rate from dividends before investing.

# Market Highlights

| Returns of the Major Capital Markets | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | Period Ending 06/30/2025 |
| | Second Quarter | YTD | 1-Year | 3-Year[1] | 5-Year[1] | 10-Year[1] |
| **Equity** | | | | | | |
| MSCI All Country World IMI | 11.62% | 9.82% | 15.89% | 16.80% | 13.39% | 9.69% |
| MSCI All Country World | 11.53% | 10.05% | 16.17% | 17.35% | 13.65% | 9.99% |
| Dow Jones U.S. Total Stock Market | 11.09% | 5.68% | 15.23% | 19.07% | 15.87% | 12.88% |
| Russell 3000 | 10.99% | 5.75% | 15.30% | 19.08% | 15.96% | 12.96% |
| S&P 500 | 10.94% | 6.20% | 15.16% | 19.71% | 16.64% | 13.65% |
| Russell 2000 | 8.50% | -1.79% | 7.68% | 10.00% | 10.04% | 7.12% |
| MSCI All Country World ex-U.S. IMI | 12.71% | 17.88% | 17.83% | 13.92% | 10.20% | 6.18% |
| MSCI All Country World ex-U.S. | 12.03% | 17.90% | 17.72% | 13.99% | 10.13% | 6.12% |
| MSCI EAFE | 11.78% | 19.45% | 17.73% | 15.97% | 11.16% | 6.51% |
| MSCI EAFE (Local Currency) | 4.80% | 7.83% | 8.04% | 13.47% | 11.64% | 7.04% |
| MSCI Emerging Markets | 11.99% | 15.27% | 15.29% | 9.70% | 6.81% | 4.81% |
| **Equity Factors** | | | | | | |
| MSCI World Minimum Volatility (USD) | 2.55% | 10.80% | 17.63% | 11.30% | 9.07% | 8.76% |
| MSCI World High Dividend Yield | 2.89% | 9.92% | 14.55% | 11.27% | 11.34% | 8.33% |
| MSCI World Quality | 9.32% | 6.38% | 7.01% | 19.88% | 14.88% | 13.62% |
| MSCI World Momentum | 14.88% | 13.98% | 17.81% | 21.28% | 14.33% | 13.47% |
| MSCI World Enhanced Value | 9.67% | 17.29% | 19.10% | 15.91% | 14.17% | 7.37% |
| MSCI World Equal Weighted | 10.61% | 13.70% | 19.50% | 14.68% | 11.74% | 8.03% |
| MSCI World Index Growth | 17.74% | 8.66% | 16.80% | 23.28% | 15.32% | 13.55% |
| MSCI USA Minimum Volatility (USD) | 0.63% | 6.52% | 13.84% | 12.11% | 11.01% | 10.99% |
| MSCI USA High Dividend Yield | 0.35% | 4.89% | 10.22% | 9.73% | 11.00% | 9.89% |
| MSCI USA Quality | 8.29% | 5.14% | 9.59% | 21.62% | 16.20% | 15.31% |
| MSCI USA Momentum | 15.02% | 12.86% | 18.80% | 21.16% | 13.45% | 14.06% |
| MSCI USA Enhanced Value | 6.97% | 8.80% | 12.81% | 11.08% | 12.59% | 8.50% |
| MSCI USA Equal Weighted | 6.28% | 4.88% | 14.27% | 13.95% | 13.49% | 10.27% |
| MSCI USA Growth | 19.26% | 6.21% | 18.21% | 27.16% | 18.35% | 17.03% |

| Returns of the Major Capital Markets | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | Period Ending 06/30/2025 |
| | Second Quarter | YTD | 1-Year | 3-Year[1] | 5-Year[1] | 10-Year[1] |
| **Fixed Income** | | | | | | |
| Bloomberg Global Aggregate | 4.52% | 7.27% | 8.91% | 2.75% | -1.16% | 1.17% |
| Bloomberg U.S. Aggregate | 1.21% | 4.02% | 6.08% | 2.55% | -0.73% | 1.76% |
| Bloomberg U.S. Long Gov't | -1.51% | 3.08% | 1.58% | -3.66% | -8.16% | 0.15% |
| Bloomberg U.S. Long Credit | 1.25% | 3.75% | 5.13% | 2.72% | -2.32% | 2.95% |
| Bloomberg U.S. Long Gov't/Credit | -0.18% | 3.38% | 3.32% | -0.31% | -4.93% | 1.79% |
| Bloomberg U.S. TIPS | 0.48% | 4.67% | 5.84% | 2.34% | 1.61% | 2.67% |
| Bloomberg U.S. High Yield | 3.53% | 4.57% | 10.29% | 9.93% | 5.97% | 5.38% |
| Bloomberg Global Treasury ex U.S. | 6.99% | 9.57% | 10.95% | 1.56% | -2.85% | 0.14% |
| JP Morgan EMBI Global (Emerging Markets | 3.06% | 5.48% | 9.51% | 8.23% | 1.81% | 3.45% |
| **Commodities** | | | | | | |
| Bloomberg Commodity Index | -3.08% | 5.53% | 5.77% | 0.13% | 12.68% | 1.99% |
| Goldman Sachs Commodity Index | -2.81% | 1.94% | 0.25% | -0.37% | 17.69% | 1.45% |
| **Hedge Funds** | | | | | | |
| HFRI Fund-Weighted Composite[2] | 4.35% | 3.91% | 8.47% | 7.79% | 8.56% | 5.40% |
| HFRI Fund of Funds[2] | 3.42% | 3.03% | 7.25% | 6.54% | 6.21% | 3.82% |
| **Real Estate** | | | | | | |
| NAREIT U.S. Equity REITS | -1.16% | -0.25% | 8.60% | 5.35% | 8.63% | 6.32% |
| NCREIF NFI - ODCE | 1.03% | 2.10% | 3.54% | -5.43% | 3.42% | 5.35% |
| FTSE Global Core Infrastructure Index | 3.11% | 8.92% | 17.65% | 6.55% | 8.43% | 7.72% |
| **Private Equity** | | | | | | |
| Burgiss Private iQ Global Private Equity[3] | | | 6.00% | 1.89% | 13.10% | 12.71% |

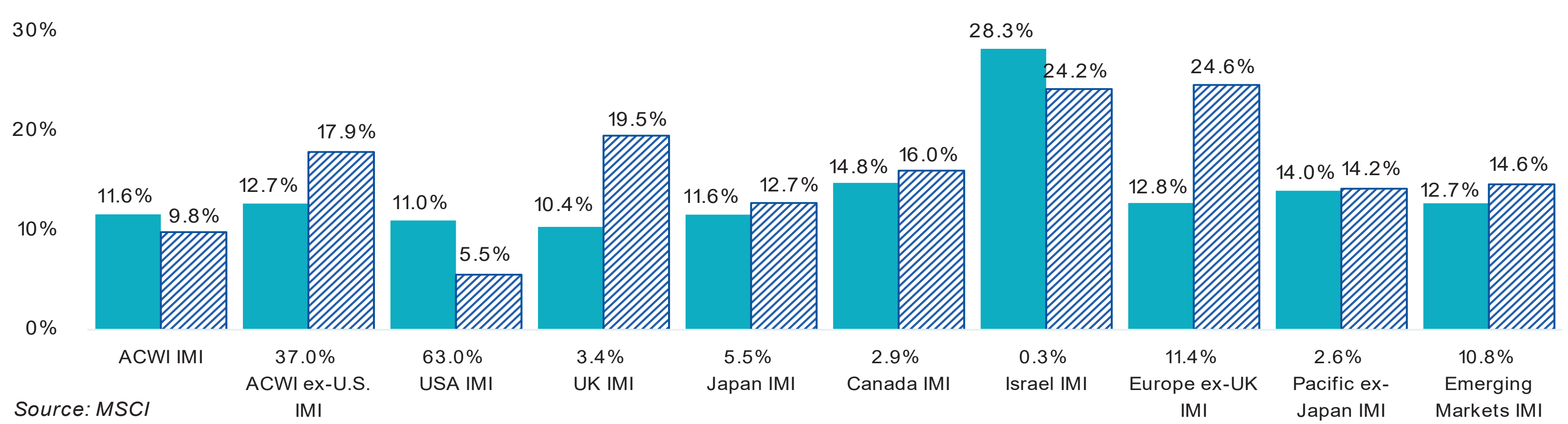
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.
[1] Periods are annualized.
[2] Latest 5 months of HFR data are estimated by HFR and may change in the future.
[3] Burgiss Private iQ Global Private Equity data is as at December 31, 2024

Source: Russell, MSCI, Bloomberg

**Past performance is no guarantee of future results**. Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect fees and expenses. Please see appendix for index definitions and other general disclosures.
**MSCI net return:** deducts assumed foreign tax withholding rate from dividends before investing.

# Global Equity Markets

**GLOBAL MSCI IMI INDEX RETURNS (USD) AS OF 6/30/2025**




*Source: MSCI*

- Global equity markets rose over Q2 2025, despite facing significant correction during the early weeks of the quarter. The S&P 500 index rose by 10.9% over the quarter. The MSCI AC World index rose by 11.7% over the quarter, marginally underperforming the MSCI AC World ex-U.S. index, which rose 12.3%.
- The reciprocal tariff announcement made by the U.S. President increased market volatility, leading to the CBOE Volatility Index (VIX) touching 52.3 in early April, before closing the quarter at 16.7, which is below its 20-year average of 19.3.
- Despite rising by 11.0% over the quarter, USA IMI was the second-worst performer. Information Technology (23.4%) and Communication Services (18.5%) were the best-performing sectors.
- Across international markets, all regions posted positive returns. Israeli equities outperformed with a return of 28.3%, followed by Canada IMI (14.8%).

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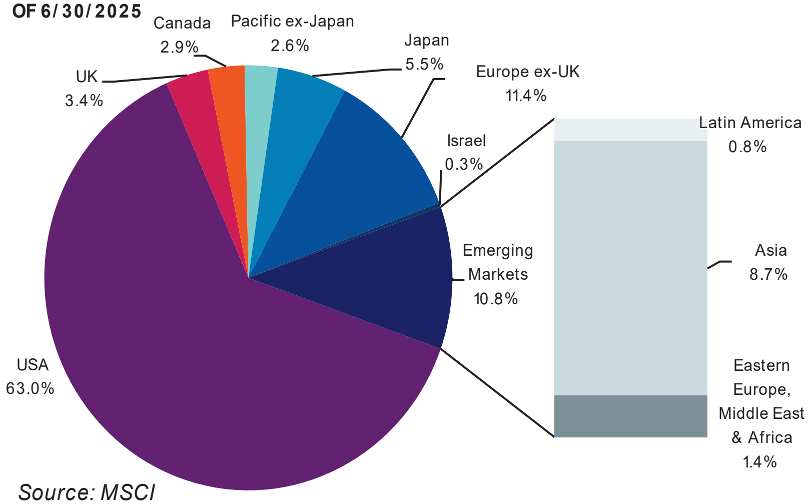
**MSCI net return:** deducts assumed foreign tax withholding rate from dividends before investing.

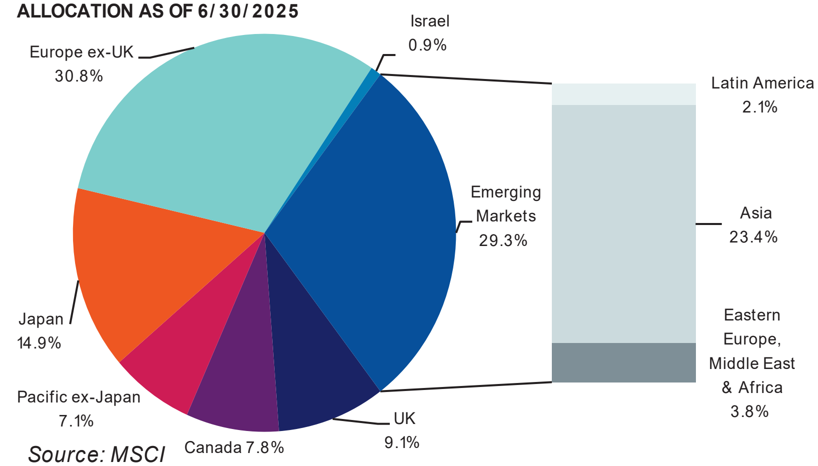
# Global Equity Markets

Below is the country/region breakdown of the global and international equity markets as measured by the MSCI All Country World IMI Index and the MSCI All Country World ex-U.S. IMI Index, respectively.

**MSCI ALL COUNTRY WORLD IMI INDEX GEOGRAPHIC ALLOCATION AS OF 6/30/2025**




**MSCI ALL COUNTRY WORLD EX-U.S. IMI INDEX GEOGRAPHIC ALLOCATION AS OF 6/30/2025**

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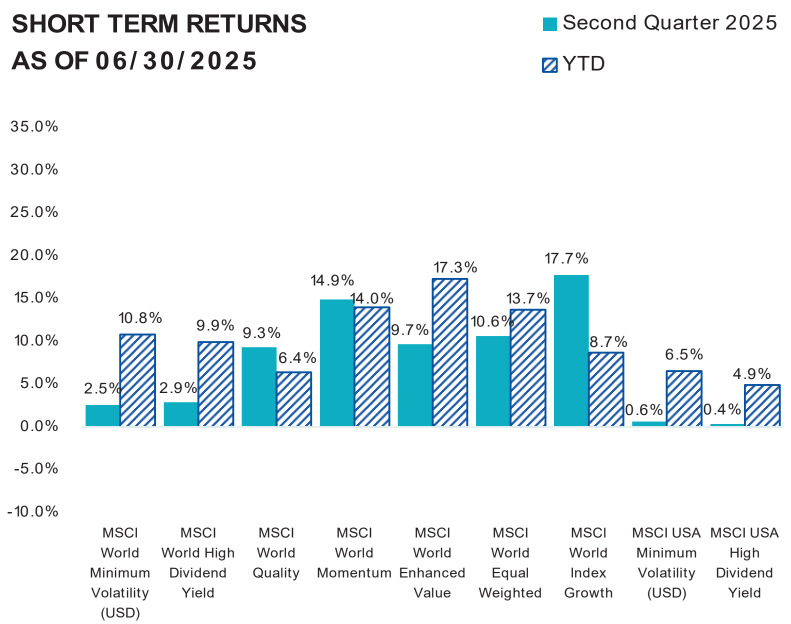
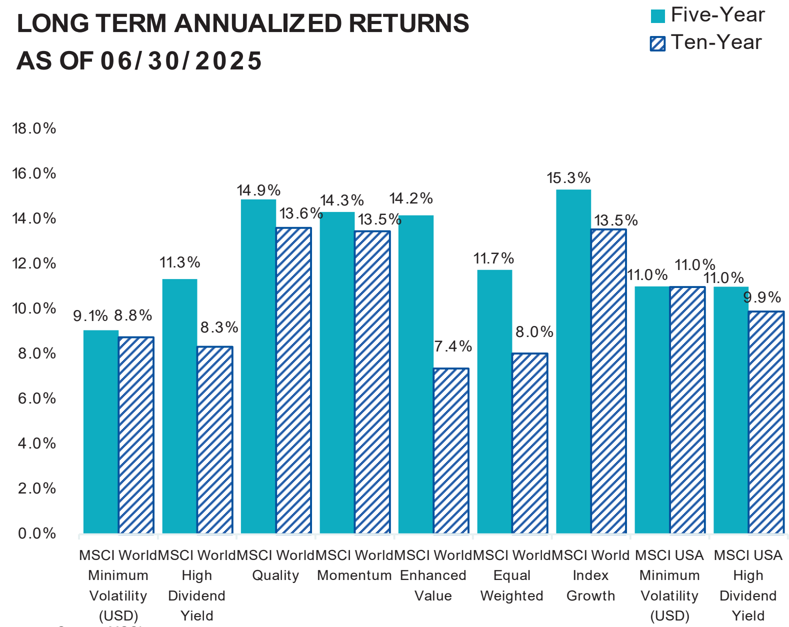
**MSCI net return:** deducts assumed foreign tax withholding rate from dividends before investing.

# Factor Indices




Source: MSCI
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.




Source: MSCI
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

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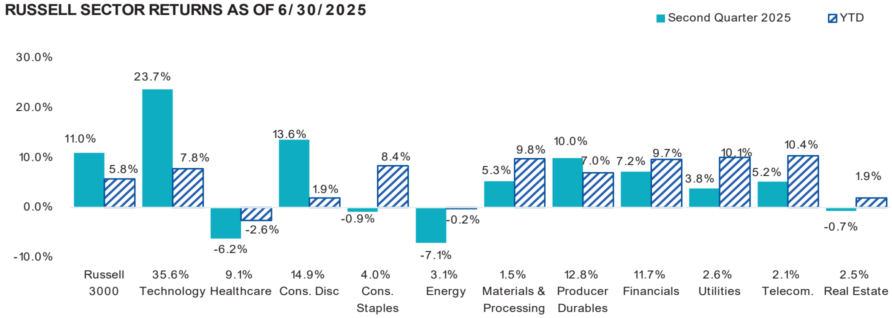
**MSCI net return:** deducts assumed foreign tax withholding rate from dividends before investing.

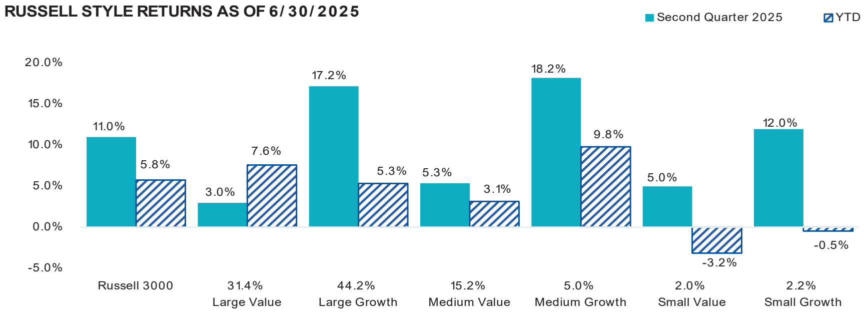
# U.S. Equity Markets

- Amidst the uncertainty surrounding the U.S. tariff policies, the S&P 500 entered correction territory (-11.2%) from March 31 to April 8, before making a recovery and ending the quarter up by 10.9%. The tech heavy NASDAQ Composite Index rose by 18.0%.
- Q2 remained dominated by trade and tariff policy changes by U.S. President Donald Trump, resulting in trade tensions between the U.S. and its trading partners. The U.S. economy contracted at an annualised rate of 0.5% in Q1 2025, much lower than the initial 0.4% growth economists had expected and the previous quarter's 2.4%. This marks the first quarterly decline since Q1 2022, primarily driven by an increase in imports and a decrease in government spending.
- The FOMC has projected a GDP growth of 1.4% for 2025, down from the March projection of 1.7%, while PCE inflation is forecasted to rise to 3.0% this year, up from the March projection of 2.7%.
- The Russell 3000 Index rose 11.0% during the second quarter and rose by 5.8% on a YTD basis. Technology (23.7%) and Consumer Discretionary (13.6%) were the best performers, while Energy (-7.1%) and Healthcare (-6.2%) were the worst performers.
- On a style basis, growth outperformed value across market capitalizations over the quarter. Medium-cap stocks outperformed Large and Small-cap stocks in growth style as well as value style.

**RUSSELL SECTOR RETURNS AS OF 6/30/2025**




**RUSSELL STYLE RETURNS AS OF 6/30/2025**




*Source: Russell Indexes*

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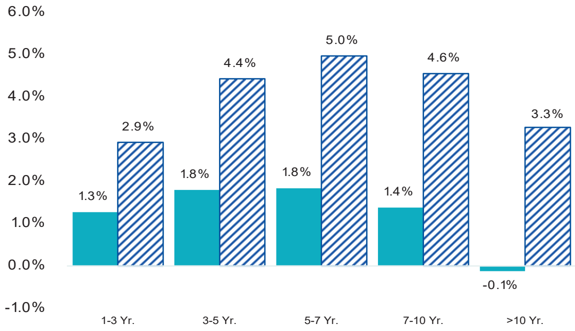
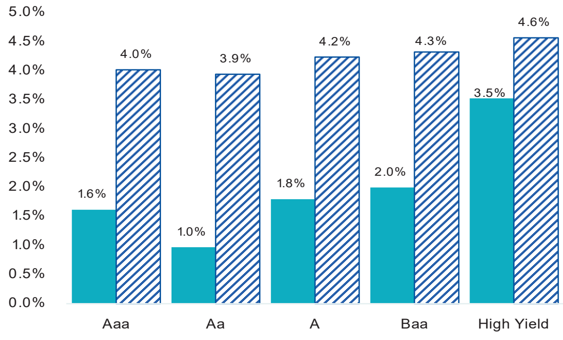
# U.S. Fixed Income Markets

BLOOMBERG AGGREGATE RETURNS BY MATURITY AS OF 06/30/2025



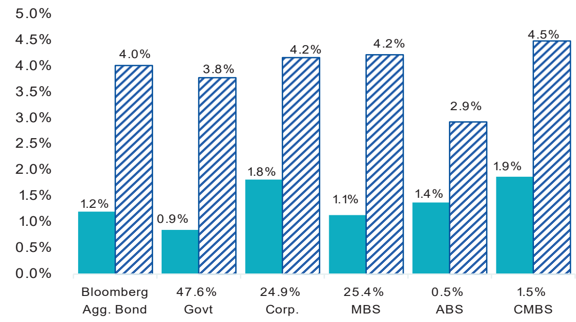

Source: FactSet

BLOOMBERG AGGREGATE RETURNS BY QUALITY AND HIGH YIELD RETURNS AS OF 06/30/2025




Source: FactSet

BLOOMBERG AGGREGATE RETURNS BY SECTOR AS OF 06/30/2025




Source: FactSet

- The U.S. Fed maintained interest rates over the quarter between a range of 4.25% – 4.50%. The latest Fed "dot plot," shows eight FOMC members projecting an interest rate reduction of 0.50% in 2025, with seven members projecting no further rate cuts this year. Two members each project a 0.25% and 0.75% rate cut, respectively.
- The Bloomberg U.S. Aggregate Bond Index rose by 1.2% over the quarter and is up by 4.0% on a YTD basis.
- Across durations, almost all maturities finished the quarter in positive territory with medium-term maturities rising more.
- Within investment-grade bonds, lower-quality issues generally outperformed higher-quality issues, with Baa-rated bonds returning 2.0% during the quarter. High-yield bonds rose by 3.5%. On a 1-year basis, high-yield bonds have outperformed indicating an increased risk appetite.

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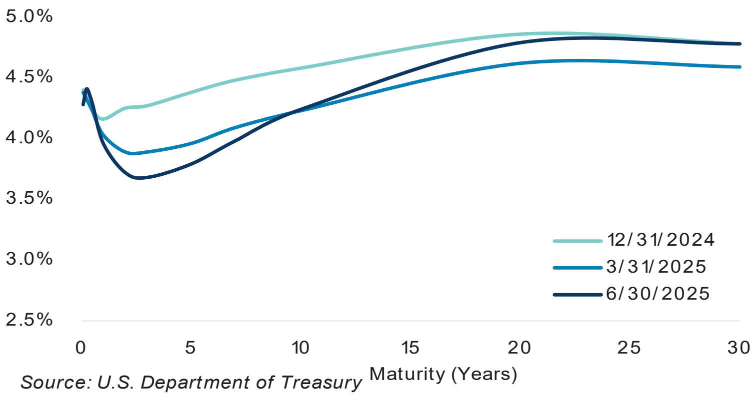
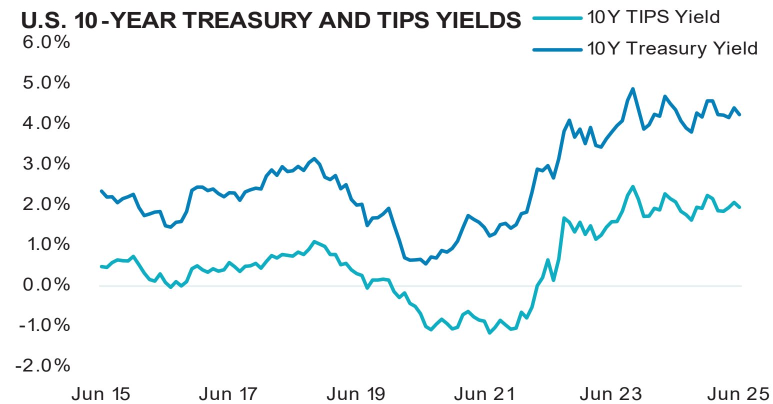
# U.S. Fixed Income Markets

**U.S. TREASURY YIELD CURVE**




*Source: U.S. Department of Treasury*

**U.S. 10-YEAR TREASURY AND TIPS YIELDS**

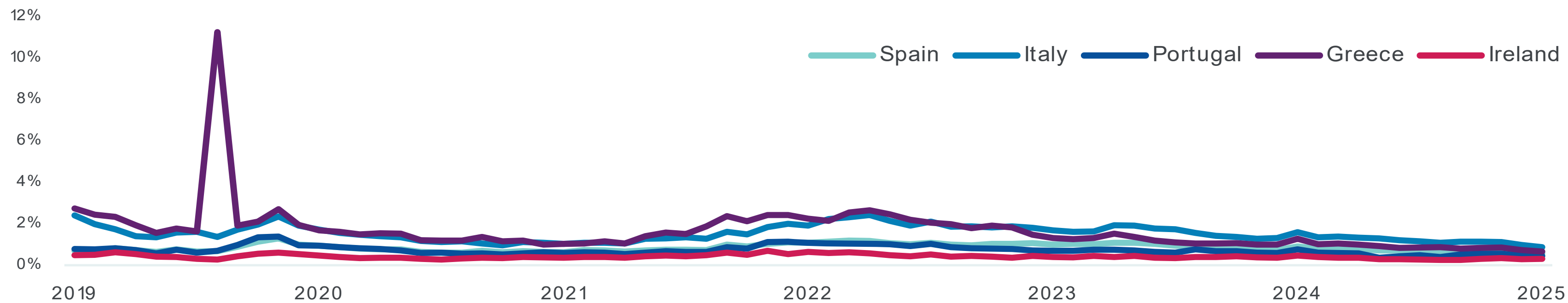



*Source: U.S. Department of Treasury*

- U.S. Treasury yields displayed deviating behaviour across maturities, with the yield curve mostly shifting downwards in the short to medium term maturities and rising across the long-term maturities. The 10-year Treasury yield rose by 1bp to 4.24%, and the 30-year Treasury yield rose by 19bps to 4.78% over the quarter.
- U.S. headline consumer price index (CPI) rose to 2.7% year-on-year in June, higher than the 2.4% year-on-year recorded in March and in line with the economists' expectations. U.S. core inflation, which excludes energy and food prices, rose to 2.9% year-on-year in June, higher than March's 2.8% but lower than the economists' expectations of 3.0%.
- The 10-year TIPS yield rose by 10bps over the quarter to 1.95%.

# European Fixed Income Markets

**EUROZONE PERIPHERAL BOND SPREADS (10-YEAR SPREADS OVER GERMAN BUNDS)**




*Source: FactSet*

- European government bond spreads over 10-year German bunds fell across the Euro Area, with the spreads showing maximum contraction for Italy, followed by Greece and Portugal. Over Q2 2025, the European Central Bank (ECB) reduced its policy interest rate twice by 0.25% each to 2.0%. The ECB expects the headline inflation at 2% in 2025, 1.6% in 2026 and 2% in 2027. GDP growth is expected to be 0.9% in 2025, 1.1% in 2026 and 1.3% in 2027.
- Greek and Italian government bond yields fell by 27bps and 37bps to 3.26% and 3.47%, respectively over the quarter while Portugal government bond yields fell by 21bps to 3.04%. Irish and Spain government bond yields fell by 11bps and 17bps to 2.90% and 3.17%, respectively over the quarter.
- German bund yields fell by 10bps to 2.60% over the quarter.
- Eurozone headline inflation slowed down as the CPI increased 2.0% year-on-year in June, lower than the 2.2% increase recorded in March and in line with the economists' expectations. Core inflation rose 2.3% year-on-year in June, lower than the March's 2.4% and in line with the economists' expectations.

# Credit Spreads

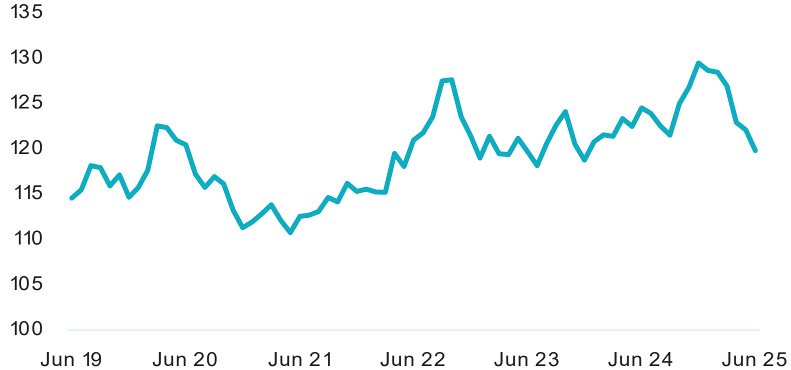
| Spread (bps) | 6/30/2025 | 3/31/2025 | 12/31/2024 | Quarterly Change (bps) | YTD |
|---|---|---|---|---|---|
| U.S. Aggregate | 32 | 35 | 34 | -3 | -1 |
| Long Gov't | 0 | -1 | 0 | 1 | 1 |
| Long Credit | 102 | 117 | 100 | -15 | 2 |
| Long Gov't/Credit | 49 | 57 | 50 | -7 | -1 |
| MBS | 37 | 36 | 43 | 1 | -6 |
| CMBS | 84 | 88 | 80 | -3 | 4 |
| ABS | 57 | 60 | 44 | -3 | 13 |
| Corporate | 83 | 94 | 80 | -11 | 3 |
| High Yield | 290 | 347 | 287 | -57 | 3 |
| Global Emerging Markets | 216 | 232 | 219 | -16 | -3 |

*Source: FactSet, Bloomberg*

- Credit markets rose amid rising risk tolerance sentiment, with spreads generally narrowing.
- High Yield and Global Emerging Markets spreads narrowed by 57bps and 16bps, respectively. ABS spreads narrowed by 3bps.

# Currency

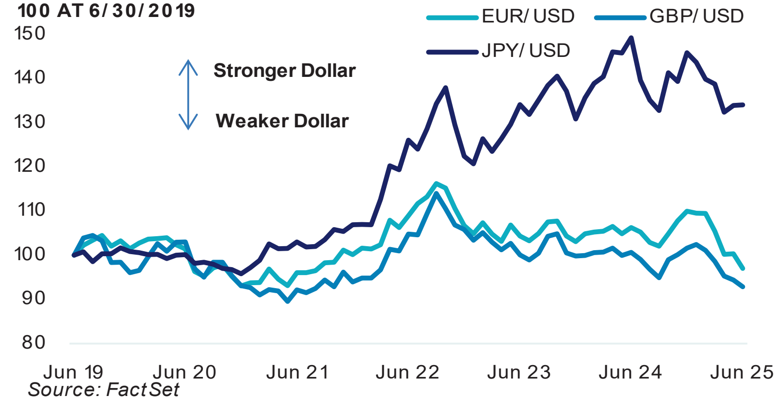
**TRADE WEIGHTED U.S. DOLLAR INDEX (2006 = 100)**




*Source: Federal Reserve*

As of 60/30/2025

**U.S. DOLLAR RELATIVE TO EUR, GBP AND JPY REBASED TO 100 AT 6/30/2019**

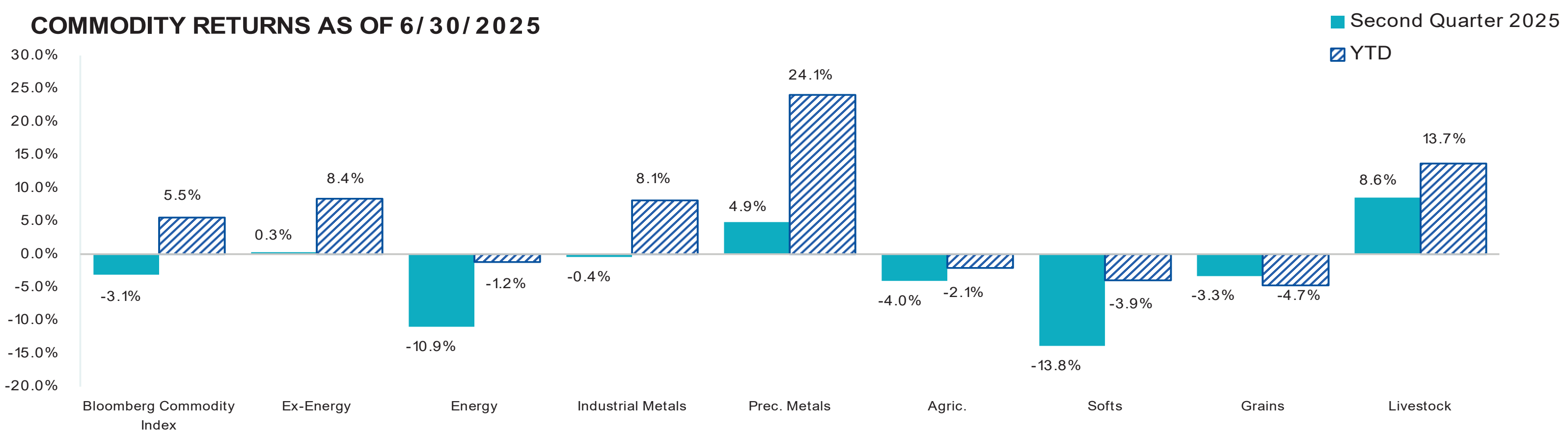



*Source: FactSet*

As of 60/30/2025

- The U.S. Dollar depreciated against all major currencies over the quarter. On a trade-weighted basis, the U.S. dollar depreciated by 5.6%.
- Sterling appreciated by 5.8% against the U.S. dollar. In its May meeting, the Bank of England (BoE) reduced interest rates by 0.25% to 4.25%. The BoE forecasts that inflation will peak at 3.5% in Q3 2025 (down from 3.7%), before returning to the target rate of 2% by Q1 2027.
- The U.S. dollar depreciated by 8.0% against the euro and by 3.4% against the yen.

# Commodities




*Source: Bloomberg Note: Softs and Grains are part of the wider Agriculture sector*

- Commodity prices fell over the quarter (except for Prec. Metals and Livestock sub-sector) with the Bloomberg Commodity Index returning -3.1%.
- The softs sub-sector was the worst performer over the quarter at -13.8%.
- The Livestock sector rose the most over the quarter at 8.6%.
- Brent crude oil prices mostly moderated over the quarter, with OPEC+ countries raising oil production output by 960,000 barrels per day (bpd) over Q2 2025 and announcing further increase of 411,000 bpd starting July 2025. Brent crude oil prices ranged from U.S. $60/BBL to U.S. $79/BBL, before ending the quarter at U.S. $68/BBL.

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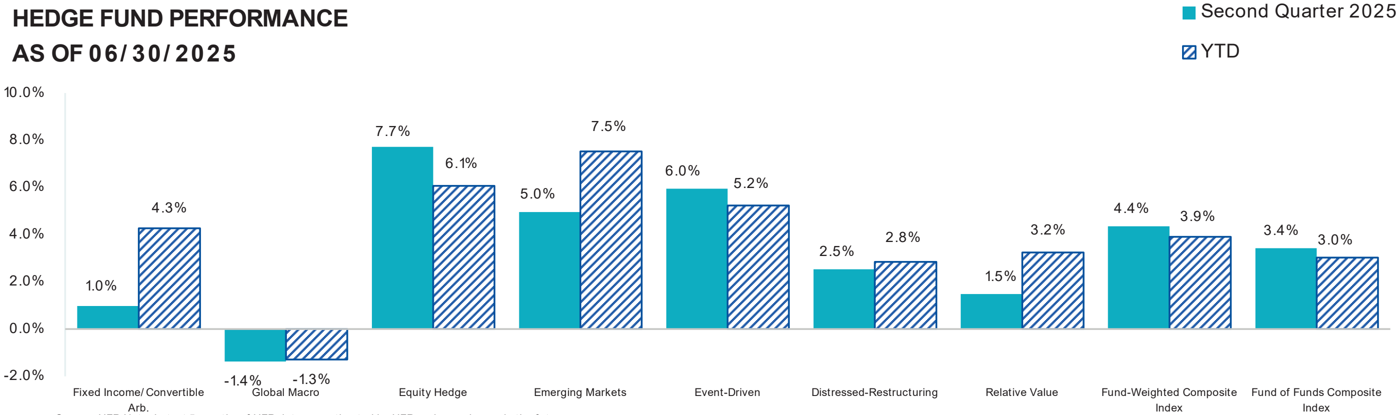
# Hedge Funds Market Overview



*Source: HFR Note: Latest 5 months of HFR data are estimated by HFR and may change in the future.*

- Hedge fund performance was mostly positive over the quarter.
- The HFRI Fund-Weighted Composite produced a return of 4.4% and the HFRI Fund of Funds Composite Index produced a return of 3.4% over the quarter.
- Over the quarter, Equity Hedge was the best performer with a return of 7.7%.
- Global Macro was the worst performer with a return of -1.4% over the quarter.
- On a YTD basis, Emerging Markets has outperformed all other strategies while Global Macro has performed the worst.

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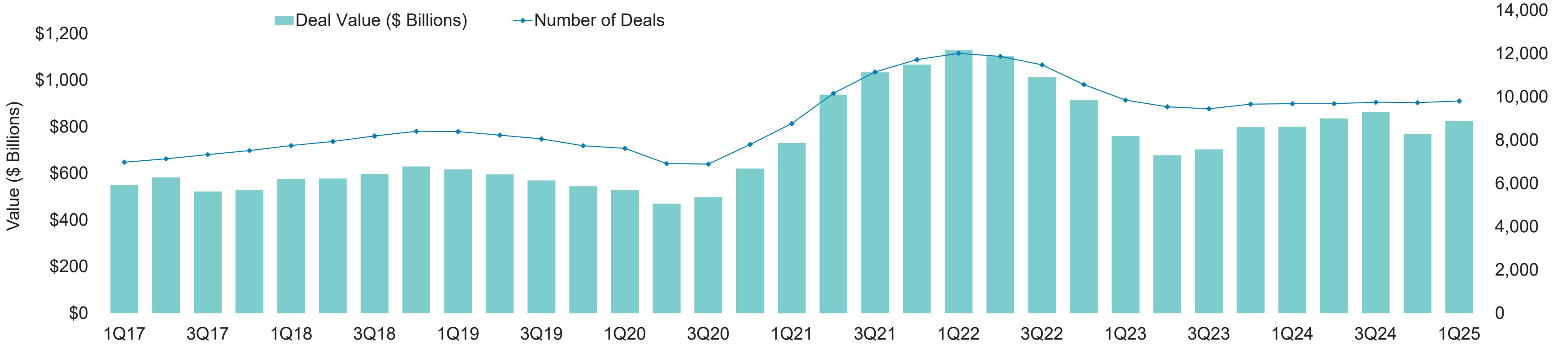
# Private Equity Overview

## First Quarter 2025

LTM Global Private Equity-Backed Buyout Deal Volume

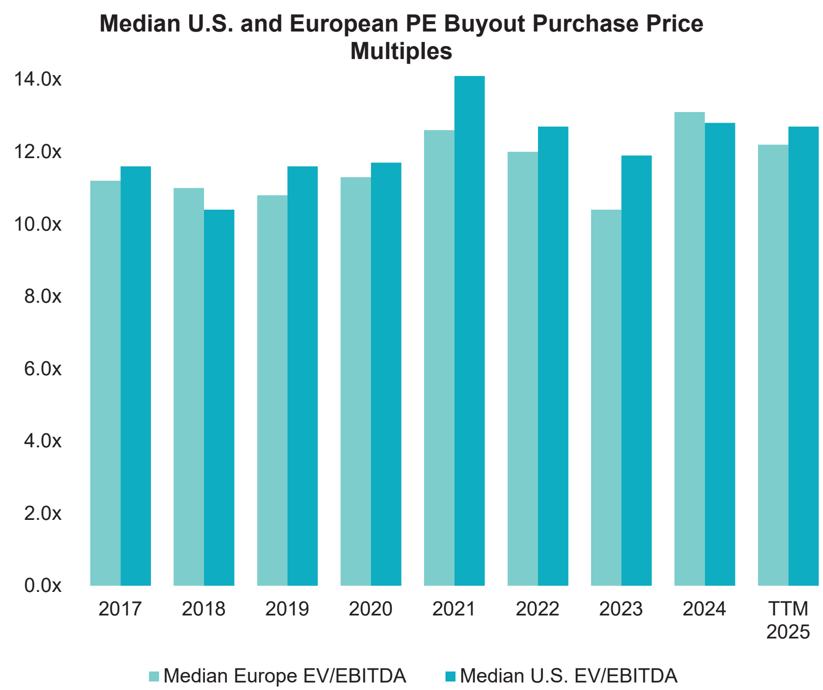



Source: Preqin Pro

- **Fundraising:** In Q1 2025, $247.5 billion of capital was raised by 717 funds, which was an increase of 30.0% on a capital basis but a decrease of 13.7% by number of funds closed over the prior quarter. Capital raised and the number of funds closed in Q1 2025 represented a decrease of 18.9% and 44.9%, respectively, compared to the five-year quarterly average.[1]
- **Buyout:** Global private equity-backed buyout deals totaled $210.8 billion in Q1 2025, which was an increase on a capital basis of 11.1% compared to Q4 2024 and an increase of 1.2% compared to the five-year quarterly average.[1] On a TTM basis, median U.S. private equity EV/EBITDA multiples reached 12.2x at the end of Q1 2025, a decrease compared to the 13.1x seen at the end of 2024 and down slightly from the five-year average (12.5x). In Europe, on a TTM basis, median private equity EV/EBITDA multiples reached 12.7x at the end of Q1 2025, roughly in line with the 12.8x multiple seen at the end of 2024.[2] Globally, buyout exit value totaled $85.6 billion across 530 deals during the quarter, down, on a value and deal count basis, from $129.8 billion in exit value from 597 deals during the prior quarter. Exit value in Q1 2025 was also materially below the five-year quarterly average of $129.1 billion in value.[1]
- **Venture:** During the quarter, an estimated 3,990 U.S. venture-backed transactions totaling $91.5 billion were completed, which was an increase of 18.5% on a capital basis and 10.9% by deal count over the prior quarter, which saw 3,599 deals completed totaling $77.2 billion. This was also an increase of 34.6% on a capital basis compared to the five-year quarterly average of $57.4 billion. Total U.S. venture-backed exit value increased during the quarter, totaling approximately $56.2 billion across an estimated 385 completed transactions compared to $41.3 billion of value across 359 exits in Q4 2024. However, Q1 2025 exit value remained below the five-year quarterly average of $81.4 billion from 360 transactions.[3]

Sources: 1 Preqin 2 Pitchbook/LCD 3 PitchBook/NVCA Venture Monitor 4 Fitch Ratings 5 Jefferies
Notes: FY=Fiscal year ended 12/31; YTD=Year to date; LTM=Last 12 months (aka trailing 12 months); PPM=Purchase Price Multiples: Total Purchase Price ÷ EBITDA.

# Private Equity Overview (cont.)



Source: Pitchbook, LCD

- **Mezzanine:** 5 funds closed on $4.0 billion during the quarter, an increase from the prior quarter's total of $0.6 billion raised by 5 funds. Capital raised in Q1 2025 was also an increase of 89.6% compared to Q1 2024. However, this represented a decrease compared to the five-year quarterly average of $6.4 billion.[1]
- **Distressed Debt/Special Situations:** The TTM U.S. high-yield default rate was 1.95% as of March 2025, which was down from December 2024's TTM rate of 2.58%.[4] During the quarter, $23.8 billion was raised by 16 funds, up from the $14.3 billion raised by 15 funds during Q4 2024. Capital raised in Q1 2025 represented 56.0% of 2024's total of $42.5 billion.[1]
- **Secondaries:** 10 funds raised $34.1 billion during Q1 2025, up significantly from the $7.9 billion raised by 22 funds in Q4 2024. This was also an increase compared to the five-year quarterly average of $16.0 billion.[1] The average discount rate for LP buyout and venture capital portfolios finished Q1 2025 at 6.0% and 23.0%, respectively, with buyout discounts being flat and venture discounts decreasing 2.0% compared to Q4 2024.[5]
- **Infrastructure:** $60.1 billion of capital was raised by 26 funds in Q1 2025 compared to $20.1 billion of capital raised by 31 funds in Q4 2024. The 10 largest funds in market are currently seeking a combined $156.9 billion in capital. Infrastructure managers completed 435 deals for an aggregate deal value of $151.0 billion in Q1 2025, an increase, on a capital basis, compared to 482 deals totaling $81.4 billion completed in Q4 2024.[1]
- **Natural Resources:** During Q1 2025, 10 funds closed on $3.6 billion, a decrease compared to 12 funds closing on $10.8 billion during the prior quarter. This was also a decrease of 22.3% compared to the five-year quarterly average. 65 energy and utilities buyout deals were completed in Q1 2025 totaling $0.5 billion, a decrease, on a value and number of deals basis, compared to 87 completed deals totaling $7.7 billion in Q4 2024.[1]

Sources: 1 Preqin 2 Pitchbook/LCD 3 PitchBook/NVCA Venture Monitor 4 Fitch Ratings 5 Jefferies

# Appendix
## Index Definitions

| Index | Definition |
|---|---|
| **MSCI AC World Index** | The MSCI ACWI captures large and mid cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. With 2,528 constituents, the index covers approximately 85% of the global investable equity opportunity set. |
| **MSCI All Country World Investable Market Index** | The MSCI ACWI Investable Market Index (IMI) captures large, mid and small cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. With 8,274 constituents, the index is comprehensive, covering approximately 99% of the global equity investment opportunity set. |
| **MSCI World Index** | The MSCI World Index captures large and mid-cap representation across 23 Developed Markets (DM) countries. With 1,325 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. |
| **MSCI EAFE** | The MSCI EAFE Index is an equity index which captures large and mid cap representation across 21 Developed Markets countries around the world, excluding the U.S. and Canada. With 695 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. |
| **MSCI Emerging Markets** | The MSCI Emerging Markets Index captures large and mid cap representation across 24 Emerging Markets (EM) countries. With 1,203 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. |
| **MSCI Emerging Markets Investable Market Index** | The MSCI Emerging Markets Investable Market Index (IMI) includes large, mid and small cap companies and targets coverage of approximately 99% of the free float-adjusted market capitalization in each country. |
| **MSCI Factor indexes** | These are rules-based indexes that capture the returns of systematic factors that have historically earned a persistent premium over long periods of time—such as Value, Low Size, Low Volatility, High Yield, Quality and Momentum and Growth. |
| **MSCI USA Value/Growth** | The MSCI USA Value/Growth Index captures U.S. large and mid cap securities exhibiting overall value/growth style characteristics. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend. |
| **MSCI ACWI ex USA IMI** | The MSCI ACWI ex USA Investable Market Index (IMI) captures large, mid and small cap representation across 22 of 23 Developed Markets (DM) countries (excluding the United States) and 24 Emerging Markets (EM) countries. With 6,060 constituents, the index covers approximately 99% of the global equity opportunity set outside the US. |
| **MSCI USA IMI** | The MSCI USA Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the U.S. market. With 2,214 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in the US |
| **MSCI UK IMI** | The MSCI United Kingdom Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the UK market. With 279 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in the UK. |
| **MSCI Japan IMI** | The MSCI Japan Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the Japan market. With 979 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in Japan. |
| **MSCI Canada IMI** | The MSCI Canada Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the Canada market. With 265 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in Canada. |

# Appendix
## Index Definitions

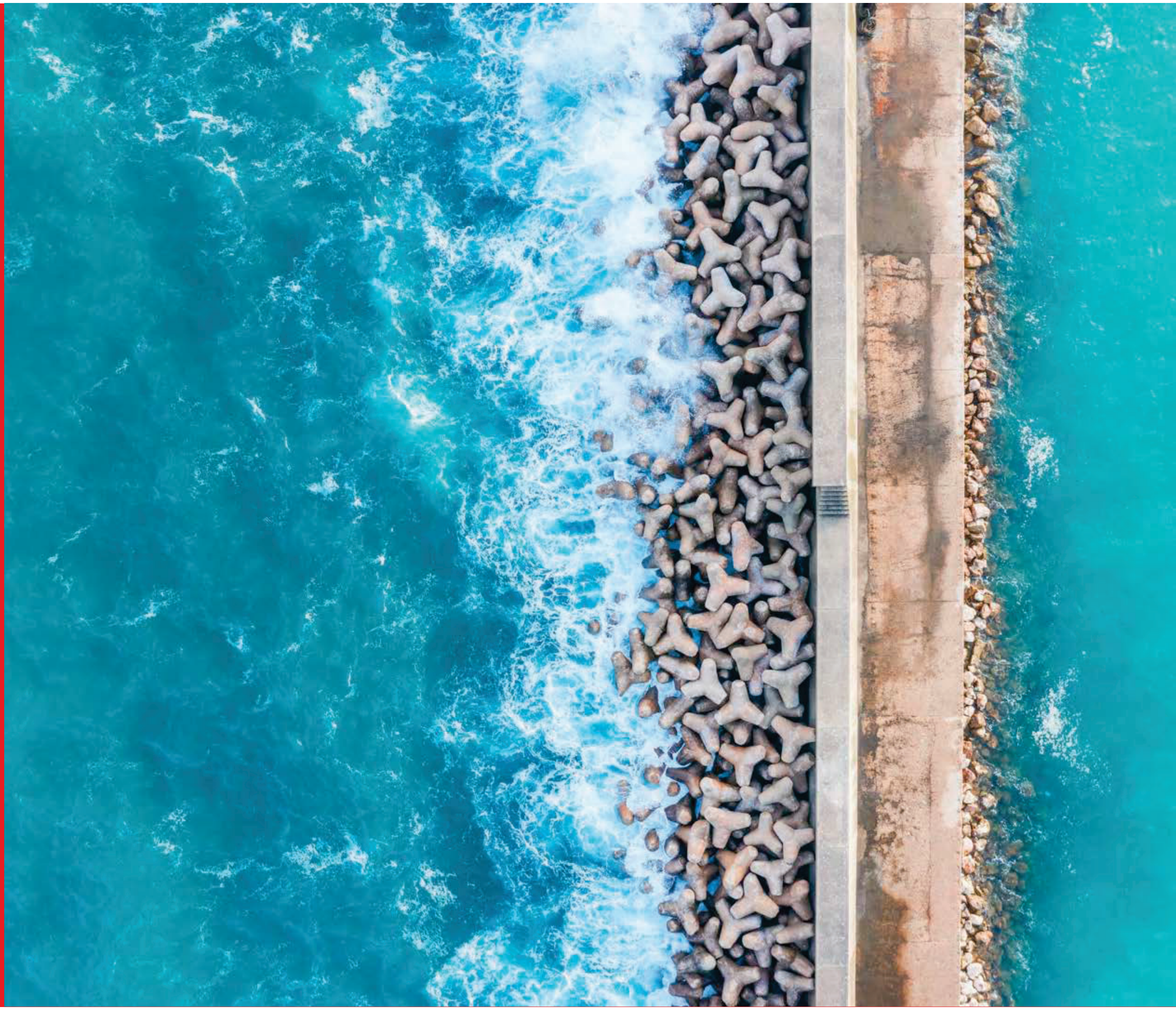
| Index | Definition |
|---|---|
| **MSCI Israel IMI** | The MSCI Israel Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the Israeli market. With 100 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in Israel. |
| **MSCI Europe ex UK IMI Index** | The MSCI Europe ex UK IMI Index is an equity index which captures large, mid and small cap representation across 14 of 15 Developed Market (DM) countries in Europe* excluding the UK. With 955 constituents, the index is comprehensive, covering approximately 99% of the free float-adjusted market capitalization in each country. |
| **MSCI Pacific ex Japan IMI** | The MSCI Pacific ex Japan Investable Market Index (IMI) captures large, mid and small cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 383 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in each country. |
| **Dow Jones U.S. Total Stock Market Index** | A capitalization-weighted index of stocks representing all U.S. equity eligible securities. |
| **S&P 500** | The S&P 500® is widely regarded as the best single gauge of large-cap U.S. equities and serves as the foundation for a wide range of investment products. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization. |
| **S&P GSCI** | A world-production weighted index that is based on the average quantity of production of each commodity in the index. |
| **Russell 3000 Index** | The Russell 3000 Index is a market-capitalization-weighted equity index that seeks to track 3000 of the largest U.S.-traded stocks. |
| **Russell 2000 Index** | The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership. |
| **Bank of America Merrill Lynch U.S. Corporate Index** | An unmanaged index considered representative of fixed-income obligations issued by U.S. corporates. |
| **Bank of America Merrill Lynch U.S. High Yield Index** | An unmanaged index considered representative of sub-investment grade fixed-income obligations issued by U.S. corporates. |
| **Bloomberg U.S. Government Index** | An unmanaged index considered representative of fixed-income obligations issued by the U.S. government. |
| **Bloomberg Long Credit Index** | An unmanaged index considered representative of long duration fixed-income obligations issued by U.S. corporates. |
| **Bloomberg Global Aggregate Index** | The Bloomberg Global Aggregate Index is a flagship measure of global investment grade debt from twenty-eight local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. |

# Appendix
## Index Definitions

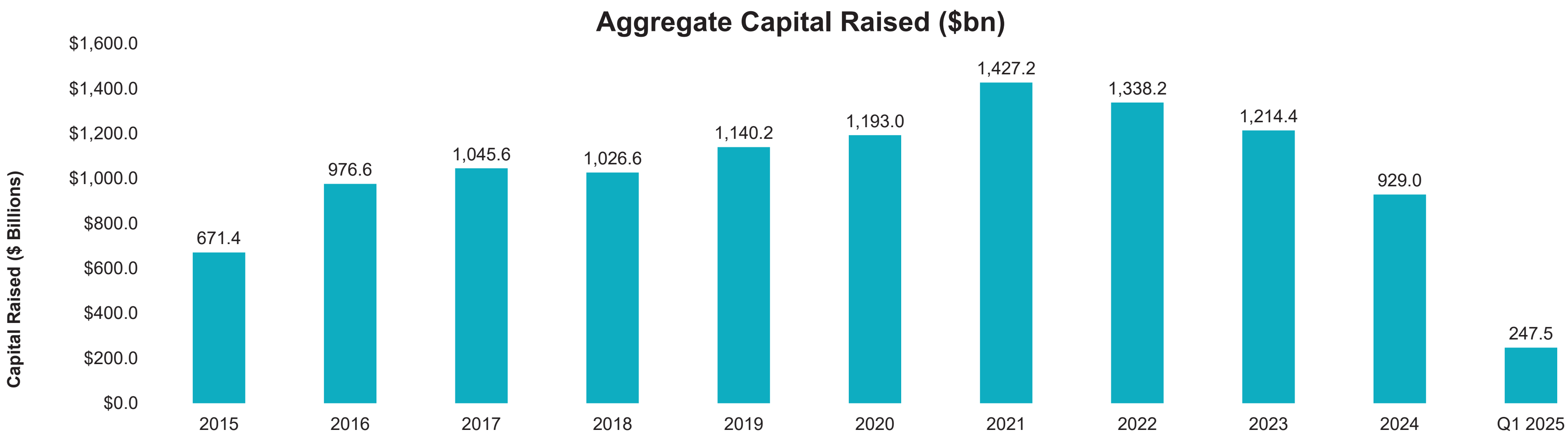
| Index | Definition |
|---|---|
| **Bloomberg U.S. Government: Long** | The Bloomberg U.S. Government: Long Index tracks U.S. dollar denominated, fixed-rate, nominal U.S. Treasuries and U.S. agency debentures (securities issued by U.S. government owned or government sponsored entities, and debt explicitly guaranteed by the U.S. government) with maturities equal or greater than 10 years |
| **Bloomberg U.S. Corporate High Yield Index** | The Bloomberg U.S. Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on the indices' EM country definition, are excluded. The U.S. Corporate High Yield Index is a component of the U.S. Universal and Global High Yield Indices. |
| **Bloomberg Global Treasury ex-U.S.** | The Bloomberg Global Treasury Index tracks fixed-rate, local currency government debt of investment grade countries, outside the United States.. The index represents the treasury sector of the Global Aggregate Index. |
| **Bloomberg U.S. Aggregate Index** | The Bloomberg U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, U.S. dollar denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, fixed rate agency MBS, ABS and CMBS (agency and non-agency). |
| **Bloomberg U.S. TIPS Index** | The Index measures the performance of the U.S. treasury inflation linked bond market. |
| **Bloomberg Commodity Index** | The Bloomberg Commodity Index is a broadly diversified commodity price index distributed by Bloomberg Index Services Limited. |
| **J.P. Morgan EMBI Global Diversified Index** | The J.P. Morgan EMBI Global Diversified Index (EMBIGD) tracks liquid, U.S. Dollar emerging market fixed and floating-rate debt instruments issued by sovereign and quasi-sovereign entities. |
| **JP Morgan EMBI Global** | The J.P.Morgan Emerging Markets Bond Index Global ("EMBI Global") tracks total returns for traded external debt instruments in the emerging markets and is an expanded version of the JPMorgan EMBI+. |
| **HFRI Fund Weighted Composite** | The HFRI Fund Weighted Composite Index is a global, equal-weighted index of single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. Dollar and have a minimum of $50 Million under management or $10 Million under management and a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds. |
| **HFRI Fund of Funds** | HFR FOF Indices are comprised of funds that are constituents of the HFRI 500 Index and are designed to synthetically (S) represent the performance of Low, Mid or High volatility fund of funds. |
| **FTSE NARIET** | The FTSE Nareit U.S. Real Estate Index Series tracks the performance of the U.S. REIT industry at both an industry-wide level and on a sector-by-sector basis. |
| **NCREIF NFI-ODCE** | The NFI-ODCE, like the NCREIF Property Index (NPI) and other stock and bond indices, is a capitalization-weighted index based on each fund's net invested capital, which is defined as beginning market value net assets (BMV), adjusted for weighted cash flows (WCF) during the period. |
| **FTSE Global Core Infrastructure** | The FTSE Infrastructure Index Series is a comprehensive set of nine cap-weighted indices, diversified across six FTSE-defined infrastructure sub-sectors, to reflect the performance of infrastructure and infrastructure-related listed securities worldwide. |

# Q1 2025 Global Private Equity Market Overview

July 2025



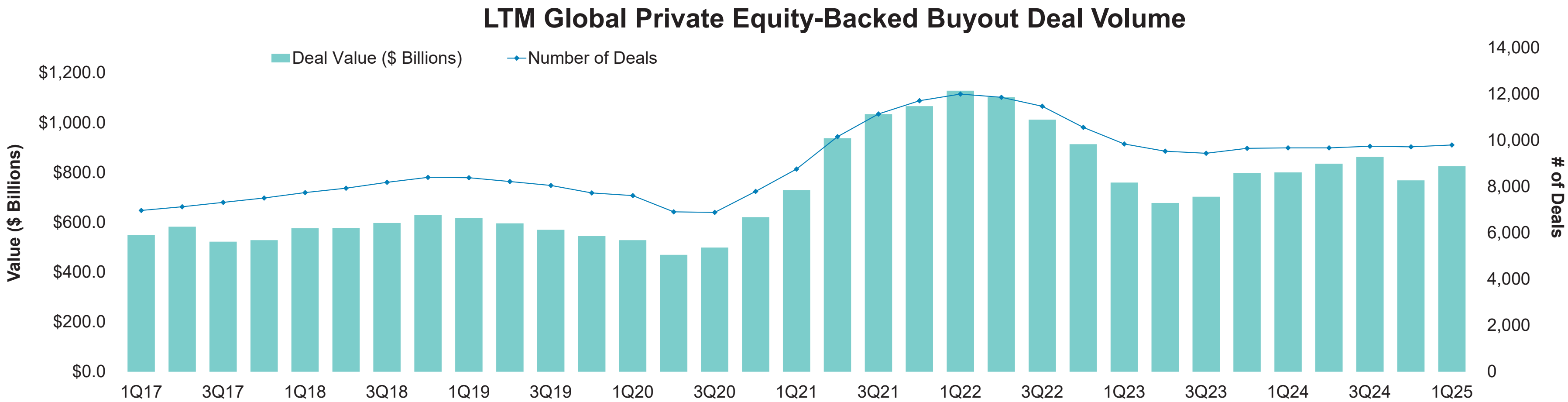
# Private Equity Overview




**Fundraising**

- In Q1 2025, $247.5 billion of capital was raised by 717 funds, which was an increase of 30.0% on a capital basis but a decrease of 13.7% by number of funds closed over the prior quarter. The number of funds closed increased by 0.4%, while capital raised decreased by 5.9% when compared to Q1 2024.[1]
  - Capital raised and the number of funds closed in Q1 2025 represented a decrease of 18.9% and 44.9%, respectively, compared to five-year quarterly average.
  - The majority of capital was raised by funds located in North America, comprising 54.6% of the quarter's total. This was down from 65.9% during the prior quarter. Capital raised by European managers accounted for 47.4% of capital raised during the quarter, a large increase from 26.9% in Q4 2024. The remainder was attributable to managers located in Asia and other parts of the world.
- Dry powder stood at $3.4 trillion at the end of the Q3 2024, a decrease compared to year-end 2023's total of $3.7 trillion, but an increase of 4.5% compared to the five-year average.[1]

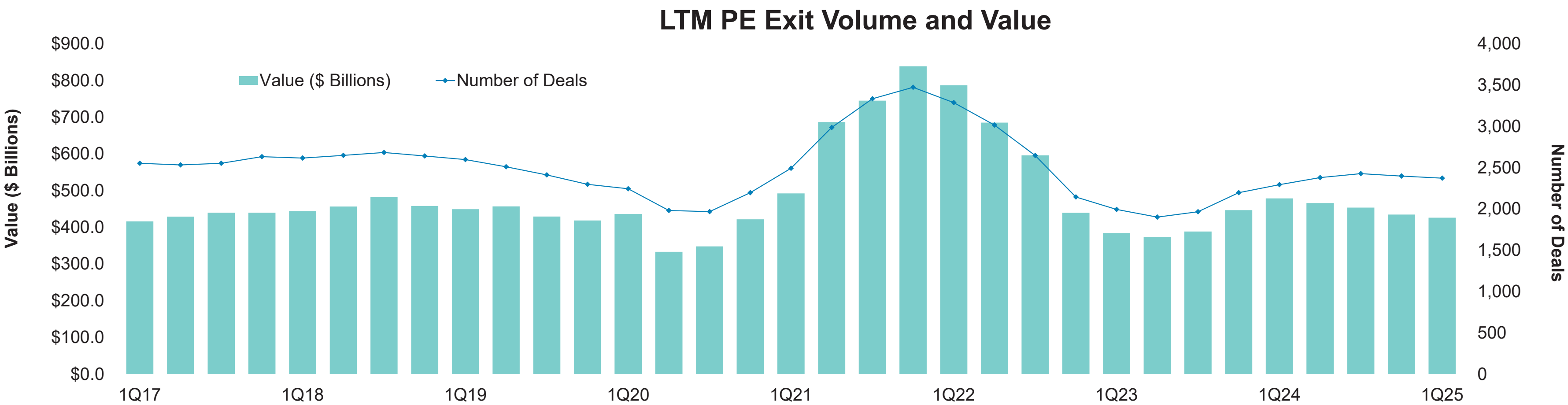
# Private Equity Overview (cont.)




**Activity**

- Global private equity-backed buyout deals totaled $210.8 billion in Q1 2025, which was an increase of 11.1%, on a value basis, compared to Q4 2024. On a number of deals basis, however, the quarter's total decreased by 5.9% over the prior quarter as the average deal size increased. Q1 2025's global buyout deal value and count was 36.7% and 3.2% higher, respectively, than Q1 2024's totals.[1]
  - Deal value in Q1 2025 experienced a slight increase of 1.2% compared to the five-year quarterly average.
  - Add-on deals comprised the largest number of completed deals by type, accounting for 49.9% of the quarter's total.
- On a TTM basis, median U.S. private equity EV/EBITDA multiples reached 12.2x at the end of Q1 2025, a decrease compared to the 13.1x seen at the end of 2024.[3]
  - The median purchase price multiple for U.S. PE buyout transactions in Q1 2025 was lower than the five-year average of 12.5x EBITDA, but higher than the ten-year average of 11.5x EBITDA.
- In Europe, on a TTM basis, median private equity EV/EBITDA multiples reached 12.7x at the end of Q1 2025, roughly in line with the 12.8x multiple seen at the end of 2024. This was up compared to the five-year average of 11.6x and the ten-year average of 11.0x.[3]
- GPs were able to obtain debt financing, however equity comprised a higher proportion of completed transactions. For U.S. broadly syndicated loan-funded transactions, debt comprised 45.7% of completed transactions, a slight decrease compared to the prior quarter's 47.7%.[3]

# Buyouts / Corporate Finance




Sources: Preqin

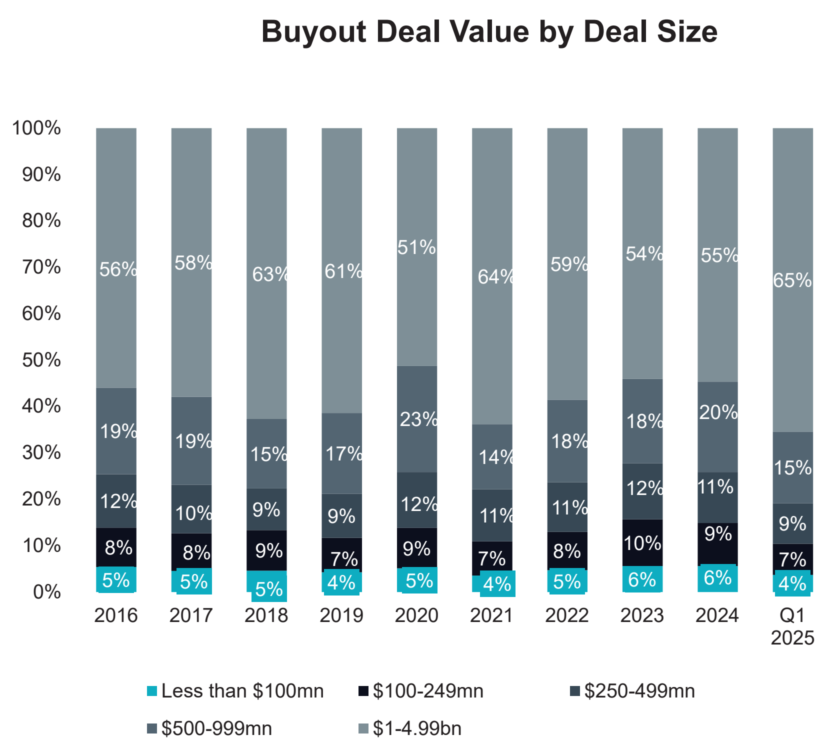
**Fundraising**

- $105.1 billion was closed on by 261 buyout and growth funds in Q1 2025, an increase compared to $94.6 billion raised by 259 funds in Q4 2024. However, this represented a decrease of 36.1% compared to capital raised in Q1 2024.[1]
  - Activity in Q1 2025 was lower, on a capital and number of funds raised basis, compared to the five-year quarterly average of $138.1 billon raised by 283 funds.
  - Insight Partners Fund XIII Growth Buyout Fund was the largest fund raised during the quarter, closing on $12.5 billion of commitments.
- Buyout and growth equity dry powder was estimated at $1.4 trillion at the end of Q3 2024, down 6.3% compared to the year-end 2023.[1]
  - An estimated 60.3% of buyout dry powder was targeted for North America, while European dry powder comprised 25.2% and Asia/Rest of World accounted for the remainder.

**Activity**

- Globally, buyout exit value totaled $85.6 billion across 530 deals during the quarter, down, on a value and deal count basis, from $129.8 billion in exit value from 597 deals during the prior quarter. Exit value in Q1 2025 was also materially below the five-year quarterly average of $129.1 billion in deal value.[1]

# Buyouts / Corporate Finance




Sources: Preqin

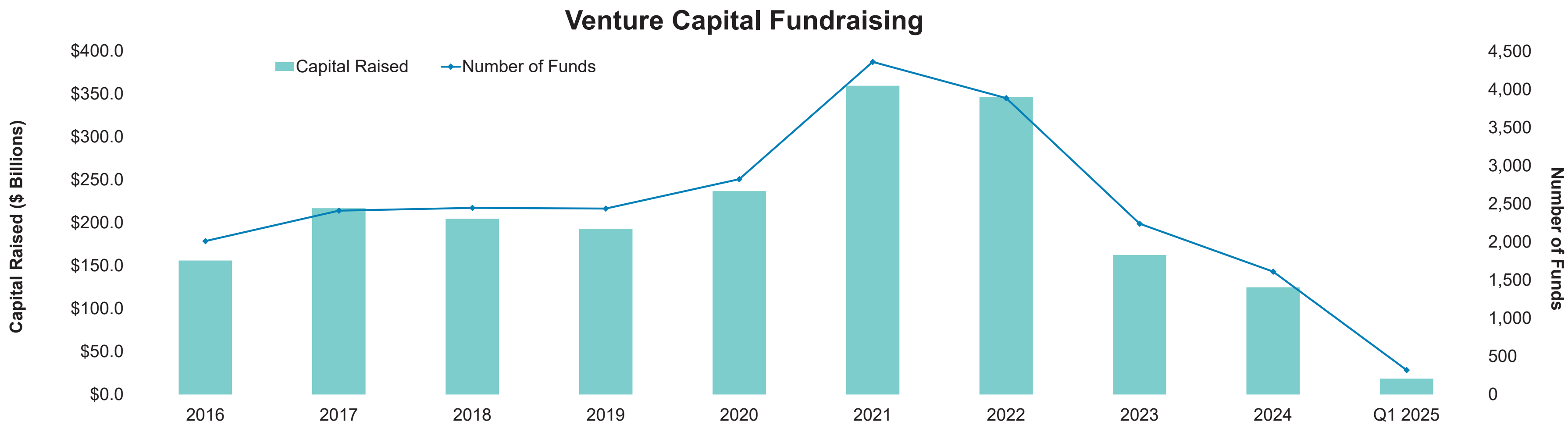
**Activity**

- Global private equity-backed buyout deals totaled $210.8 billion in Q1 2025, which was an increase on a capital basis of 11.1% compared to Q4 2024 and an increase of 1.2% compared to the five-year quarterly average.[1]
  - By geography, deals in North America accounted for the largest percentage of deal value at an estimated 65.9% in Q1 2025, followed by Asia/Australasia (18.8%). By industry, consumer discretionary deals accounted for the largest percentage of deal value at 22.8%, followed by industrials at 19.2%.
- Of deals less than $5.0 billion in size, deals valued between $1.0 billion - $4.9 billion accounted for an estimated 65.3% in Q1 2025 compared to 54.7% of deal value in 2024. Deals valued between $500.0 million to $999.9 million accounted for the second largest weighting, representing 15.4% of total deal value during the quarter.[1]
- On a TTM basis, median U.S. private equity EV/EBITDA multiples reached 12.2x at the end of Q1 2025, a decrease compared to the 13.1x seen at the end of 2024.[3]
  - This was also below the five-year average of 12.5x EBITDA, but above the ten-year average of 11.5x EBITDA.
  - This remained below the peak multiple seen in 2021, where the median EBITDA multiple reached 14.1x.
- In Europe, on a TTM basis, median private equity EV/EBITDA multiples reached 12.7x at the end of Q1 2025, roughly in line with the 12.8x multiple seen at the end of 2024. This was up compared to the five-year average of 11.6x and above the ten-year average of 11.0x EBITDA.[3]
- The equity contribution for U.S. broadly syndicated loan-funded buyout transactions stood at 54.3% in Q1 2025 as transactions were less reliant on debt financing to complete the deals. This remained above the five- and ten-year average levels of 50.9% and 47.9%, respectively.[3]

**Opportunity**[4]

- Mid-market managers with value-creation expertise across business cycles.
- Managers focused on value-oriented strategies and/or corporate carve-outs.

# Venture Capital



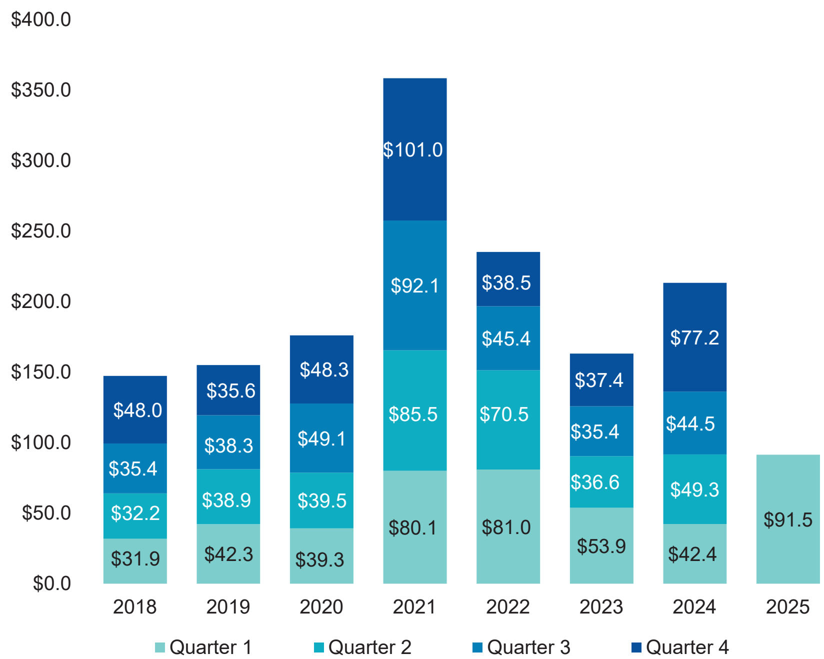

Sources: Preqin

**Fundraising**

- $18.5 billion of capital was raised by 321 funds in Q1 2025, lower, by both capital raised and number of funds closed, from the prior quarter's total of $29.9 billion raised by 419 funds. This was also lower than the $33.2 billion of capital raised by 395 funds during Q1 2024.[1]
  - Q1 2025 fundraising was 69.9% lower, on a capital basis, compared to the five-year quarterly average of $61.6 billion. The number of funds closed in Q1 2025 was also materially lower than the five-year quarterly average of 746 funds.
  - US Innovative Technology Fund was the largest fund raised during the quarter with total commitments of $2.3 billion.
- At the end of Q1 2025, there were an estimated 7,354 funds in market targeting $444.2 billion.[1]
  - A fund being raised by Zhongwan Capital was the largest fund in market, targeting an estimated $14.9 billion.
  - The majority of funds in market are seeking commitments of $200.0 million or less.
- Dry powder was estimated at $658.7 billion at the end of Q3 2024, down from year-end 2023's total of $712.1 billion.[1]

# Venture Capital

**U.S. Venture Capital Investments by Quarter ($B)**




Source: Pitchbook / NVCA

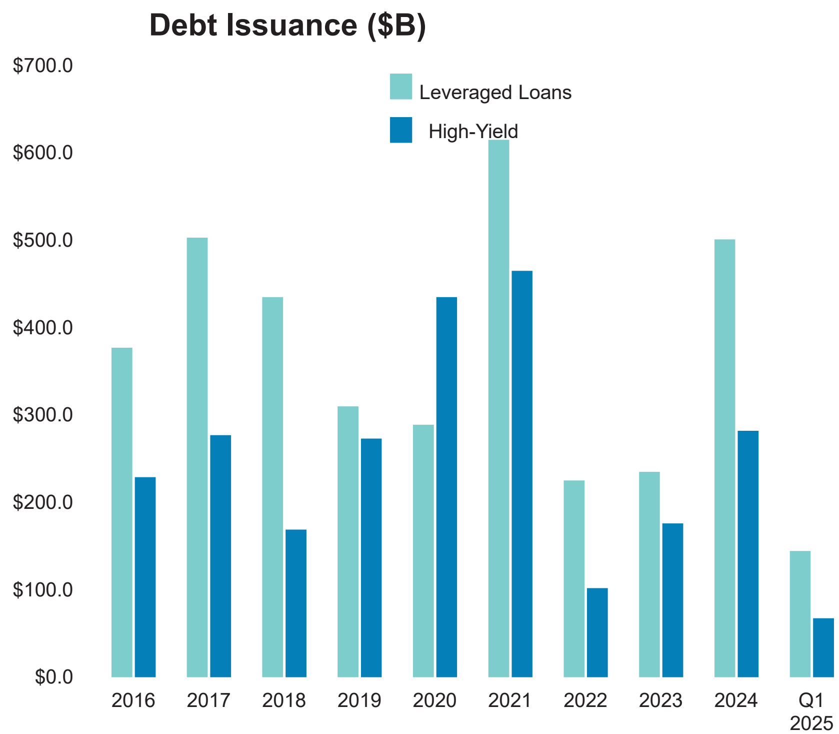
**Activity**

- During the quarter, an estimated 3,990 U.S. venture-backed transactions totaling $91.5 billion were completed, which was an increase of 18.5% on a capital basis and 10.9% by deal count over the prior quarter, which saw 3,599 deals completed totaling $77.2 billion. This was also an increase of 34.6% on a capital basis compared to the five-year quarterly average of $57.4 billion.[7]
  - In Q1 2025, there were 78 U.S.-based deals involving unicorn companies, representing roughly $57.5 billion in deal value, driven by substantial investment in the AI space. This was up compared to the prior quarter, which saw 64 unicorn-related deals close at a deal value of $43.9 billion. The quarter's unicorn deal value was also above the five-year quarterly average of $20.4 billion.[7]
- All median pre-money valuations decreased relative to the valuations seen at the end of the prior quarter, with the exception of Series A. Compared to the prior quarter, Seed valuations decreased from a median pre-money valuation of $17.1 million to $17.0 million, Series B decreased from $162.1 million to $132.2 million, Series C decreased from $360.0 million to $164.0 million, and Series D and later decreased from $651.9 million to $543.7 million. Series A valuations increased from $47.0 million to $52.5 million.[8]
- Total U.S. venture-backed exit value increased during the quarter, totaling approximately $56.2 billion across an estimated 385 completed transactions compared to $41.3 billion of value across 359 exits in Q4 2024. However, Q1 2025 exit value remained below the five-year quarterly average of $81.4 billion from 360 transactions.[7]
  - The number of U.S. venture-backed initial public offerings was down slightly compared to the prior quarter, with 12 IPOs completed in Q1 2025 at a value of $25.9 billion. 205 exits occurred by acquisition, marking a decrease over the prior quarter's 226 acquisitions, and accounted for $22.7 billion in exit value.[7]

**Opportunity**[4]

- Early stage continues to be attractive, although we continue to monitor valuations
- Technology sector, with emerging AI, digital health, and potential for new energy & climate-related innovation

# Leveraged Loans & Mezzanine




Sources: UBS

**Leveraged Loans**

**Fundraising**

- New U.S. CLO issuance totaled $43.4 billion in Q1 2025, which was a decrease compared to the $53.8 billion issued in Q4 2024. CLO issuances through Q1 2025 represented 22.3% of 2024's total.
- High-yield debt issuance totaled $67.5 billion in Q1 2025, down 20.9% compared to Q1 2024. While this is below the high levels of issuance seen in 2020 and 2021, on an annualized basis, it more closely aligns with the issuance level seen in the pre-Covid years.[2]

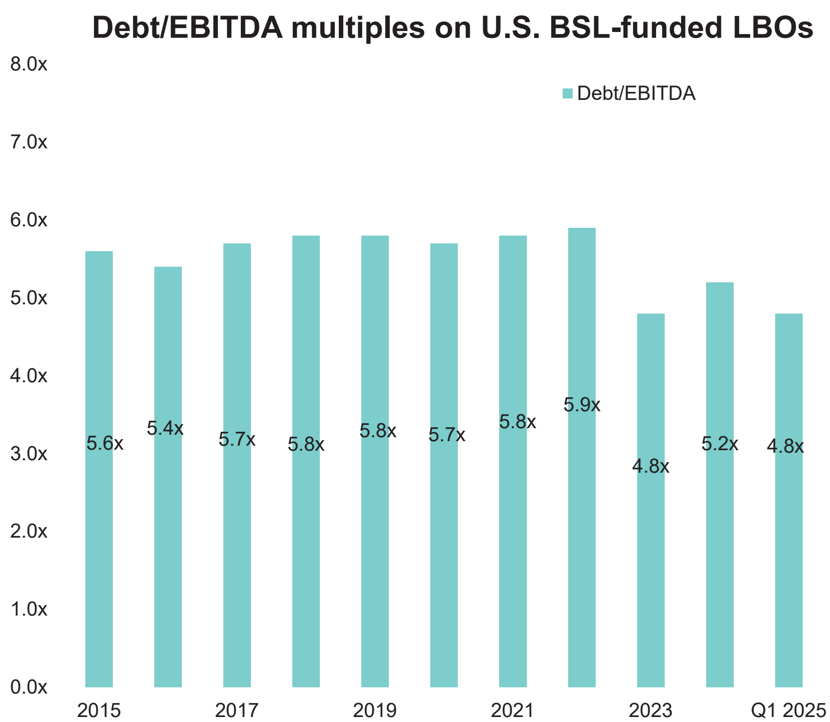
**Activity**

- U.S. institutional leveraged loan primary volume totaled $144.5 billion through Q1 2025, a slight increase compared to $143.5 billion during the same period in 2024 (+0.7%).[2]
    - Loan issuance for M&A activity is expected to remain strong in 2025 in addition to continued activity related to repricing and managing loan maturities, however macro-economic factors may impact these projections.
- European institutional loan issuance, including repricing and extensions, totaled €99.8 billion in Q1 2025, which marked a quarterly record for the European market.[3]

**Opportunity** [4]

- Funds with the ability to source deals directly and the capacity to scale for large transactions (both sponsored and non-sponsored)
- Funds with an extensive track record, experience through prior credit cycles, and staff with workout experience

# Leveraged Loans & Mezzanine




Sources: Pitchbook / LCD

**Activity**

- For U.S. broadly syndicated loan-funded transactions, debt comprised 45.7% of completed transactions in Q1 2025, a slight decrease compared to the prior year's total of 47.7%. This compares to the five- and ten-year averages of 49.1% and 52.1%, respectively.[3]
- According to UBS, primary market activity continues to be weighted towards new money offerings, while transactions with opportunistic uses of proceeds have declined compared to the start of the year.[2]
- While UBS expects activity to remain robust in 2025, key events to consider that may impact continued activity include the progression of rate cuts by the Federal Reserve, regulatory and policy changes implemented by the Trump administration, and continued geopolitical events in the Middle East and Asia.

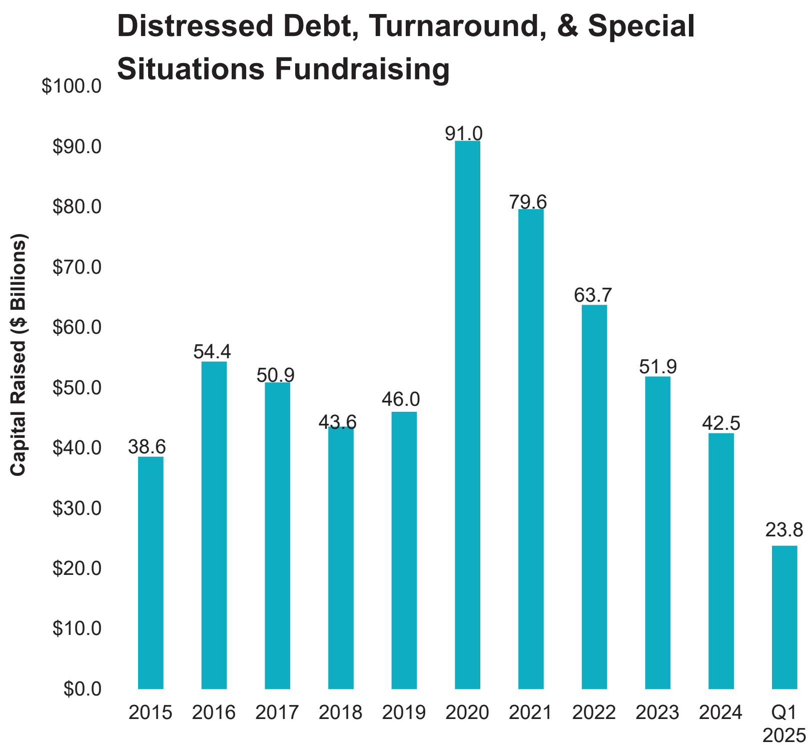
**Mezzanine**
**Fundraising**

- 5 funds closed on $4.0 billion during the quarter, an increase from the prior quarter's total of $0.6 billion raised by 5 funds. Capital raised in Q1 2025 was also an increase of 89.6% compared to Q1 2024. However, this represented a decrease compared to the five-year quarterly average of $6.4 billion.[1]
- Estimated dry powder was $49.2 billion at the end of Q3 2024, down from $63.8 billion at the end of 2023.[1]
- An estimated 122 funds were in market targeting $32.8 billion of commitments. Blackstone Capital Opportunities Fund V was the largest fund in market targeting commitments of $10.0 billion.[1]

**Opportunity**[4]

- Funds with the capacity to scale for large sponsored deals

# Distressed Private Markets

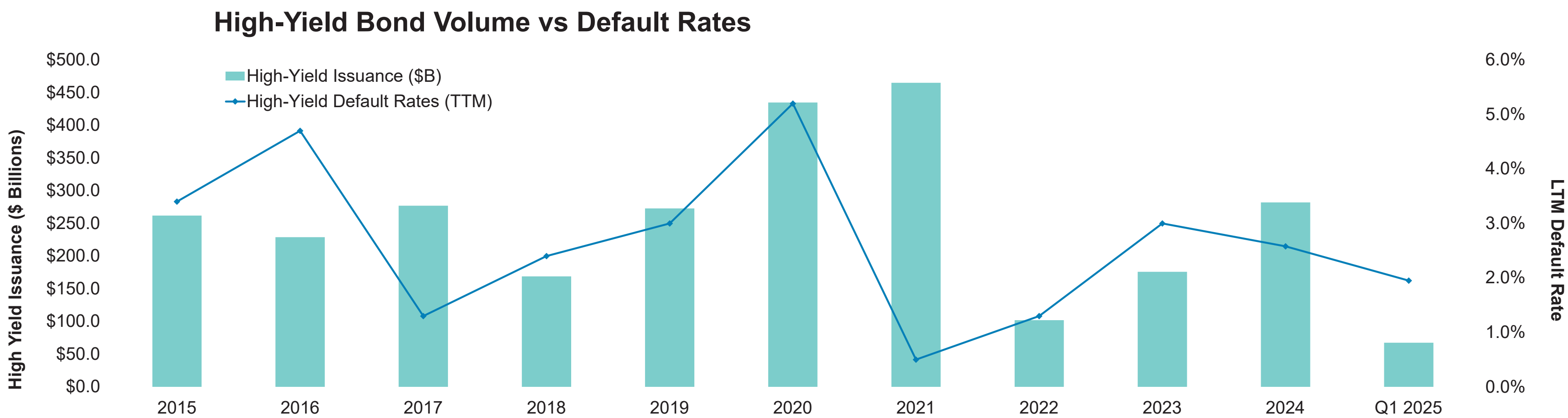



Source: Preqin

**Fundraising**

- During the quarter, $23.8 billion was raised by 16 funds, up from the $14.3 billion raised by 15 funds during Q4 2024. Capital raised in Q1 2025 represented 56.0% of 2024's total of $42.5 billion.[1]
  - Capital raised in Q1 2025 increased by 240.8% compared to Q1 2024's total of $7.0 billion.
  - Q1 2025's fundraising was 44.8% higher than the five-year quarterly average of $16.4 billion.
  - The average closed fund size was $1.6 billion in Q1 2025, an increase compared to the $1.1 billion average in Q4 2024. This was also an increase of 89.6% compared to the five-year quarterly average of $836.6 million.
- Dry powder was estimated at $149.1 billion at the end of Q3 2024, which was down 5.3% from year-end 2023. This was down from the five-year average level of $165.8 billion.[1]
- Roughly 295 funds were in the market at the end of Q1 2025 seeking $130.0 billion in capital commitments.[1]
  - Special situations managers were targeting the most capital, seeking approximately 55.2% of commitments, followed by distressed debt managers seeking 43.6% of commitments.
  - Clearlake Capital Partners VIII was the largest fund in market with a target fund size of $15.0 billion.

# Distressed Private Markets




Sources: UBS / Fitch Ratings

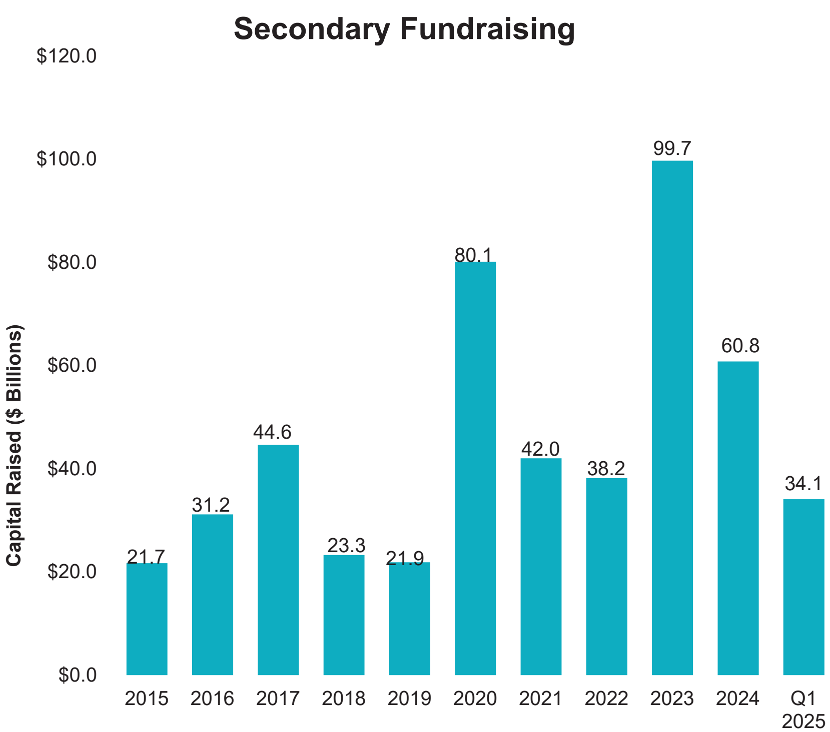
**Activity**

- The TTM U.S. high-yield default rate was 1.95% as of March 2025, which was down from December 2024's TTM rate of 2.58%. Fitch expects the high-yield default rate to trend higher in 2025, with forecasted default rates in 2025 of 4.0% to 4.5% (up from 2.5% to 3.0%).[6]
- Continued market dislocations caused by macroeconomic factors as well as higher-for-longer interest rates may supply additional distressed opportunities in the next several months, notably if the default rate moves higher.

**Opportunity** [4]

- Funds capable of performing operational turnarounds
- Funds with the flexibility to invest globally

# Secondaries




Source: Preqin

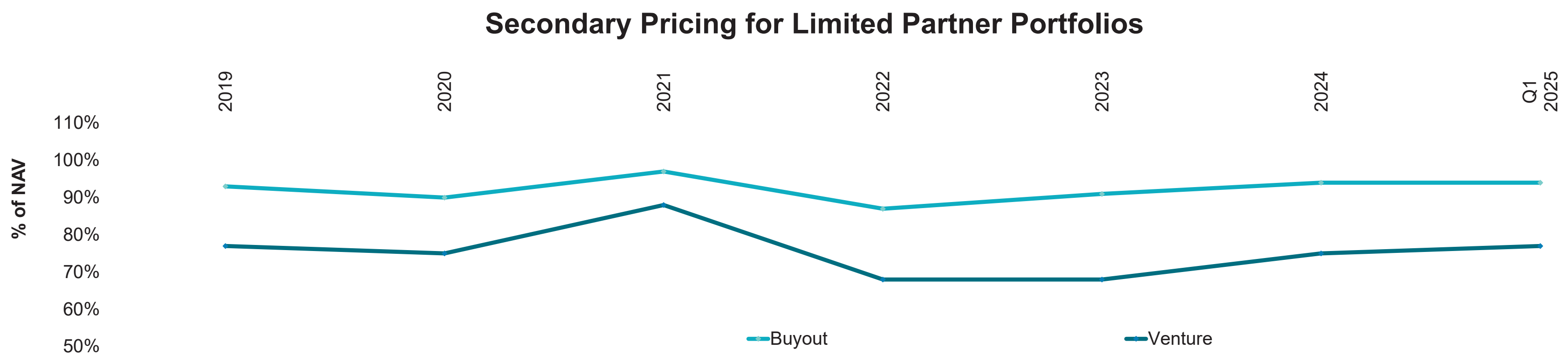
**Fundraising**

- 10 funds raised $34.1 billion during Q1 2025, up significantly from the $7.9 billion raised by 22 funds in Q4 2024. This was also an increase compared to the five-year quarterly average of $16.0 billion.[1]
  - ASF IX was the largest fund closed during the quarter with total commitments of $30.0 billion.
- At the end of Q1 2025, there were an estimated 209 secondary funds in market targeting roughly $82.7 billion. The majority of secondary funds are targeting North American investments.[1]
  - Coller International Partners IX was the largest fund being raised, seeking $10.0 billion in commitments.

**Activity**

- Limited Partner transactions continue to have participation from a broad base of buyers and sellers with selling activity spread across LP seller types. Notably, there has been an influx of retail capital stemming from '40 Act Funds. [16]
- Given the continued liquidity needs of Limited Partners, and the effects of slower distributions and longer hold periods, Jefferies expects continued adoption of secondaries transactions by a growing number of Limited Partners.[16]
- Dry powder levels remains robust, as many of the the largest secondary players have raised capital over the last 24 months. Notably, these firms are able to write larger checks to purchase sizable LP portfolios.[14]
- Jefferies noted continued demand for secondary transactions involving new vintage year exposure with well-regarded, high conviction managers. Demand for transactions involving middle-market buyouts in North America and Western Europe continue to be a highly sought after space.[16]

# Secondaries




Source: Jefferies

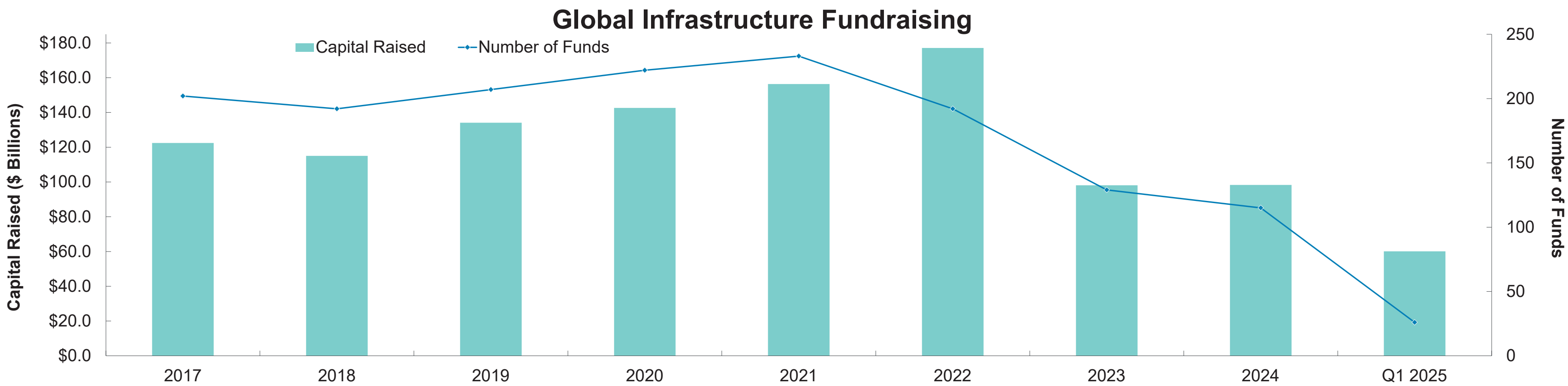
**Activity**

- Limited partner portfolio pricing continued to improved relative to the lows seen in H2 2022 given public market price momentum and more aggressive buyer activity. The average discount rate for LP buyout and venture capital portfolios finished Q1 2025 at 6.0% and 23.0%, respectively, with buyout discounts being flat and venture discounts decreasing 200 bps compared to Q4 2024. Jefferies expects pricing to remain relatively consistent in 2025 as demand remains stable, notably from retail entrants into the market and recent fundraising activity by large secondary managers. This, coupled with secondary dry powder available to invest, is expected to drive strong transaction volume in 2025, albeit buyers remain cautious as they evaluate potential tariff impacts on portfolio companies.[17]
- Payment deferrals and structured equity solutions, notably mosaic structures, continue to be prevalent in the LP portfolio market and are used to improve pricing and deal returns in an increasingly competitive environment.[16]
- GP-led volume is expected to remain robust in 2025 compared to the prior year, according to Jefferies. While transaction value is expected to increase, GP-led transactions, as a share of the secondaries market, are expected to remain relatively flat compared to the prior year. Numerous factors support a healthy GP-led market including Limited Partner's desire for liquidity, an increase in funds and capital targeting GP-led transactions, and a growing universe of potential syndicate investors.[17]
- According to a recent survey conducted by PJT, a higher percentage of GPs indicated use of the secondaries market in the next 24 months to not only provide liquidity to Limited Partners, but also to increase follow-on investments in high performing companies. Roughly 63% of respondents indicated the use of secondaries as likely or highly likely over the next 24 months.[14]

**Opportunity**[4]

- Funds that are able to execute complex transactions
- Niche strategies

# Infrastructure

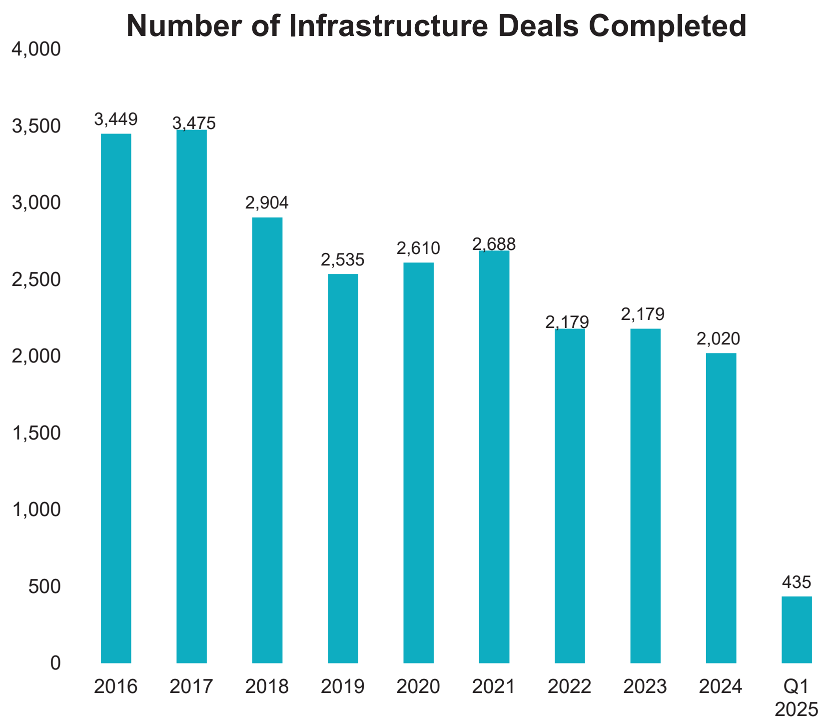



Source: Preqin

**Fundraising**

- $60.1 billion of capital was raised by 26 funds in Q1 2025 compared to $20.1 billion of capital raised by 31 funds in Q4 2024 and $38.5 billion of capital raised by 35 funds in Q1 2024. This was an increase of 78.7% compared to the five-year quarterly average of $33.6 billion. Funds with a primary geographic focus on Europe raised the majority of capital during the quarter at 64.9%, followed by North America at 31.3%. [1]
  - EQT Infrastructure Fund VI was the largest fund closed during the quarter with aggregate commitments of $23.3 billion.
- As of the end of Q1 2025, there were an estimated 684 unlisted infrastructure funds in the market seeking roughly $513.3 billion.[1]
  - The largest funds in market, Global Infrastructure Partners V and ALTÉRRA Acceleration, each had a target fund size of $25.0 billion.
  - The 10 largest funds in market are currently seeking a combined $156.9 billion in capital.
- Concerns surrounding the relative availability and pricing of assets remain. Fundraising remains competitive given the number of funds and aggregate target level of funds in market. Investor appetite for the asset class persists despite the strong levels of dry powder and increased investment activity from strategic and corporate buyers as well as institutional investors.

# Infrastructure




Source: Preqin

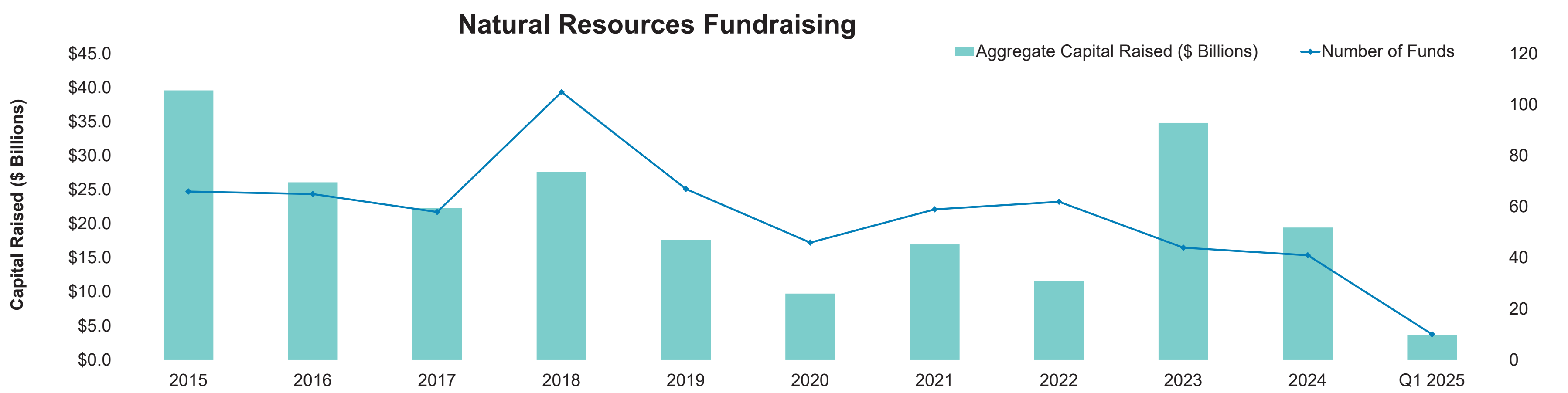
**Activity**

- Infrastructure managers completed 435 deals for an aggregate deal value of $151.0 billion in Q1 2025, an increase, on a capital basis, compared to 482 deals totaling $81.4 billion completed in Q4 2024.[1]
  - By region, North America produced the largest value of completed deals, with 59.1% of deal value being completed in the region, followed by APAC at 26.2%. Europe amassed only 9.8% of value during Q1 2025, the lowest percentage since Q2 2019.
- Infrastructure dry powder totaled $373.9 billion at the end of Q3 2024, a decrease compared to year-end 2023's total of $398.6 billion.

**Opportunity** [4]

- Mid-market core+ and value-add infrastructure as well as a platform investing approach continue to offer the best relative value.
- Assess funds with pre-specified assets with caution due to possible lag in and uncertainty around valuation impact.
- Blind-pool funds may be better positioned to take advantage of the market dislocation in certain sub-sectors, however careful review of such strategies is required.
- Build-to-core greenfield strategies particularly in the social / PPP infrastructure space offer a premium for investors willing to take on construction / development risk.

# Natural Resources




Source: Preqin

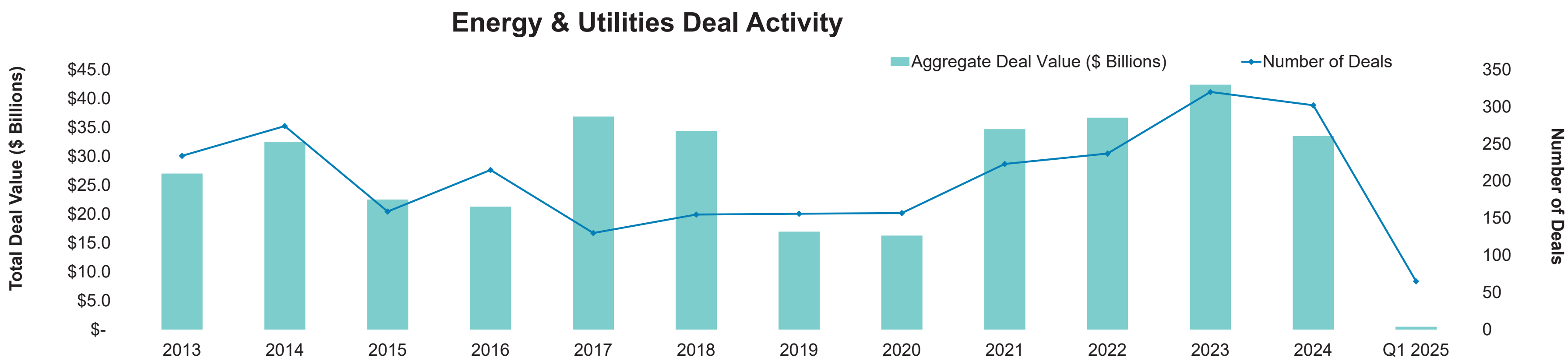
**Fundraising**

- During Q1 2025, 10 funds closed on $3.6 billion, a decrease compared to 12 funds closing on $10.8 billion during the prior quarter. This was also a decrease, on a capital raised and number of funds closed basis, of 22.3% and 20.6%, respectively, compared to the five-year quarterly average.[1]
- Dry powder stood at roughly $66.4 billion at the end of Q3 2024, which was almost equal to year-end 2023's level of $67.4 billion. This was higher than the five-year average of $58.1 billion.[1]

**Activity**

- Crude oil prices decreased quarter-over-quarter and year-over-year, while natural gas prices increased.
  - WTI crude oil prices decreased 2.7% during the quarter to $68.24 per bbl. This was a decrease of 16.0% compared to Q1 2024.[10]
  - Brent crude oil prices ended the quarter at $72.73/bbl, down 1.53% compared to the prior quarter. This was also a decrease of 14.8% from Q1 2025.[10]
  - Natural gas prices (Henry Hub) finished Q1 2025 at $4.12 per MMBtu, which was up 36.9% compared to the prior quarter and up 176.5% from Q1 2024.[10]

# Natural Resources




Source: Preqin

**Activity**

- 65 energy and utilities buyout deals were completed in Q1 2025 totaling $0.5 billion, a decrease, on a value and number of deals basis, compared to 87 completed deals totaling $7.7 billion in Q4 2024.[1]
- A total of 588 crude oil and natural gas rotary rigs were in operation in the U.S. at the end of the quarter. This was down by 0.3% from the prior quarter and down 5.7% over Q1 2024.[13]
  - Crude oil rigs represented 82.0% of the total rigs in operation. 299 of the 482 active oil rigs were in the Permian basin.
  - At the end of Q1 2025, 30.0% and 23.0% of natural gas rigs were operating in the Haynesville and Marcellus basins, respectively.
- The price of iron ore (Tianjin Port) ended the quarter at $103.65 per dry metric ton, down from $105.34 at the end of Q4 2024.[10]

**Opportunity**[4]

- Acquire and exploit existing oil and gas strategies over early-stage exploration in core U.S. and Canadian basins
- Select midstream opportunities

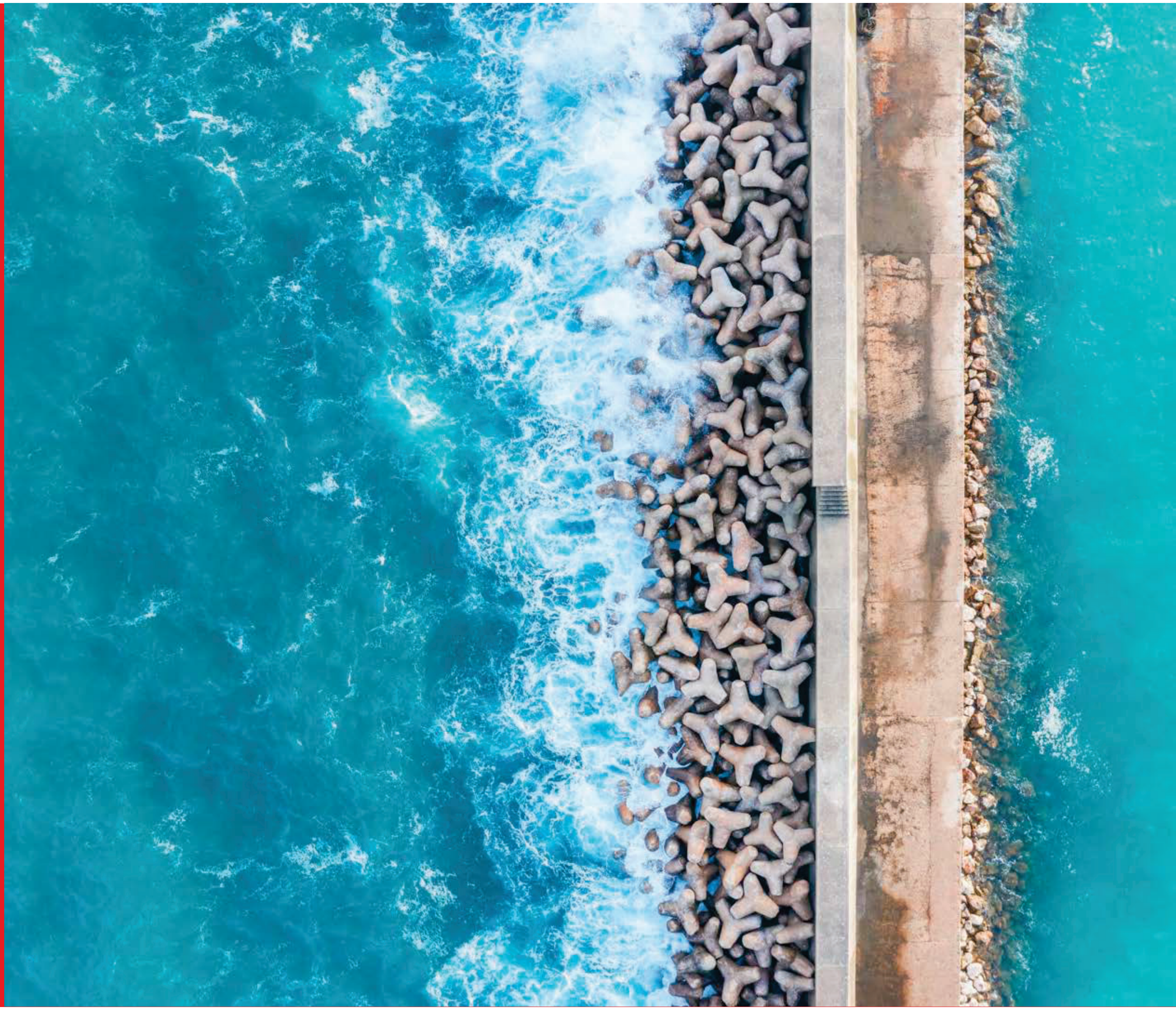
# Notes

1. Preqin
2. UBS
3. Pitchbook / LCD
4. Aon Investments USA Inc.
5. Moody's
6. Fitch Ratings
7. PitchBook/National Venture Capital Association Venture Monitor
8. Cooley Venture Financing Report
9. U.S. Energy Information Administration
10. Bloomberg
11. Setter Capital Volume Report: Secondary Market
12. KPMG and CB Insights
13. Baker Hughes
14. Evercore
15. Campbell Lutyens
16. PJT Partners
17. Jefferies

Notes:
FY: Fiscal year ended 12/31
YTD: Year to date
YE: Year end
LTM: Last twelve months (aka trailing twelve months or TTM)
PPM: Purchase Price Multiples: Total Purchase Price / EBITDA
/bbl: Price per barrel
MMBtu: Price per million British thermal units

# Q1 2025 Real Estate Market Overview

July 2025

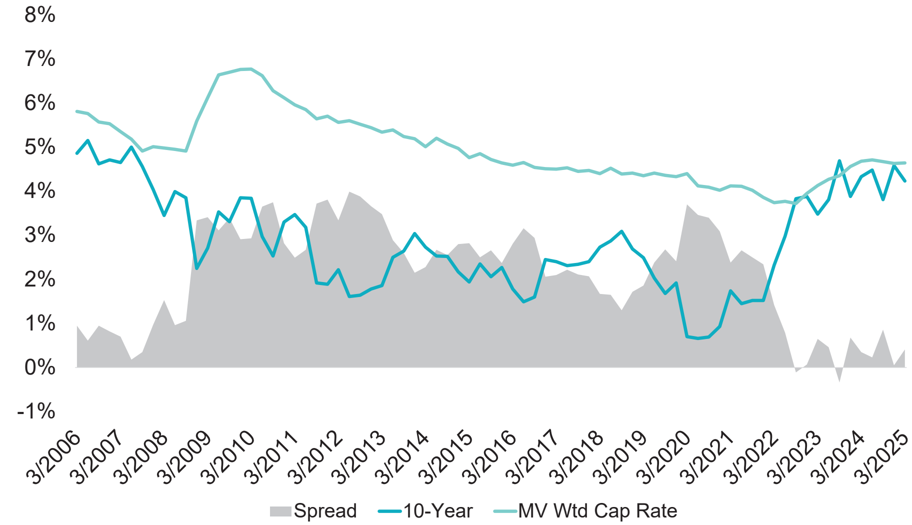


# United States Real Estate Market Update
1Q 2025

## General

- The economy remained resilient in the first quarter while inflation continued to moderate from its June 2022 high; however, remains above the Fed's 2% target largely due to high services and shelter inflation. The Fed has slowed its pace to cut interest rates, citing uncertainty related to tariff sentiment, keeping interest rates within the 4.50%-4.25% target.
- During the first quarter, GDP decreased at an annual rate of 0.5%. The decline was led by net imports and defense spending, partially offset by increases in investment and consumer spending. Investors will continue to monitor economic growth, coupled with headline inflation and tariff sentiment, as an indication of a soft landing out of the current cycle.

**NPI Current Value Cap Rate versus 10yr Treasury**



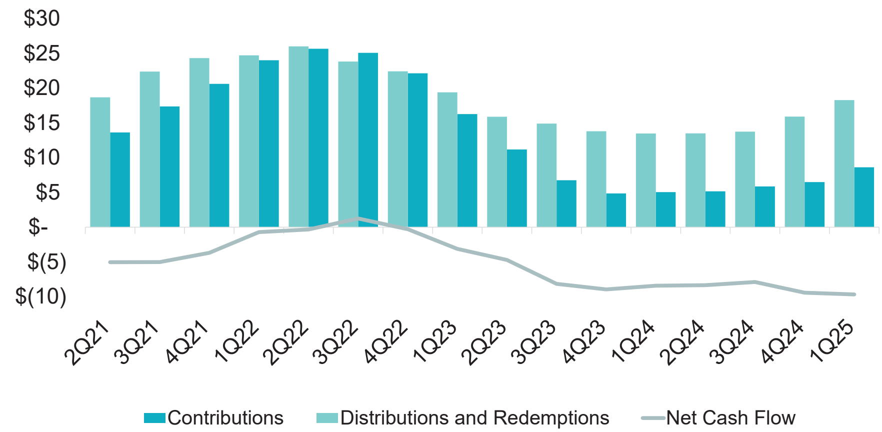

Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Preqin.

# United States Real Estate Market Update
1Q 2025

## Commercial Real Estate

- 10yr Treasury bond yields declined from the prior quarter, ending the quarter at 4.2%. Recent hawkish sentiment from the Fed could indicate a potentially protracted plateau, and subsequent recovery, from a multi-year high. Additionally, the spread between the 10yr Treasury and current value cap rates remain relatively tight, indicating minimal risk premium for commercial real estate investors.
- Capital flows in and out of US stabilized commercial real estate remain negative. Contributions are showing signs of growth; however, distributions and redemptions growth currently outpaces contribution growth. Current investor redemption queues remain elevated at around $30 billion (or 14% of the index), manager payouts remain the range of 5-10% of a given funds' redemption queue.

**NFI-ODCE: Rolling 4 Quarter Cash Flows ($ in Billions)**




Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Preqin.

# United States Property Detail

1Q 2025

## Industrial

Strong NOI growth continues to support capital values. Oversupplied markets continue to revise rental rate assumptions, impacting valuations; however, medium-term sentiment remains healthy.

## Residential

Expanded NPI now includes manufactured housing, single-family rental, and student housing along with apartments. Outsized deliveries continue to forecast weak rental growth for multifamily properties; however, positive appreciation from the new property subtypes helped support overall returns.

## Office

Expanded NPI now includes life sciences and medical office along with traditional office. Medical Office is the only subtype printing positive appreciation.

## Retail

Malls entered this cycle at depressed values, offering investors a value proposition which supported property valuations. NOI growth has also been strong at select properties. Necessity based retail (i.e., grocery and pharmacy anchored) also performed well.

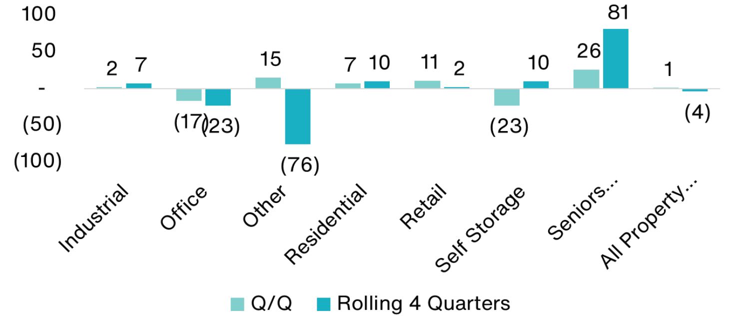
## Other Property Types

Seniors Housing: as seniors delay assisted living, independent living outperforms due to relative demand.

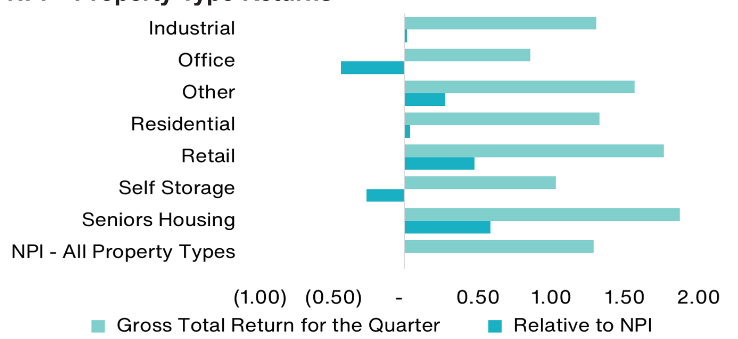
Self-Storage: tends to do well in down cycles when tenants require more storage space.

Other: roughly 1.5% of NPI and is made up of data centers, land, parking, and other.

**Current Value Cap Rate Change by Property Type** (in basis points)




**NPI – Property Type Returns**




Source: NCREIF

# Global Outlook: Major Economies Face Near-Term Growth Uncertainty

## Experts disagree on growth outlook; revise views frequently in response to fluid U.S. policies

### United States

- U.S. administration's shifting tariff policies have created uncertainty, leading businesses to adopt a wait-and-see approach before making major investments.
- Further, policy shifts on taxes, regulation, DOGE, and immigration in the U.S. and other newly elected administrations in Canada, the UK, Germany, and Australia are adding to caution on the part of businesses.
- Unemployment is expected to rise from 4.0% to 4.7% affecting consumer spending. Recent layoffs or hiring cautions have been announced at Microsoft, Meta, Dell, PwC, Panasonic, Burberry, etc.

### EU & UK

- Increasing economic and geopolitical uncertainty – largely precipitated by U.S. policies – have increased headwinds. However, rising household incomes, higher infrastructure and defense spending, and easing financing conditions are expected to support growth.
- U.S. trade policy may be disinflationary for region if goods originally destined for U.S. are 'dumped' elsewhere.
- UK's moderate recovery is expected to continue due to resilient consumer spending, services sector strength and a potential recovery in trade ties with the EU.

### Asia

- On a relative basis, the Australian growth outlook continues to be better than other Western economies due to immigration led population growth, and a healthy labor market supporting consumer spending.
- Japanese growth outlook remains low as exports face pressure from U.S. tariffs and slowing demand from China.
- Chinese economy growth rate is gradually declining weighed down by U.S. tariff pressures and a still struggling property market; however, a positive trade agreement with the U.S. could improve overall economic outlook.

**Global Economic Growth Forecasts Suppressed by Tariffs**

**Real GDP Forecasts (YoY%)**

| Major Regions | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|
| North America | 2.6 | 1.3 | 1.4 | 2.0 |
| European Union | 1.0 | 1.1 | 1.5 | 1.7 |
| Asia Pacific | 4.5 | 3.8 | 3.7 | 3.8 |
| **Selected Markets** | **2024** | **2025** | **2026** | **2027** |
| United States | 2.8 | 1.4 | 1.5 | 2.0 |
| United Kingdom | 1.1 | 0.9 | 1.2 | 1.5 |
| Germany | -0.2 | 0.0 | 1.1 | 1.6 |
| China | 5.0 | 4.2 | 4.0 | 4.0 |
| Japan | 0.1 | 1.0 | 0.8 | 0.8 |
| Australia | 1.1 | 1.9 | 2.3 | 2.5 |

**Considerable Dispersion in U.S. Growth Forecasts**

**U.S. Real GDP Forecasts Among Economic Organizations**

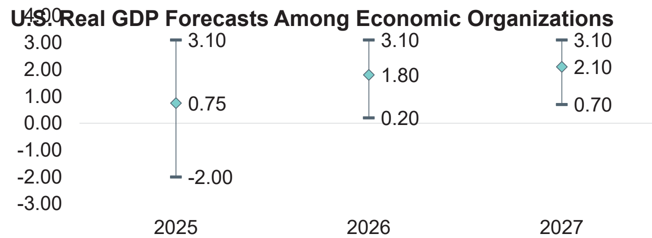



Chart indicates 25th percentile, median, and 75th percentile forecasts

Source: The Townsend Group, Bloomberg (May 2025), Wall Street Journal (April 2025).
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# For Now, Interest Rates, Inflation Expected to Hold at Current Levels

Central bankers, particularly in U.S. and Asia, have ability to lower rates to address growth issues

### United States

- Inflation is expected to inch slightly higher due to the tariff impact and expected to linger due to various onshoring initiatives; however, these projections have turned out to be very unreliable in the past.
- As such, while the dot plot points towards two rate cuts, the Chair emphasized the Fed is in a "good place to wait and see."
- Expected higher rates in the near-term will continue to weigh on asset valuations, but many sectors in real estate are poised well to capture inflation. Additionally, recent inflationary-linked cost increases have increased replacement values, potentially benefitting existing assets.

### EU & UK

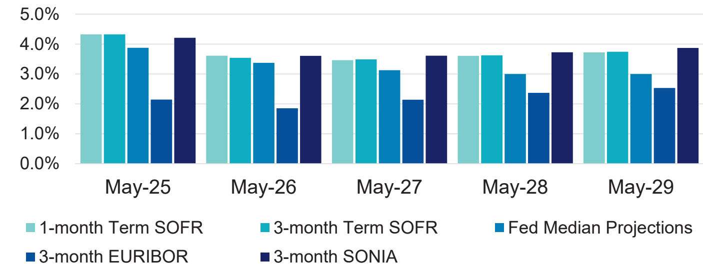
- The ECB has been reducing rates and is likely to continue the gradual lowering path as inflation trends down. Interest rates are lower than U.S. and UK, leading to a positive spread between yields and rates, supporting asset values.
- BoE also lowered rates in May but is now cautious as the services sector inflation rate continues to be elevated.

### Asia

- In Australia, the RBA continues to be cautious in lowering rates, but inflation has been coming under control. Forecast is for rates to come down by 50 bps, which will be supportive of property values.
- In Japan where the interest rates are already low, outlook is for BoJ to increase rates; inflation is higher than historical levels, shifting consumer investment behavior to seek more risky stocks.
- In China, PBoC may reduce rates to support growth but might be limited in doing so to protect the value of its currency.

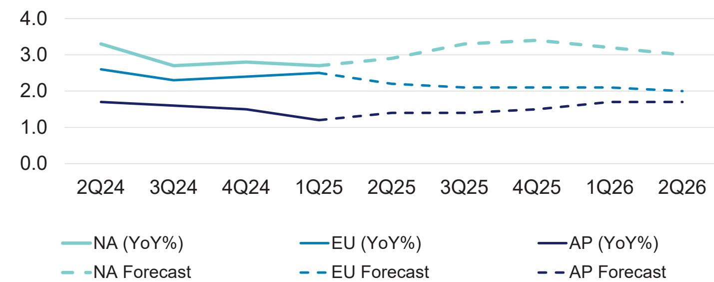
**Interest rates forecast to hold steady**

**Forward Curves**




**Inflation trends vary by region**

**CPI Quarterly**




Source: The Townsend Group, Barclays Private Bank (April 2025), Chatham Financial (May 2025), Bloomberg (May 2025).
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# Investment Markets Are Stressed Offering Compelling Entry Valuations

## Transaction volume decline and market repricing

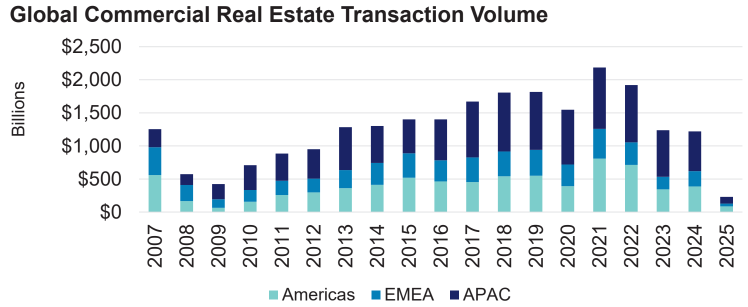
### Global Commercial Real Estate Transaction Volume Signals Stress

- Commercial real estate transaction volume has declined since 2022 as interest rates started to rise in the post-pandemic world.
- Many transactions were initiated over the record investment period from 2013 to 2020. Investors in those assets now seeking exits at a time when other investors are wary of putting additional capital to work. This is leading to significantly better entry valuations for those with medium-term mindset.
- Additionally, many investors are still looking to reduce real estate exposure, and the exit queues of open-end funds continue to be elevated.
- LPs seeking to rebalance portfolios are eager for exit opportunities.
- GPs under pressure to offer an exit and are motivated to offer better terms to new set of investors.

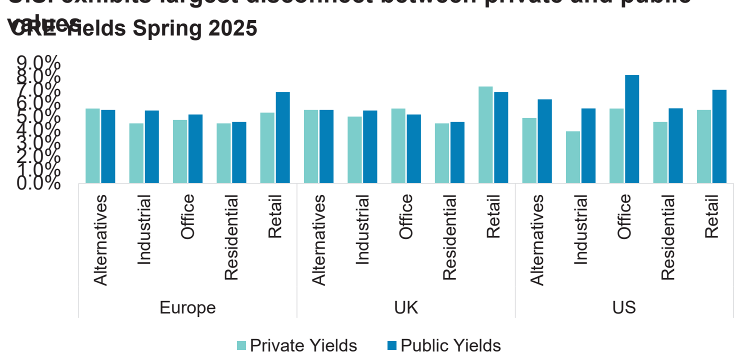
### Lag Between Appraisal Values And Expected Transaction Values

- Rising interest rates since 2022 have driven material cap rate expansion. NCREIF cap rates increased from 3.70% in 3Q22 to 4.65% in 1Q25.
- U.S. Transaction Cap Rates suggest assets are still trading at a premium to current valuations. The weighted average transaction cap rate was 5.66% in 1Q25. Transaction cap rates are useful guidepost, but not necessarily a precise representation of broader asset values.
- Public REIT valuations remain discounted to private real estate valuations in U.S. and Europe.
- Closed-end funds with legacy portfolios might also be subject to a disconnect in appraised valuations versus market valuations.
- Detachment of appraisal market from transaction market is driving demand for secondaries and GP staking.

**Transaction volume held steady in 2024 but remains low**




**U.S. exhibits largest disconnect between private and public values**




Source: The Townsend Group, MSCI Real Assets (May 2025), NCREIF (First Quarter 2025), Green Street (May 2025).
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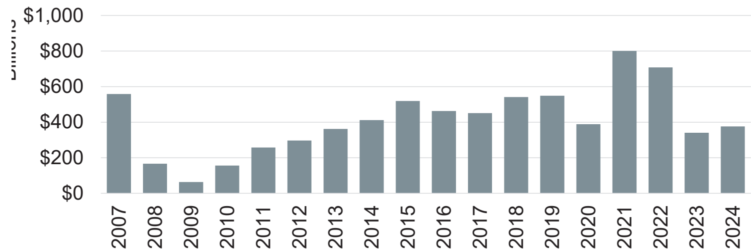
# U.S. Outlook: Real Estate Market Conditions

## Capital markets remain soft, but most property sectors poised for growth

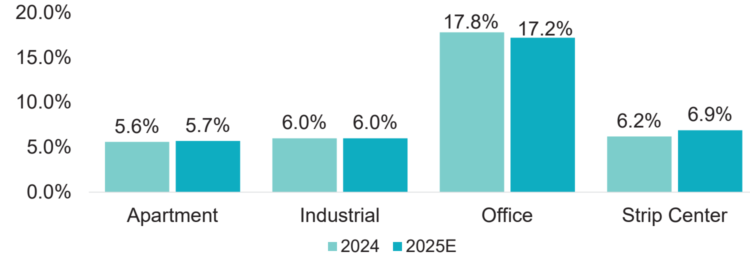
### Transaction volumes have declined over 50% from peak

**U.S. Commercial Real Estate Transaction Volume**



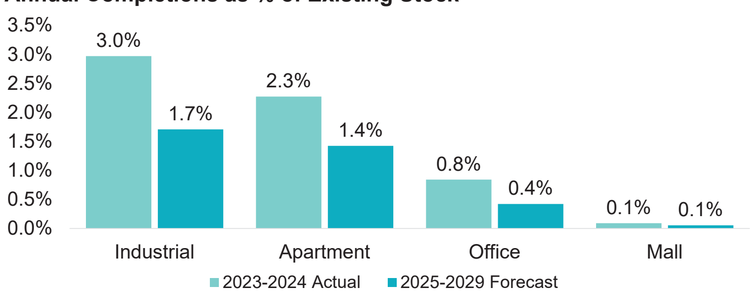

### Vacancy rates remain low (except office)

**U.S. Vacancy Rates by Sector**



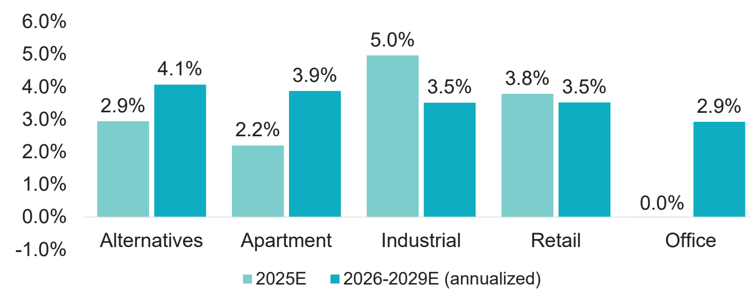

### Supply growth is contracting meaningfully across sectors

**Annual Completions as % of Existing Stock**




### Growth forecasts remain above long-term inflation

**NOI Growth**




Source: The Townsend Group, NCREIF, MSCI Real Assets (May 2025), Green Street (March 2025). Alternatives NOI Growth is the average of Cold Storage, Health Care, Single Family Rental, Data Center, Manufactured Housing, and Self Storage.
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# Due to Uncertainty, Supply is Shrinking, Pent-up Demand is Building

Long-term real estate operating fundamentals are strengthening

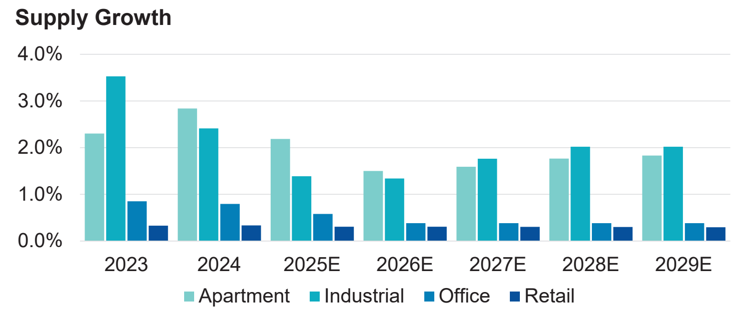
### Tapering Supply Driving Fundamentals For Existing Asset Owners

- In Apartment and Industrial sectors, elevated supply is forecasted to moderate as development costs have risen, construction labor shortages are expected, and capital has become more scarce.
- Apartment supply remains elevated in the Sunbelt markets, including Austin, Phoenix, and Denver, but is expected to be absorbed due to rising demand over the medium-term.
- Industrial supply is concentrated in Southwest markets, including Las Vegas, Riverside/Inland Empire, Phoenix, and Dallas/Fort Worth, but other markets witnessing a healthier demand/supply balance.
- Supply levels for Office and Retail continue to remain low.

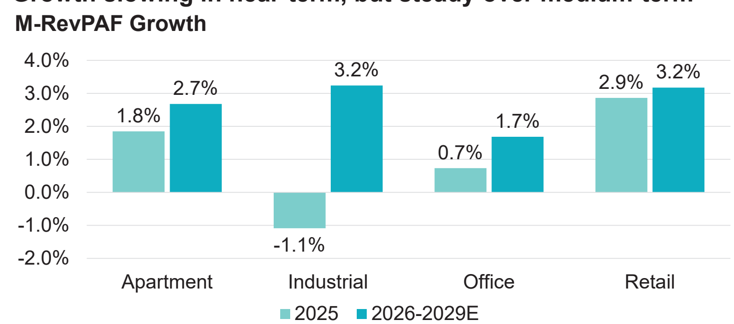
### Short-Term Demand Erosion Offset By Medium-Term Pent-Up Demand

- Oversupply and tariff implications have hindered short-term fundamentals in Apartments, but medium-term outlook remains healthy.
- Industrial sector has seen declining rent growth concentrated in Inland Empire/Western markets. Existing portfolios still hold in-place rents below market, and growth is expected to pick-up in 2026 and beyond as supply declines.
- Retail demand remains healthy. Class A regional malls are generating sales per square foot at pre-pandemic levels. Neighborhood and Community Centers have been among the best performing subsectors, driven by consumer preference for retail adjacent to suburban locations.
- Office fundamentals are beginning to improve in select submarkets including markets in the Southeast (Charlotte, Palm Beach, and Miami) and Northeast (New York, Boston).

**Supply growth to taper off across main property types**




**Growth slowing in near-term, but steady over medium-term**




Source: The Townsend Group, Green Street (April 2025). Market Revenue per Available Foot (M-RevPAF) is a Green Street metric combining changes in rents with changes in occupancies.
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Chicago, IL 60601
ATTN: Aon Investments Compliance Officer

# REPORT

## Meketa Capital Markets Outlook & Risk Metrics

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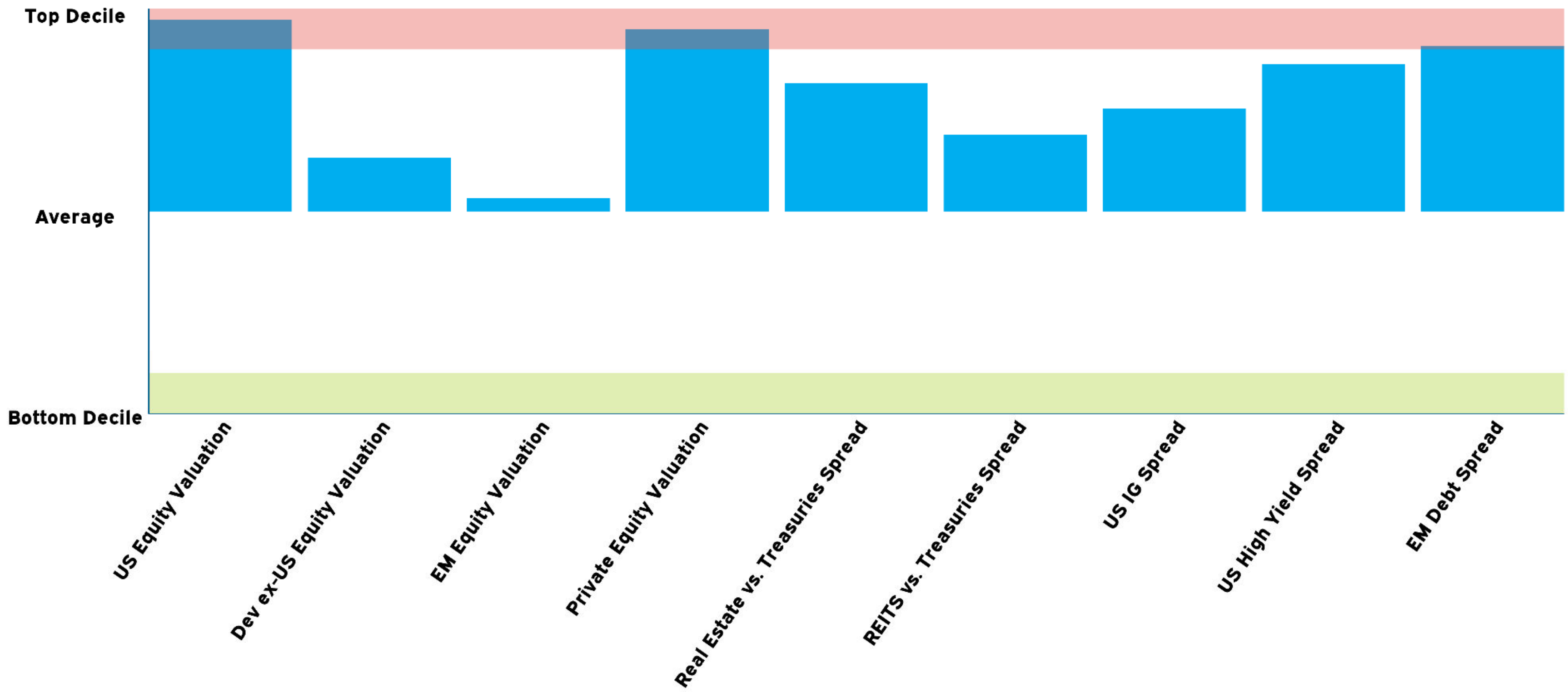
# Capital Markets Outlook & Risk Metrics

As of June 30, 2025

## Capital Markets Outlook

- In June, the Fed held rates steady, seeking to balance some weaker economic indicators continued with concerns of new inflation pressures from prospective tariffs.
- US stocks rallied in June, with the Russell 3000 returning 5.1% in the month and 11.0% in the second quarter. Large cap growth stocks beat small cap and value stocks on a relative basis.
- Non-US developed stocks continued their strong start to the year with the MSCI EAFE up 2.2% in June and 11.8% in the second quarter, with a weakening US dollar supporting returns.
- Emerging market stocks returned 6.0% in June and 15.3% on a year-to-date basis helped by a weaker dollar and delay on the Liberation Day tariffs.
- Chinese stocks returned 3.7% in June and are up 17.3% year-to-date. Beijing's policy support for share prices and the real estate sector have buoyed investor sentiment, especially in the offshore market.
- Major bond markets rallied, with the Bloomberg Aggregate gaining 1.5% in June, high yield up 1.8%, and long government bonds gaining 2.5%.
- Real assets had mixed returns in June, with public natural resource, utilities, and infrastructure stocks delivering positive returns while public real estate sold off. Commodities rose just 2.4%.

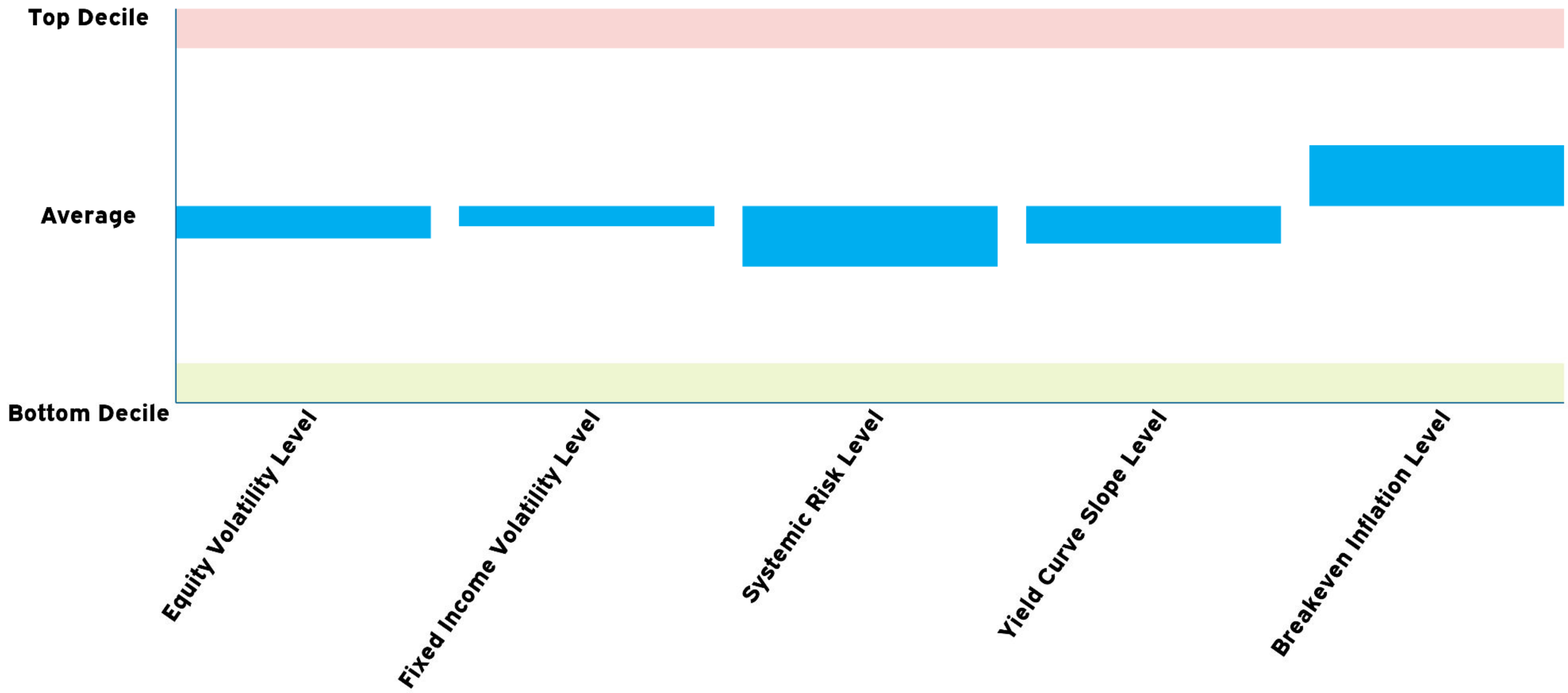
## Risk Overview/Dashboard (1)
(As of June 30, 2025)[1]




→ Dashboard (1) summarizes the current state of the different valuation metrics per asset class relative to their own history.

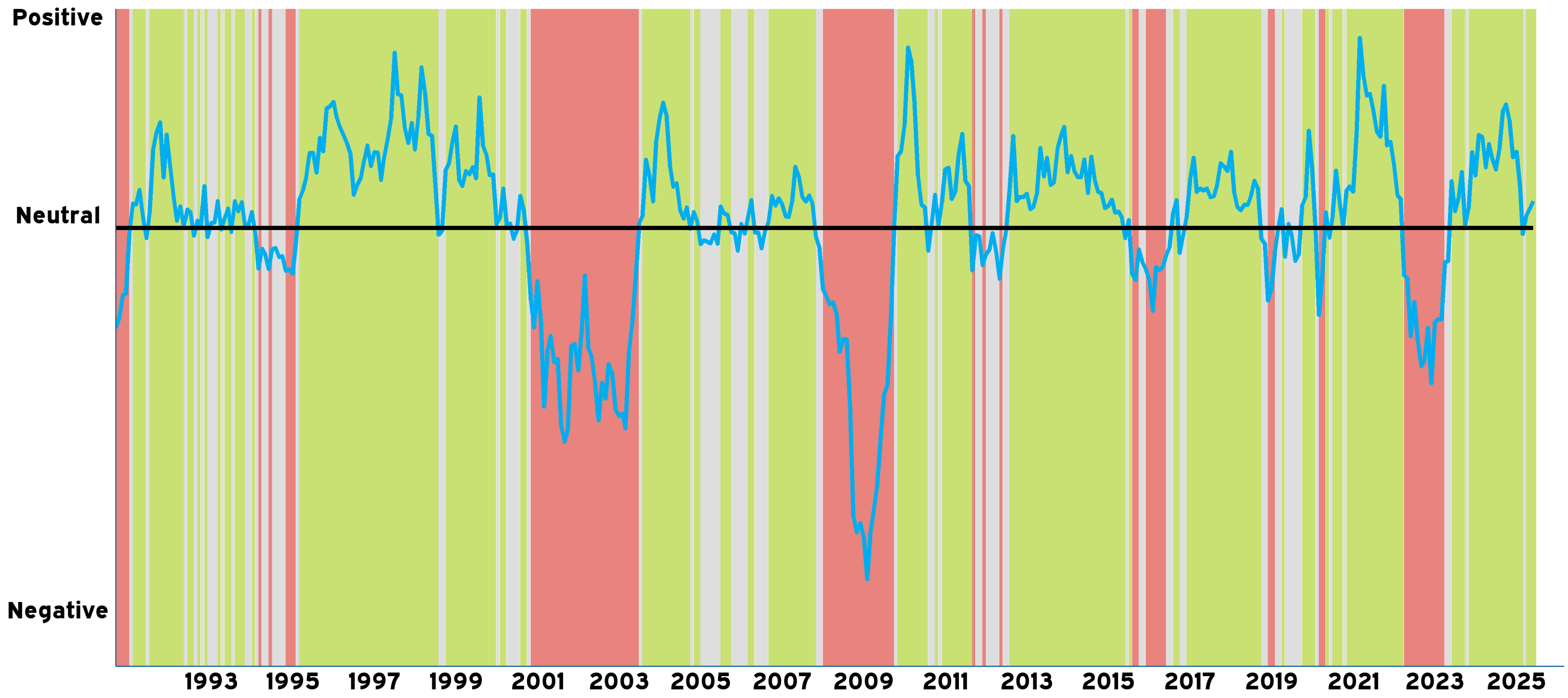
[1] With the exception of Private Equity Valuation, that is YTD as of December 31, 2024.

## Risk Overview/Dashboard (2)
(As of June 30, 2025)



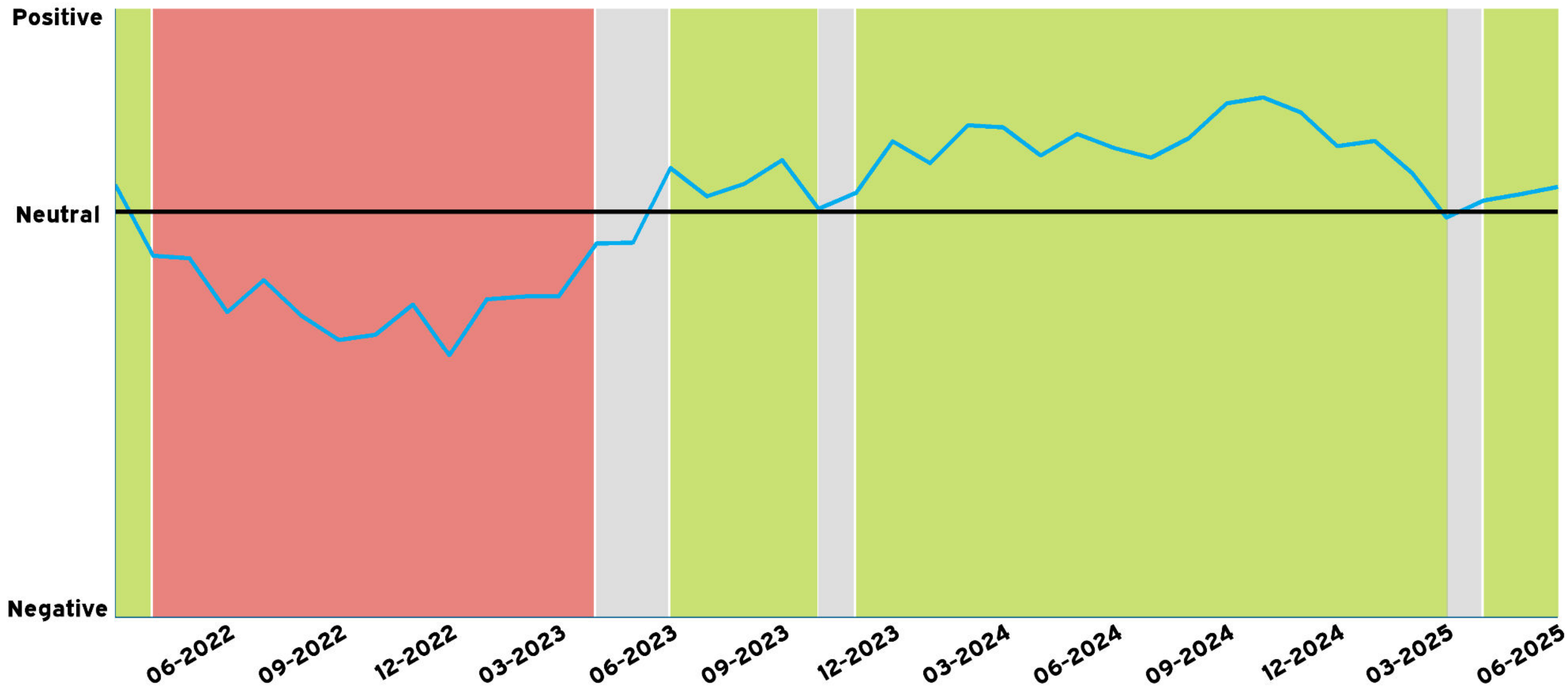

→ Dashboard (2) shows how the current level of each indicator compares to its respective history.

## Market Sentiment Indicator (All History)
(As of June 30, 2025)

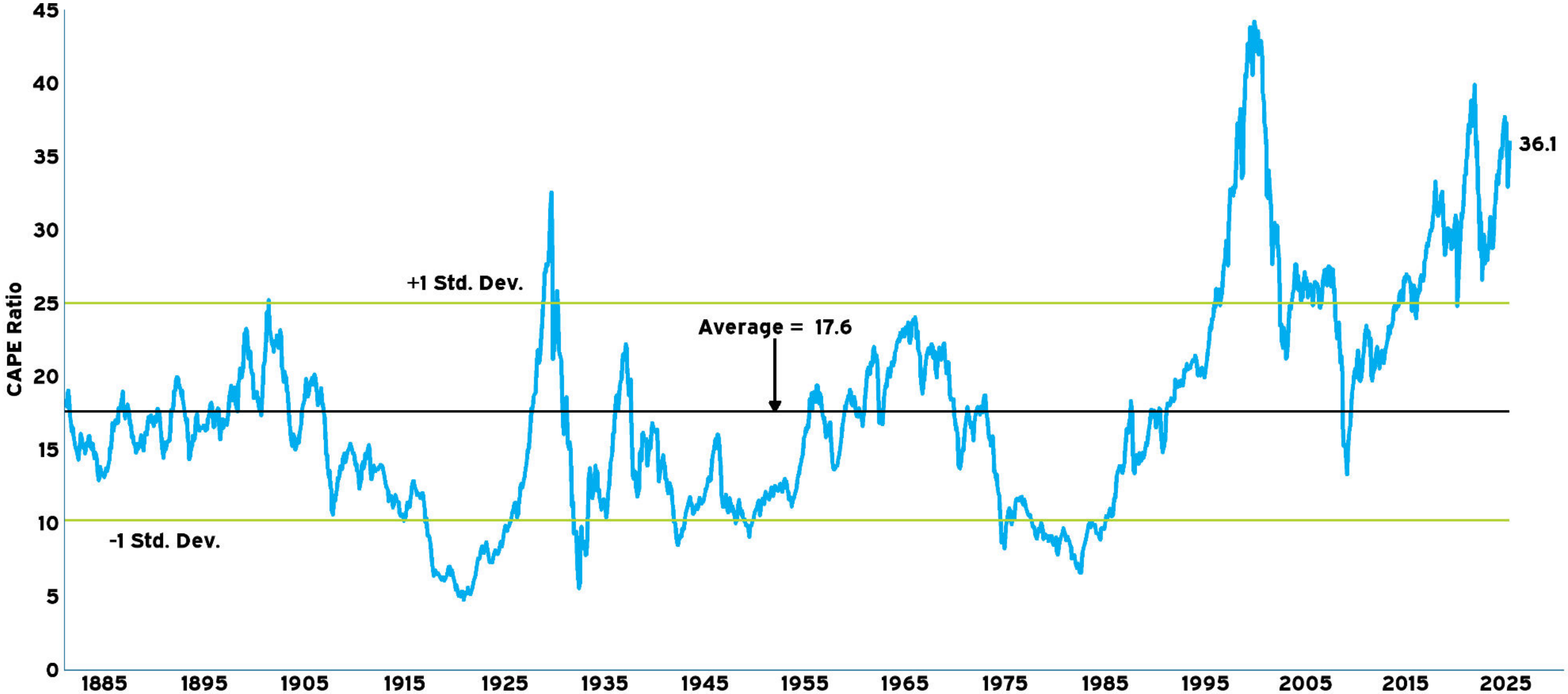


## Market Sentiment Indicator (Last Three Years)

(As of June 30, 2025)



## US Equity Cyclically Adjusted P/E[1]
(As of June 30, 2025)

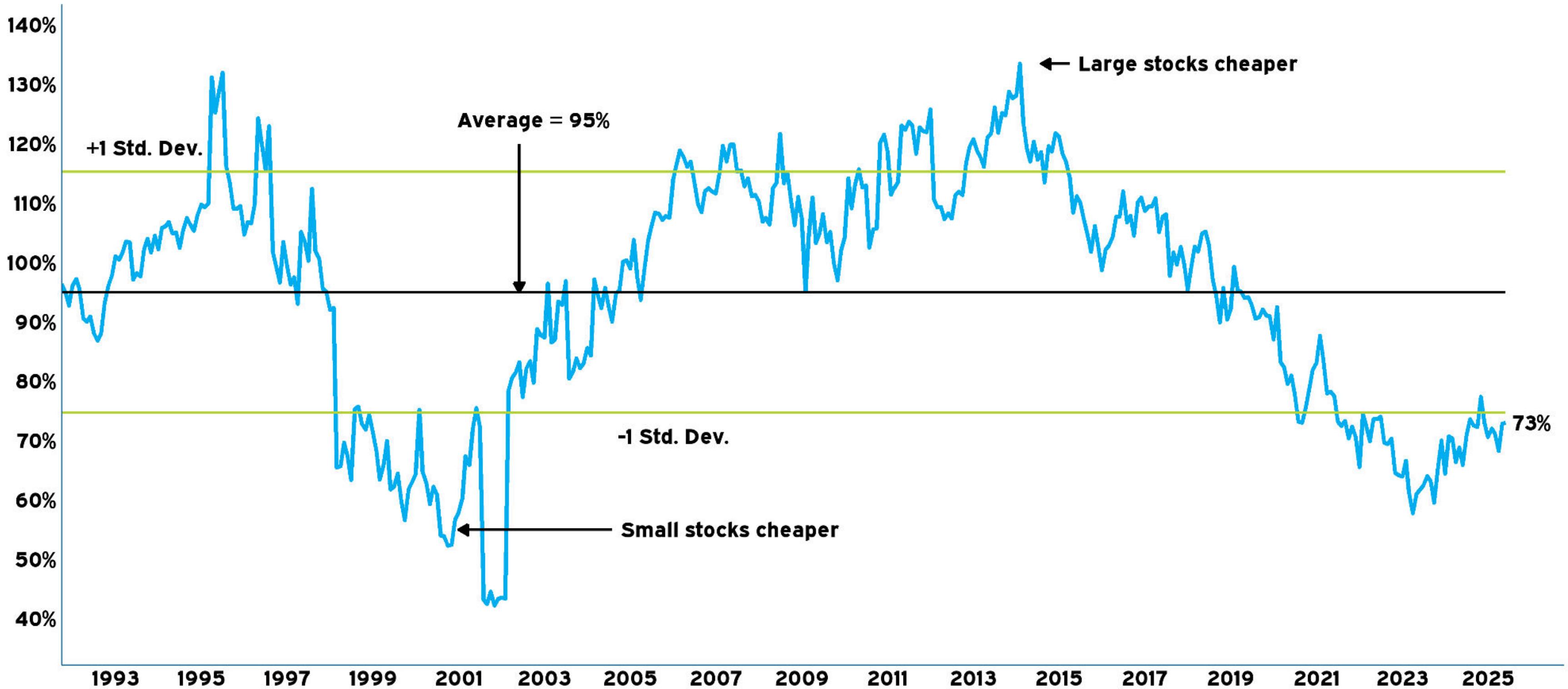



→ This chart details one valuation metric for US equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group.

## Small Cap P/E vs. Large Cap P/E[1]

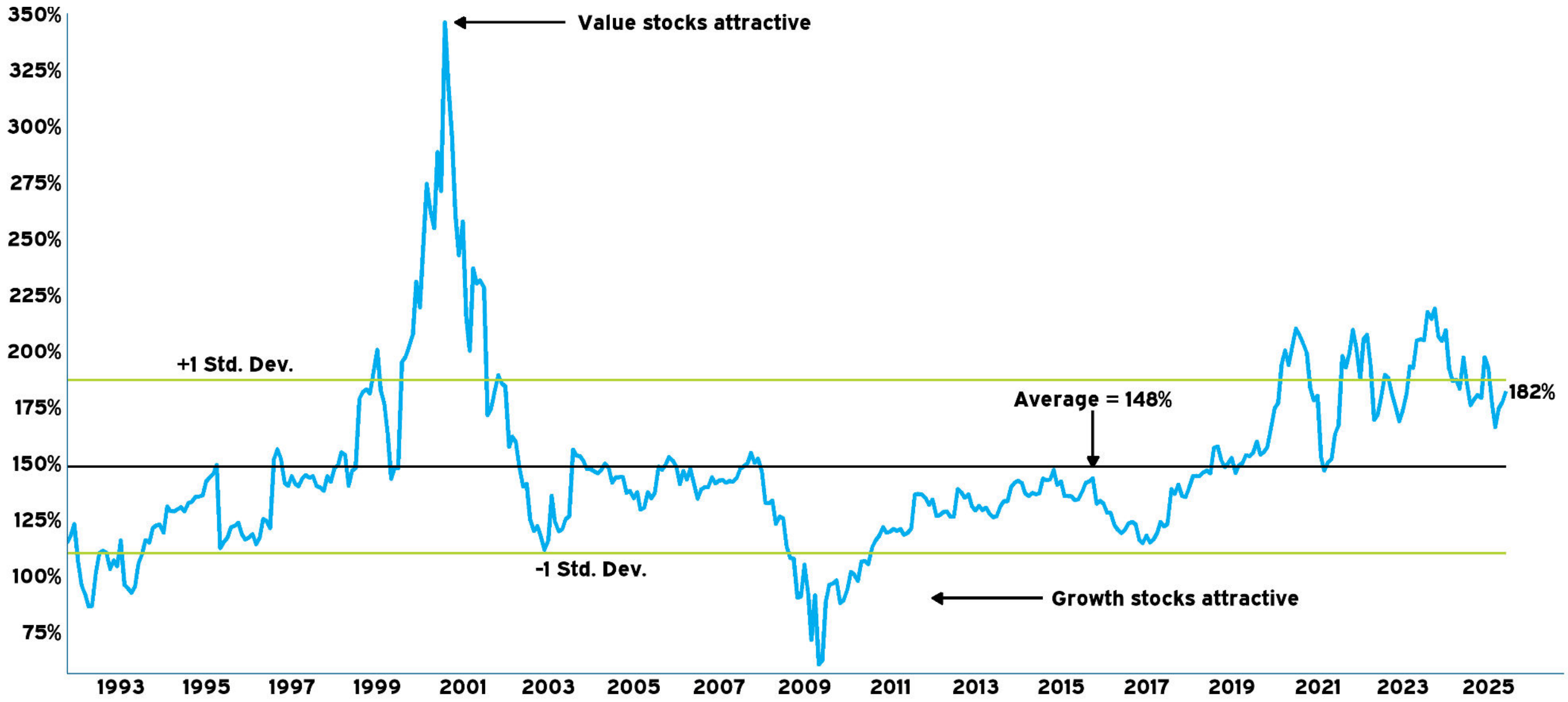
(As of June 30, 2025)




→ This chart compares the relative attractiveness of small cap US equities vs. large cap US equities on a valuation basis. A higher (lower) figure indicates that large cap (small cap) is more attractive.

[1] Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments and Bloomberg. Prior months unavailable on Bloomberg are backfilled with last reported earnings. Earnings figures represent 12-month “as reported” earnings.

## Growth P/E vs. Value P/E[1]
(As of June 30, 2025)




→ This chart compares the relative attractiveness of US growth equities vs. US value equities on a valuation basis. A higher (lower) figure indicates that value (growth) is more attractive.

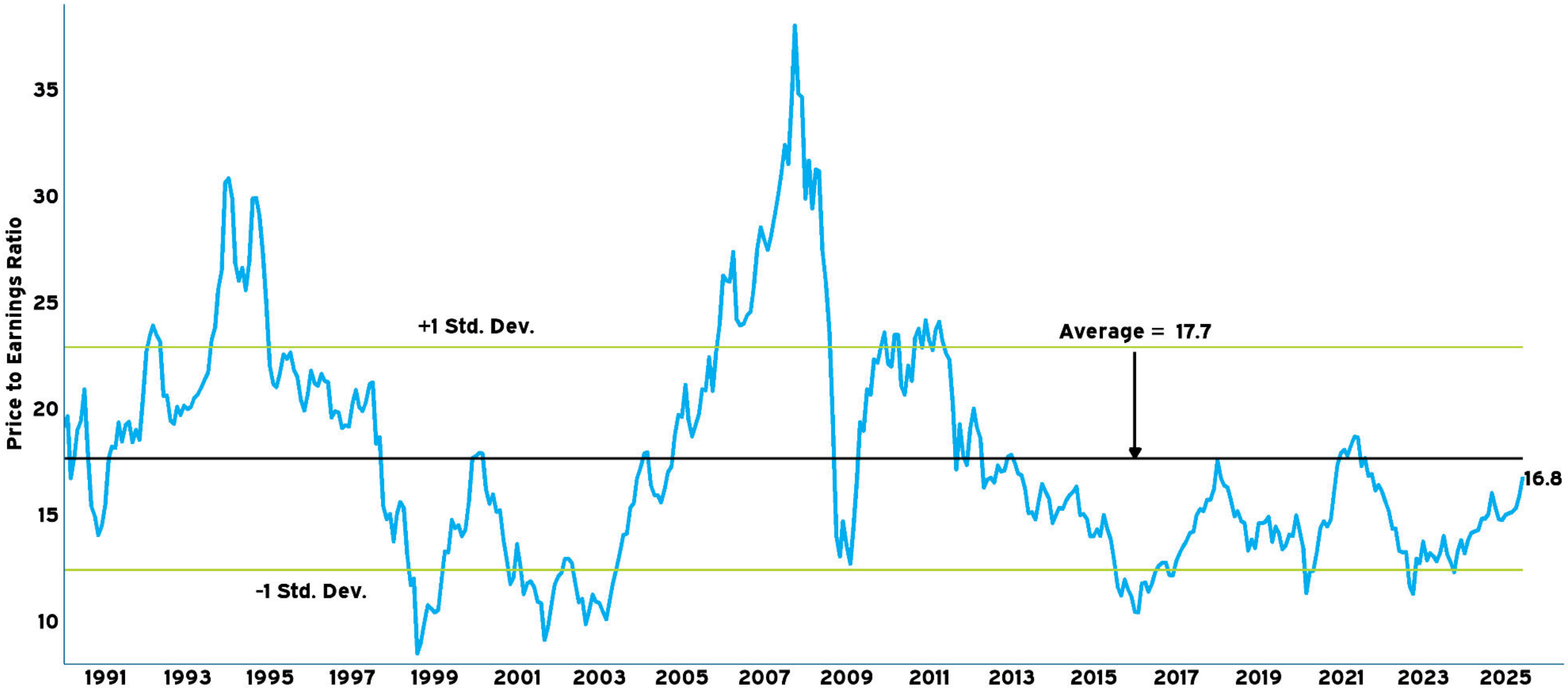
[1] Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.

## Developed International Equity Cyclically Adjusted P/E[1]
(As of June 30, 2025)


→ This chart details one valuation metric for developed international equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] Developed International Equity (MSCI EAFE Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.

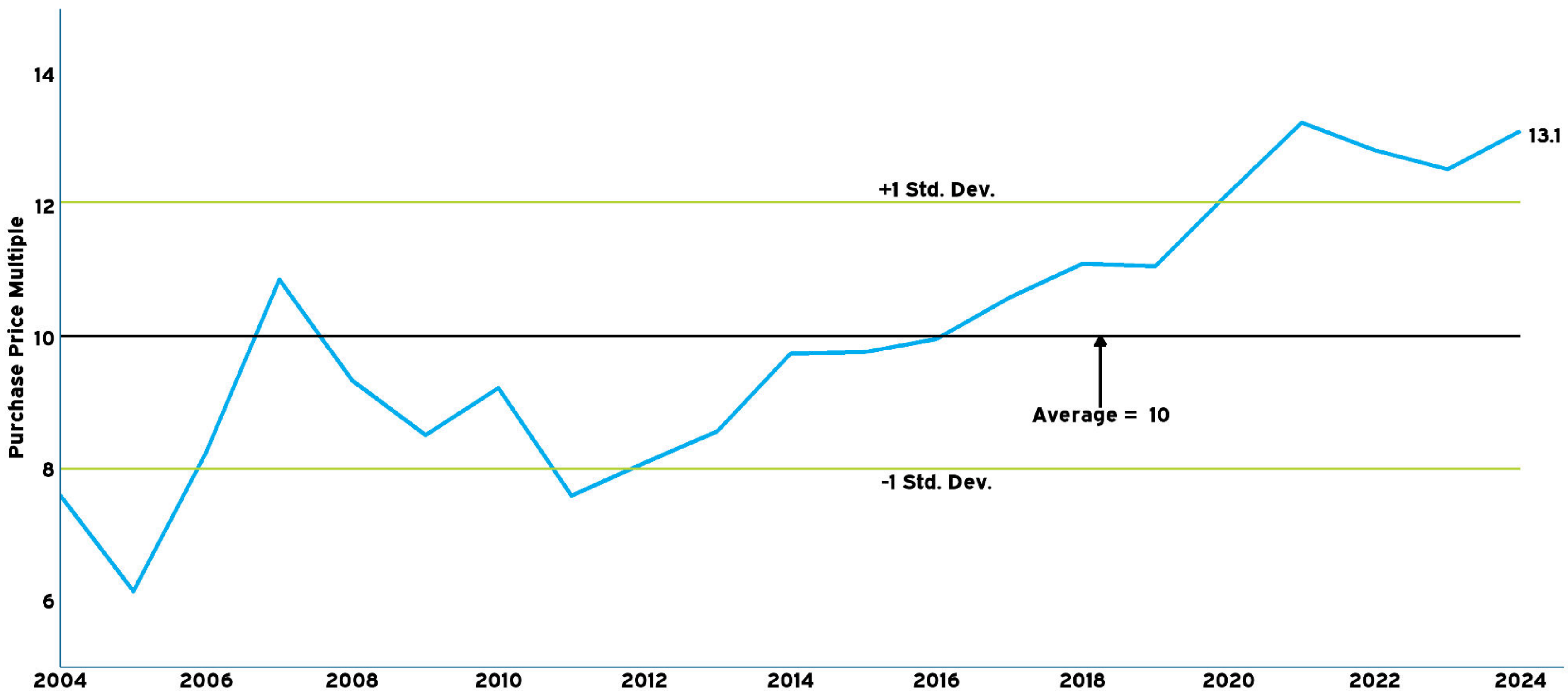
**Emerging Market Equity Cyclically Adjusted P/E[1]**
(As of June 30, 2025)




→ This chart details one valuation metric for emerging markets equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.

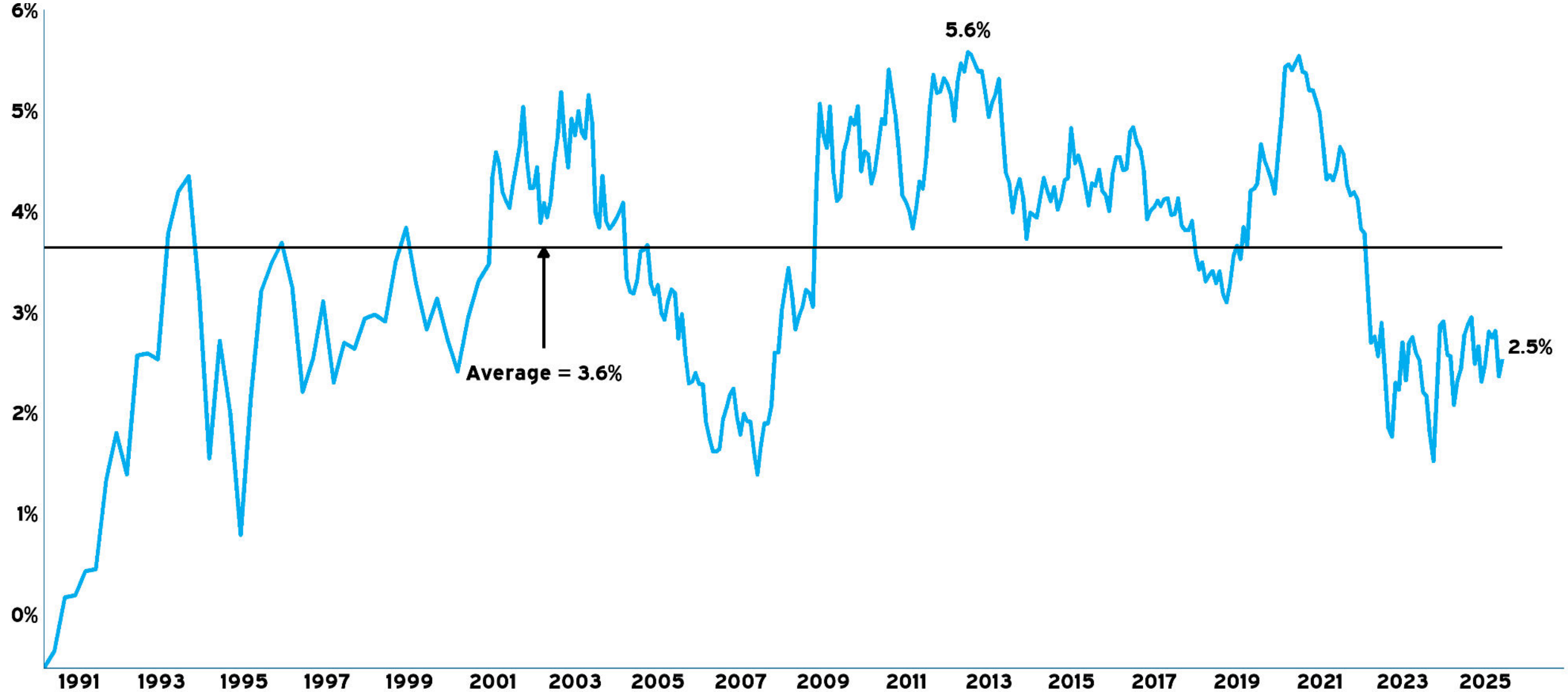
**Private Equity Multiples[1]**
(As of December 31, 2024)




→ This chart details one valuation metric for the private equity market. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] Private Equity Multiples – Source: Preqin Median EBITDA Multiples Paid in All LBOs. Data pulled as of 1/8/2025.

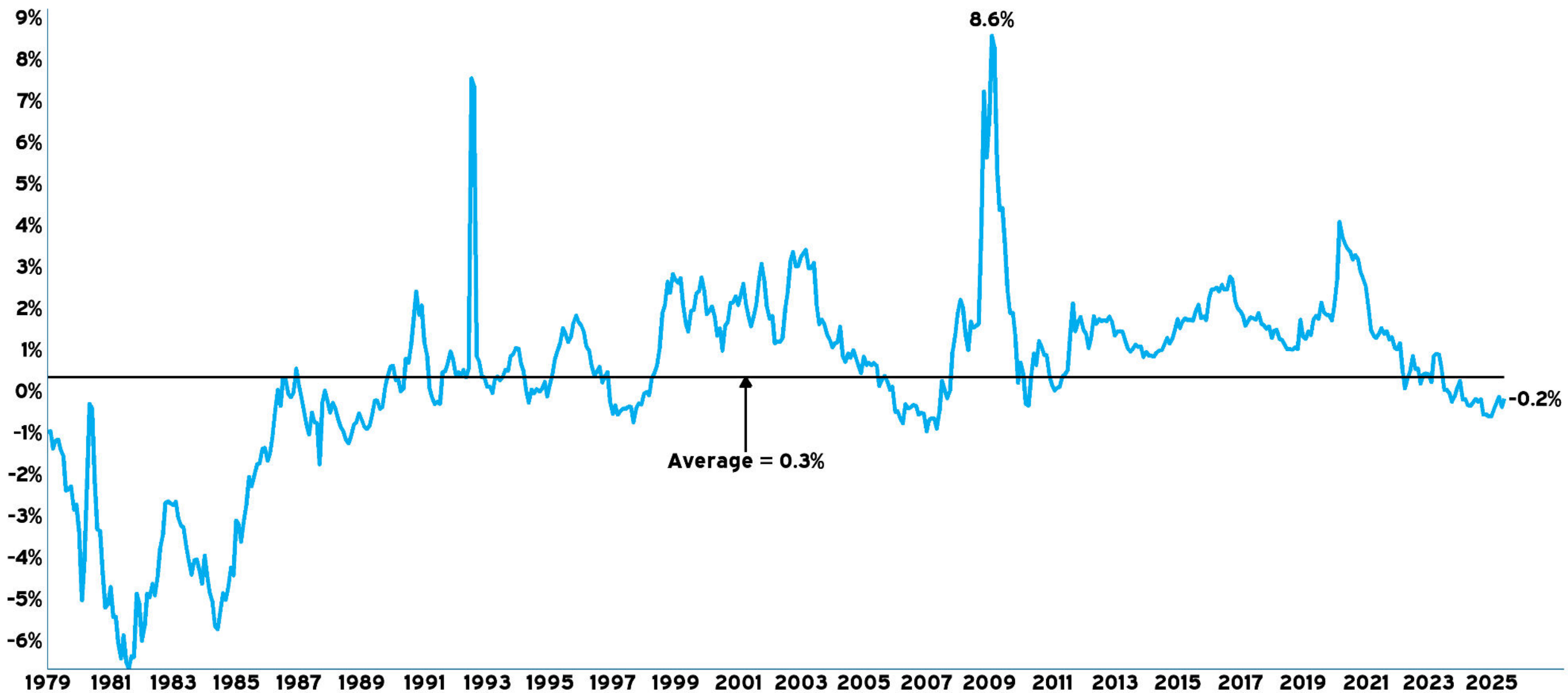
**Core Real Estate Spread vs. Ten-Year Treasury**[1]
(As of June 30, 2025)




→ This chart details one valuation metric for the private core real estate market. A higher (lower) figure indicates cheaper (more expensive) valuation.

[1] Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, FRED, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction-based indices from Real Capital Analytics and Meketa Investment Group.

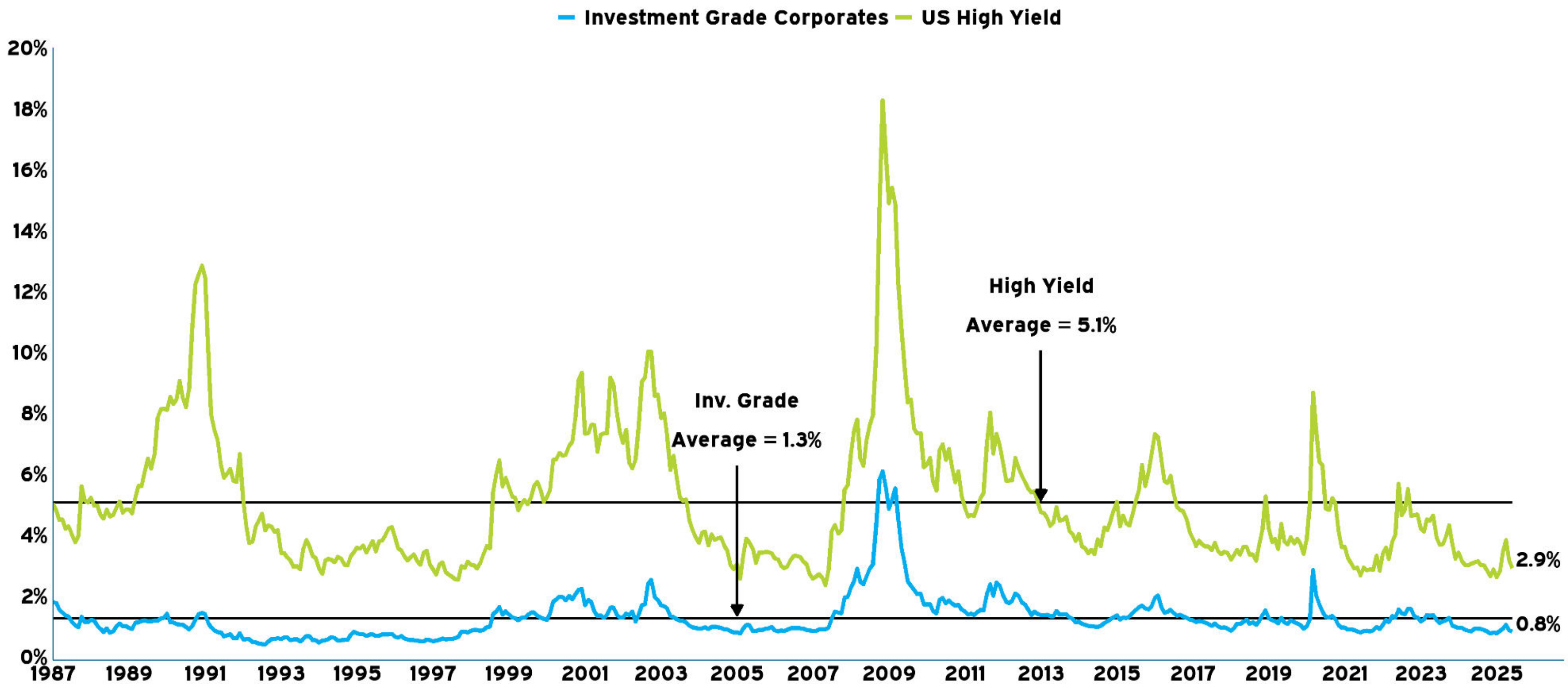
**REITs Dividend Yield Spread vs. Ten-Year Treasury[1]**
(As of June 30, 2025)




→ This chart details one valuation metric for the public REITs market. A higher (lower) figure indicates cheaper (more expensive) valuation.

[1] REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, Bloomberg, US Treasury. REITs are proxied by the yield for the NAREIT Equity Index.

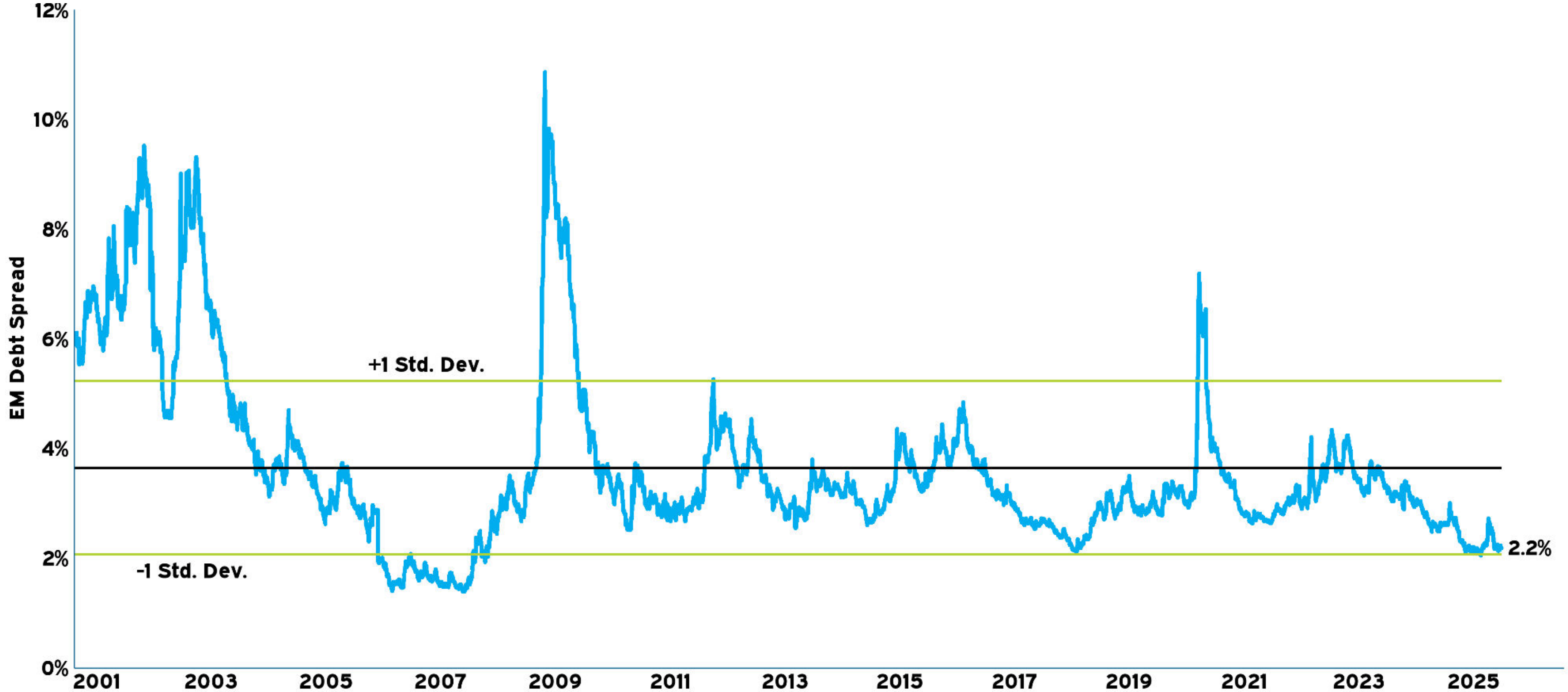
## Credit Spreads[1]
(As of June 30, 2025)




- This chart details one valuation metric for the US credit markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

[1] Credit Spreads – Source: Bloomberg. High Yield is proxied by the Bloomberg High Yield Index and Investment Grade Corporates are proxied by the Bloomberg US Corporate Investment Grade Index. Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year US Treasury yield.

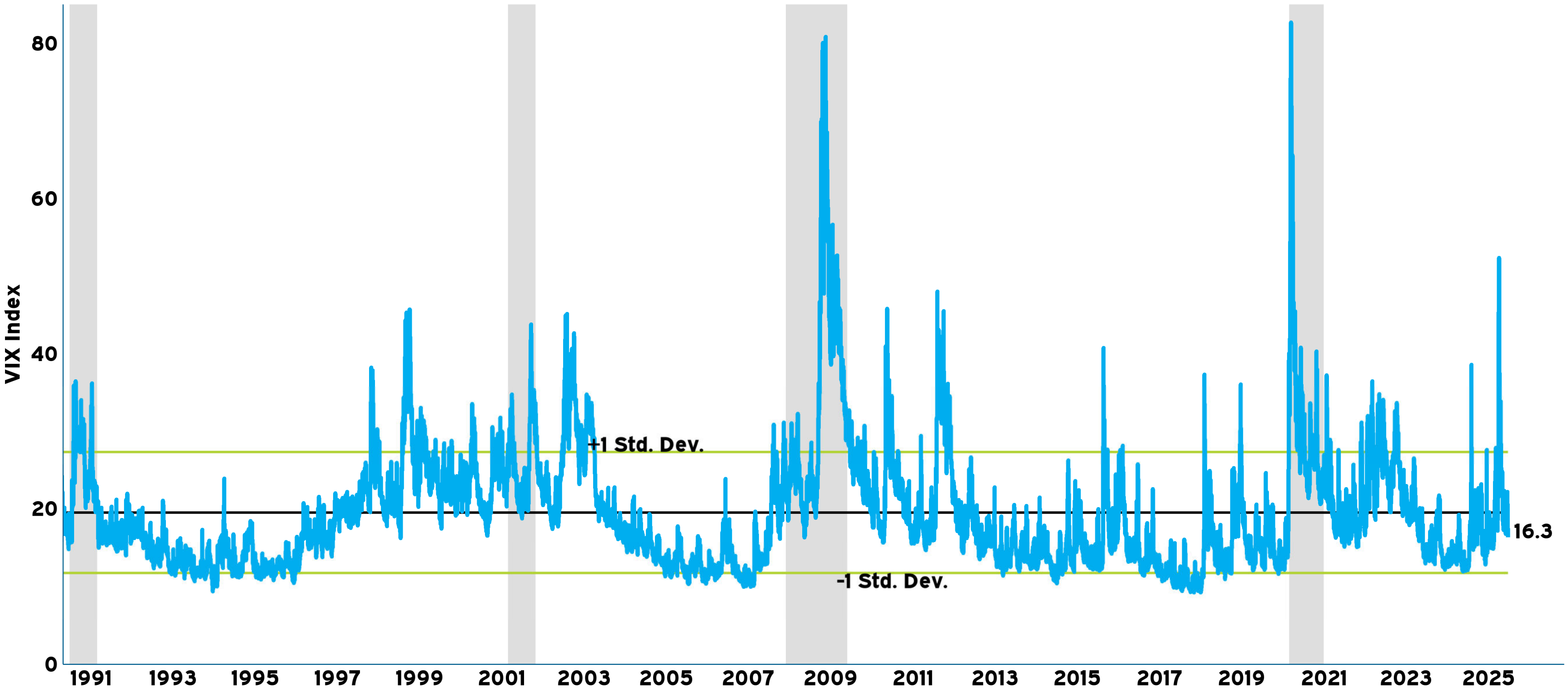
## Emerging Market Debt Spreads[1]
(As of June 30, 2025)




→ This chart details one valuation metric for the EM debt markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

[1] EM Spreads – Source: Bloomberg. Option Adjusted Spread (OAS) for the Bloomberg EM USD Aggregate Index.

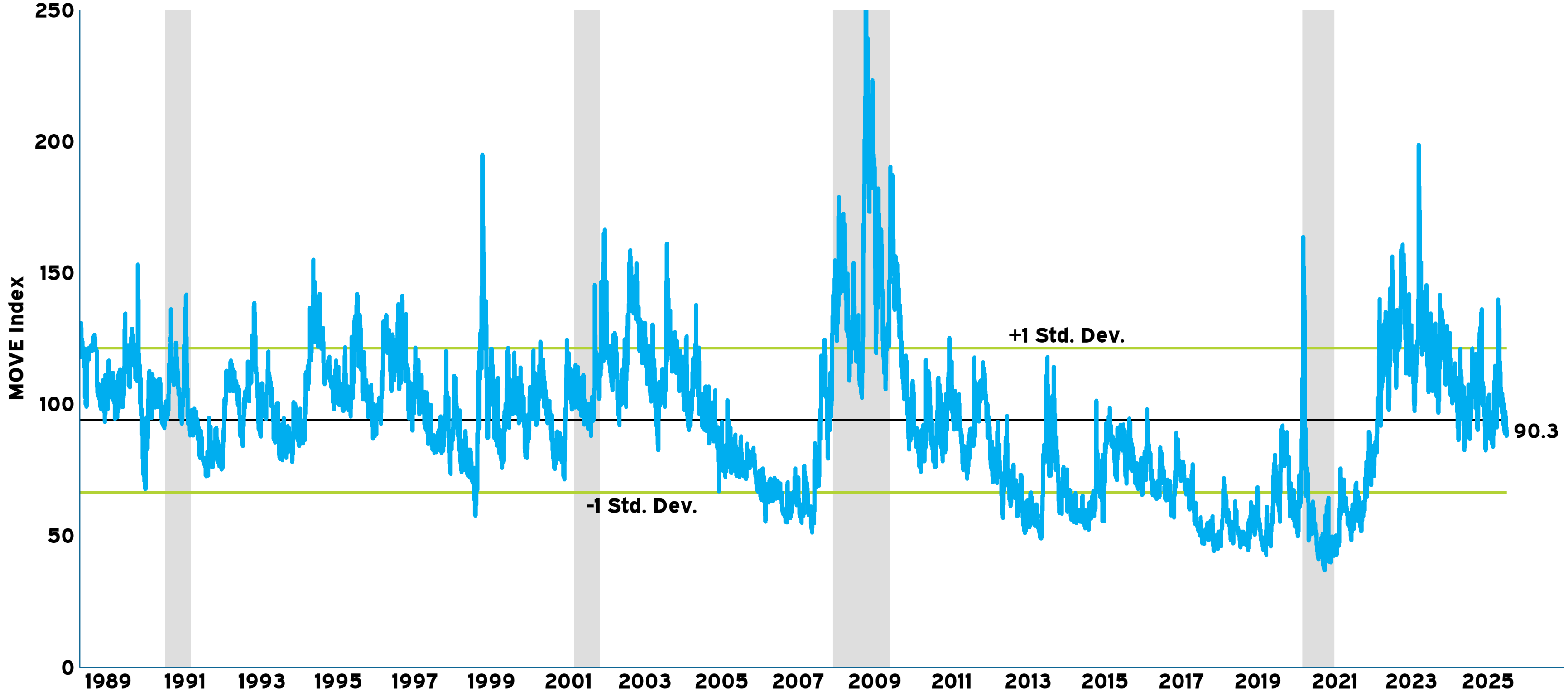
## Equity Volatility[1]
(As of June 30, 2025)




→ This chart details historical implied equity market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

[1] Equity Volatility – Source: FRED, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.
[2] Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.

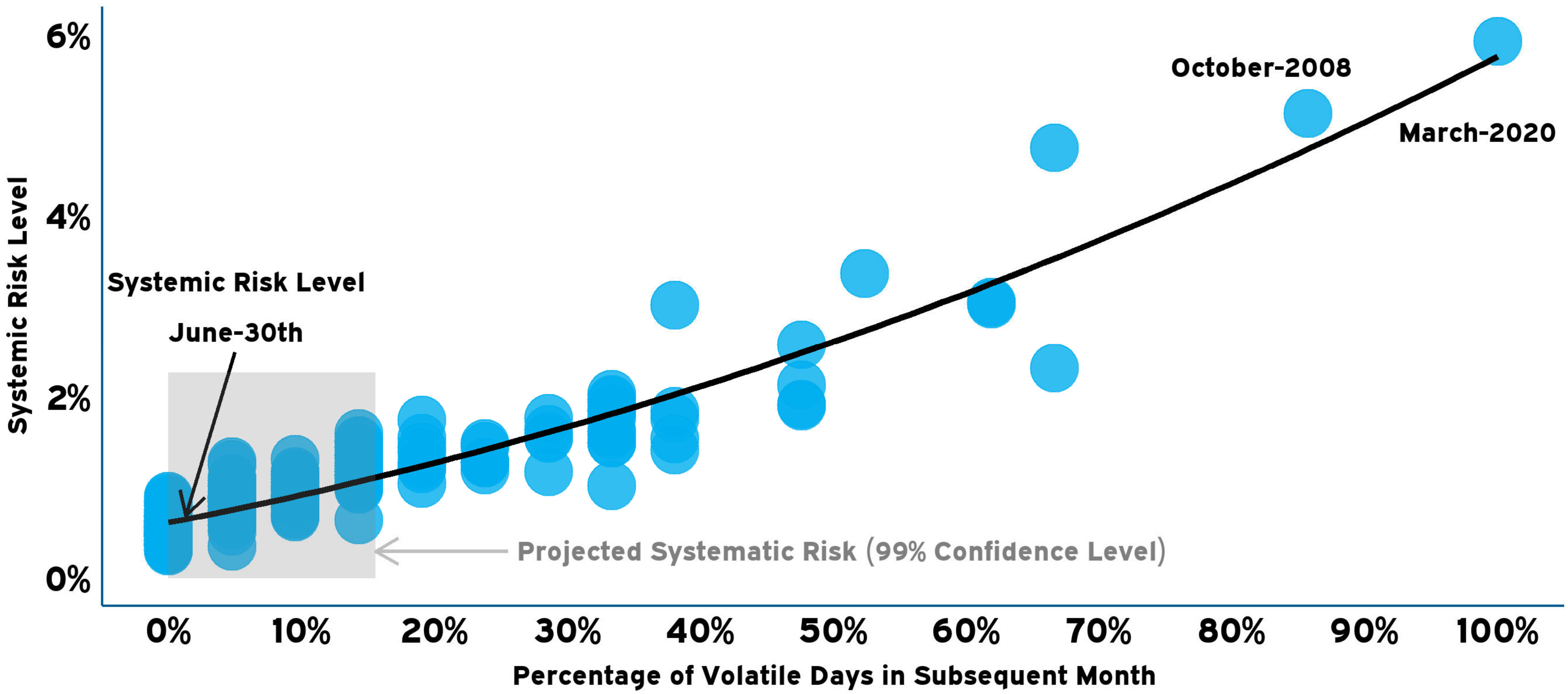
## Fixed Income Volatility[1]
(As of June 30, 2025)




→ This chart details historical implied fixed income market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

[1] Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.

## Systemic Risk and Volatile Market Days[1]
(As of June 30, 2025)

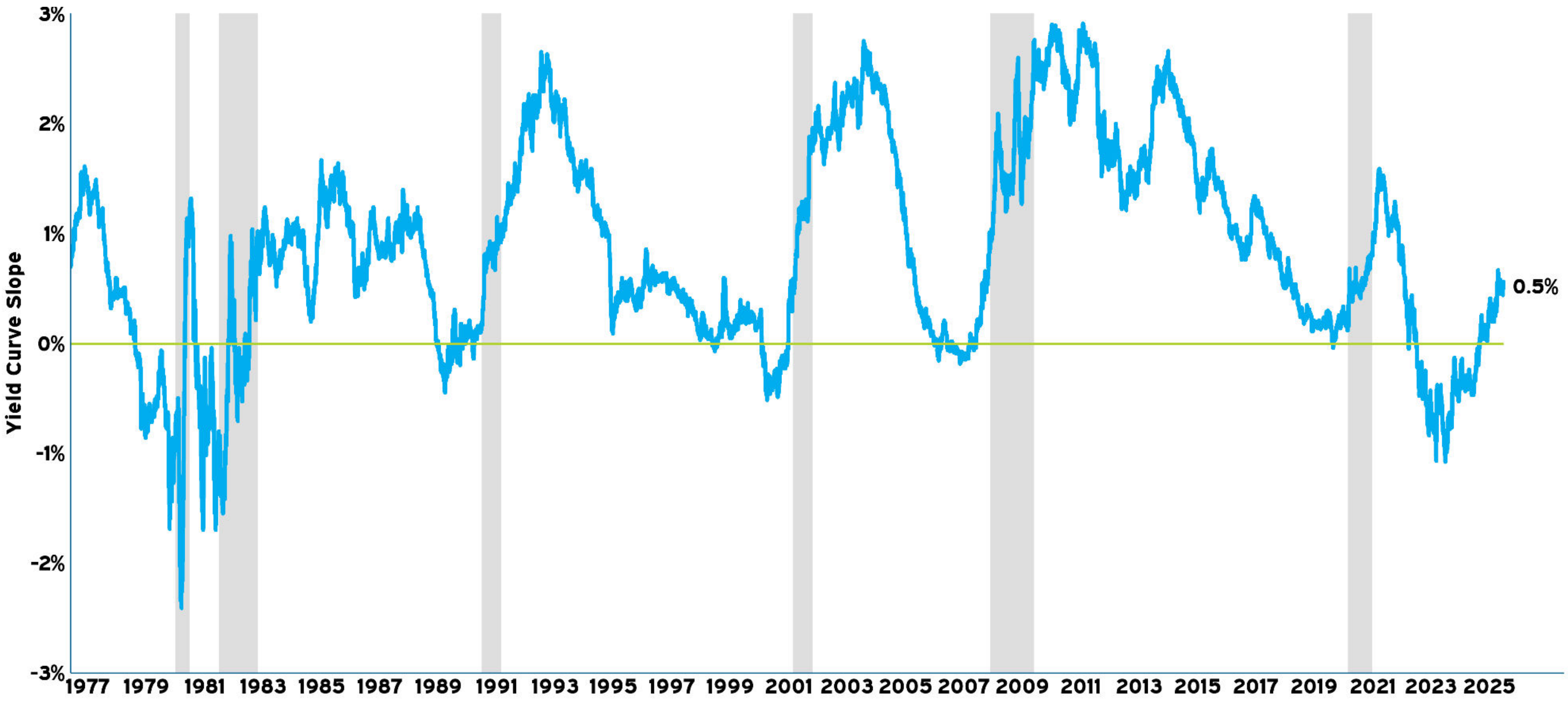



→ Systemic Risk is a measure of 'System-wide' risk, which indicates herding type behavior.

[1] Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.

## Yield Curve Slope (Ten Minus Two)[1]

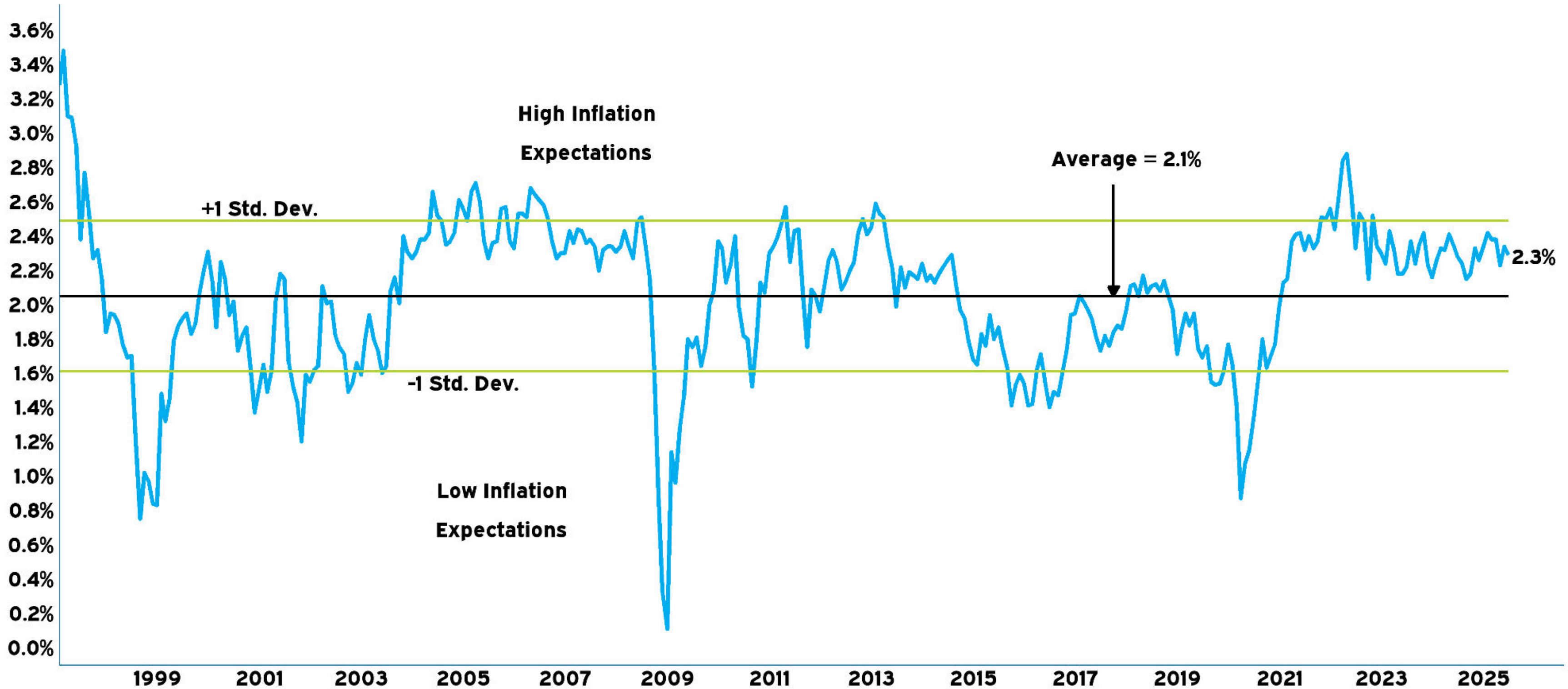
(As of June 30, 2025)




→ This chart details the historical difference in yields between ten-year and two-year US Treasury bonds/notes. A higher (lower) figure indicates a steeper (flatter) yield curve slope.

[1] Yield Curve Slope (Ten Minus Two) – Source: FRED. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.

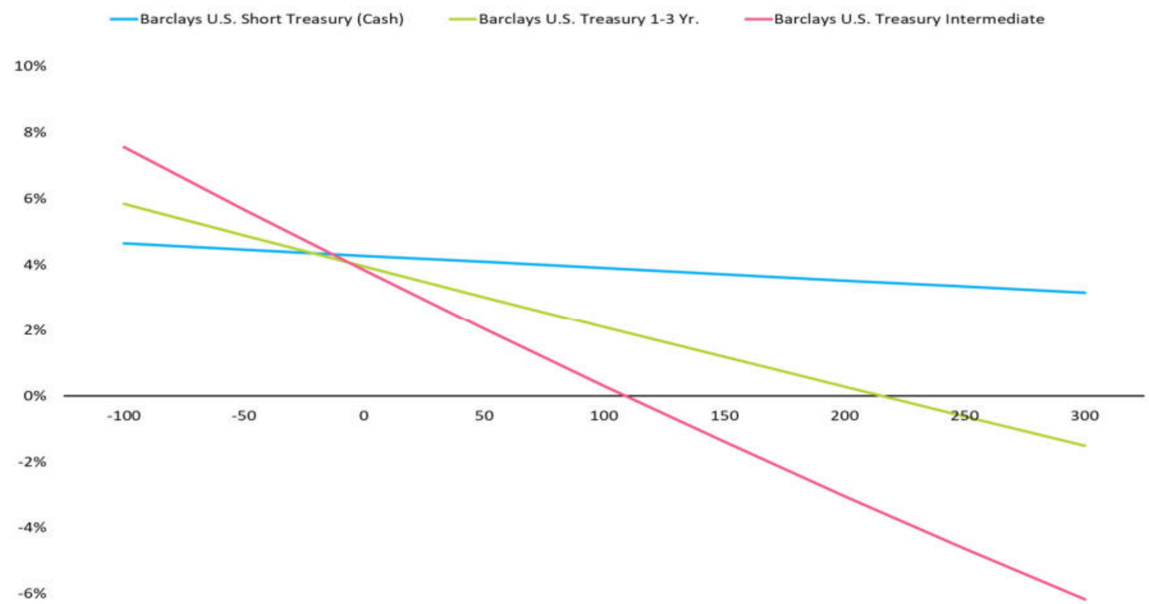
## Ten-Year Breakeven Inflation[1]
(As of June 30, 2025)




→ This chart details the difference between nominal and inflation-adjusted US Treasury bonds. A higher (lower) figure indicates higher (lower) inflation expectations.

[1] Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

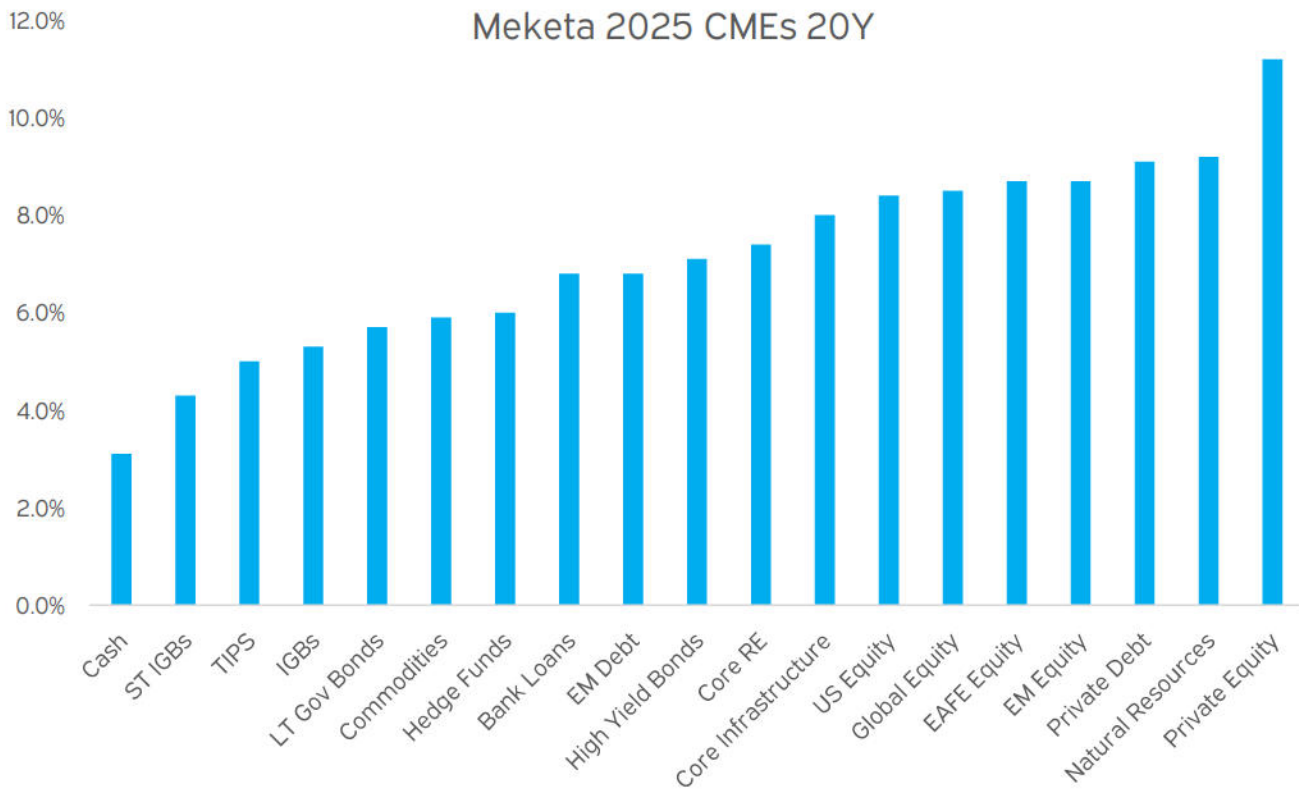
## Total Return Given Changes in Interest Rates (bps)[1]
(As June 30, 2025)




| | Total Return for Given Changes in Interest Rates (bps) | | | | | | | | | Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | -100 (%) | -50 (%) | 0 (%) | 50 (%) | 100 (%) | 150 (%) | 200 (%) | 250 (%) | 300 (%) | Duration | YTW (%) |
| Barclays US Short Treasury (Cash) | 4.7% | 4.5% | 4.3% | 4.1% | 3.9% | 3.7% | 3.5% | 3.3% | 3.2% | 0.38 | 4.27% |
| Barclays US Treasury 1-3 Yr. | 5.8% | 4.9% | 4.0% | 3.0% | 2.1% | 1.2% | 0.3% | -0.6% | -1.5% | 1.87 | 3.95% |
| Barclays US Treasury Intermediate | 7.6% | 5.7% | 3.8% | 2.0% | 0.3% | -1.4% | -3.0% | -4.6% | -6.2% | 3.63 | 3.83% |
| Barclays US Treasury Long | 21.0% | 12.5% | 4.8% | -2.2% | -8.5% | -14.0% | -18.8% | -22.9% | -26.3% | 14.74 | 4.80% |

[1] Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Source: Bloomberg, and Meketa Investment Group.

## Long-Term Outlook – 20-Year Annualized Expected Returns[1]




→ This chart details Meketa's long-term forward-looking expectations for total returns across asset classes.

[1] Source: Meketa Investment Group's 2025 Asset Study.

# Appendix

## Data Sources and Explanations[1]

→ US Equity Cyclically Adjusted P/E on S&P 500 Index – Source: Robert Shiller and Yale University.

→ Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings.

→ Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.

→ Developed International Equity (MSCI EAFE) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.

→ Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.

→ Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.

→ Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction-based indices from Real Capital Analytics and Meketa Investment Group.

[1] All Data as of May 31, 2025, unless otherwise noted.

## Appendix

### Data Sources and Explanations[1]

- REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity Index.
- Credit Spreads – Source: Bloomberg High Yield is proxied by the Bloomberg High Yield Index and Investment Grade Corporates are proxied by the Bloomberg US Corporate Investment Grade Index.
  - Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year Treasury Yield.
- EM Debt Spreads – Source: Bloomberg, and Meketa Investment Group. Option Adjusted Spread (OAS) for the Bloomberg EM USD Aggregate Index.
- Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.
- Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.
- Systemic Risk and Volatile Market Days – Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.
- Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.

[1] All Data as May 31, 2025, unless otherwise noted.

# Appendix

## Data Sources and Explanations[1]

- Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.
- Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

[1] All Data as of May 31, 2025, unless otherwise noted.

# Meketa Market Sentiment Indicator

## Explanation, Construction and Q&A

Meketa has created the MIG Market Sentiment Indicator (MIG-MSI) to complement our valuation-focused Risk Metrics. This measure of sentiment is meant to capture significant and persistent shifts in long-lived market trends of economic growth risk, either towards a risk-seeking trend or a risk-aversion trend.

**This appendix explores:**

→ What is the Meketa Market Sentiment Indicator?

→ How do I read the indicator graph?

→ How is the Meketa Market Sentiment Indicator constructed?

→ What do changes in the indicator mean?

**Meketa has created a market sentiment indicator for monthly publication (the MIG-MSI – see below) to complement Meketa's Risk Metrics.**

- Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market correction takes place. The MIG-MSI helps to address this early-warning bias by measuring whether the markets are beginning to acknowledge key Risk Metrics trends, and / or indicating non-valuation-based concerns. Once the MIG-MSI indicates that the market sentiment has shifted, it is our belief that investors should consider significant action, particularly if confirmed by the Risk Metrics. Importantly, Meketa believes the Risk Metrics and MIG-MSI should always be used in conjunction with one another and never in isolation. The questions and answers below highlight and discuss the basic underpinnings of the Meketa MIG-MSI:

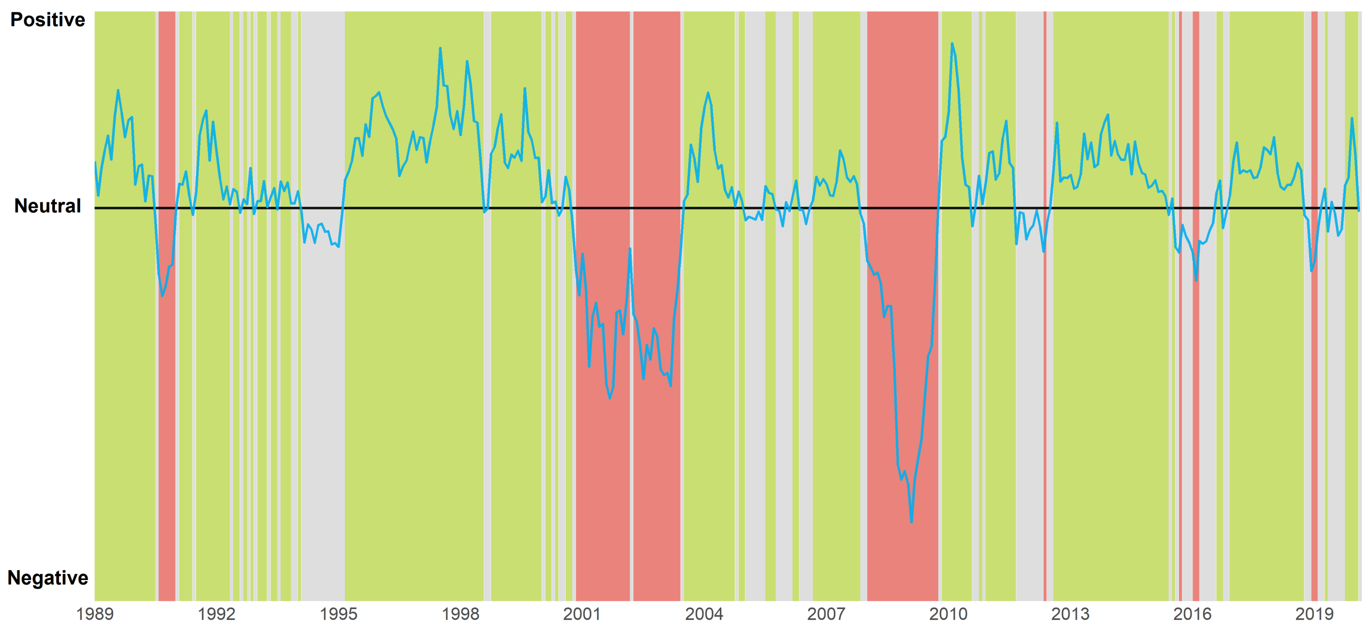
**What is the Meketa Market Sentiment Indicator (MIG-MSI)?**

- The MIG-MSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets and is the largest risk exposure that most portfolios bear. The MIG-MSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

## How do I read the Meketa Market Sentiment Indicator graph?

→ Simply put, the MIG-MSI is a color-coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MIG-MSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the MIG-MSI. The degree of the signal above or below the neutral reading is an indication of the signal's current strength.

→ Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.



## How is the Meketa Market Sentiment Indicator (MIG-MSI) Constructed?

→ The MIG-MSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:

- Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months).
- Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration US Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight).
- Both measures are converted to Z-scores and then combined to get an “apples to apples” comparison without the need of re-scaling.

→ The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure[1]. The color reading on the graph is determined as follows:

- If both stock return momentum and bond spread momentum are positive = GREEN (positive).
- If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive).
- If both stock return momentum and bond spread momentum are negative = RED (negative).

[1] Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.
“Time Series Momentum” Moskowitz, Ooi, Pedersen, August 2010. *http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf*

## What does the Meketa Market Sentiment Indicator (MIG-MSI) mean? Why might it be useful?

→ There is strong evidence that time series momentum is significant and persistent. Across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12-month period. The MIG-MSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

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# REPORT

# SBI Comprehensive Performance Report

June 30, 2025

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# Comprehensive Performance Report

## June 30, 2025

## Description of SBI Investment Programs

The Minnesota State Board of Investment (SBI) is responsible for the investment management of various retirement funds, trust funds, and cash accounts.

**Combined Funds**

The Combined Funds represent the assets for both the active and retired public employees in the statewide retirement systems, the biggest of which are the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the Minnesota State Retirement System (MSRS). The SBI commingles the assets of these plans into the Combined Funds to capture investment efficiencies. All assets in the Combined Funds are managed externally by investment management firms retained by contract.

**Other Retirement Funds**

In addition to the assets of the Statewide Retirement Systems, the SBI provides broad asset-class investment options to both defined benefit and defined contribution retirement plans that either make investment decisions at the plan level and participant-directed plans. Other public retirement funds include the Public Employees Retirement Association (PERA) Defined Contribution Plan, St. Paul Teachers' Retirement Fund Association, Statewide Volunteer Firefighter Plan, Unclassified Retirement Plan, and Volunteer Fire Relief Associations.

**Tax-Advantaged Savings Plans**

The SBI aims to help participants meet their savings and investment goals by offering a range of investment options across asset classes managed by institutional investment managers that charge competitive fees. The investment options offered within each plan will vary based on several factors, including statutory requirements, operational limitations, and other rules and regulations established for each participating plan. Tax-advantaged savings plans include the Health Care Savings Plan, Hennepin County Supplemental Retirement Plan, and Minnesota Deferred Compensation Plan

**State-Sponsored Savings Plans**

The SBI is responsible for oversight of the investment options in the State-Sponsored Savings Plans, including the Minnesota College Savings Plan and the Minnesota ABLE Plan. SBI does not directly administer plans; it partners with the respective plan-administrating agencies when selecting investment options.

**Non-Retirement Investment Program**

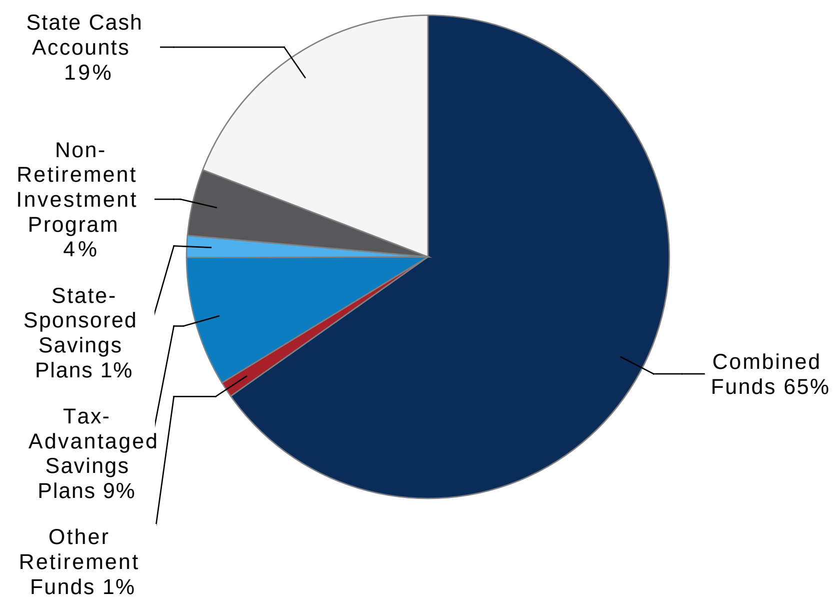
The SBI is responsible for the assets of several state trust funds, public sector sponsored entities, Other Postemployment Benefits (OPEB) trusts, and Qualifying Governmental Entities. These trust funds and accounts have different accounting requirements and spending targets derived from constitutional and statutory provisions. Statute will also identify whether the SBI or the sponsoring entity is responsible for determining the asset allocation targets for the respective fund or account.

**State Cash**

The State Cash accounts are cash balances of state government funds including the State General Fund. Most accounts are invested by SBI staff through a short-term pooled fund referred to as the Treasurer's Cash Pool. It contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and non-dedicated cash in the State Treasury. Because of special legal restrictions, a small number of cash accounts cannot be commingled.

## Funds Under Management

| | $ Millions |
|---|---|
| **Combined Funds** | **$101,221** |
| **Other Retirement Funds** | **$1,568** |
| PERA Defined Contribution Plan | $106 |
| St. Paul Teachers' Retirement Fund | $335 |
| Statewide Volunteer Firefighter Plan | $415 |
| Unclassified Retirement Plan | $442 |
| Volunteer Fire Relief Associations | $270 |
| **Tax-Advantaged Savings Plans** | **$13,599** |
| Health Care Savings Plan | $2,343 |
| Hennepin County Supplemental Retirement Plan | $184 |
| Minnesota Deferred Compensation Plan | $11,072 |
| **State-Sponsored Savings Plans** | **$2,303** |
| Minnesota College Savings Plan | $2,241 |
| Minnesota Achieving a Better Life Experience Plan | $62 |
| **Non-Retirement Investment Program** | **$6,921** |
| Other Postemployment Benefits (OPEB) | $1,071 |
| Qualifying Governmental Entities | $21 |
| Trust Funds | $5,828 |
| **State Cash** | **$30,248** |
| Invested Treasurer's Cash | $29,610 |
| Other State Cash Accounts | $637 |
| **TOTAL SBI AUM** | **$155,859** |




Note: Differentials within column amounts may occur due to rounding. Totals are unaudited and may differ from the final fiscal year-end report.

# Quarterly Report

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## Performance Reporting Legends

### Combined Funds

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**Sub-Asset Class Level Data**
**Asset Class Level Data**

### Other Retirement Funds and Tax-Advantaged Savings Plans

**Asset Class Investment Pools**
**Single Manager Investment Option**

### Non-Retirement Investment Program

**Non-Retirement Funds**
**Non-Retirement Separate Accounts**

Note:

Throughout this report, performance is calculated net of investment management fees, gross of administrative fees, unless noted. Aggregates include terminated managers and returns for all periods greater than one year are annualized. Inception Date and Since Inception Returns refer to the date of retention by the SBI. FYTD refers to the return generated by an account since July 1 of the most recent year. For historical benchmark details, please refer to the addendum of this report. Some aggregate inception-to-date returns are based on portfolio management decisions to re-group manager accounts in different or newly created aggregates.

# Combined Funds

## June 30, 2025

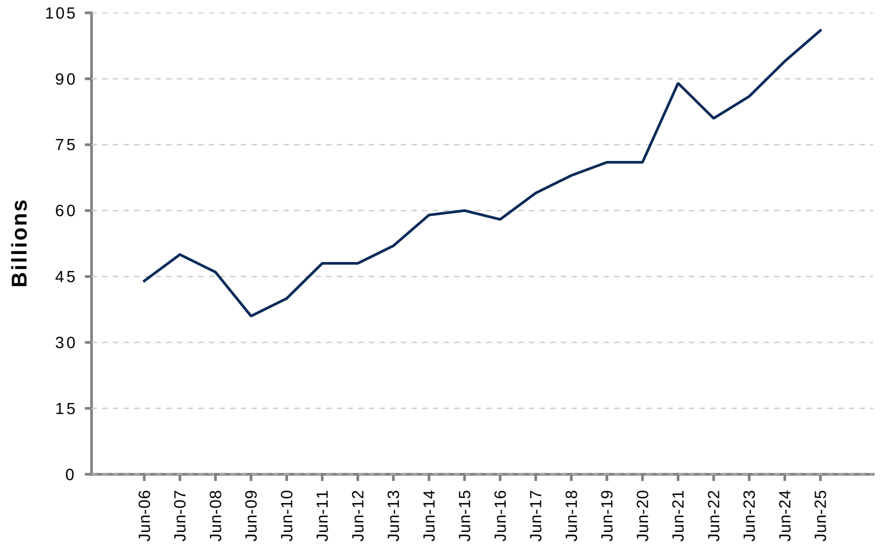
## Combined Funds Summary

### Combined Funds Change in Market Value ($Millions)

| | One Quarter |
|---|---|
| **COMBINED FUNDS** | |
| Beginning Market Value | $96,008 |
| Net Contributions | -619 |
| Investment Return | 5,833 |
| Ending Market Value | 101,221 |

The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

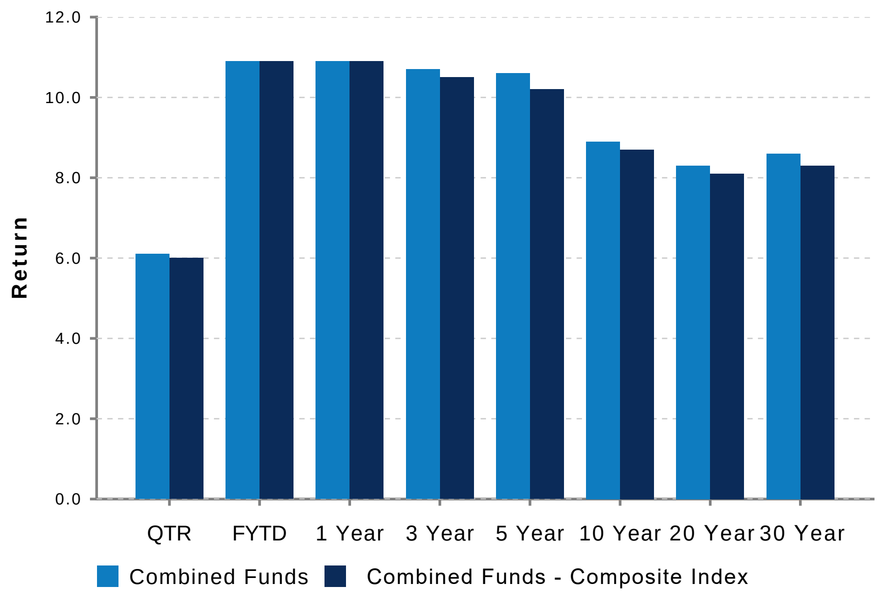
### Asset Growth




### Performance (Net of Fees)

The Combined Funds' performance is evaluated relative to a composite of public market index and private market investment returns. The Composite performance is calculated by multiplying the beginning of month Composite weights and the monthly returns of the asset class benchmarks.

| | QTR | FYTD | 1 Yr | 3 Yr | 5 Yr | 10 Yr | 20 Yr | 30 Yr |
|---|---|---|---|---|---|---|---|---|
| Combined Funds | 6.1% | 10.9% | 10.9% | 10.7% | 10.6% | 8.9% | 8.3% | 8.6% |
| Combined Funds-Composite Index | 6.0% | 10.9% | 10.9% | 10.5% | 10.2% | 8.7% | 8.1% | 8.3% |
| Excess | 0.2% | 0.0% | 0.0% | 0.3% | 0.4% | 0.2% | 0.2% | 0.3% |

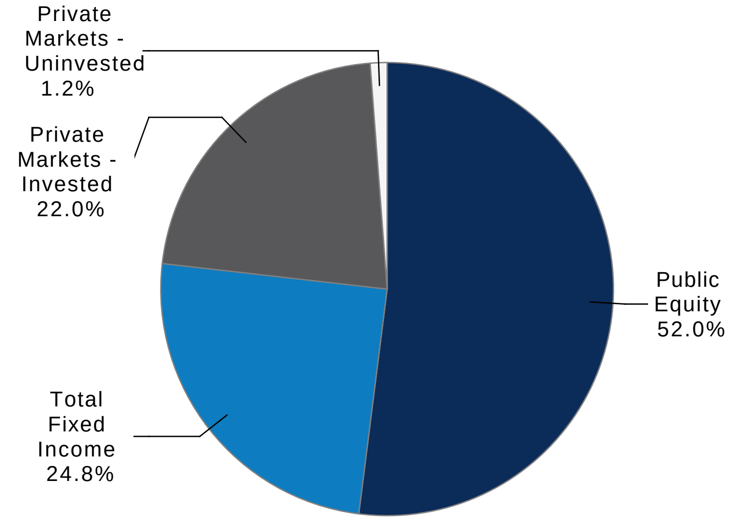


## Combined Funds Summary

### Asset Mix

The Combined Funds actual asset mix relative to the Strategic Asset Allocation Policy Target is shown below. Any uninvested portion of the Private Markets allocation is held in cash.

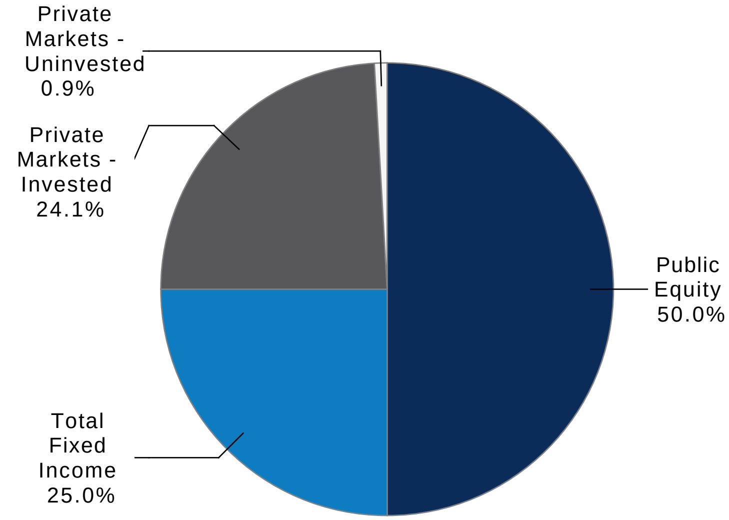
| | (Millions) | Actual Mix | Policy Target |
|---|---|---|---|
| Public Equity | $52,596 | 52.0 | 50.0 |
| Total Fixed Income | 25,111 | 24.8 | 25.0 |
| Private Markets - Total | 23,514 | 23.2 | 25.0 |
| Private Markets - Invested | 22,306 | 22.0 | |
| Private Markets - Uninvested | 1,208 | 1.2 | |
| TOTAL | 101,221 | 100.0 | |




### Composite Index Comparison

The Combined Funds Composite is set as the Strategic Asset Allocation Policy Target. The Combined Funds Composite weighting shown below is as of the first day of the quarter.

| | Policy Weight | Market Index |
|---|---|---|
| Public Equity | 50.0 | Public Equity Benchmark |
| Total Fixed Income | 25.0 | Total Fixed Income Benchmark |
| Private Markets - Invested | 24.1 | Private Markets |
| Private Markets - Uninvested | 0.9 | ICE BofA US 3-Month Treasury Bill |



## Combined Funds Asset Class Performance Summary

### Public Equity

The Combined Funds Public Equity includes Domestic Equity, International Equity and Global Equity.

The Public Equity benchmark is 67% Russell 3000 and 33% MSCI ACWI ex US (net).

| | Market Value | Actual Weight | Policy Weight | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Public Equity | $52.6 | 52.0% | 50.0% | 11.2% | 15.6% | 15.6% | 17.6% | 14.4% | 10.9% | 9.3% | 9.2 |
| Public Equity Benchmark | | | | 11.4 | 16.3 | 16.3 | 17.5 | 14.1 | 10.8 | 9.2 | 9.0 |
| Excess | | | | -0.1 | -0.6 | -0.6 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Domestic Equity | 34.6 | 34.2 | 33.5 | 11.1 | 15.2 | 15.2 | 19.2 | 16.1 | 12.8 | 10.4 | 10.1 |
| Domestic Equity Benchmark | | | | 11.0 | 15.3 | 15.3 | 19.1 | 16.0 | 12.9 | 10.5 | 10.2 |
| Excess | | | | 0.1 | -0.1 | -0.1 | 0.1 | 0.1 | -0.1 | -0.1 | -0.1 |
| International Equity | 16.8 | 16.6 | 16.5 | 11.3 | 16.6 | 16.6 | 14.5 | 11.1 | 6.7 | 6.4 | 6.3 |
| International Equity Benchmark | | | | 12.0 | 17.7 | 17.7 | 14.0 | 10.1 | 6.1 | 5.8 | 5.6 |
| Excess | | | | -0.8 | -1.2 | -1.2 | 0.5 | 1.0 | 0.6 | 0.5 | 0.7 |
| Global Equity | 1.1 | 1.1 | 0.0 | 13.2 | 14.2 | 14.2 | 14.4 | | | | |
| MSCI AC WORLD INDEX NET | | | | 11.5 | 16.2 | 16.2 | 17.3 | | | | |
| Excess | | | | 1.6 | -1.9 | -1.9 | -2.9 | | | | |

Note:

Prior to 6/30/16 the returns of Domestic and International Equity were not reported as a Total Public Equity return. For additional information regarding historical asset class performance and benchmarks, please refer to the Combined Funds Performance Report.

## Combined Funds Asset Class Performance Summary

### Total Fixed Income

The Combined Funds Fixed Income program includes Core/Core Plus, Return Seeking Fixed Income, Treasuries and Laddered Bond + Cash.

The Total Fixed Income benchmark is 40% Bloomberg U.S. Aggregate Index/ 40% Bloomberg Treasury 5+ Years Index/ 20% ICE BofA US 3-Month Treasury Bill.

| | Market Value | Actual Weight | Policy Weight | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Fixed Income | $25.1 | 24.8% | 25.0% | 1.1% | 5.8% | 5.8% | 2.8% | -0.8% | 2.4% | 3.6% | 4.8% |
| Total Fixed Income Benchmark | | | | 0.8 | 5.1 | 5.1 | 1.7 | -1.5 | 1.9 | 3.1 | 4.4 |
| Excess | | | | 0.4 | 0.7 | 0.7 | 1.1 | 0.7 | 0.6 | 0.5 | 0.4 |
| Core/Core Plus | $5.7 | 5.6% | 5.0 | 1.5 | 6.5 | 6.5 | 3.4 | -0.1 | 2.3 | 3.6 | 4.7 |
| Core Bonds Benchmark | | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 3.1 | 4.3 |
| Excess | | | | 0.2 | 0.4 | 0.4 | 0.9 | 0.7 | 0.6 | 0.5 | 0.4 |
| Return Seeking Fixed Income | $4.9 | 4.9% | 5.0 | 2.8 | 8.6 | 8.6 | 6.9 | | | | |
| Bloomberg U.S. Aggregate | | | | 1.2 | 6.1 | 6.1 | 2.5 | | | | |
| Excess | | | | 1.6 | 2.5 | 2.5 | 4.4 | | | | |
| Treasury Protection | $9.6 | 9.5% | 10.0 | 0.2 | 4.4 | 4.4 | -0.6 | -4.4 | | | |
| Bloomberg Treasury 5+ Year | | | | 0.2 | 4.2 | 4.2 | -0.7 | -4.6 | | | |
| Excess | | | | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | | | |
| Laddered Bond + Cash | $4.9 | 4.8% | 5.0 | 1.1 | 5.0 | 5.0 | 4.7 | 2.8 | 2.0 | 1.9 | 3.0 |
| ICE BofA US 3-Month Treasury Bill | | | | 1.0 | 4.7 | 4.7 | 4.6 | 2.8 | 2.0 | 1.7 | 2.5 |
| Excess | | | | 0.0 | 0.3 | 0.3 | 0.2 | 0.0 | 0.1 | 0.2 | 0.5 |

Note:

Since 12/1/2020 the Total Fixed Income includes allocations to Core/Core Plus Bonds, Return Seeking Bonds, Treasuries and Laddered Bond + Cash. From 7/1/2020 to 11/30/2020 Total Fixed Income was Core Bonds, Treasuries and Cash. From 2/1/2018-6/30/20 Total Fixed Income was Core Bonds and Treasuries. Prior to 2/1/2018, Total Fixed Income was Core Bonds. For additional information regarding historical asset class performance and benchmarks, please refer to the Combined Funds Performance Report.

## Combined Funds Asset Class Performance Summary

### Private Markets

| | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 25 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|
| Private Markets - Invested | 0.6% | 6.1% | 6.1% | 5.2% | 14.9% | 11.5% | 12.5% | 11.9% | 13.4% |
| Private Markets -Uninvested(1) | 0.9% | 4.1% | 4.1% | 5.2% | | | | | |
| Private Equity | 1.4% | 8.3% | 8.3% | 6.5% | 17.1% | 14.8% | 14.6% | 12.7% | 15.6% |
| Private Credit | -1.9% | 4.8% | 4.8% | 7.9% | 12.5% | 11.5% | 12.2% | 11.6% | |
| Resources | -2.6% | -1.9% | -1.9% | 1.7% | 10.5% | 2.0% | 10.3% | 12.2% | 12.2% |
| Real Estate | -0.3% | -1.6% | -1.6% | -3.9% | 7.8% | 8.0% | 7.7% | 8.4% | 9.1% |

### Private Markets

The time-weighted rates of return for the Private Markets portfolio are shown here. Private Markets included Private Equity, Private Credit, Resources, and Real Estate. Some of the existing investments are relatively immature and returns may not be indicative of future results.

**Private Equity Investments -** The objectives of the Private Equity portfolio, which may include leveraged buyouts, growth equity, venture capital and special situations, are to achieve attractive returns and to provide overall portfolio diversification to the total plan.

**Private Credit Investments -** The objectives of the Private Credit portfolio, which may include mezzanine debt, direct lending, and other forms of non-investment grade fixed income instruments, are to achieve a high total return over a full market cycle and to provide some degree of downside protection and typically provide current income in the form of a coupon. In certain situations, investments in the Private Credit portfolio also provide an equity component of return in the form of warrants or re-organized equity.

**Resource Investments -** The objectives of the Resources portfolio, which may include energy, infrastructure, and other hard assets, are to provide protection against the risks associated with inflation and to provide overall portfolio diversification to the total plan.

**Real Estate Investments -** The objectives of the Real Estate portfolio, which may include core and non-core real estate investments, are to achieve attractive returns, preserve capital, provide protection against risks associated with inflation, and provide overall portfolio diversification to the total plan.

The SBI also monitors Private Markets performance using money-weighted return metrics such as Internal Rate of Return and Multiple of Invested Capital. For money-weighted return metrics please refer to the Combined Funds Performance Report.

(1) The Uninvested Private Markets is currently cash. Prior to 11/02/2022, the Uninvested portion of the Private Markets allocation was invested in a combination of a passively managed S&P 500 Index strategy and a cash overlay strategy invested in equity derivatives and cash.

Source: State Street Bank

# Asset Class & Manager Performance
## March 31, 2025

The assets of the Combined Funds are allocated to public equity, fixed income, private markets, and cash. Each asset class may be further differentiated by geography, management style, and/or strategy. Managers are hired to manage the assets accordingly. This diversification is intended to reduce wide fluctuations in investment returns on a year-to-year basis and enhances the Funds' ability to meet or exceed the actuarial return target over the long-term.

The Combined Funds consist of the assets of active employees and retired members of the statewide retirement plans. The SBI commingles the assets of these plans into the Combined Funds to capture investment efficiencies. This sharing is accomplished by grouping managers by asset class, geography, and management style, into several Investment Pools. The individual funds participate in the Investment Pools by purchasing units which function much like the shares of a mutual fund.

While the vast majority of the units of these pools are owned by the Combined Funds, the Supplemental Investment Fund also owns units of these pools. The Supplemental Investment Funds are mutual fund-like investment vehicles which are used by investors in the Participant Directed Investment Program. Please refer to the Participant Directed Investment Program report for more information.

The performance information presented on the following pages for Public Equity and Fixed Income includes both the Combined Funds and Supplemental Investment Fund. The Private Markets is Combined Funds only. All assets in the Combined Funds are managed externally by investment management firms retained by contract.

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# Domestic Equity

## June 30, 2025

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Domestic Equity** | | | | | | | | | | |
| **ACTIVE DOMESTIC EQUITY AGGREGATE (1)** | **$3,206,974,391** | **9.1%** | **11.1%** | **12.4%** | **12.4%** | **15.2%** | **13.1%** | **10.3%** | **8.6%** | **06/1996** |
| Active Domestic Equity Benchmark | | | 9.4 | 11.6 | 11.6 | 13.9 | 12.7 | 10.0 | 9.0 | 06/1996 |
| Excess | | | 1.6 | 0.8 | 0.8 | 1.4 | 0.3 | 0.3 | -0.5 | |
| **SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)** | **4,773,849,657** | **13.6** | **11.3** | **14.4** | **14.4** | **20.2** | **17.0** | **13.6** | **9.8** | **06/1996** |
| Semi Passive Domestic Equity Benchmark | | | 11.1 | 15.7 | 15.7 | 19.6 | 16.3 | 13.4 | 9.6 | 06/1996 |
| Excess | | | 0.2 | -1.2 | -1.2 | 0.6 | 0.7 | 0.3 | 0.1 | |
| **PASSIVE DOMESTIC EQUITY AGGREGATE (3)** | **27,216,885,110** | **77.3** | **11.1** | **15.6** | **15.6** | **19.6** | **16.3** | **13.2** | **9.8** | **06/1996** |
| Passive Domestic Equity Benchmark | | | 11.1 | 15.6 | 15.6 | 19.5 | 16.3 | 13.2 | 9.9 | 06/1996 |
| Excess | | | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | -0.0 | -0.1 | |
| TRANSITION AGGREGATE DOMESTIC EQUITY (4) | | | | | | | | | | |
| **TOTAL DOMESTIC EQUITY (5)** | **35,197,709,159** | **100.0** | **11.1** | **15.2** | **15.2** | **19.2** | **16.1** | **12.8** | **11.0** | **01/1984** |
| Domestic Equity Benchmark | | | 11.0 | 15.3 | 15.3 | 19.1 | 16.0 | 12.9 | 11.1 | 01/1984 |
| Excess | | | 0.1 | -0.1 | -0.1 | 0.1 | 0.1 | -0.1 | -0.2 | |

(1) The Active Domestic Equity Benchmark is a weighted composite each of the individual active domestic equity manager's benchmarks.

(2) The current Semi-Passive Domestic Equity Benchmark is the Russell 1000 index.

(3) The current Passive Domestic Equity Benchmark is a weighted average of the Russell 1000, Russell 2000 and Russell 3000.

(4) The Transition Domestic Equity Aggregate will periodically contain residual Domestic Equity securities from transitions.

(5) The current Domestic Equity Benchmark is the Russell 3000.

Note: All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Total Domestic Equity** | | | | | |
| **ACTIVE DOMESTIC EQUITY AGGREGATE (1)** | **18.2%** | **20.9%** | **-21.3%** | **18.5%** | **27.3%** |
| Active Domestic Equity Benchmark | 17.0 | 19.4 | -19.4 | 20.3 | 19.8 |
| Excess | 1.2 | 1.5 | -1.9 | -1.7 | 7.5 |
| **SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)** | **25.4** | **27.5** | **-18.7** | **28.8** | **21.0** |
| Semi Passive Domestic Equity Benchmark | 24.5 | 26.5 | -19.1 | 26.5 | 21.0 |
| Excess | 0.9 | 1.0 | 0.4 | 2.3 | 0.0 |
| **PASSIVE DOMESTIC EQUITY AGGREGATE (3)** | **24.4** | **26.5** | **-19.2** | **26.5** | **20.8** |
| Passive Domestic Equity Benchmark | 24.4 | 26.5 | -19.1 | 26.4 | 20.8 |
| Excess | -0.0 | 0.0 | -0.0 | 0.1 | 0.0 |
| TRANSITION AGGREGATE DOMESTIC EQUITY (4) | | | | | |
| **TOTAL DOMESTIC EQUITY (5)** | **23.9** | **26.0** | **-19.4** | **25.8** | **21.7** |
| Domestic Equity Benchmark | 23.8 | 26.0 | -19.2 | 25.7 | 20.8 |
| Excess | 0.1 | 0.1 | -0.2 | 0.1 | 0.9 |

(1) The Active Domestic Equity Benchmark is a weighted composite each of the individual active domestic equity manager’s benchmarks.
(2) The current Semi-Passive Domestic Equity Benchmark is the Russell 1000 index.
(3) The current Passive Domestic Equity Benchmark is a weighted average of the Russell 1000, Russell 2000 and Russell 3000.
(4) The Transition Domestic Equity Aggregate will periodically contain residual Domestic Equity securities from transitions.
(5) The current Domestic Equity Benchmark is the Russell 3000.
Note: All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Large Cap Growth** | | | | | | | | | | |
| **SANDS** | **$270,150,041** | **0.8%** | **27.7%** | **24.2%** | **24.2%** | **28.8%** | **9.6%** | **13.8%** | **12.0%** | **01/2005** |
| Russell 1000 Growth | | | 17.8 | 17.2 | 17.2 | 25.8 | 18.1 | 17.0 | 12.6 | 01/2005 |
| Excess | | | 9.9 | 6.9 | 6.9 | 3.0 | -8.5 | -3.2 | -0.6 | |
| **WINSLOW** | **297,802,230** | **0.8** | **20.1** | **18.2** | **18.2** | **28.2** | **17.0** | **16.5** | **12.9** | **01/2005** |
| Russell 1000 Growth | | | 17.8 | 17.2 | 17.2 | 25.8 | 18.1 | 17.0 | 12.6 | 01/2005 |
| Excess | | | 2.3 | 1.0 | 1.0 | 2.4 | -1.1 | -0.5 | 0.4 | |
| **RUSSELL 1000 GROWTH AGGREGATE (1)** | **567,952,270** | **1.6** | **23.7** | **21.0** | **21.0** | **28.5** | **14.2** | **17.3** | **12.4** | **11/2003** |
| Russell 1000 Growth | | | 17.8 | 17.2 | 17.2 | 25.8 | 18.1 | 17.0 | 12.4 | 11/2003 |
| Excess | | | 5.8 | 3.8 | 3.8 | 2.7 | -3.9 | 0.3 | 0.0 | |

(1) Prior to 1/1/2021 the Russell 1000 Growth Aggregate included returns from Zevenbergen, which moved to the Russell 3000 Growth benchmark and is now reported separately.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Large Cap Growth** | | | | | |
| **SANDS** | **24.7%** | **52.0%** | **-49.3%** | **5.2%** | **71.0%** |
| Russell 1000 Growth | 33.4 | 42.7 | -29.1 | 27.6 | 38.5 |
| Excess | -8.7 | 9.3 | -20.2 | -22.4 | 32.5 |
| **WINSLOW** | **31.8** | **43.7** | **-31.0** | **24.8** | **37.6** |
| Russell 1000 Growth | 33.4 | 42.7 | -29.1 | 27.6 | 38.5 |
| Excess | -1.6 | 1.0 | -1.8 | -2.8 | -0.9 |
| **RUSSELL 1000 GROWTH AGGREGATE (1)** | **28.2** | **47.7** | **-41.3** | **12.8** | **81.3** |
| Russell 1000 Growth | 33.4 | 42.7 | -29.1 | 27.6 | 38.5 |
| Excess | -5.1 | 5.1 | -12.1 | -14.8 | 42.8 |

(1) Prior to 1/1/2021 the Russell 1000 Growth Aggregate included returns from Zevenbergen, which moved to the Russell 3000 Growth benchmark and is now reported separately.

Note: All aggregates include the performance of terminated managers.

### Semi-Passive Large Cap

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **BLACKROCK** | **$2,387,159,690** | **6.8%** | **11.6%** | **14.8%** | **14.8%** | **20.1%** | **16.6%** | **13.9%** | **11.0%** | **01/1995** |
| Semi Passive Domestic Equity Benchmark | | | 11.1 | 15.7 | 15.7 | 19.6 | 16.3 | 13.4 | 10.6 | 01/1995 |
| Excess | | | 0.5 | -0.9 | -0.9 | 0.5 | 0.3 | 0.5 | 0.4 | |
| **J.P. MORGAN** | **2,386,689,968** | **6.8** | **10.9** | **14.1** | **14.1** | **20.3** | **17.3** | **13.9** | **11.0** | **01/1995** |
| Semi Passive Domestic Equity Benchmark | | | 11.1 | 15.7 | 15.7 | 19.6 | 16.3 | 13.4 | 10.6 | 01/1995 |
| Excess | | | -0.2 | -1.6 | -1.6 | 0.7 | 1.0 | 0.5 | 0.4 | |
| **SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE** | **4,773,849,657** | **13.6** | **11.3** | **14.4** | **14.4** | **20.2** | **17.0** | **13.6** | **9.8** | **06/1996** |
| Semi Passive Domestic Equity Benchmark | | | 11.1 | 15.7 | 15.7 | 19.6 | 16.3 | 13.4 | 9.6 | 06/1996 |
| Excess | | | 0.2 | -1.2 | -1.2 | 0.6 | 0.7 | 0.3 | 0.1 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Semi-Passive Large Cap** | | | | | |
| **BLACKROCK** | **26.1%** | **26.9%** | **-19.2%** | **28.3%** | **20.7%** |
| Semi Passive Domestic Equity Benchmark | 24.5 | 26.5 | -19.1 | 26.5 | 21.0 |
| Excess | 1.6 | 0.4 | -0.1 | 1.8 | -0.3 |
| **J.P. MORGAN** | **24.8** | **28.1** | **-18.1** | **29.3** | **21.2** |
| Semi Passive Domestic Equity Benchmark | 24.5 | 26.5 | -19.1 | 26.5 | 21.0 |
| Excess | 0.3 | 1.6 | 1.0 | 2.8 | 0.3 |
| **SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE** | **25.4** | **27.5** | **-18.7** | **28.8** | **21.0** |
| Semi Passive Domestic Equity Benchmark | 24.5 | 26.5 | -19.1 | 26.5 | 21.0 |
| Excess | 0.9 | 1.0 | 0.4 | 2.3 | 0.0 |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Large Cap Value** | | | | | | | | | | |
| **BARROW HANLEY** | **$456,504,534** | **1.3%** | **4.3%** | **11.2%** | **11.2%** | **14.0%** | **16.7%** | **10.3%** | **9.1%** | **04/2004** |
| Russell 1000 Value | | | 3.8 | 13.7 | 13.7 | 12.8 | 13.9 | 9.2 | 8.3 | 04/2004 |
| Excess | | | 0.5 | -2.5 | -2.5 | 1.2 | 2.8 | 1.1 | 0.8 | |
| **LSV** | **362,311,453** | **1.0** | **5.1** | **12.3** | **12.3** | **12.6** | **15.3** | **9.1** | **9.1** | **04/2004** |
| Russell 1000 Value | | | 3.8 | 13.7 | 13.7 | 12.8 | 13.9 | 9.2 | 8.3 | 04/2004 |
| Excess | | | 1.3 | -1.4 | -1.4 | -0.2 | 1.4 | -0.1 | 0.8 | |
| **RUSSELL 1000 VALUE AGGREGATE** | **818,815,988** | **2.3** | **4.7** | **11.7** | **11.7** | **13.3** | **15.9** | **9.9** | **9.2** | **10/2003** |
| Russell 1000 Value | | | 3.8 | 13.7 | 13.7 | 12.8 | 13.9 | 9.2 | 8.9 | 10/2003 |
| Excess | | | 0.9 | -2.0 | -2.0 | 0.6 | 2.0 | 0.7 | 0.3 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Large Cap Value** | | | | | |
| **BARROW HANLEY** | **18.2%** | **12.0%** | **1.1%** | **27.7%** | **2.4%** |
| Russell 1000 Value | 14.4 | 11.5 | -7.5 | 25.2 | 2.8 |
| Excess | 3.8 | 0.5 | 8.6 | 2.5 | -0.4 |
| **LSV** | **15.2** | **10.5** | **-6.3** | **29.7** | **-1.3** |
| Russell 1000 Value | 14.4 | 11.5 | -7.5 | 25.2 | 2.8 |
| Excess | 0.9 | -0.9 | 1.3 | 4.5 | -4.1 |
| **RUSSELL 1000 VALUE AGGREGATE** | **16.8** | **11.3** | **-2.6** | **28.8** | **1.6** |
| Russell 1000 Value | 14.4 | 11.5 | -7.5 | 25.2 | 2.8 |
| Excess | 2.4 | -0.2 | 4.9 | 3.7 | -1.2 |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Small Cap Growth** | | | | | | | | | | |
| **ARROWMARK** | **$183,541,323** | **0.5%** | **6.1%** | **-0.6%** | **-0.6%** | **8.1%** | **6.2%** | | **8.3%** | **11/2016** |
| Russell 2000 Growth | | | 12.0 | 9.7 | 9.7 | 12.4 | 7.4 | | 9.4 | 11/2016 |
| Excess | | | -5.9 | -10.3 | -10.3 | -4.3 | -1.2 | | -1.1 | |
| **HOOD RIVER** | **213,190,373** | **0.6** | **17.0** | **13.5** | **13.5** | **19.2** | **17.0** | | **15.9** | **11/2016** |
| Russell 2000 Growth | | | 12.0 | 9.7 | 9.7 | 12.4 | 7.4 | | 9.4 | 11/2016 |
| Excess | | | 5.0 | 3.8 | 3.8 | 6.8 | 9.6 | | 6.5 | |
| **RICE HALL JAMES** | **211,413,834** | **0.6** | **8.8** | **19.5** | **19.5** | **11.7** | **9.5** | | **10.7** | **11/2016** |
| Russell 2000 Growth | | | 12.0 | 9.7 | 9.7 | 12.4 | 7.4 | | 9.4 | 11/2016 |
| Excess | | | -3.2 | 9.7 | 9.7 | -0.7 | 2.1 | | 1.3 | |
| **WELLINGTON** | **189,078,871** | **0.5** | **9.2** | **1.3** | **1.3** | **9.6** | **5.8** | | **8.7** | **11/2016** |
| Russell 2000 Growth | | | 12.0 | 9.7 | 9.7 | 12.4 | 7.4 | | 9.4 | 11/2016 |
| Excess | | | -2.8 | -8.4 | -8.4 | -2.8 | -1.6 | | -0.8 | |
| **RUSSELL 2000 GROWTH AGGREGATE** | **797,224,402** | **2.3** | **10.3** | **8.4** | **8.4** | **12.3** | **9.8** | **7.5%** | **7.8** | **11/2003** |
| Russell 2000 Growth | | | 12.0 | 9.7 | 9.7 | 12.4 | 7.4 | 7.1 | 8.5 | 11/2003 |
| Excess | | | -1.7 | -1.3 | -1.3 | -0.1 | 2.3 | 0.4 | -0.6 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Small Cap Growth** | | | | | |
| **ARROWMARK** | **9.0%** | **19.9%** | **-23.3%** | **6.1%** | **21.9%** |
| Russell 2000 Growth | 15.2 | 18.7 | -26.4 | 2.8 | 34.6 |
| Excess | -6.1 | 1.3 | 3.1 | 3.2 | -12.8 |
| **HOOD RIVER** | **35.1** | **21.9** | **-27.7** | **24.2** | **61.7** |
| Russell 2000 Growth | 15.2 | 18.7 | -26.4 | 2.8 | 34.6 |
| Excess | 20.0 | 3.3 | -1.4 | 21.4 | 27.0 |
| **RICE HALL JAMES** | **16.6** | **14.3** | **-24.4** | **15.6** | **23.8** |
| Russell 2000 Growth | 15.2 | 18.7 | -26.4 | 2.8 | 34.6 |
| Excess | 1.4 | -4.3 | 2.0 | 12.8 | -10.8 |
| **WELLINGTON** | **12.9** | **18.5** | **-28.5** | **4.3** | **33.1** |
| Russell 2000 Growth | 15.2 | 18.7 | -26.4 | 2.8 | 34.6 |
| Excess | -2.3 | -0.1 | -2.1 | 1.4 | -1.5 |
| **RUSSELL 2000 GROWTH AGGREGATE** | **18.3** | **18.7** | **-26.3** | **12.4** | **35.4** |
| Russell 2000 Growth | 15.2 | 18.7 | -26.4 | 2.8 | 34.6 |
| Excess | 3.2 | 0.1 | 0.0 | 9.5 | 0.8 |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Small Cap Value** | | | | | | | | | | |
| **GOLDMAN SACHS** | **$188,643,399** | **0.5%** | **4.7%** | **7.6%** | **7.6%** | **7.7%** | **12.1%** | **6.3%** | **8.3%** | **01/2004** |
| Russell 2000 Value | | | 5.0 | 5.5 | 5.5 | 7.5 | 12.5 | 6.7 | 7.4 | 01/2004 |
| Excess | | | -0.3 | 2.1 | 2.1 | 0.3 | -0.4 | -0.4 | 1.0 | |
| **HOTCHKIS AND WILEY** | **193,284,632** | **0.5** | **3.2** | **1.4** | **1.4** | **10.9** | **18.9** | **7.3** | **8.5** | **01/2004** |
| Russell 2000 Value | | | 5.0 | 5.5 | 5.5 | 7.5 | 12.5 | 6.7 | 7.4 | 01/2004 |
| Excess | | | -1.7 | -4.1 | -4.1 | 3.5 | 6.4 | 0.5 | 1.1 | |
| **MARTINGALE** | **182,291,654** | **0.5** | **7.7** | **7.4** | **7.4** | **11.8** | **16.8** | **8.2** | **8.1** | **01/2004** |
| Russell 2000 Value | | | 5.0 | 5.5 | 5.5 | 7.5 | 12.5 | 6.7 | 7.4 | 01/2004 |
| Excess | | | 2.7 | 1.9 | 1.9 | 4.3 | 4.4 | 1.5 | 0.7 | |
| **PEREGRINE** | **187,487,150** | **0.5** | **3.2** | **5.9** | **5.9** | **6.6** | **13.1** | **6.4** | **9.1** | **07/2000** |
| Russell 2000 Value | | | 5.0 | 5.5 | 5.5 | 7.5 | 12.5 | 6.7 | 8.6 | 07/2000 |
| Excess | | | -1.8 | 0.4 | 0.4 | -0.8 | 0.7 | -0.4 | 0.5 | |
| **RUSSELL 2000 VALUE AGGREGATE** | **751,706,835** | **2.1** | **4.6** | **5.5** | **5.5** | **8.8** | **14.6** | **6.8** | **8.5** | **10/2003** |
| Russell 2000 Value | | | 5.0 | 5.5 | 5.5 | 7.5 | 12.5 | 6.7 | 8.0 | 10/2003 |
| Excess | | | -0.3 | -0.0 | -0.0 | 1.3 | 2.1 | 0.0 | 0.5 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Small Cap Value** | | | | | |
| **GOLDMAN SACHS** | **8.5%** | **11.9%** | **-14.4%** | **27.0%** | **2.4%** |
| Russell 2000 Value | 8.1 | 14.6 | -14.5 | 28.3 | 4.6 |
| Excess | 0.5 | -2.8 | 0.1 | -1.3 | -2.3 |
| | | | | | |
| **HOTCHKIS AND WILEY** | **5.4** | **18.8** | **3.1** | **36.5** | **-0.2** |
| Russell 2000 Value | 8.1 | 14.6 | -14.5 | 28.3 | 4.6 |
| Excess | -2.6 | 4.2 | 17.6 | 8.2 | -4.8 |
| | | | | | |
| **MARTINGALE** | **9.0** | **20.7** | **-8.0** | **41.3** | **-4.6** |
| Russell 2000 Value | 8.1 | 14.6 | -14.5 | 28.3 | 4.6 |
| Excess | 1.0 | 6.1 | 6.4 | 13.0 | -9.2 |
| | | | | | |
| **PEREGRINE** | **14.5** | **9.2** | **-12.5** | **28.6** | **7.3** |
| Russell 2000 Value | 8.1 | 14.6 | -14.5 | 28.3 | 4.6 |
| Excess | 6.5 | -5.4 | 2.0 | 0.3 | 2.7 |
| | | | | | |
| **RUSSELL 2000 VALUE AGGREGATE** | **9.4** | **14.2** | **-9.4** | **31.8** | **1.5** |
| Russell 2000 Value | 8.1 | 14.6 | -14.5 | 28.3 | 4.6 |
| Excess | 1.3 | -0.5 | 5.1 | 3.5 | -3.1 |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active All Cap** | | | | | | | | | | |
| **ZEVENBERGEN (1)** | **$271,274,896** | **0.8%** | **31.9%** | **32.6%** | **32.6%** | **33.5%** | **8.6%** | **15.6%** | **12.1%** | **04/1994** |
| Zevenbergen Custom Benchmark | | | 17.6 | 16.9 | 16.9 | 25.1 | 18.6 | 17.2 | | 04/1994 |
| Excess | | | 14.4 | 15.7 | 15.7 | 8.5 | -10.0 | -1.6 | | |
| **ACTIVE RUSSELL 3000 GROWTH (2)** | **271,274,896** | **0.8** | **31.9** | **32.6** | **32.6** | **33.5** | | | **0.3** | **01/2021** |
| Russell 3000 Growth TR | | | 17.6 | 16.9 | 16.9 | 25.1 | | | 13.5 | 01/2021 |
| Excess | | | 14.4 | 15.7 | 15.7 | 8.5 | | | -13.3 | |

(1) Effective 1/1/2021, the SBI changed the Zevenbergen Benchmark to the Russell 3000 Growth. Prior to this date it was the Russell 1000 Growth.

(2) Prior to 1/1/2021, Zevenbergen returns were reported as part of the Russell 1000 Growth Aggregate.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active All Cap** | | | | | |
| **ZEVENBERGEN (1)** | **35.0%** | **66.6%** | **-55.7%** | **-9.7%** | **126.2%** |
| Zevenbergen Custom Benchmark | 32.5 | 41.2 | -29.0 | 32.3 | 38.5 |
| Excess | 2.5 | 25.4 | -26.8 | -42.0 | 87.7 |
| **ACTIVE RUSSELL 3000 GROWTH (2)** | **35.0** | **66.6** | **-55.7** | **-9.7** | |
| Russell 3000 Growth TR | 32.5 | 41.2 | -29.0 | 25.8 | |
| Excess | 2.5 | 25.4 | -26.8 | -35.6 | |

(1) Effective 1/1/2021, the SBI changed the Zevenbergen Benchmark to the Russell 3000 Growth. Prior to this date it was the Russell 1000 Growth.

(2) Prior to 1/1/2021, Zevenbergen returns were reported as part of the Russell 1000 Growth Aggregate.

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Passive Domestic Equity** | | | | | | | | | | |
| **BLACKROCK RUSSELL 1000** | **$26,168,423,700** | **74.3%** | **11.1%** | **15.7%** | **15.7%** | **19.6%** | **16.3%** | | **14.9%** | **11/2016** |
| RUSSELL 1000 (DAILY) | | | 11.1 | 15.7 | 15.7 | 19.6 | 16.3 | | 14.9 | 11/2016 |
| Excess | | | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | | -0.0 | |
| **BLACKROCK RUSSELL 2000** | **73,373,972** | **0.2** | **8.5** | **7.8** | **7.8** | **9.9** | **10.4** | | **7.5** | **11/2018** |
| RUSSELL 2000 (DAILY) | | | 8.5 | 7.7 | 7.7 | 10.0 | 10.0 | | 7.1 | 11/2018 |
| Excess | | | 0.0 | 0.1 | 0.1 | -0.1 | 0.3 | | 0.4 | |
| **BLACKROCK RUSSELL 3000 (1)** | **975,087,438** | **2.8** | **11.0** | **15.3** | **15.3** | **19.1** | **16.1** | **13.1%** | **10.3** | **07/1995** |
| Passive Manager Benchmark | | | 11.0 | 15.3 | 15.3 | 19.1 | 16.0 | 13.0 | 10.2 | 07/1995 |
| Excess | | | -0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | |
| **PASSIVE DOMESTIC EQUITY AGGREGATE (2)** | **27,216,885,110** | **77.3** | **11.1** | **15.6** | **15.6** | **19.6** | **16.3** | **13.2** | **9.8** | **06/1996** |
| Passive Domestic Equity Benchmark | | | 11.1 | 15.6 | 15.6 | 19.5 | 16.3 | 13.2 | 9.9 | 06/1996 |
| Excess | | | -0.0 | -0.0 | -0.0 | 0.0 | 0.0 | -0.0 | -0.1 | |

(1) The current Passive Manager Benchmark is the Russell 3000. For historical benchmark details please refer to the addendum of this report.

(2) The current Passive Domestic Equity Benchmark is a weighted average of the Russell 1000, Russell 2000 and Russell 3000.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Total Passive Domestic Equity** | | | | | |
| **BLACKROCK RUSSELL 1000** | **24.5%** | **26.6%** | **-19.2%** | **26.5%** | **20.9%** |
| RUSSELL 1000 (DAILY) | 24.5 | 26.5 | -19.1 | 26.5 | 21.0 |
| Excess | -0.0 | 0.0 | -0.0 | 0.1 | -0.0 |
| **BLACKROCK RUSSELL 2000** | **11.6** | **16.7** | **-19.9** | **16.0** | **20.8** |
| RUSSELL 2000 (DAILY) | 11.5 | 16.9 | -20.4 | 14.8 | 20.0 |
| Excess | 0.1 | -0.3 | 0.6 | 1.2 | 0.8 |
| **BLACKROCK RUSSELL 3000 (1)** | **23.8** | **26.0** | **-19.2** | **26.2** | **21.2** |
| Passive Manager Benchmark | 23.8 | 26.0 | -19.2 | 25.7 | 20.9 |
| Excess | 0.0 | 0.1 | 0.0 | 0.5 | 0.3 |
| **PASSIVE DOMESTIC EQUITY AGGREGATE (2)** | **24.4** | **26.5** | **-19.2** | **26.5** | **20.8** |
| Passive Domestic Equity Benchmark | 24.4 | 26.5 | -19.1 | 26.4 | 20.8 |
| Excess | -0.0 | 0.0 | -0.0 | 0.1 | 0.0 |

(1) The current Passive Manager Benchmark is the Russell 3000. For historical benchmark details please refer to the addendum of this report.

(2) The current Passive Domestic Equity Benchmark is a weighted average of the Russell 1000, Russell 2000 and Russell 3000.

Note: All aggregates include the performance of terminated managers.

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# International Equity

## June 30, 2025

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total International Equity** | | | | | | | | | | |
| **DEVELOPED MARKETS (1)** | **$11,936,270,334** | **70.0%** | **10.8%** | **17.2%** | **17.2%** | **16.2%** | **12.8%** | **7.5%** | **6.1%** | **01/1997** |
| BENCHMARK DM | | | 12.0% | 18.7% | 18.7% | 15.7% | 11.5% | 6.7% | 3.3% | 01/1997 |
| Excess | | | -1.2% | -1.5% | -1.5% | 0.5% | 1.3% | 0.8% | 2.8% | |
| **EMERGING MARKETS (2)** | **$4,510,256,027** | **26.4%** | **12.5%** | **13.5%** | **13.5%** | **10.1%** | **6.9%** | **4.7%** | **5.6%** | **11/1996** |
| BENCHMARK EM | | | 12.0% | 15.3% | 15.3% | 9.7% | 6.8% | 4.8% | 5.9% | 11/1996 |
| Excess | | | 0.5% | -1.8% | -1.8% | 0.4% | 0.1% | -0.1% | -0.3% | |
| **ACWI EX-US AGGREGATE** | **$503,249,034** | **3.0%** | **12.8%** | **21.1%** | **21.1%** | **15.9%** | | | **9.1%** | **01/2021** |
| MSCI AC WORLD ex US (NET) - DAILY | | | 12.0% | 17.7% | 17.7% | 14.0% | | | 6.1% | 01/2021 |
| Excess | | | 0.8% | 3.4% | 3.4% | 1.9% | | | 3.1% | |
| **CHINA ONLY AGGREGATE** | **$105,149,504** | **0.6%** | **-0.6%** | **21.5%** | **21.5%** | **-4.3%** | | | **-7.1%** | **01/2021** |
| MSCI China A | | | 3.3% | 17.0% | 17.0% | -5.2% | | | -5.8% | 01/2021 |
| Excess | | | -3.9% | 4.5% | 4.5% | 1.0% | | | -1.3% | |
| TRANSITION AGGREGATE INTERNATIONAL EQUITY (3) | $5,297,786 | 0.0% | | | | | | | | 06/2017 |
| **TOTAL INTERNATIONAL EQUITY (4)** | **$17,056,394,504** | **100.0%** | **11.3%** | **16.5%** | **16.5%** | **14.5%** | **11.1%** | **6.7%** | **6.8%** | **10/1992** |
| International Equity Benchmark | | | 12.0% | 17.7% | 17.7% | 14.0% | 10.1% | 6.1% | 6.2% | 10/1992 |
| Excess | | | -0.8% | -1.2% | -1.2% | 0.5% | 1.0% | 0.6% | 0.5% | |

(1) The current benchmark for Developed Markets, Benchmark DM, is the Standard (large + mid) MSCI World ex USA (net).

(2) The current benchmark for Emerging Markets, Benchmark EM, is the Standard (large + mid) MSCI Emerging Markets Free (net).

(3) The Transition Aggregate International Equity primarily consists of a portfolio equitized by NISA through an overlay strategy designed to track the MSCI Emerging Markets Index, along with securities from prior terminated managers.

(4) The current International Equity Benchmark is the MSCI ACWI ex USA (net) does not includes impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Total International Equity** | | | | | |
| **DEVELOPED MARKETS (1)** | **8.4%** | **17.8%** | **-10.7%** | **13.5%** | **8.9%** |
| BENCHMARK DM | 4.7 | 17.9 | -14.3 | 12.6 | 7.6 |
| Excess | 3.7 | -0.1 | 3.6 | 0.9 | 1.3 |
| **EMERGING MARKETS (2)** | **6.2** | **10.2** | **-21.1** | **-1.5** | **17.9** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -1.3 | 0.4 | -1.0 | 1.1 | -0.4 |
| **ACWI EX-US AGGREGATE** | **6.8** | **17.9** | **-12.6** | **12.8** | |
| MSCI AC WORLD ex US (NET) - DAILY | 5.5 | 15.6 | -16.0 | 7.8 | |
| Excess | 1.3 | 2.3 | 3.4 | 4.9 | |
| **CHINA ONLY AGGREGATE** | **6.9** | **-10.0** | **-24.5** | **-2.9** | |
| MSCI China A | 11.7 | -13.5 | -25.9 | 3.2 | |
| Excess | -4.8 | 3.5 | 1.4 | -6.1 | |
| TRANSITION AGGREGATE INTERNATIONAL EQUITY (3) | | | | | |
| **TOTAL INTERNATIONAL EQUITY (4)** | **7.8** | **15.6** | **-13.7** | **8.9** | **11.4** |
| International Equity Benchmark | 5.5 | 15.6 | -16.0 | 7.8 | 10.5 |
| Excess | 2.2 | -0.1 | 2.3 | 1.1 | 0.8 |

(1) The current benchmark for Developed Markets, Benchmark DM, is the Standard (large + mid) MSCI World ex USA (net).

(2) The current benchmark for Emerging Markets, Benchmark EM, is the Standard (large + mid) MSCI Emerging Markets Free (net).

(3) The Transition Aggregate International Equity contains International Equity securities that are being transitioned to a different manager.

(4) The current International Equity Benchmark is the MSCI ACWI ex USA (net). Does not includes impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio.

Note: All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Developed Markets** | | | | | | | | | | |
| **ACADIAN** | **$708,920,139** | **4.2%** | **13.2%** | **24.2%** | **24.2%** | **17.2%** | **13.0%** | **9.7%** | **7.5%** | **07/2005** |
| BENCHMARK DM | | | 12.0 | 18.7 | 18.7 | 15.7 | 11.5 | 6.7 | 5.9 | 07/2005 |
| Excess | | | 1.2 | 5.5 | 5.5 | 1.5 | 1.5 | 3.0 | 1.6 | |
| **COLUMBIA** | **587,498,506** | **3.4** | **10.6** | **11.5** | **11.5** | **16.5** | **12.2** | **8.0** | **4.6** | **03/2000** |
| BENCHMARK DM | | | 12.0 | 18.7 | 18.7 | 15.7 | 11.5 | 6.7 | 4.5 | 03/2000 |
| Excess | | | -1.4 | -7.2 | -7.2 | 0.8 | 0.7 | 1.4 | 0.1 | |
| **FIDELITY** | **581,668,044** | **3.4** | **11.3** | **15.1** | **15.1** | **14.3** | **10.7** | **7.3** | **7.1** | **07/2005** |
| BENCHMARK DM | | | 12.0 | 18.7 | 18.7 | 15.7 | 11.5 | 6.7 | 5.9 | 07/2005 |
| Excess | | | -0.7 | -3.6 | -3.6 | -1.4 | -0.8 | 0.6 | 1.2 | |
| **JP MORGAN** | **432,524,561** | **2.5** | **10.4** | **15.5** | **15.5** | **14.3** | **9.9** | **6.7** | **6.0** | **07/2005** |
| BENCHMARK DM | | | 12.0 | 18.7 | 18.7 | 15.7 | 11.5 | 6.7 | 5.9 | 07/2005 |
| Excess | | | -1.7 | -3.2 | -3.2 | -1.4 | -1.6 | -0.0 | 0.0 | |
| **MARATHON** | **518,576,774** | **3.0** | **13.1** | **20.3** | **20.3** | **16.9** | **13.3** | **7.4** | **8.3** | **11/1993** |
| BENCHMARK DM | | | 12.0 | 18.7 | 18.7 | 15.7 | 11.5 | 6.7 | 5.7 | 11/1993 |
| Excess | | | 1.0 | 1.6 | 1.6 | 1.2 | 1.8 | 0.7 | 2.6 | |

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Developed Markets** | | | | | |
| **ACADIAN** | **13.1%** | **12.4%** | **-12.5%** | **13.6%** | **11.7%** |
| BENCHMARK DM | 4.7 | 17.9 | -14.3 | 12.6 | 7.6 |
| Excess | 8.4 | -5.5 | 1.8 | 0.9 | 4.2 |
| **COLUMBIA** | **5.6** | **21.1** | **-15.0** | **14.2** | **15.0** |
| BENCHMARK DM | 4.7 | 17.9 | -14.3 | 12.6 | 7.6 |
| Excess | 0.9 | 3.2 | -0.7 | 1.6 | 7.4 |
| **FIDELITY** | **4.7** | **18.0** | **-17.4** | **13.0** | **15.4** |
| BENCHMARK DM | 4.7 | 17.9 | -14.3 | 12.6 | 7.6 |
| Excess | -0.0 | 0.1 | -3.2 | 0.4 | 7.8 |
| **JP MORGAN** | **1.7** | **17.1** | **-19.0** | **13.3** | **14.2** |
| BENCHMARK DM | 4.7 | 17.9 | -14.3 | 12.6 | 7.6 |
| Excess | -3.0 | -0.9 | -4.7 | 0.7 | 6.6 |
| **MARATHON** | **6.6** | **18.2** | **-12.1** | **12.8** | **7.6** |
| BENCHMARK DM | 4.7 | 17.9 | -14.3 | 12.6 | 7.6 |
| Excess | 1.9 | 0.3 | 2.2 | 0.2 | 0.1 |

| | Ending Market Value | Portfolio Weight | 1 Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Developed Markets** | | | | | | | | | | |
| **Active Developed Markets Aggregate (1)** | **$2,829,188,025** | **16.6%** | **11.8%** | **17.5%** | **17.5%** | **16.0%** | **11.8%** | **7.2%** | **6.2%** | **06/1996** |
| BENCHMARK DM | | | 12.0% | 18.7% | 18.7% | 15.7% | 11.5% | 6.7% | 3.2% | 06/1996 |
| Excess | | | -0.2% | -1.2% | -1.2% | 0.2% | 0.2% | 0.6% | 3.0% | |
| **SSgA DEVELOPED MARKETS PASSIVE** | **$9,175,339,114** | **53.8%** | **12.3%** | **19.2%** | **19.2%** | **16.2%** | **12.0%** | **7.1%** | | |
| BENCHMARK DM | | | 12.0% | 18.7% | 18.7% | 15.7% | 11.5% | 6.7% | | |
| Excess | | | 0.3% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | | |
| **RECORD CURRENCY (2)** | **-$72,084,927** | **-0.4%** | **1.4%** | **1.5%** | **1.5%** | **-0.1%** | | | | **10/2020** |
| **DEVELOPED MARKETS TOTAL (3)** | **$11,936,270,334** | | **10.8%** | **17.2%** | **17.2%** | **16.2%** | **12.8%** | **7.5%** | **6.1%** | **01/1997** |
| BENCHMARK DM | | | 12.0% | 18.7% | 18.7% | 15.7% | 11.5% | 6.7% | 3.3% | 01/1997 |
| Excess | | | -1.2% | -1.5% | -1.5% | 0.5% | 1.3% | 0.8% | 2.8% | |

(1) Includes the historical returns of terminated managers previously classified as "Semi-Passive Developed Markets."

(2) Return for Record Currency is the difference between the DM Equity with Currency Management and without.

(3) The current International Equity Benchmark is the MSCI ACWI ex USA (net). Does not includes impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio. Market values inculde residuals from terminated managers

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Total Developed Markets** | | | | | |
| **Active Developed Markets Aggregate** | **6.8%** | **17.6%** | **-15.2%** | **12.5%** | **12.2%** |
| BENCHMARK DM | 4.7% | 17.9% | -14.3% | 12.6% | 7.6% |
| Excess | 2.1% | -0.4% | -0.9% | -0.1% | 4.6% |
| | | | | | |
| **SSgA DEVELOPED MARKETS PASSIVE** | **5.0%** | **18.5%** | **-13.8%** | **13.0%** | **8.2%** |
| BENCHMARK DM | 4.7% | 17.9% | -14.3% | 12.6% | 7.6% |
| Excess | 0.3% | 0.5% | 0.5% | 0.4% | 0.6% |
| | | | | | |
| **DEVELOPED MARKETS TOTAL** | **8.4%** | **17.8%** | **-10.7%** | **13.5%** | **8.9%** |
| BENCHMARK DM | 4.7% | 17.9% | -14.3% | 12.6% | 7.6% |
| Excess | 3.7% | -0.1% | 3.6% | 0.9% | 1.3% |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Emerging Markets** | | | | | | | | | | |
| **FIDELITY** | **$362,242,983** | | **9.9%** | | | | | | **9.9%** | **04/2025** |
| BENCHMARK EM | | | 12.0 | | | | | | 12.0 | 04/2025 |
| Excess | | | -2.1 | | | | | | -2.1 | |
| **MARTIN CURRIE** | **604,085,364** | **3.5%** | **10.6** | **11.8%** | **11.8%** | **6.9%** | **4.2%** | | **5.6** | **04/2017** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | | 5.6 | 04/2017 |
| Excess | | | -1.4 | -3.4 | -3.4 | -2.8 | -2.6 | | 0.1 | |
| **MACQUARIE** | **632,094,932** | **3.7** | **21.4** | **14.6** | **14.6** | **13.7** | **8.1** | | **7.6** | **04/2017** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | | 5.6 | 04/2017 |
| Excess | | | 9.4 | -0.7 | -0.7 | 4.0 | 1.3 | | 2.0 | |
| **MORGAN STANLEY** | **735,750,406** | **4.3** | **13.0** | **11.1** | **11.1** | **11.9** | **7.0** | **4.6%** | **8.2** | **01/2001** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | 4.8 | 8.0 | 01/2001 |
| Excess | | | 1.1 | -4.2 | -4.2 | 2.2 | 0.2 | -0.2 | 0.2 | |
| **PZENA** | **737,359,963** | **4.3** | **9.1** | **16.0** | **16.0** | **14.9** | **14.8** | | **7.9** | **04/2017** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | | 5.6 | 04/2017 |
| Excess | | | -2.9 | 0.7 | 0.7 | 5.2 | 8.0 | | 2.3 | |

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Emerging Markets** | | | | | |
| **FIDELITY (1)** | | | | | |
| BENCHMARK EM | | | | | |
| Excess | | | | | |
| **MARTIN CURRIE** | **3.8%** | **5.8%** | **-25.7%** | **-3.5%** | **26.5%** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -3.7 | -4.1 | -5.6 | -1.0 | 8.2 |
| **MACQUARIE** | **7.2** | **16.0** | **-26.5** | **-2.2** | **24.2** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -0.3 | 6.1 | -6.4 | 0.3 | 5.9 |
| **MORGAN STANLEY** | **8.0** | **10.8** | **-23.8** | **3.5** | **15.7** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | 0.5 | 1.0 | -3.7 | 6.0 | -2.6 |
| **PZENA** | **5.8** | **19.7** | **-7.4** | **9.3** | **7.7** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -1.7 | 9.9 | 12.7 | 11.8 | -10.6 |

(1) Fidelity funded 03/25/2025, performance reporting starts on 04/01/2025.

## Total Emerging Markets

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **ACTIVE EMERGING MARKETS AGGREGATE (1)** | **$3,071,533,647** | **18.0%** | **12.8%** | **12.9%** | **12.9%** | **10.5%** | **7.1%** | **4.6%** | **4.6%** | **01/2012** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | 4.8 | 4.7 | 01/2012 |
| Excess | | | 0.8 | -2.4 | -2.4 | 0.8 | 0.3 | -0.2 | -0.1 | |
| **SSGA EMERGING MARKETS PASSIVE** | **1,438,722,321** | **8.4** | **11.7** | **14.9** | **14.9** | **9.2** | **6.3** | **4.6** | **4.6** | **01/2012** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | 4.8 | 4.7 | 01/2012 |
| Excess | | | -0.2 | -0.4 | -0.4 | -0.5 | -0.5 | -0.2 | -0.1 | |
| **EMERGING MARKETS TOTAL (1)** | **4,510,256,027** | **26.4** | **12.5** | **13.5** | **13.5** | **10.1** | **6.9** | **4.7** | **5.6** | **11/1996** |
| BENCHMARK EM | | | 12.0 | 15.3 | 15.3 | 9.7 | 6.8 | 4.8 | 5.9 | 11/1996 |
| Excess | | | 0.5 | -1.8 | -1.8 | 0.4 | 0.1 | -0.1 | -0.3 | |

(1) All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Total Emerging Markets** | | | | | |
| **ACTIVE EMERGING MARKETS AGGREGATE (1)** | **5.9%** | **10.6%** | **-21.4%** | **-0.9%** | **17.6%** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -1.6 | 0.8 | -1.3 | 1.6 | -0.7 |
| **SSGA EMERGING MARKETS PASSIVE** | **6.7** | **9.4** | **-20.4** | **-2.9** | **18.3** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -0.8 | -0.4 | -0.3 | -0.3 | 0.0 |
| **EMERGING MARKETS TOTAL (1)** | **6.2** | **10.2** | **-21.1** | **-1.5** | **17.9** |
| BENCHMARK EM | 7.5 | 9.8 | -20.1 | -2.5 | 18.3 |
| Excess | -1.3 | 0.4 | -1.0 | 1.1 | -0.4 |

(1) All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active ACWI ex-US** | | | | | | | | | | |
| **EARNEST PARTNERS ACWI EX US** | **$503,249,034** | **3.0%** | **12.8%** | **21.1%** | **21.1%** | **15.9%** | | | **9.1%** | **01/2021** |
| MSCI AC WORLD ex US (NET) - DAILY | | | 12.0% | 17.7% | 17.7% | 14.0% | | | 6.1% | 01/2021 |
| Excess | | | 0.8% | 3.4% | 3.4% | 1.9% | | | 3.1% | |
| **TOTAL ACWI EX-US AGGREGATE** | **$503,249,034** | **3.0%** | **12.8%** | **21.1%** | **21.1%** | **15.9%** | | | **9.1%** | **01/2021** |
| MSCI AC WORLD ex US (NET) - DAILY | | | 12.0% | 17.7% | 17.7% | 14.0% | | | 6.1% | 01/2021 |
| Excess | | | 0.8% | 3.4% | 3.4% | 1.9% | | | 3.1% | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active ACWI ex-US** | | | | | |
| **EARNEST PARTNERS ACWI EX US** | **6.8%** | **17.9%** | **-12.6%** | **12.8%** | |
| MSCI AC WORLD ex US (NET) - DAILY | 5.5 | 15.6 | -16.0 | 7.8 | |
| Excess | 1.3 | 2.3 | 3.4 | 4.9 | |
| | | | | | |
| **TOTAL ACWI EX-US AGGREGATE** | **6.8** | **17.9** | **-12.6** | **12.8** | |
| MSCI AC WORLD ex US (NET) - DAILY | 5.5 | 15.6 | -16.0 | 7.8 | |
| Excess | 1.3 | 2.3 | 3.4 | 4.9 | |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **China Only Managers** | | | | | | | | | | |
| **EARNEST PARTNERS CHINA** | **$105,149,504** | **0.6%** | **-0.6%** | **21.5%** | **21.5%** | **-4.3%** | | | **-7.1%** | **01/2021** |
| MSCI China A | | | 3.3 | 17.0 | 17.0 | -5.2 | | | -5.8 | 01/2021 |
| Excess | | | -3.9 | 4.5 | 4.5 | 1.0 | | | -1.3 | |
| | | | | | | | | | | |
| **CHINA ONLY AGGREGATE** | **105,149,504** | **0.6** | **-0.6** | **21.5** | **21.5** | **-4.3** | | | **-7.1** | **01/2021** |
| MSCI China A | | | 3.3 | 17.0 | 17.0 | -5.2 | | | -5.8 | 01/2021 |
| Excess | | | -3.9 | 4.5 | 4.5 | 1.0 | | | -1.3 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **China Only Managers** | | | | | |
| **EARNEST PARTNERS CHINA** | **6.9%** | **-10.0%** | **-24.5%** | **-2.9%** | |
| MSCI China A | 11.7 | -13.5 | -25.9 | 3.2 | |
| Excess | -4.8 | 3.5 | 1.4 | -6.1 | |
| | | | | | |
| **CHINA ONLY AGGREGATE** | **6.9** | **-10.0** | **-24.5** | **-2.9** | |
| MSCI China A | 11.7 | -13.5 | -25.9 | 3.2 | |
| Excess | -4.8 | 3.5 | 1.4 | -6.1 | |

Note: All aggregates include the performance of terminated managers.

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# Global Equity
## June 30, 2025

## Global Equity Managers

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **ARIEL INVESTMENTS** | **$461,876,696** | **40.2%** | **8.0%** | **18.3%** | **18.3%** | **11.7%** | | | **9.2%** | **01/2021** |
| MSCI AC WORLD NET USD DAILY | | | 11.5 | 16.2 | 16.2 | 17.3 | | | 9.9 | 01/2021 |
| Excess | | | -3.5 | 2.1 | 2.1 | -5.6 | | | -0.7 | |
| **BAILLIE GIFFORD** | **325,712,721** | **28.3** | **21.7** | **26.8** | **26.8** | **24.3** | | | **2.0** | **01/2021** |
| MSCI AC WORLD NET USD DAILY | | | 11.5 | 16.2 | 16.2 | 17.3 | | | 9.9 | 01/2021 |
| Excess | | | 10.2 | 10.7 | 10.7 | 6.9 | | | -8.0 | |
| **MARTIN CURRIE INVESTMENTS - GLOBAL EQ** | **362,235,713** | **31.5** | **12.9** | **1.6** | **1.6** | **11.2** | | | **0.8** | **01/2021** |
| MSCI AC WORLD NET USD DAILY | | | 11.5 | 16.2 | 16.2 | 17.3 | | | 9.9 | 01/2021 |
| Excess | | | 1.4 | -14.5 | -14.5 | -6.2 | | | -9.1 | |
| **GLOBAL EQUITY** | **1,149,825,130** | **100.0** | **13.2** | **14.2** | **14.2** | **14.4** | | | **4.2** | **01/2021** |
| MSCI AC WORLD NET USD DAILY | | | 11.5 | 16.2 | 16.2 | 17.3 | | | 9.9 | 01/2021 |
| Excess | | | 1.6 | -1.9 | -1.9 | -2.9 | | | -5.8 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Global Equity Managers** | | | | | |
| **ARIEL INVESTMENTS** | **7.6%** | **14.1%** | **-5.6%** | **12.1%** | |
| MSCI AC WORLD NET USD DAILY | 17.5 | 22.2 | -18.4 | 18.5 | |
| Excess | -9.9 | -8.1 | 12.8 | -6.5 | |
| **BAILLIE GIFFORD** | **26.1** | **38.0** | **-46.9** | **3.1** | |
| MSCI AC WORLD NET USD DAILY | 17.5 | 22.2 | -18.4 | 18.5 | |
| Excess | 8.6 | 15.8 | -28.5 | -15.5 | |
| **MARTIN CURRIE INVESTMENTS - GLOBAL EQ** | **5.3** | **23.8** | **-32.9** | **12.8** | |
| MSCI AC WORLD NET USD DAILY | 17.5 | 22.2 | -18.4 | 18.5 | |
| Excess | -12.2 | 1.6 | -14.5 | -5.8 | |
| **GLOBAL EQUITY** | **11.1** | **22.6** | **-27.7** | **9.6** | |
| MSCI AC WORLD NET USD DAILY | 17.5 | 22.2 | -18.4 | 18.5 | |
| Excess | -6.4 | 0.4 | -9.4 | -8.9 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

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# Core/Core Plus Bonds
## June 30, 2025

# Minnesota State Board of Investment
## Quarter Ending June 30, 2025
## Core/Core Plus Bonds Managers

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Bonds** | | | | | | | | | | |
| **CORE (1)** | **$2,785,071,403** | **46.5%** | **1.4%** | **6.6%** | **6.6%** | **3.8%** | | | **0.2%** | **11/2020** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | | | -0.8 | 11/2020 |
| Excess | | | 0.2 | 0.5 | 0.5 | 1.2 | | | 1.0 | |
| **CORE PLUS (1)** | **3,203,927,047** | **53.5** | **1.5** | **6.5** | **6.5** | **3.2** | | | **-0.6** | **11/2020** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | | | -0.8 | 11/2020 |
| Excess | | | 0.3 | 0.4 | 0.4 | 0.6 | | | 0.2 | |
| TRANSITION AGGREGATE CORE BONDS (2) | 21,954 | 0.0 | | | | | | | | |
| **TOTAL CORE/CORE PLUS BONDS (3)** | **5,989,020,405** | **100.0** | **1.5** | **6.5** | **6.5** | **3.4** | **-0.1%** | **2.3%** | **6.6** | **07/1984** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 6.2 | 07/1984 |
| Excess | | | 0.2 | 0.4 | 0.4 | 0.9 | 0.7 | 0.6 | 0.4 | |

(1) Prior to 12/1/2020 the Core and Core Plus managers were categorized as Active or Semi-Passive. For historical performance of each manager, see the following pages in this report. For information on the historical performance of the previous groupings refer to the 9/30/2020 Comprehensive Performance Report.

(2) The Transition Aggregate Core Bonds includes core bonds securities that are being transition to a different manager.

(3) The current Core Bonds Benchmark is the Bloomberg U.S. Aggregate calculated daily. For historical benchmark details please refer to the addendum of this report.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Bonds** | | | | | |
| **CORE (1)** | **2.1%** | **7.3%** | **-12.3%** | **-1.0%** | |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | |
| Excess | 0.8 | 1.7 | 0.7 | 0.5 | |
| **CORE PLUS (1)** | **1.7** | **6.8** | **-15.2** | **-1.1** | |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | |
| Excess | 0.5 | 1.3 | -2.2 | 0.4 | |
| TRANSITION AGGREGATE CORE BONDS (2) | | | | | |
| **TOTAL CORE/CORE PLUS BONDS (3)** | **1.9** | **7.0** | **-14.1** | **-1.1** | **9.7%** |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | 7.5 |
| Excess | 0.6 | 1.5 | -1.1 | 0.5 | 2.2 |

(1) Prior to 12/1/2020 the Core and Core Plus managers were categorized as Active or Semi-Passive. For historical performance of each manager, see the following pages in this report. For information on the historical performance of the previous groupings refer to the 9/30/2020 Comprehensive Performance Report.

(2) The Transition Aggregate Core Bonds includes core bonds securities that are being transition to a different manager.

(3) The current Core Bonds Benchmark is the Bloomberg U.S. Aggregate calculated daily. For historical benchmark details please refer to the addendum of this report.

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Active Core** | | | | | | | | | | |
| **DODGE & COX** | **$1,352,774,659** | **22.6%** | **1.5%** | **6.8%** | **6.8%** | **4.4%** | **1.1%** | **2.9%** | **5.1%** | **02/2000** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 4.0 | 02/2000 |
| Excess | | | 0.2 | 0.7 | 0.7 | 1.9 | 1.8 | 1.2 | 1.1 | |
| **BLACKROCK** | **1,432,296,745** | **23.9** | **1.3** | **6.3** | **6.3** | **3.1** | **-0.4** | **2.0** | **4.4** | **04/1996** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 4.3 | 04/1996 |
| Excess | | | 0.1 | 0.2 | 0.2 | 0.5 | 0.3 | 0.3 | 0.1 | |
| **CORE** | **2,785,071,403** | **46.5** | **1.4** | **6.6** | **6.6** | **3.8** | | | **0.2** | **11/2020** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | | | -0.8 | 11/2020 |
| Excess | | | 0.2 | 0.5 | 0.5 | 1.2 | | | 1.0 | |

(1) Prior to 12/1/2020 the Core managers were categorized as Active or Semi-Passive. For information on the historical performance of the previous groupings refer to the 9/30/2020 Comprehensive Performance Report.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Core** | | | | | |
| **DODGE & COX** | **2.4%** | **8.0%** | **-11.3%** | **-0.7%** | **9.4%** |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | 7.5 |
| Excess | 1.1 | 2.5 | 1.7 | 0.8 | 1.8 |
| | | | | | |
| **BLACKROCK** | **1.7** | **6.4** | **-13.4** | **-1.3** | **8.3** |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | 7.5 |
| Excess | 0.5 | 0.9 | -0.4 | 0.2 | 0.8 |
| | | | | | |
| **CORE** | **2.1** | **7.3** | **-12.3** | **-1.0** | |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | |
| Excess | 0.8 | 1.7 | 0.7 | 0.5 | |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Core Plus Bonds** | | | | | | | | | | |
| **GOLDMAN SACHS** | **$1,674,255,977** | **28.0%** | **1.3%** | **6.4%** | **6.4%** | **3.1%** | **-0.4%** | **2.1%** | **4.7%** | **07/1993** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 4.4 | 07/1993 |
| Excess | | | 0.1 | 0.3 | 0.3 | 0.5 | 0.3 | 0.4 | 0.3 | |
| **NEUBERGER** | **1,529,674,458** | **25.5** | **1.7** | **6.8** | **6.8** | **3.7** | **0.2** | **2.3** | **5.6** | **07/1988** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | -0.7 | 1.8 | 5.3 | 07/1988 |
| Excess | | | 0.5 | 0.7 | 0.7 | 1.1 | 0.9 | 0.6 | 0.3 | |
| **CORE PLUS** | **3,203,927,047** | **53.5** | **1.5** | **6.5** | **6.5** | **3.2** | | | **-0.6** | **11/2020** |
| Bloomberg U.S. Aggregate | | | 1.2 | 6.1 | 6.1 | 2.5 | | | -0.8 | 11/2020 |
| Excess | | | 0.3 | 0.4 | 0.4 | 0.6 | | | 0.2 | |

(1) Prior to 12/1/2020 the Core managers were categorized as Active or Semi-Passive. For information on the historical performance of the previous groupings refer to the 9/30/2020 Comprehensive Performance Report.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Core Plus Bonds** | | | | | |
| **GOLDMAN SACHS** | **1.9%** | **6.3%** | **-13.9%** | **-1.5%** | **9.0%** |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | 7.5 |
| Excess | 0.7 | 0.8 | -0.9 | 0.0 | 1.5 |
| **NEUBERGER** | **2.7** | **6.7** | **-13.8** | **-0.6** | **9.9** |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | 7.5 |
| Excess | 1.5 | 1.2 | -0.8 | 1.0 | 2.4 |
| **CORE PLUS** | **1.7** | **6.8** | **-15.2** | **-1.1** | |
| Bloomberg U.S. Aggregate | 1.3 | 5.5 | -13.0 | -1.5 | |
| Excess | 0.5 | 1.3 | -2.2 | 0.4 | |

Note: All aggregates include the performance of terminated managers.

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# Return Seeking Bonds

## June 30, 2025

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Return Seeking Bonds Managers** | | | | | | | | | | |
| **COLUMBIA CREDIT PLUS** | **$1,015,831,003** | **20.6%** | **2.6%** | **7.9%** | **7.9%** | **5.1%** | | | **0.4%** | **12/2020** |
| Credit Plus Benchmark | | | 2.1 | 7.6 | 7.6 | 5.2 | | | 0.2 | 12/2020 |
| Excess | | | 0.5 | 0.3 | 0.3 | -0.1 | | | 0.2 | |
| **PIMCO CREDIT PLUS** | **1,047,040,135** | **21.2** | **2.3** | **7.9** | **7.9** | **5.4** | | | **0.7** | **12/2020** |
| Credit Plus Benchmark | | | 2.1 | 7.6 | 7.6 | 5.2 | | | 0.2 | 12/2020 |
| Excess | | | 0.2 | 0.3 | 0.3 | 0.3 | | | 0.5 | |
| **CREDIT PLUS** | **2,062,871,138** | **41.9** | **2.4** | **7.9** | **7.9** | **5.3** | | | **0.6** | **12/2020** |
| Credit Plus Benchmark | | | 2.1 | 7.6 | 7.6 | 5.2 | | | 0.2 | 12/2020 |
| Excess | | | 0.3 | 0.3 | 0.3 | 0.1 | | | 0.3 | |
| **BLACKROCK OPPORTUNISTIC** | **517,219,621** | **10.5** | **1.9** | **6.8** | **6.8** | **5.7** | | | **2.4** | **12/2020** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.7 | 4.6 | | | 3.0 | 12/2020 |
| Excess | | | 0.9 | 2.2 | 2.2 | 1.1 | | | -0.6 | |
| **ASHMORE EMERGING MARKETS** | **362,592,614** | **7.4** | **5.5** | **11.8** | **11.8** | **7.7** | | | **-2.1** | **01/2021** |
| JPM JEMB Sovereign-only 50-50 | | | 5.5 | 11.9 | 11.9 | 8.7 | | | 0.1 | 01/2021 |
| Excess | | | 0.1 | -0.1 | -0.1 | -0.9 | | | -2.1 | |
| **TCW SECURITIZED CREDIT** | **519,414,594** | **10.5** | **1.6** | **8.7** | **8.7** | **5.8** | | | **3.8** | **07/2021** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.7 | 4.6 | | | 3.4 | 07/2021 |
| Excess | | | 0.5 | 4.0 | 4.0 | 1.3 | | | 0.3 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| Return Seeking Bonds Managers | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **COLUMBIA CREDIT PLUS** | **2.4%** | **9.0%** | **-15.3%** | **1.1%** | |
| Credit Plus Benchmark | 3.2 | 8.6 | -13.7 | 0.0 | |
| Excess | -0.8 | 0.5 | -1.6 | 1.1 | |
| **PIMCO CREDIT PLUS** | **3.7** | **8.4** | **-13.6** | **0.8** | |
| Credit Plus Benchmark | 3.2 | 8.6 | -13.7 | 0.0 | |
| Excess | 0.5 | -0.1 | 0.1 | 0.7 | |
| **CREDIT PLUS** | **3.1** | **8.7** | **-14.5** | **0.9** | |
| Credit Plus Benchmark | 3.2 | 8.6 | -13.7 | 0.0 | |
| Excess | -0.2 | 0.2 | -0.7 | 0.9 | |
| **BLACKROCK OPPORTUNISTIC** | **4.4** | **7.7** | **-5.4** | **0.3** | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | |
| Excess | -0.9 | 2.7 | -6.8 | 0.2 | |
| **ASHMORE EMERGING MARKETS** | **1.4** | **10.9** | **-17.2** | **-10.1** | |
| JPM JEMB Sovereign-only 50-50 | 2.0 | 11.9 | -14.8 | -5.3 | |
| Excess | -0.6 | -1.0 | -2.4 | -4.8 | |
| **TCW SECURITIZED CREDIT** | **7.9** | **7.1** | **-4.6** | | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | | |
| Excess | 2.7 | 2.1 | -6.1 | | |

Note: All aggregates include the performance of terminated managers

| Return Seeking Bonds Managers | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **PAYDEN RYGEL** | **$379,887,062** | **7.7%** | **3.1%** | **9.2%** | **9.2%** | **9.3%** | | | **3.4%** | **01/2021** |
| Multi-Asset Credit Benchmark | | | 3.0 | 8.9 | 8.9 | 9.2 | | | 3.5 | 01/2021 |
| Excess | | | 0.1 | 0.4 | 0.4 | 0.1 | | | -0.0 | |
| **PGIM** | **380,121,602** | **7.7** | **3.2** | **9.0** | **9.0** | **9.5** | | | **3.2** | **01/2021** |
| Multi-Asset Credit Benchmark | | | 3.0 | 8.9 | 8.9 | 9.2 | | | 3.5 | 01/2021 |
| Excess | | | 0.2 | 0.2 | 0.2 | 0.3 | | | -0.2 | |
| **MULTI-ASSET CREDIT** | **760,008,664** | **15.4** | **3.2** | **9.1** | **9.1** | **9.4** | | | **3.3** | **01/2021** |
| Multi-Asset Credit Benchmark | | | 3.0 | 8.9 | 8.9 | 9.2 | | | 3.5 | 01/2021 |
| Excess | | | 0.1 | 0.3 | 0.3 | 0.2 | | | -0.1 | |
| **KKR** | **356,229,424** | **7.2** | **3.9** | **9.9** | **9.9** | **10.3** | | | **4.3** | **01/2021** |
| ICE BofA US Cash Pay HY Constrained | | | 3.6 | 10.2 | 10.2 | 9.8 | | | 4.1 | 01/2021 |
| Excess | | | 0.4 | -0.3 | -0.3 | 0.5 | | | 0.2 | |
| **OAKTREE** | **349,348,134** | **7.1** | **3.4** | **9.6** | **9.6** | **9.7** | | | **4.1** | **01/2021** |
| ICE BofA US Cash Pay HY Constrained | | | 3.6 | 10.2 | 10.2 | 9.8 | | | 4.1 | 01/2021 |
| Excess | | | -0.1 | -0.6 | -0.6 | -0.1 | | | 0.0 | |
| **HIGH YIELD** | **705,577,558** | **14.3** | **3.7** | **9.8** | **9.8** | **10.0** | | | **4.2** | **01/2021** |
| ICE BofA US Cash Pay HY Constrained | | | 3.6 | 10.2 | 10.2 | 9.8 | | | 4.1 | 01/2021 |
| Excess | | | 0.1 | -0.4 | -0.4 | 0.2 | | | 0.1 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| Return Seeking Bonds Managers | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **PAYDEN RYGEL** | **7.7%** | **11.7%** | **-9.6%** | **2.6%** | |
| Multi-Asset Credit Benchmark | 7.5 | 12.3 | -10.0 | 2.7 | |
| Excess | 0.2 | -0.6 | 0.4 | -0.1 | |
| **PGIM** | **7.6** | **12.3** | **-11.5** | **3.2** | |
| Multi-Asset Credit Benchmark | 7.5 | 12.3 | -10.0 | 2.7 | |
| Excess | 0.1 | -0.0 | -1.5 | 0.5 | |
| **MULTI-ASSET CREDIT** | **7.7** | **12.0** | **-10.6** | **2.9** | |
| Multi-Asset Credit Benchmark | 7.5 | 12.3 | -10.0 | 2.7 | |
| Excess | 0.2 | -0.3 | -0.6 | 0.2 | |
| **KKR** | **8.8** | **13.9** | **-11.0** | **4.7** | |
| ICE BofA US Cash Pay HY Constrained | 8.0 | 13.4 | -11.1 | 5.3 | |
| Excess | 0.8 | 0.5 | 0.1 | -0.6 | |
| **OAKTREE** | **8.4** | **12.4** | **-9.5** | **4.5** | |
| ICE BofA US Cash Pay HY Constrained | 8.0 | 13.4 | -11.1 | 5.3 | |
| Excess | 0.3 | -1.0 | 1.6 | -0.8 | |
| **HIGH YIELD** | **8.6** | **13.2** | **-10.3** | **4.6** | |
| ICE BofA US Cash Pay HY Constrained | 8.0 | 13.4 | -11.1 | 5.3 | |
| Excess | 0.6 | -0.2 | 0.8 | -0.7 | |

Note: All aggregates include the performance of terminated managers.

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Return Seeking Bonds** | | | | | | | | | | |
| **CREDIT PLUS** | **$2,062,871,138** | **41.9%** | **2.4%** | **7.9%** | **7.9%** | **5.3%** | | | **0.6%** | **12/2020** |
| Credit Plus Benchmark | | | 2.1 | 7.6 | 7.6 | 5.2 | | | 0.2 | 12/2020 |
| Excess | | | 0.3 | 0.3 | 0.3 | 0.1 | | | 0.3 | |
| **OPPORTUNISTIC FI** | **517,219,621** | **10.5** | **1.9** | **6.8** | **6.8** | **5.7** | | | **2.4** | **12/2020** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.7 | 4.6 | | | 3.0 | 12/2020 |
| Excess | | | 0.9 | 2.2 | 2.2 | 1.1 | | | -0.6 | |
| **EMERGING MARKET DEBT** | **362,592,614** | **7.4** | **5.5** | **11.8** | **11.8** | **7.7** | | | **-2.1** | **01/2021** |
| JPM JEMB Sovereign-only 50-50 | | | 5.5 | 11.9 | 11.9 | 8.7 | | | 0.1 | 01/2021 |
| Excess | | | 0.1 | -0.1 | -0.1 | -0.9 | | | -2.1 | |
| **SECURITIZED CREDIT** | **519,414,594** | **10.5** | **1.6** | **8.7** | **8.7** | **5.8** | | | **3.7** | **06/2021** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.7 | 4.6 | | | 3.4 | 06/2021 |
| Excess | | | 0.5 | 4.0 | 4.0 | 1.3 | | | 0.3 | |
| **MULTI-ASSET CREDIT** | **760,008,664** | **15.4** | **3.2** | **9.1** | **9.1** | **9.4** | | | **3.3** | **01/2021** |
| Multi-Asset Credit Benchmark | | | 3.0 | 8.9 | 8.9 | 9.2 | | | 3.5 | 01/2021 |
| Excess | | | 0.1 | 0.3 | 0.3 | 0.2 | | | -0.1 | |
| **HIGH YIELD** | **705,577,558** | **14.3** | **3.7** | **9.8** | **9.8** | **10.0** | | | **4.2** | **01/2021** |
| ICE BofA US Cash Pay HY Constrained | | | 3.6 | 10.2 | 10.2 | 9.8 | | | 4.1 | 01/2021 |
| Excess | | | 0.1 | -0.4 | -0.4 | 0.2 | | | 0.1 | |
| **RETURN SEEKING BONDS** | **4,927,691,614** | **100.0** | **2.8** | **8.6** | **8.6** | **6.9** | | | **1.9** | **12/2020** |
| Return Seeking Fixed Income Benchmark | | | 2.5 | 7.8 | 7.8 | 6.6 | | | 2.0 | 12/2020 |
| Excess | | | 0.3 | 0.8 | 0.8 | 0.3 | | | -0.0 | |

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Return Seeking Bonds** | | | | | |
| **CREDIT PLUS** | **3.1%** | **8.7%** | **-14.5%** | **0.9%** | |
| Credit Plus Benchmark | 3.2 | 8.6 | -13.7 | 0.0 | |
| Excess | -0.2 | 0.2 | -0.7 | 0.9 | |
| **OPPORTUNISTIC FI** | **4.4** | **7.7** | **-5.4** | **0.3** | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | |
| Excess | -0.9 | 2.7 | -6.8 | 0.2 | |
| **EMERGING MARKET DEBT** | **1.4** | **10.9** | **-17.2** | **-10.1** | |
| JPM JEMB Sovereign-only 50-50 | 2.0 | 11.9 | -14.8 | -5.3 | |
| Excess | -0.6 | -1.0 | -2.4 | -4.8 | |
| **SECURITIZED CREDIT** | **7.9** | **7.1** | **-4.6** | | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | | |
| Excess | 2.7 | 2.1 | -6.1 | | |
| **MULTI-ASSET CREDIT** | **7.7** | **12.0** | **-10.6** | **2.9** | |
| Multi-Asset Credit Benchmark | 7.5 | 12.3 | -10.0 | 2.7 | |
| Excess | 0.2 | -0.3 | -0.6 | 0.2 | |
| **HIGH YIELD** | **8.6** | **13.2** | **-10.3** | **4.6** | |
| ICE BofA US Cash Pay HY Constrained | 8.0 | 13.4 | -11.1 | 5.3 | |
| Excess | 0.6 | -0.2 | 0.8 | -0.7 | |
| **RETURN SEEKING BONDS** | **5.1** | **9.8** | **-11.3** | **0.9** | |
| Return Seeking Fixed Income Benchmark | 5.0 | 9.3 | -9.8 | 0.8 | |
| Excess | 0.1 | 0.5 | -1.6 | 0.1 | |

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# Treasuries

## June 30, 2025

| | Ending Market Value | Portfolio Weight | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| **Treasuries Managers** | | | | | | | | | | |
| **BLACKROCK** | **$3,070,539,808** | **32.1%** | **0.2%** | **4.2%** | **4.2%** | **-0.7%** | **-4.6%** | | **0.3%** | **02/2018** |
| Bloomberg Treasury 5+ Year | | | 0.2 | 4.2 | 4.2 | -0.7 | -4.6 | | 0.4 | 02/2018 |
| Excess | | | 0.0 | -0.1 | -0.1 | -0.0 | -0.0 | | -0.1 | |
| **GOLDMAN SACHS** | **2,989,703,308** | **31.3** | **0.2** | **4.4** | **4.4** | **-0.5** | **-4.4** | | **0.4** | **02/2018** |
| Bloomberg Treasury 5+ Year | | | 0.2 | 4.2 | 4.2 | -0.7 | -4.6 | | 0.4 | 02/2018 |
| Excess | | | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | | 0.1 | |
| **NEUBERGER** | **3,506,568,698** | **36.7** | **0.3** | **4.6** | **4.6** | **-0.6** | **-4.3** | | **0.4** | **02/2018** |
| Bloomberg Treasury 5+ Year | | | 0.2 | 4.2 | 4.2 | -0.7 | -4.6 | | 0.4 | 02/2018 |
| Excess | | | 0.1 | 0.4 | 0.4 | 0.0 | 0.3 | | 0.1 | |
| **TOTAL TREASURIES** | **9,566,811,814** | **100.0** | **0.2** | **4.4** | **4.4** | **-0.6** | **-4.4** | | **0.4** | **02/2018** |
| Bloomberg Treasury 5+ Year | | | 0.2 | 4.2 | 4.2 | -0.7 | -4.6 | | 0.4 | 02/2018 |
| Excess | | | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | | 0.0 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

## Treasuries Managers

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **BLACKROCK** | **-3.0%** | **4.1%** | **-20.6%** | **-4.0%** | **12.5%** |
| Bloomberg Treasury 5+ Year | -3.0 | 3.7 | -20.3 | -3.8 | 12.8 |
| Excess | -0.0 | 0.5 | -0.3 | -0.2 | -0.3 |
| | | | | | |
| **GOLDMAN SACHS** | **-2.8** | **4.4** | **-20.6** | **-3.9** | **12.7** |
| Bloomberg Treasury 5+ Year | -3.0 | 3.7 | -20.3 | -3.8 | 12.8 |
| Excess | 0.2 | 0.7 | -0.3 | -0.1 | -0.1 |
| | | | | | |
| **NEUBERGER** | **-2.7** | **4.1** | **-20.5** | **-3.4** | **12.8** |
| Bloomberg Treasury 5+ Year | -3.0 | 3.7 | -20.3 | -3.8 | 12.8 |
| Excess | 0.2 | 0.4 | -0.2 | 0.4 | -0.1 |
| | | | | | |
| **TOTAL TREASURIES** | **-2.8** | **4.2** | **-20.6** | **-3.7** | **12.7** |
| Bloomberg Treasury 5+ Year | -3.0 | 3.7 | -20.3 | -3.8 | 12.8 |
| Excess | 0.1 | 0.5 | -0.3 | 0.0 | -0.2 |

Note: All aggregates include the performance of terminated managers.

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# Laddered Bonds + Cash

## June 30, 2025

| | Ending Market Value | Portfolio Weight | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|
| **Laddered Bond and Cash Managers** | | | | | | | | | |
| **Neuberger Berman Ladder Bond** | **$1,612,317,514** | **32.9%** | **1.1%** | **5.0%** | **4.7%** | | | **2.9%** | **11/2020** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.6 | | | 3.0 | 11/2020 |
| Excess | | | 0.0 | 0.3 | 0.1 | | | -0.0 | |
| **Goldman Sachs Ladder Bond** | **1,614,160,052** | **32.9** | **1.1** | **5.0** | **4.7** | | | **2.9** | **11/2020** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.6 | | | 3.0 | 11/2020 |
| Excess | | | 0.0 | 0.3 | 0.1 | | | -0.0 | |
| **Treasury Ladder Aggregate** | **3,226,477,566** | **65.8** | **1.1** | **5.0** | **4.7** | | | **2.9** | **11/2020** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.6 | | | 3.0 | 11/2020 |
| Excess | | | 0.0 | 0.3 | 0.1 | | | -0.0 | |
| **Combined Funds STIF** | **1,623,491,555** | **33.1** | **1.1** | **4.9** | **4.8** | **3.0%** | **2.1%** | **1.9** | **01/2004** |
| iMoneyNet Money Fund Average-All Taxable | | | 1.0 | 4.4 | 4.3 | 2.6 | 1.7 | 1.5 | 01/2004 |
| Excess | | | 0.1 | 0.5 | 0.5 | 0.3 | 0.4 | 0.4 | |
| **TEACHERS RETIREMENT CD REPO** | **56,855,227** | **1.2** | **1.1** | **4.9** | **4.8** | **2.9** | **2.2** | **1.7** | **02/2012** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.6 | 2.8 | 2.0 | 1.5 | 02/2012 |
| Excess | | | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | |
| **Laddered Bond + Cash** | **4,907,028,637** | **100.0** | **1.1** | **5.0** | **4.7** | **2.8** | **2.0** | **4.2** | **12/1977** |
| ICE BofA US 3-Month Treasury Bill | | | 1.0 | 4.7 | 4.6 | 2.8 | 2.0 | 4.4 | 12/1977 |
| Excess | | | 0.0 | 0.3 | 0.2 | 0.0 | 0.1 | -0.2 | |

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Laddered Bond and Cash Managers** | | | | | |
| **Neuberger Berman Ladder Bond** | **5.4%** | **5.2%** | **0.8%** | **0.0%** | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | |
| Excess | 0.2 | 0.2 | -0.6 | -0.0 | |
| **Goldman Sachs Ladder Bond** | **5.4** | **5.2** | **0.9** | **0.1** | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | |
| Excess | 0.2 | 0.2 | -0.5 | 0.0 | |
| **Treasury Ladder Aggregate** | **5.4** | **5.2** | **0.9** | **0.0** | |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | |
| Excess | 0.2 | 0.2 | -0.6 | -0.0 | |
| **Combined Funds STIF** | **5.4** | **5.3** | **1.7** | **0.1** | **0.5%** |
| iMoneyNet Money Fund Average-All Taxable | 4.9 | 4.8 | 1.4 | 0.0 | 0.3 |
| Excess | 0.5 | 0.5 | 0.4 | 0.1 | 0.2 |
| **TEACHERS RETIREMENT CD REPO** | **5.5** | **5.2** | **1.5** | **0.1** | **1.0** |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | 0.7 |
| Excess | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 |
| **Laddered Bond + Cash** | **5.4** | **5.2** | **1.1** | **0.0** | **0.6** |
| ICE BofA US 3-Month Treasury Bill | 5.3 | 5.0 | 1.5 | 0.0 | 0.7 |
| Excess | 0.2 | 0.2 | -0.4 | -0.0 | -0.1 |

Note: All aggregates include the performance of terminated managers.

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# Private Markets

## June 30, 2025

## Combined Funds Asset Class Performance Summary

### Private Markets

| | Last Qtr | FYTD | 1 Year | 3 Year | 5 Year | 10 Year | 20 Year | 25 Year | 30 Year |
|---|---|---|---|---|---|---|---|---|---|
| Private Markets - Invested | 0.6% | 6.1% | 6.1% | 5.2% | 14.9% | 11.5% | 12.5% | 11.9% | 13.4% |
| Private Markets -Uninvested(1) | 0.9% | 4.1% | 4.1% | 5.2% | | | | | |
| Private Equity | 1.4% | 8.3% | 8.3% | 6.5% | 17.1% | 14.8% | 14.6% | 12.7% | 15.6% |
| Private Credit | -1.9% | 4.8% | 4.8% | 7.9% | 12.5% | 11.5% | 12.2% | 11.6% | |
| Resources | -2.6% | -1.9% | -1.9% | 1.7% | 10.5% | 2.0% | 10.3% | 12.2% | 12.2% |
| Real Estate | -0.3% | -1.6% | -1.6% | -3.9% | 7.8% | 8.0% | 7.7% | 8.4% | 9.1% |

### Private Markets

The time-weighted rates of return for the Private Markets portfolio are shown here. Private Markets included Private Equity, Private Credit, Resources, and Real Estate. Some of the existing investments are relatively immature and returns may not be indicative of future results.

**Private Equity Investments -** The objectives of the Private Equity portfolio, which may include leveraged buyouts, growth equity, venture capital and special situations, are to achieve attractive returns and to provide overall portfolio diversification to the total plan.

**Private Credit Investments -** The objectives of the Private Credit portfolio, which may include mezzanine debt, direct lending, and other forms of non-investment grade fixed income instruments, are to achieve a high total return over a full market cycle and to provide some degree of downside protection and typically provide current income in the form of a coupon. In certain situations, investments in the Private Credit portfolio also provide an equity component of return in the form of warrants or re-organized equity.

**Resource Investments -** The objectives of the Resources portfolio, which may include energy, infrastructure, and other hard assets, are to provide protection against the risks associated with inflation and to provide overall portfolio diversification to the total plan.

**Real Estate Investments -** The objectives of the Real Estate portfolio, which may include core and non-core real estate investments, are to achieve attractive returns, preserve capital, provide protection against risks associated with inflation, and provide overall portfolio diversification to the total plan.

The SBI also monitors Private Markets performance using money-weighted return metrics such as Internal Rate of Return and Multiple of Invested Capital. For money-weighted return metrics please refer to the Combined Funds Performance Report.

(1) The Uninvested Private Markets is currently cash. Prior to 11/02/2022, the Uninvested portion of the Private Markets allocation was invested in a combination of a passively managed S&P 500 Index strategy and a cash overlay strategy invested in equity derivatives and cash.

Source: State Street Bank

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| **Private Equity** | **27,533,970,302** | **21,769,925,377** | **18,890,571,540** | **8,347,754,056** | **16,141,709,172** | **1.61** | **13.5** | |
| Adams Street Partners, LLC | 465,355,000 | 337,438,684 | 181,452,515 | 128,725,675 | 301,636,877 | 1.43 | 11.8 | |
| Adams Street Global Secondary Fund 5 LP | 100,000,000 | 77,114,692 | 86,678,888 | 22,885,308 | 17,530,878 | 1.35 | 5.9 | 2012 |
| Adams Street Global Secondary Fund 6 | 100,000,000 | 80,400,008 | 81,050,365 | 19,599,992 | 46,536,190 | 1.59 | 16.5 | 2017 |
| Adams Street Global Secondary Fund 7 | 265,355,000 | 179,923,984 | 13,723,262 | 86,240,375 | 237,569,809 | 1.40 | 23.7 | 2021 |
| Advent International Group | 505,000,000 | 426,949,702 | 425,246,728 | 81,134,252 | 312,157,374 | 1.73 | 14.7 | |
| Advent International GPE VI-A, L.P. | 50,000,000 | 52,993,313 | 103,400,194 | 0 | 3,621,950 | 2.02 | 16.3 | 2008 |
| Advent International GPE VII, L.P. | 90,000,000 | 86,490,641 | 149,322,935 | 3,600,000 | 6,664,398 | 1.80 | 13.1 | 2012 |
| Advent International GPE VIII-B | 100,000,000 | 100,000,000 | 140,575,651 | 0 | 68,184,207 | 2.09 | 15.7 | 2016 |
| Advent International GPE IX | 115,000,000 | 109,824,875 | 31,947,948 | 5,175,125 | 140,488,190 | 1.57 | 13.1 | 2019 |
| Advent International GPE X | 150,000,000 | 77,640,873 | 0 | 72,359,127 | 93,198,629 | 1.20 | 11.2 | 2022 |
| Apax Partners | 600,000,000 | 572,315,467 | 604,929,111 | 127,328,151 | 287,566,579 | 1.56 | 13.5 | |
| APAX VIII - USD | 200,000,000 | 240,451,261 | 364,650,169 | 7,966,190 | 12,911,131 | 1.57 | 12.7 | 2013 |
| Apax IX USD L.P. | 150,000,000 | 159,251,896 | 214,343,922 | 16,039,251 | 91,903,589 | 1.92 | 17.7 | 2016 |
| Apax X USD L.P. | 150,000,000 | 149,727,625 | 25,935,020 | 26,207,396 | 159,001,286 | 1.24 | 7.8 | 2019 |
| Apax XI | 100,000,000 | 22,884,685 | 0 | 77,115,315 | 23,750,573 | 1.04 | 5.5 | 2022 |
| Arsenal Capital Partners | 175,000,000 | 130,579,557 | 25,964,417 | 55,834,093 | 113,235,329 | 1.07 | 2.0 | |
| Arsenal Capital Partners V, L.P. | 75,000,000 | 75,030,149 | 24,634,619 | 10,072,766 | 71,156,739 | 1.28 | 5.9 | 2019 |
| Arsenal Capital Partners VI LP | 100,000,000 | 55,549,408 | 1,329,798 | 45,761,327 | 42,078,590 | 0.78 | -13.5 | 2021 |
| Asia Alternatives | 399,000,000 | 268,044,493 | 35,243,138 | 151,056,686 | 264,452,093 | 1.12 | 4.2 | |
| Asia Alternatives Capital Partners V | 99,000,000 | 111,257,784 | 32,361,152 | 7,473,091 | 103,267,608 | 1.22 | 5.3 | 2017 |
| MN Asia Investors | 300,000,000 | 156,786,709 | 2,881,986 | 143,583,595 | 161,184,486 | 1.05 | 2.4 | 2020 |
| Banc Fund | 187,460,477 | 187,466,811 | 144,125,851 | 0 | 122,464,688 | 1.42 | 5.7 | |
| Banc Fund IX, L.P. | 107,205,932 | 107,205,932 | 133,710,654 | 0 | 31,707,792 | 1.54 | 6.2 | 2014 |
| Banc Fund X, L.P. | 80,254,545 | 80,260,879 | 10,415,197 | 0 | 90,756,896 | 1.26 | 4.6 | 2018 |
| BlackRock | 950,000,000 | 954,617,522 | 1,176,261,707 | 0 | 823,591,458 | 2.09 | 23.3 | |
| BlackRock Long Term Capital, SCSP | 950,000,000 | 954,617,522 | 1,176,261,707 | 0 | 823,591,458 | 2.09 | 23.3 | 2019 |
| Blackstone Group L.P. | 2,035,000,000 | 1,095,518,010 | 842,557,592 | 1,085,374,453 | 731,345,696 | 1.44 | 13.8 | |
| Blackstone Capital Partners Asia II | 270,000,000 | 104,425,763 | 29,466,971 | 177,431,369 | 134,561,163 | 1.57 | 31.6 | 2021 |
| Blackstone Capital Partners Asia III | 300,000,000 | 0 | 0 | 300,000,000 | 0 | | | 2025 |
| Blackstone Capital Partners IV, L.P. | 70,000,000 | 84,481,419 | 201,562,974 | 1,765,384 | 57,841 | 2.39 | 37.0 | 2002 |
| Blackstone Capital Partners V L.P. | 140,000,000 | 152,478,007 | 246,892,515 | 7,027,560 | 303,739 | 1.62 | 8.0 | 2006 |
| Blackstone Capital Partners VI, L.P. | 100,000,000 | 107,015,142 | 173,057,041 | 10,975,597 | 22,708,066 | 1.83 | 12.2 | 2008 |
| Blackstone Capital Partners VII | 130,000,000 | 143,219,220 | 130,486,433 | 7,599,396 | 103,223,354 | 1.63 | 11.7 | 2015 |
| Blackstone Capital Partners VIII LP | 150,000,000 | 141,087,260 | 28,362,271 | 37,157,011 | 143,839,213 | 1.22 | 8.5 | 2019 |
| Blackstone Capital Partners IX | 150,000,000 | 8,213,517 | 0 | 141,786,483 | 7,527,959 | 0.92 | -8.3 | 2022 |
| Blackstone Energy Transition Partners IV L.P. | 200,000,000 | 33,665,036 | 852,491 | 167,187,455 | 39,309,658 | 1.19 | 32.0 | 2024 |
| Blackstone Growth | 250,000,000 | 240,738,164 | 30,131,868 | 37,295,928 | 204,327,941 | 0.97 | -0.9 | 2020 |
| Blackstone Growth Equity II | 150,000,000 | 0 | 0 | 150,000,000 | 0 | | | 2022 |
| Blackstone Supplemental Account - M | 125,000,000 | 80,194,483 | 1,745,029 | 47,148,270 | 75,486,762 | 0.96 | -1.3 | 2021 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Blackstone Strategic Partners | 550,000,000 | 424,486,911 | 422,629,327 | 184,252,813 | 218,055,174 | 1.51 | 15.5 | |
| Strategic Partners VI, L.P. | 150,000,000 | 105,178,489 | 143,288,302 | 21,739,080 | 15,134,515 | 1.51 | 13.4 | 2014 |
| Strategic Partners VII, L.P. | 150,000,000 | 125,912,229 | 161,977,431 | 42,086,549 | 45,144,896 | 1.64 | 15.7 | 2016 |
| Strategic Partners VIII | 150,000,000 | 131,275,637 | 109,251,365 | 74,558,704 | 91,971,118 | 1.53 | 20.7 | 2018 |
| Strategic Partners IX | 100,000,000 | 62,120,556 | 8,112,229 | 45,868,480 | 65,804,645 | 1.19 | 12.5 | 2022 |
| Blue Owl Capital | 775,000,000 | 572,644,140 | 522,231,536 | 555,024,854 | 521,628,024 | 1.82 | 26.7 | |
| Blue Owl GP Stakes III | 175,000,000 | 226,898,754 | 267,561,527 | 107,699,261 | 184,085,058 | 1.99 | 24.9 | 2015 |
| Blue Owl GP Stakes IV | 250,000,000 | 220,380,818 | 206,553,029 | 177,261,200 | 236,153,811 | 2.01 | 34.7 | 2018 |
| Blue Owl GP Stakes V | 200,000,000 | 117,864,568 | 48,116,981 | 127,564,394 | 97,139,070 | 1.23 | 13.3 | 2020 |
| Blue Owl GP Stakes VI | 150,000,000 | 7,500,000 | 0 | 142,500,000 | 4,250,085 | | | 2024 |
| Bridgepoint | 408,199,681 | 210,090,862 | 92,618,855 | 179,911,821 | 263,903,164 | 1.70 | 17.5 | |
| Bridgepoint Development Capital V, L.P. | 117,384,945 | 0 | 0 | 117,384,945 | 0 | | | 2024 |
| Bridgepoint Europe VI L.P. | 176,077,418 | 161,699,396 | 90,321,895 | 7,282,223 | 208,820,047 | 1.85 | 17.4 | 2018 |
| Bridgepoint Europe VII | 114,737,318 | 48,391,466 | 2,296,960 | 55,244,653 | 55,083,117 | 1.19 | 21.8 | 2022 |
| Brookfield Asset Management Inc. | 500,000,000 | 478,800,223 | 342,875,723 | 87,613,231 | 506,026,010 | 1.77 | 25.3 | |
| Brookfield Capital Partners Fund IV | 100,000,000 | 116,823,344 | 232,768,420 | 4,839,916 | 42,580,091 | 2.36 | 41.2 | 2015 |
| Brookfield Capital Partners V L.P. | 250,000,000 | 271,046,390 | 106,304,291 | 20,176,192 | 352,800,953 | 1.69 | 15.6 | 2018 |
| Brookfield Capital Partners Fund VI | 150,000,000 | 90,930,489 | 3,803,012 | 62,597,122 | 110,644,967 | 1.26 | 15.8 | 2022 |
| Canyon Partners | 125,000,000 | 146,475,843 | 101,727,366 | 0 | 96,364,439 | 1.35 | 10.9 | |
| Canyon Distressed Opportunity Fund III | 125,000,000 | 146,475,843 | 101,727,366 | 0 | 96,364,439 | 1.35 | 10.9 | 2020 |
| Cardinal Partners | 10,000,000 | 10,000,000 | 39,196,082 | 0 | 118,489 | 3.93 | 10.6 | |
| DSV Partners IV | 10,000,000 | 10,000,000 | 39,196,082 | 0 | 118,489 | 3.93 | 10.6 | 1985 |
| Carlyle Group | 400,000,000 | 403,493,995 | 164,033,922 | 88,788,809 | 329,396,748 | 1.22 | 6.9 | |
| Carlyle Strategic Partners IV, L.P. | 100,000,000 | 144,440,762 | 91,037,024 | 13,471,683 | 70,642,725 | 1.12 | 4.5 | 2016 |
| Carlyle Partners VII, L.P. | 150,000,000 | 161,047,965 | 55,849,073 | 6,263,341 | 163,354,722 | 1.36 | 7.7 | 2017 |
| Carlyle Partners VIII | 150,000,000 | 98,005,268 | 17,147,825 | 69,053,785 | 95,399,301 | 1.15 | 8.5 | 2021 |
| CarVal Investors | 600,000,000 | 532,109,760 | 546,614,473 | 37,500,000 | 191,818,469 | 1.39 | 8.1 | |
| CVI Credit Value Fund A II | 150,000,000 | 142,500,000 | 202,619,684 | 7,500,000 | 1,406,754 | 1.43 | 8.3 | 2012 |
| CVI Credit Value Fund A III | 150,000,000 | 142,500,000 | 186,223,886 | 7,500,000 | 10,871,711 | 1.38 | 8.3 | 2015 |
| CVI Credit Value Fund IV | 150,000,000 | 104,609,760 | 101,740,823 | 15,000,000 | 63,825,341 | 1.58 | 7.8 | 2017 |
| CVI Credit Value Fund V | 150,000,000 | 142,500,000 | 56,030,081 | 7,500,000 | 115,714,663 | 1.21 | 7.5 | 2020 |
| Clearlake Capital | 100,000,000 | 71,735,191 | 268,947 | 28,423,122 | 77,574,018 | 1.09 | 3.6 | |
| Clearlake Capital Partners VII | 100,000,000 | 71,735,191 | 268,947 | 28,423,122 | 77,574,018 | 1.09 | 3.6 | 2022 |
| Court Square | 589,419,132 | 523,356,628 | 798,324,231 | 127,163,008 | 215,887,654 | 1.94 | 15.0 | |
| Court Square Capital Partners II, L.P. | 164,419,132 | 170,270,247 | 298,783,330 | 5,656,060 | 150,594 | 1.76 | 12.3 | 2006 |
| Court Square Capital Partners III, L.P. | 175,000,000 | 191,495,275 | 380,599,995 | 4,749,636 | 86,934,871 | 2.44 | 20.4 | 2012 |
| Court Square Capital Partners IV, L.P. | 150,000,000 | 161,591,106 | 118,940,906 | 16,757,312 | 128,802,190 | 1.53 | 16.4 | 2018 |
| Court Square Capital Partners V, L.P. | 100,000,000 | 0 | 0 | 100,000,000 | 0 | | | 2024 |
| CVC Capital Partners | 498,886,017 | 466,602,620 | 703,741,995 | 111,579,610 | 219,231,306 | 1.98 | 16.2 | |
| CVC Capital Partners VI | 264,116,127 | 295,794,217 | 406,714,859 | 10,837,122 | 199,167,423 | 2.05 | 15.6 | 2013 |
| CVC Capital Partners IX | 117,384,945 | 16,924,305 | 1,468,909 | 99,065,951 | 16,705,261 | 1.07 | 14.0 | 2023 |
| CVC European Equity Partners V, L.P. | 117,384,945 | 153,884,098 | 295,558,227 | 1,676,537 | 3,358,621 | 1.94 | 16.7 | 2008 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Dawson Partners | 400,000,000 | 381,654,494 | 255,098,592 | 129,005,212 | 197,931,668 | 1.19 | 11.3 | |
| Dawson Portfolio Finance 3 | 100,000,000 | 106,796,003 | 99,407,045 | 10,899,784 | 39,259,240 | 1.30 | 12.4 | 2019 |
| Dawson Portfolio Finance 4 | 100,000,000 | 110,766,258 | 71,407,395 | 13,730,922 | 61,021,100 | 1.20 | 10.0 | 2020 |
| Dawson Portfolio Finance 5 | 100,000,000 | 88,896,270 | 39,486,808 | 36,322,603 | 60,228,082 | 1.12 | 9.2 | 2021 |
| Dawson Portfolio Finance 6 | 100,000,000 | 75,195,963 | 44,797,344 | 68,051,903 | 37,423,246 | 1.09 | 17.8 | 2024 |
| Goldman, Sachs & Co. | 449,800,000 | 397,101,231 | 389,298,575 | 156,446,888 | 186,200,457 | 1.45 | 9.6 | |
| GS Capital Partners VI, L.P. | 100,000,000 | 110,606,276 | 144,104,252 | 2,551,356 | 874,723 | 1.31 | 7.1 | 2007 |
| GS China-US Cooperation Fund | 99,800,000 | 44,121,012 | 523,330 | 56,087,600 | 56,404,847 | 1.29 | 6.5 | 2018 |
| GS Vintage VII | 100,000,000 | 90,982,076 | 94,207,820 | 61,815,210 | 54,956,498 | 1.64 | 13.4 | 2016 |
| West Street Capital Partners VII, L.P. | 150,000,000 | 151,391,867 | 150,463,173 | 35,992,722 | 73,964,389 | 1.48 | 12.6 | 2016 |
| Goldner Hawn Johnson & Morrison | 150,510,266 | 91,524,814 | 106,938,463 | 59,617,419 | 79,901,623 | 2.04 | 21.4 | |
| GHJM TrailHead Fund | 20,000,000 | 17,572,130 | 56,220,283 | 2,894,486 | 0 | 3.20 | 19.6 | 2012 |
| Goldner Hawn Fund VII, L.P. | 57,755,138 | 49,124,873 | 50,716,280 | 8,795,616 | 46,395,499 | 1.98 | 26.6 | 2018 |
| Goldner Hawn VIII | 72,755,128 | 24,827,811 | 1,900 | 47,927,317 | 33,506,124 | 1.35 | 25.9 | 2023 |
| Green Equity Investors | 325,000,000 | 426,682,825 | 457,074,912 | 23,768,669 | 214,055,148 | 1.57 | 11.3 | |
| Green Equity Investors VI, L.P. | 200,000,000 | 307,992,517 | 431,519,800 | 4,125,348 | 64,080,225 | 1.61 | 11.3 | 2012 |
| Green Equity Investors VIII | 125,000,000 | 118,690,308 | 25,555,112 | 19,643,321 | 149,974,924 | 1.48 | 11.6 | 2020 |
| GTCR | 110,000,000 | 108,893,534 | 266,749,865 | 10,416,556 | 62,822,104 | 3.03 | 30.4 | |
| GTCR XI | 110,000,000 | 108,893,534 | 266,749,865 | 10,416,556 | 62,822,104 | 3.03 | 30.4 | 2013 |
| HarbourVest* | 18,296,663 | 17,604,422 | 24,233,524 | 633,840 | 3,334,061 | 1.57 | 11.4 | |
| Dover Street VII Cayman Fund L.P. | 2,198,112 | 2,074,270 | 1,856,658 | 132,416 | 3,315 | 0.90 | -4.5 | 2014 |
| Harbourvest Intl PE Partners VI-Cayman | 4,400,942 | 4,040,737 | 6,572,439 | 205,424 | 1,211,614 | 1.93 | 14.0 | 2014 |
| HarbourVest Partners VIII Cayman Buyout | 4,506,711 | 4,395,883 | 6,153,757 | 156,000 | 31,797 | 1.41 | 12.9 | 2014 |
| HarbourVest Partners VIII-Cayman Venture | 7,190,898 | 7,093,532 | 9,650,670 | 140,000 | 2,087,335 | 1.65 | 11.4 | 2014 |
| Hellman & Friedman | 575,000,000 | 473,573,985 | 221,128,901 | 142,114,020 | 521,925,768 | 1.57 | 16.5 | |
| Hellman & Friedman Capital Partners VII, L.P. | 50,000,000 | 49,914,704 | 161,459,211 | 2,183,886 | 4,025,085 | 3.32 | 24.8 | 2009 |
| Hellman & Friedman Investors IX, L.P. | 175,000,000 | 186,484,569 | 25,456,790 | 6,068,637 | 276,988,160 | 1.62 | 12.5 | 2018 |
| Hellman & Friedman Capital Partners X | 250,000,000 | 237,174,712 | 34,212,900 | 33,861,497 | 240,912,523 | 1.16 | 6.2 | 2021 |
| Hellman & Friedman Capital Partners XI | 100,000,000 | 0 | 0 | 100,000,000 | 0 | | | 2023 |
| IK Investment Partners | 727,786,660 | 518,543,412 | 604,526,059 | 227,514,922 | 269,283,339 | 1.69 | 14.3 | |
| IK Fund VII | 176,077,418 | 179,393,652 | 324,212,358 | 8,902,794 | 8,430,512 | 1.85 | 14.0 | 2013 |
| IK Fund VIII | 176,077,418 | 179,587,595 | 279,566,119 | 9,011,616 | 59,424,983 | 1.89 | 17.5 | 2016 |
| IK Fund IX | 158,469,676 | 148,769,898 | 745,854 | 4,115,624 | 190,826,129 | 1.29 | 8.2 | 2019 |
| IK Fund X | 105,646,451 | 10,792,267 | 1,728 | 93,969,190 | 10,601,715 | 0.98 | -2.3 | 2022 |
| IK Small Cap Fund IV | 111,515,698 | 0 | 0 | 111,515,698 | 0 | | | 2024 |
| Kohlberg, Kravis, Roberts & Co. | 1,997,000,000 | 1,313,388,222 | 738,381,460 | 781,485,543 | 1,249,840,472 | 1.51 | 15.8 | |
| KKR Americas Fund XII L.P. | 150,000,000 | 151,968,256 | 139,152,990 | 14,768,855 | 182,051,871 | 2.11 | 19.0 | 2016 |
| KKR Ascendant Strategy | 150,000,000 | 52,093,159 | 0 | 102,655,151 | 47,661,728 | 0.91 | -14.9 | 2023 |
| KKR Asian Fund III | 100,000,000 | 98,658,502 | 84,176,670 | 14,012,605 | 106,850,903 | 1.94 | 18.6 | 2017 |
| KKR Asian Fund IV | 150,000,000 | 101,558,865 | 19,587,235 | 66,654,425 | 123,470,831 | 1.41 | 15.5 | 2020 |
| KKR Core Investments Partnership | 97,000,000 | 107,520,663 | 16,321,657 | 24,319 | 134,621,260 | 1.40 | 11.1 | 2021 |
| KKR Core Investments Fund II | 100,000,000 | 25,984,801 | 761,191 | 74,522,617 | 30,267,946 | 1.19 | 15.3 | 2022 |
| KKR Europe V | 100,000,000 | 98,085,764 | 44,519,120 | 9,975,062 | 90,982,953 | 1.38 | 9.8 | 2018 |
| KKR European Fund VI (USD) SCSp | 100,000,000 | 59,487,549 | 0 | 43,766,423 | 52,065,319 | 0.88 | -12.1 | 2022 |
| KKR Millennium Fund | 200,000,000 | 205,167,570 | 425,091,742 | 0 | 0 | 2.07 | 16.4 | 2002 |
| KKR MN Partnership L.P. | 150,000,000 | 149,629,925 | 3,114,776 | 3,800,353 | 175,432,530 | 1.19 | 8.2 | 2021 |
| KKR North America Fund XIII | 300,000,000 | 263,233,168 | 5,656,079 | 51,305,733 | 306,435,130 | 1.19 | 10.1 | 2021 |
| KKR North America Fund XIV | 400,000,000 | 0 | 0 | 400,000,000 | 0 | | | 2024 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Lexington Partners | 1,645,000,000 | 1,277,385,659 | 968,498,195 | 460,987,429 | 1,010,513,270 | 1.55 | 12.6 | |
| Lexington Capital Partners VI-B, L.P. | 100,000,000 | 98,374,022 | 145,958,371 | 1,634,703 | 548,533 | 1.49 | 7.9 | 2005 |
| Lexington Capital Partners VII, L.P. | 200,000,000 | 173,297,773 | 282,748,237 | 30,670,593 | 4,002,989 | 1.65 | 14.2 | 2009 |
| Lexington Capital Partners VIII, L.P. | 150,000,000 | 140,262,793 | 166,017,855 | 28,787,431 | 65,433,438 | 1.65 | 14.1 | 2014 |
| Lexington Capital Partners IX, L.P. | 150,000,000 | 134,081,724 | 56,850,607 | 31,503,130 | 146,602,730 | 1.52 | 15.4 | 2018 |
| Lexington Capital Partners X | 100,000,000 | 52,573,186 | 5,630,770 | 52,577,516 | 58,821,456 | 1.23 | 16.9 | 2021 |
| Lexington Co-Investment Partners IV | 200,000,000 | 221,741,090 | 213,108,653 | 2,778,492 | 195,055,612 | 1.84 | 15.0 | 2017 |
| Lexington Co-Investment Partners V | 300,000,000 | 311,146,276 | 46,313,666 | 12,389,168 | 385,739,345 | 1.39 | 14.0 | 2020 |
| Lexington Co-Investment Partners V Overage | 45,000,000 | 39,510,900 | 6,465,891 | 7,044,291 | 48,025,948 | 1.38 | 12.2 | 2021 |
| Lexington Co-Investment Partners VI | 300,000,000 | 22,500,000 | 0 | 277,500,000 | 22,481,775 | 1.00 | -0.3 | 2023 |
| Lexington Middle Market Investors IV | 100,000,000 | 83,897,895 | 45,404,145 | 16,102,105 | 83,801,444 | 1.54 | 14.1 | 2016 |
| Madison Dearborn Capital Partners LLC | 200,000,000 | 211,722,246 | 115,502,174 | 28,932,491 | 187,015,746 | 1.43 | 10.1 | |
| Madison Dearborn Capital Partners VII, L.P. | 100,000,000 | 102,097,143 | 80,926,721 | 15,842,064 | 82,213,398 | 1.60 | 9.7 | 2015 |
| Madison Dearborn Capital Partners VIII-A, L.P | 100,000,000 | 109,625,103 | 34,575,453 | 13,090,427 | 104,802,348 | 1.27 | 11.1 | 2019 |
| Marathon | 400,000,000 | 261,487,712 | 131,830,739 | 163,000,000 | 196,958,469 | 1.26 | 10.4 | |
| Marathon Distressed Credit Fund | 200,000,000 | 161,906,171 | 112,361,635 | 44,000,000 | 109,305,210 | 1.37 | 10.5 | 2020 |
| Marathon Distressed Credit Fund II | 200,000,000 | 99,581,541 | 19,469,104 | 119,000,000 | 87,653,259 | 1.08 | 8.9 | 2023 |
| Merced Capital | 178,737,500 | 184,266,287 | 207,440,275 | 0 | 27,947,889 | 1.28 | 4.5 | |
| Merced Partners IV | 125,000,000 | 124,968,390 | 136,386,037 | 0 | 3,609,379 | 1.12 | 2.3 | 2013 |
| Merced Partners V | 53,737,500 | 59,297,897 | 71,054,238 | 0 | 24,338,510 | 1.61 | 8.2 | 2017 |
| MHR Institutional Partners | 75,000,000 | 84,110,009 | 27,817,451 | 10,648,019 | 92,994,529 | 1.44 | 7.4 | |
| MHR Institutional Partners IV LP | 75,000,000 | 84,110,009 | 27,817,451 | 10,648,019 | 92,994,529 | 1.44 | 7.4 | 2014 |
| Nordic Capital | 736,877,527 | 615,942,814 | 437,529,569 | 304,319,441 | 544,791,949 | 1.59 | 14.0 | |
| Nordic Evolution Fund II | 111,515,698 | 0 | 0 | 111,515,698 | 0 | | | 2024 |
| Nordic Capital Fund VIII | 176,077,418 | 229,362,004 | 296,912,142 | 12,395,845 | 64,335,710 | 1.58 | 12.2 | 2013 |
| Nordic Capital IX Beta, L.P. | 176,077,418 | 189,889,846 | 111,837,821 | 98,021,503 | 230,985,845 | 1.81 | 16.2 | 2017 |
| Nordic Capital Fund X | 158,469,676 | 128,391,608 | 27,153,665 | 49,022,282 | 169,391,611 | 1.53 | 16.8 | 2020 |
| Nordic Capital Fund XI | 114,737,318 | 68,299,356 | 1,625,941 | 33,364,113 | 80,078,783 | 1.20 | 24.3 | 2022 |
| Oak Hill Capital Management, Inc. | 250,000,000 | 251,413,914 | 296,457,609 | 8,106,424 | 156,598,835 | 1.80 | 26.0 | |
| Oak Hill Capital Partners IV Onshore LP | 150,000,000 | 154,428,704 | 277,234,047 | 4,466,045 | 31,455,461 | 2.00 | 31.9 | 2016 |
| Oak Hill Capital Partners V | 100,000,000 | 96,985,210 | 19,223,562 | 3,640,379 | 125,143,374 | 1.49 | 12.5 | 2018 |
| Oaktree Capital Management, LLC | 400,000,000 | 273,901,509 | 140,137,543 | 206,514,589 | 224,380,286 | 1.33 | 8.3 | |
| Oaktree Special Situations Fund, L.P. | 100,000,000 | 103,390,275 | 40,279,144 | 7,741,294 | 52,969,224 | 0.90 | -1.8 | 2014 |
| Oaktree Special Situations Fund II, L.P. | 100,000,000 | 99,203,850 | 71,858,399 | 42,579,241 | 102,945,522 | 1.76 | 27.3 | 2018 |
| Oaktree Special Situations Fund III | 200,000,000 | 71,307,384 | 28,000,000 | 156,194,054 | 68,465,540 | 1.35 | 26.0 | 2022 |
| Paine & Partners, LLC | 325,000,000 | 278,790,691 | 106,433,594 | 76,801,146 | 275,131,562 | 1.37 | 9.9 | |
| Paine Schwartz Food Chain Fund IV | 75,000,000 | 72,348,562 | 35,991,937 | 11,510,059 | 62,729,836 | 1.36 | 6.0 | 2014 |
| Paine Schwartz Food Chain Fund V, L.P. | 150,000,000 | 146,170,397 | 63,276,531 | 18,256,500 | 152,639,856 | 1.48 | 15.1 | 2018 |
| Paine Schwartz Food Chain VI | 100,000,000 | 60,271,732 | 7,165,126 | 47,034,587 | 59,761,870 | 1.11 | 7.1 | 2023 |
| Permal PE* | 5,337,098 | 4,426,520 | 4,848,251 | 1,090,000 | 113,711 | 1.12 | 3.8 | |
| Glouston Private Equity Opportunities IV | 5,337,098 | 4,426,520 | 4,848,251 | 1,090,000 | 113,711 | 1.12 | 3.8 | 2014 |
| Permira | 651,486,446 | 549,171,087 | 602,918,393 | 148,586,636 | 467,150,869 | 1.95 | 17.4 | |
| Permira V, L.P. | 176,077,418 | 185,617,109 | 437,454,557 | 3,171,435 | 66,344,313 | 2.71 | 20.3 | 2013 |
| Permira VI, L.P. | 140,861,934 | 131,033,790 | 137,737,556 | 28,500,591 | 128,167,040 | 2.03 | 15.1 | 2016 |
| Permira VII L.P.1 | 158,469,676 | 151,852,504 | 25,370,638 | 25,593,560 | 178,240,566 | 1.34 | 8.1 | 2019 |
| Permira VIII | 176,077,418 | 80,667,684 | 2,355,643 | 91,321,051 | 94,398,950 | 1.20 | 13.7 | 2022 |
| Public Pension Capital Management | 375,000,000 | 246,026,701 | 243,886,349 | 163,775,146 | 235,319,457 | 1.95 | 22.9 | |
| Public Pension Capital, LLC | 375,000,000 | 246,026,701 | 243,886,349 | 163,775,146 | 235,319,457 | 1.95 | 22.9 | 2014 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Silver Lake Partners | 335,000,000 | 352,597,854 | 514,545,236 | 29,968,159 | 251,200,643 | 2.17 | 17.9 | |
| Silver Lake Partners III, L.P. | 100,000,000 | 94,870,929 | 217,811,140 | 9,528,468 | 17,499,201 | 2.48 | 18.6 | 2007 |
| Silver Lake Partners IV | 100,000,000 | 118,476,239 | 210,999,947 | 2,881,307 | 101,105,137 | 2.63 | 20.3 | 2012 |
| Silver Lake Partners V, L.P. | 135,000,000 | 139,250,686 | 85,734,149 | 17,558,384 | 132,596,305 | 1.57 | 11.0 | 2017 |
| Siris Capital Group | 50,000,000 | 0 | 0 | 50,000,000 | 0 | | | |
| Siris V | 50,000,000 | 0 | 0 | 50,000,000 | 0 | | | 2022 |
| Split Rock | 110,000,000 | 107,890,906 | 130,490,654 | 2,109,094 | 25,192,755 | 1.44 | 4.9 | |
| Split Rock Partners LP | 50,000,000 | 47,890,906 | 58,794,192 | 2,109,094 | 4,861,788 | 1.33 | 3.3 | 2005 |
| Split Rock Partners II, LP | 60,000,000 | 60,000,000 | 71,696,462 | 0 | 20,330,967 | 1.53 | 6.8 | 2008 |
| Stellex Capital Management | 200,000,000 | 32,568,508 | 135,142 | 167,431,492 | 27,531,300 | 0.85 | -16.1 | |
| Stellex Capital Partners III | 200,000,000 | 32,568,508 | 135,142 | 167,431,492 | 27,531,300 | 0.85 | -16.1 | 2024 |
| Stone Point Capital | 100,000,000 | 0 | 0 | 100,000,000 | 0 | | | |
| Trident Capital X US Fund | 100,000,000 | 0 | 0 | 100,000,000 | 0 | | | 2025 |
| Summit Partners | 850,000,000 | 519,833,276 | 488,433,480 | 478,037,075 | 412,720,266 | 1.73 | 22.2 | |
| Summit Partners Growth Equity Fund VIII | 100,000,000 | 117,223,049 | 262,116,353 | 12,774,672 | 14,789,664 | 2.36 | 25.5 | 2011 |
| Summit Partners Growth Equity Fund IX | 100,000,000 | 136,228,128 | 177,282,625 | 32,610,000 | 101,152,124 | 2.04 | 23.8 | 2015 |
| Summit Partners Growth Equity Fund X-A | 150,000,000 | 147,021,636 | 48,015,933 | 50,994,297 | 169,316,921 | 1.48 | 12.7 | 2019 |
| Summit Partners Growth Equity Fund XI | 250,000,000 | 119,360,463 | 1,018,569 | 131,658,106 | 127,461,557 | 1.08 | 4.9 | 2021 |
| Summit Partners Growth Equity XII | 250,000,000 | 0 | 0 | 250,000,000 | 0 | | | 2024 |
| TA Associates | 80,000,000 | 9,600,000 | 0 | 70,400,000 | 8,528,237 | 0.89 | -26.6 | |
| TA XV | 80,000,000 | 9,600,000 | 0 | 70,400,000 | 8,528,237 | 0.89 | -26.6 | 2023 |
| Thoma Bravo LLC | 625,000,000 | 516,683,181 | 381,042,385 | 231,063,792 | 481,143,318 | 1.67 | 15.8 | |
| Thoma Bravo Fund XII, L.P. | 75,000,000 | 81,836,011 | 137,496,540 | 18,452,144 | 42,092,197 | 2.19 | 15.3 | 2016 |
| Thoma Bravo Fund XIII, L.P. | 150,000,000 | 186,271,950 | 188,076,556 | 11,571,287 | 173,965,291 | 1.94 | 22.3 | 2018 |
| Thoma Bravo Fund XIV | 150,000,000 | 162,370,589 | 52,098,573 | 33,828,411 | 151,392,194 | 1.25 | 7.0 | 2020 |
| Thoma Bravo Fund XV LP | 100,000,000 | 86,204,631 | 3,370,716 | 17,211,950 | 113,693,635 | 1.36 | 14.6 | 2021 |
| Thoma Bravo Fund XVI | 150,000,000 | 0 | 0 | 150,000,000 | 0 | | | 2024 |
| Thomas H. Lee Partners | 550,000,000 | 364,929,462 | 302,419,901 | 215,632,138 | 263,542,993 | 1.55 | 19.4 | |
| Thomas H. Lee Equity Fund VII, LP. | 100,000,000 | 100,056,435 | 137,891,993 | 10,105,722 | 37,538,480 | 1.75 | 18.3 | 2015 |
| Thomas H. Lee Equity Fund VIII, L.P. | 150,000,000 | 151,958,502 | 164,527,908 | 18,440,941 | 101,871,591 | 1.75 | 26.4 | 2018 |
| Thomas H. Lee Equity Fund IX | 150,000,000 | 112,914,525 | 0 | 37,085,475 | 124,132,922 | 1.10 | 5.1 | 2021 |
| Thomas H. Lee Equity Fund X | 150,000,000 | 0 | 0 | 150,000,000 | 0 | | | 2024 |
| TPG Capital | 800,000,000 | 641,131,250 | 305,067,096 | 235,723,545 | 618,782,780 | 1.44 | 16.2 | |
| TPG Growth V | 150,000,000 | 148,820,360 | 27,285,891 | 22,543,315 | 185,505,554 | 1.43 | 14.1 | 2021 |
| TPG Growth VI, L.P. | 150,000,000 | 60,997,507 | 5,415,321 | 94,299,425 | 63,560,260 | 1.13 | 29.6 | 2023 |
| TPG Partners VII, L.P. | 100,000,000 | 101,330,001 | 185,375,846 | 8,242,892 | 19,225,694 | 2.02 | 19.1 | 2015 |
| TPG Partners VIII | 150,000,000 | 151,654,176 | 52,865,088 | 16,859,479 | 175,311,656 | 1.50 | 15.1 | 2018 |
| TPG Partners IX, L.P. | 100,000,000 | 64,447,096 | 4,153,177 | 39,666,270 | 70,443,974 | 1.16 | 15.7 | 2022 |
| TPG Tech Adjacencies II, L.P. | 150,000,000 | 113,882,110 | 29,971,773 | 54,112,164 | 104,735,642 | 1.18 | 10.0 | 2021 |
| Vance Street Capital Partners | 85,000,000 | 25,632,913 | 0 | 59,367,087 | 25,948,864 | 1.01 | 1.5 | |
| Vance Street Capital IV, L.P. | 85,000,000 | 25,632,913 | 0 | 59,367,087 | 25,948,864 | 1.01 | 1.5 | 2024 |
| Varde Fund | 547,108,974 | 526,615,999 | 599,151,862 | 24,725,817 | 160,752,008 | 1.44 | 7.3 | |
| Varde Fund X, LP | 150,000,000 | 150,000,000 | 254,062,551 | 0 | 5,408,318 | 1.73 | 9.9 | 2010 |
| Varde Fund XI, LP | 200,000,000 | 200,000,000 | 237,571,921 | 0 | 25,910,242 | 1.32 | 4.3 | 2013 |
| Varde Fund XIII, L.P. | 150,000,000 | 144,000,000 | 103,284,548 | 6,000,000 | 95,306,789 | 1.38 | 8.9 | 2018 |
| Varde Fund XIV | 47,108,974 | 32,615,999 | 4,232,842 | 18,725,817 | 34,126,659 | 1.18 | 8.7 | 2022 |

# Minnesota State Board of Investment
## Quarter Ending June 30, 2025
## Private Markets Investments

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Vestar Capital Partners | 250,000,000 | 267,783,666 | 292,845,700 | 30,695,286 | 138,009,886 | 1.61 | 18.1 | |
| Vestar Capital Partners VI, LP | 100,000,000 | 109,951,730 | 204,511,431 | 357,259 | 34,532,968 | 2.17 | 23.5 | 2011 |
| Vestar Capital Partners VII, L.P. | 150,000,000 | 157,831,936 | 88,334,269 | 30,338,027 | 103,476,918 | 1.22 | 6.8 | 2017 |
| Vista Equity Partners | 200,000,000 | 201,228,725 | 13,450,428 | 13,357,383 | 274,176,554 | 1.43 | 10.5 | |
| Vista Equity Partners Perennial | 200,000,000 | 201,228,725 | 13,450,428 | 13,357,383 | 274,176,554 | 1.43 | 10.5 | 2020 |
| Warburg Pincus | 1,316,000,000 | 1,192,768,095 | 1,173,245,086 | 131,805,000 | 812,316,328 | 1.66 | 11.1 | |
| Warburg Pincus China, L.P. | 45,000,000 | 46,935,000 | 20,662,200 | 0 | 36,563,795 | 1.22 | 3.9 | 2016 |
| Warburg Pincus China-Southeast Asia II | 50,000,000 | 36,000,000 | 5,702,500 | 14,000,000 | 31,950,739 | 1.05 | 1.8 | 2019 |
| Warburg Pincus Financial Sector | 90,000,000 | 90,439,542 | 95,848,883 | 3,555,000 | 84,543,027 | 1.99 | 16.8 | 2017 |
| Warburg Pincus Global Growth, L.P. | 250,000,000 | 238,821,534 | 107,082,893 | 14,500,000 | 298,299,775 | 1.70 | 13.8 | 2018 |
| Warburg Pincus Global Growth 14, L.P. | 300,000,000 | 199,229,567 | 13,737,000 | 99,750,000 | 235,218,327 | 1.25 | 15.7 | 2022 |
| Warburg Pincus Private Equity IX, L.P. | 100,000,000 | 100,000,000 | 172,072,950 | 0 | 116,350 | 1.72 | 9.6 | 2005 |
| Warburg Pincus Private Equity X, LP | 150,000,000 | 150,000,000 | 267,384,491 | 0 | 3,051,649 | 1.80 | 9.5 | 2007 |
| Warburg Pincus Private Equity XI, LP | 200,000,000 | 200,342,452 | 302,859,821 | 0 | 43,319,768 | 1.73 | 11.4 | 2012 |
| Warburg Pincus Private Equity XII, LP | 131,000,000 | 131,000,000 | 187,894,348 | 0 | 79,252,897 | 2.04 | 15.4 | 2015 |
| Wayzata Investment Partners | 150,000,000 | 68,415,000 | 72,163,281 | 0 | 1,010,031 | 1.07 | 1.3 | |
| Wayzata Opportunities Fund III | 150,000,000 | 68,415,000 | 72,163,281 | 0 | 1,010,031 | 1.07 | 1.3 | 2012 |
| Wellspring Capital Partners | 125,000,000 | 153,842,297 | 118,800,648 | 10,722,723 | 107,762,934 | 1.47 | 12.5 | |
| Wellspring Capital Partners VI, L.P. | 125,000,000 | 153,842,297 | 118,800,648 | 10,722,723 | 107,762,934 | 1.47 | 12.5 | 2016 |
| Welsh, Carson, Anderson & Stowe | 650,000,000 | 561,372,103 | 620,148,273 | 113,996,206 | 368,438,056 | 1.76 | 16.6 | |
| Welsh, Carson, Anderson & Stowe XI, L.P. | 100,000,000 | 100,000,000 | 166,120,752 | 0 | 190,322 | 1.66 | 11.5 | 2008 |
| Welsh, Carson, Anderson & Stowe XII, L.P. | 150,000,000 | 150,000,000 | 298,980,537 | 0 | 68,755,593 | 2.45 | 24.1 | 2014 |
| Welsh, Carson, Anderson & Stowe XIII, L.P. | 250,000,000 | 246,650,576 | 155,046,984 | 28,717,733 | 234,639,034 | 1.58 | 18.1 | 2018 |
| Welsh, Carson, Anderson & Stowe XIV | 150,000,000 | 64,721,527 | 0 | 85,278,473 | 64,853,106 | 1.00 | 0.1 | 2022 |
| Wind Point Partners | 200,000,000 | 172,527,238 | 58,638,455 | 56,647,217 | 193,043,966 | 1.46 | 15.7 | |
| Wind Point Partners IX | 100,000,000 | 105,641,554 | 50,428,126 | 16,800,707 | 113,119,739 | 1.55 | 15.1 | 2019 |
| Wind Point Partners X | 100,000,000 | 66,885,684 | 8,210,329 | 39,846,510 | 79,924,226 | 1.32 | 18.1 | 2022 |
| Windjammer Capital Investors | 441,708,861 | 274,166,396 | 303,219,902 | 192,597,073 | 170,943,451 | 1.73 | 11.6 | |
| Windjammer Capital Fund VI | 175,000,000 | 20,669,061 | 0 | 154,330,939 | 15,582,240 | 0.75 | -25.5 | 2023 |
| Windjammer Mezzanine & Equity Fund II | 66,708,861 | 55,215,684 | 86,029,064 | 10,139,363 | 69,413 | 1.56 | 9.0 | 2000 |
| Windjammer Senior Equity Fund IV, L.P. | 100,000,000 | 95,107,015 | 170,802,066 | 20,801,627 | 52,586,748 | 2.35 | 15.8 | 2012 |
| Windjammer Senior Equity Fund V, L.P. | 100,000,000 | 103,174,636 | 46,388,772 | 7,325,144 | 102,705,050 | 1.45 | 13.5 | 2017 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| **Private Credit** | **4,409,045,546** | **3,713,753,927** | **3,048,990,894** | **1,307,949,515** | **1,911,326,772** | **1.34** | **9.8** | |
| Audax Group | 350,000,000 | 280,173,049 | 257,111,005 | 105,753,540 | 94,777,316 | 1.26 | 10.1 | |
| Audax Mezzanine Fund III, L.P. | 100,000,000 | 107,449,863 | 136,564,504 | 0 | 4,492,100 | 1.31 | 9.6 | 2010 |
| Audax Mezzanine Fund IV-A, L.P. | 100,000,000 | 96,811,286 | 95,042,007 | 19,049,743 | 25,679,906 | 1.25 | 10.2 | 2015 |
| Audax Mezzanine Fund V | 150,000,000 | 75,911,900 | 25,504,494 | 86,703,797 | 64,605,310 | 1.19 | 13.7 | 2020 |
| Avenue Capital Partners | 200,000,000 | 200,977,328 | 320,007,323 | 0 | 39,155,105 | 1.79 | 10.0 | |
| Avenue Energy Opportunities Fund, L.P. | 100,000,000 | 100,977,328 | 142,077,076 | 0 | 13,383,973 | 1.54 | 6.5 | 2014 |
| Avenue Energy Opportunities Fund II | 100,000,000 | 100,000,000 | 177,930,247 | 0 | 25,771,132 | 2.04 | 14.9 | 2017 |
| BlackRock | 97,500,000 | 94,528,478 | 55,290,175 | 2,971,522 | 78,028,304 | 1.41 | 8.0 | |
| BlackRock Middle Market Senior Fund | 97,500,000 | 94,528,478 | 55,290,175 | 2,971,522 | 78,028,304 | 1.41 | 8.0 | 2018 |
| Brookfield Asset Management Inc. | 200,000,000 | 134,577,827 | 74,143,174 | 120,490,166 | 73,469,493 | 1.10 | 7.1 | |
| Brookfield Real Estate Finance Fund VI | 200,000,000 | 134,577,827 | 74,143,174 | 120,490,166 | 73,469,493 | 1.10 | 7.1 | 2021 |
| Castlelake L.P. | 100,000,000 | 16,561,695 | 1,895,194 | 84,837,809 | 16,169,840 | 1.09 | 24.5 | |
| Castlelake Aviation V Stable Yield | 100,000,000 | 16,561,695 | 1,895,194 | 84,837,809 | 16,169,840 | 1.09 | 24.5 | 2023 |
| Energy Capital Partners | 28,087,500 | 41,792,804 | 28,343,613 | 6,997,207 | 19,620,193 | 1.15 | 6.9 | |
| Energy Capital Credit Solutions II-A | 28,087,500 | 41,792,804 | 28,343,613 | 6,997,207 | 19,620,193 | 1.15 | 6.9 | 2018 |
| HPS Investment Partners | 200,000,000 | 175,710,000 | 81,087,752 | 60,334,361 | 146,970,181 | 1.30 | 10.9 | |
| HPS Mezzanine Partners 2019, L.P. | 100,000,000 | 107,512,582 | 69,672,651 | 17,263,776 | 76,380,847 | 1.36 | 10.4 | 2019 |
| HPS Strategic Investment Partners V | 100,000,000 | 68,197,418 | 11,415,101 | 43,070,585 | 70,589,335 | 1.20 | 12.8 | 2022 |
| Kohlberg, Kravis, Roberts & Co. | 274,000,000 | 384,322,910 | 412,511,391 | 80,601,499 | 52,737,822 | 1.21 | 9.5 | |
| KKR Lending Partner II L.P. | 75,000,000 | 87,059,946 | 88,739,268 | 8,802,924 | 1,644,333 | 1.04 | 1.8 | 2015 |
| KKR Lending Partners III L.P. | 199,000,000 | 297,262,964 | 323,772,123 | 71,798,575 | 51,093,489 | 1.26 | 12.8 | 2017 |
| LBC Credit Partners | 200,000,000 | 208,448,030 | 213,498,971 | 53,897,865 | 50,235,025 | 1.27 | 10.7 | |
| LBC Credit Partners IV, L.P. | 100,000,000 | 120,031,006 | 140,990,113 | 10,000,000 | 3,647,644 | 1.21 | 8.7 | 2016 |
| LBC Credit Partners V, L.P. | 100,000,000 | 88,417,024 | 72,508,858 | 43,897,865 | 46,587,381 | 1.35 | 14.3 | 2019 |
| Marathon | 200,000,000 | 168,022,008 | 70,321,485 | 38,000,000 | 160,888,608 | 1.38 | 10.6 | |
| Marathon Secured Private Strategies Fund II | 100,000,000 | 96,022,008 | 70,138,788 | 10,000,000 | 81,408,960 | 1.58 | 11.3 | 2019 |
| Marathon Secured Private Strategies Fund III | 100,000,000 | 72,000,000 | 182,698 | 28,000,000 | 79,479,648 | 1.11 | 7.0 | 2022 |
| Merit Capital Partners | 275,000,000 | 227,233,454 | 230,627,035 | 47,699,746 | 134,261,960 | 1.61 | 12.3 | |
| Merit Mezzanine Fund V, LP | 75,000,000 | 72,306,122 | 114,535,938 | 2,693,878 | 13,873,306 | 1.78 | 10.6 | 2009 |
| Merit Mezzanine Fund VI | 100,000,000 | 93,095,514 | 114,454,733 | 6,837,687 | 52,188,839 | 1.79 | 16.5 | 2016 |
| Merit Mezzanine Fund VII | 100,000,000 | 61,831,818 | 1,636,364 | 38,168,182 | 68,199,815 | 1.13 | 7.4 | 2020 |
| Oaktree Capital Management, LLC | 650,000,000 | 538,469,859 | 257,333,474 | 125,100,000 | 451,435,630 | 1.32 | 9.0 | |
| Oaktree Opportunities Fund X, L.P. | 50,000,000 | 46,500,060 | 48,971,491 | 8,500,000 | 22,570,849 | 1.54 | 8.9 | 2015 |
| Oaktree Opportunities Fund Xb, L.P. | 100,000,000 | 75,005,568 | 37,161,508 | 25,000,000 | 88,806,487 | 1.68 | 11.5 | 2015 |
| Oaktree Opportunities Fund XI | 300,000,000 | 255,023,332 | 130,579,999 | 45,000,000 | 202,847,650 | 1.31 | 9.6 | 2020 |
| Oaktree Real Estate Debt III | 200,000,000 | 161,940,899 | 40,620,476 | 46,600,000 | 137,210,643 | 1.10 | 4.4 | 2020 |
| Permira | 69,888,046 | 7,989,899 | 196,043 | 61,221,108 | 9,915,342 | 1.27 | 27.1 | |
| Permira Strategic Opportunities I | 69,888,046 | 7,989,899 | 196,043 | 61,221,108 | 9,915,342 | 1.27 | 27.1 | 2024 |
| PIMCO BRAVO* | 5,000,000 | 4,501,479 | 5,714,432 | 0 | 288,198 | 1.33 | 6.0 | |
| PIMCO Bravo Fund OnShore Feeder II | 5,000,000 | 4,501,479 | 5,714,432 | 0 | 288,198 | 1.33 | 6.0 | 2014 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Prudential Global Investment Mgmt | 600,000,000 | 595,163,343 | 627,354,665 | 69,780,199 | 195,018,854 | 1.38 | 10.0 | |
| Prudential Capital Partners II, L.P. | 100,000,000 | 97,930,132 | 145,671,152 | 10,940,748 | 353,975 | 1.49 | 9.0 | 2005 |
| Prudential Capital Partners III, L.P. | 100,000,000 | 102,887,805 | 175,321,440 | 13,562,553 | 1,962,240 | 1.72 | 14.1 | 2009 |
| Prudential Capital Partners IV | 100,000,000 | 115,262,492 | 157,859,590 | 1,917,595 | 3,627,950 | 1.40 | 9.1 | 2012 |
| Prudential Capital Partners V, L.P. | 150,000,000 | 163,515,876 | 127,243,501 | 3,768,735 | 65,494,658 | 1.18 | 5.0 | 2016 |
| PGIM Capital Partners VI, L.P. | 150,000,000 | 115,567,039 | 21,258,981 | 39,590,568 | 123,580,031 | 1.25 | 14.0 | 2020 |
| Summit Partners | 95,000,000 | 100,222,879 | 138,347,246 | 3,818,718 | 1,157,294 | 1.39 | 9.0 | |
| Summit Subordinated Debt Fund III, L.P. | 45,000,000 | 44,088,494 | 62,804,226 | 2,250,000 | 766,784 | 1.44 | 8.6 | 2004 |
| Summit Subordinated Debt Fund IV, L.P. | 50,000,000 | 56,134,385 | 75,543,020 | 1,568,718 | 390,510 | 1.35 | 9.7 | 2008 |
| TCW | 189,570,000 | 174,519,135 | 170,125,778 | 62,214,056 | 50,478,074 | 1.26 | 7.5 | |
| TCW Direct Lending LLC | 89,570,000 | 83,599,652 | 91,467,430 | 14,899,409 | 13,139,840 | 1.25 | 6.9 | 2014 |
| TCW Direct Lending VII | 100,000,000 | 90,919,484 | 78,658,349 | 47,314,647 | 37,338,234 | 1.28 | 8.1 | 2018 |
| Torchlight Investors | 150,000,000 | 60,000,000 | 20,571,427 | 110,571,427 | 41,994,742 | 1.04 | 4.2 | |
| Torchlight Debt Fund VIII | 150,000,000 | 60,000,000 | 20,571,427 | 110,571,427 | 41,994,742 | 1.04 | 4.2 | 2023 |
| TSSP | 525,000,000 | 300,539,750 | 84,510,711 | 273,660,292 | 294,724,792 | 1.26 | 9.7 | |
| TSSP Opportunities Partners IV (A), L.P. | 50,000,000 | 40,479,121 | 22,936,356 | 6,357,267 | 34,191,686 | 1.41 | 9.5 | 2018 |
| Sixth Street Opportunities Partners V | 75,000,000 | 60,794,566 | 9,428,006 | 22,699,014 | 61,388,568 | 1.16 | 8.8 | 2021 |
| Sixth Street Opportunities Partners VI | 150,000,000 | 0 | 0 | 150,000,000 | 0 | | | 2025 |
| Sixth Street TAO Partners (B), L.P. | 50,000,000 | 61,467,862 | 27,101,373 | 19,033,164 | 53,723,561 | 1.31 | 8.5 | 2018 |
| Sixth Street TAO Partners (D), L.P. | 100,000,000 | 81,163,513 | 21,065,892 | 28,236,258 | 88,912,299 | 1.36 | 11.5 | 2018 |
| Sixth Street TAO Partners (B) Vintage 2023 | 100,000,000 | 56,634,688 | 3,979,084 | 47,334,589 | 56,508,678 | 1.07 | 8.6 | 2023 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| **Real Assets** | **4,247,571,518** | **4,069,207,417** | **3,285,897,519** | **602,670,341** | **1,901,043,527** | **1.27** | **5.4** | |
| BlackRock | 198,500,000 | 203,529,374 | 111,890,436 | 14,561,386 | 76,360,732 | 0.92 | -2.9 | |
| BlackRock Global Renewable Power Fund II | 98,500,000 | 114,176,526 | 107,019,005 | 107,929 | 8,544,155 | 1.01 | 0.4 | 2017 |
| BlackRock Global Renewable Power Infrastructure III | 100,000,000 | 89,352,848 | 4,871,430 | 14,453,457 | 67,816,577 | 0.81 | -8.7 | 2019 |
| EIG Global Energy Partners | 450,000,000 | 475,143,925 | 417,997,815 | 75,356,663 | 80,778,653 | 1.05 | 1.1 | |
| EIG Energy Fund XIV | 100,000,000 | 113,459,470 | 100,765,868 | 2,761,129 | 167,514 | 0.89 | -3.8 | 2007 |
| EIG Energy Fund XV | 150,000,000 | 161,570,371 | 166,351,585 | 22,871,323 | 2,877,241 | 1.05 | 1.1 | 2010 |
| EIG Energy Fund XVI | 200,000,000 | 200,114,084 | 150,880,362 | 49,724,211 | 77,733,898 | 1.14 | 2.8 | 2013 |
| Encap Energy | 300,000,000 | 323,490,959 | 399,832,539 | 3,869,640 | 110,776,113 | 1.58 | 9.0 | |
| EnCap Energy Capital Fund VIII, L.P. | 100,000,000 | 103,407,978 | 75,163,692 | 0 | 36,824,062 | 1.08 | 1.3 | 2010 |
| Encap Energy Fund IX | 100,000,000 | 113,775,404 | 151,733,006 | 0 | 23,670,020 | 1.54 | 10.9 | 2012 |
| EnCap Energy Capital Fund X, L.P. | 100,000,000 | 106,307,577 | 172,935,841 | 3,869,640 | 50,282,030 | 2.10 | 16.3 | 2015 |
| Energy & Minerals Group | 680,000,000 | 728,444,221 | 471,266,465 | 17,799,439 | 492,218,398 | 1.32 | 5.2 | |
| NGP Midstream & Resources, L.P. | 100,000,000 | 103,590,296 | 179,775,264 | 17,857 | 1,499,879 | 1.75 | 13.1 | 2007 |
| The Energy & Minerals Group Fund II, L.P. | 100,000,000 | 109,759,364 | 123,028,763 | 170,365 | 78,809,448 | 1.84 | 10.0 | 2011 |
| The Energy & Minerals Group Fund III, L.P. | 200,000,000 | 211,720,955 | 45,103,585 | 39,583 | 88,858,603 | 0.63 | -5.5 | 2014 |
| The Energy & Minerals Group Fund IV, LP | 150,000,000 | 181,665,997 | 117,828,500 | 865,910 | 147,852,854 | 1.46 | 7.5 | 2015 |
| The Energy & Minerals Group Fund V | 112,500,000 | 102,918,428 | 3,658,916 | 12,613,927 | 149,088,550 | 1.48 | 8.5 | 2019 |
| The Energy & Minerals Group Fund V Accordion, LP | 17,500,000 | 18,789,181 | 1,871,437 | 4,091,797 | 26,109,064 | 1.49 | 8.7 | 2019 |
| Energy Capital Partners | 500,000,000 | 500,130,490 | 421,774,016 | 125,919,513 | 329,738,364 | 1.50 | 12.5 | |
| Energy Capital Partners III, L.P. | 200,000,000 | 244,670,695 | 339,462,336 | 30,959,867 | 54,109,975 | 1.61 | 12.1 | 2013 |
| Energy Capital Partners IV-A, LP | 150,000,000 | 167,674,230 | 77,303,674 | 27,504,614 | 182,699,226 | 1.55 | 14.3 | 2017 |
| Energy Capital Partners V | 150,000,000 | 87,785,565 | 5,008,006 | 67,455,032 | 92,929,163 | 1.12 | 7.4 | 2023 |
| Enervest Management Partners | 100,000,000 | 100,427,460 | 118,813,107 | 4,497,102 | 39,897,716 | 1.58 | 9.2 | |
| EnerVest Energy Institutional Fund XIV-A, L.P. | 100,000,000 | 100,427,460 | 118,813,107 | 4,497,102 | 39,897,716 | 1.58 | 9.2 | 2015 |
| EQT | 100,000,000 | 36,698,962 | 5,216,347 | 65,343,135 | 28,366,214 | 0.92 | -10.3 | |
| EQT Infrastructure VI | 100,000,000 | 36,698,962 | 5,216,347 | 65,343,135 | 28,366,214 | 0.92 | -10.3 | 2024 |
| First Reserve | 350,000,000 | 404,914,265 | 222,758,863 | 11,058,656 | 82,954,146 | 0.76 | -5.7 | |
| First Reserve Fund XII, L.P. | 150,000,000 | 165,617,044 | 85,669,271 | 0 | 81,503 | 0.52 | -18.0 | 2008 |
| First Reserve Fund XIII, L.P. | 200,000,000 | 239,297,221 | 137,089,592 | 11,058,656 | 82,872,643 | 0.92 | -2.1 | 2013 |
| Kohlberg, Kravis, Roberts & Co. | 449,850,000 | 235,773,454 | 96,696,286 | 235,163,996 | 222,454,702 | 1.35 | 10.7 | |
| KKR Global Infrastructure Investors III | 149,850,000 | 145,871,612 | 90,718,907 | 19,424,537 | 120,923,092 | 1.45 | 11.1 | 2018 |
| KKR Global Infrastructure Investors IV | 100,000,000 | 89,901,842 | 5,977,379 | 15,739,459 | 101,531,609 | 1.20 | 9.4 | 2021 |
| KKR Global Infrastructure Investors V | 200,000,000 | 0 | 0 | 200,000,000 | 0 | | | 2024 |
| Merit Energy Partners | 419,721,518 | 401,472,471 | 242,693,892 | 18,249,047 | 273,450,603 | 1.29 | 4.5 | |
| Merit Energy Partners H | 100,000,000 | 100,000,000 | 35,586,226 | 0 | 31,040,126 | 0.67 | -4.9 | 2011 |
| Merit Energy Partners I, L.P. | 169,721,518 | 169,721,518 | 152,039,060 | 0 | 102,132,853 | 1.50 | 6.7 | 2014 |
| Merit Energy Partners K, L.P. | 150,000,000 | 131,750,953 | 55,068,606 | 18,249,047 | 140,277,625 | 1.48 | 17.8 | 2019 |
| NGP | 599,500,000 | 624,828,831 | 738,292,754 | 17,331,764 | 141,493,887 | 1.41 | 9.0 | |
| Natural Gas Partners IX, LP | 150,000,000 | 174,025,590 | 249,449,497 | 605,481 | 0 | 1.43 | 12.0 | 2007 |
| NGP Natural Resources X, L.P. | 150,000,000 | 149,753,786 | 136,269,256 | 246,214 | 11,867,530 | 0.99 | -0.3 | 2011 |
| NGP Natural Resources XI, L.P. | 150,000,000 | 158,268,887 | 211,783,964 | 4,736,941 | 39,247,257 | 1.59 | 9.7 | 2014 |
| NGP Natural Resources XII, L.P. | 149,500,000 | 142,780,568 | 140,790,037 | 11,743,128 | 90,379,100 | 1.62 | 14.5 | 2017 |
| Sheridan | 100,000,000 | 34,353,005 | 38,665,000 | 13,520,000 | 22,554,000 | 1.78 | 11.7 | |
| Sheridan Production Partners III-B, L.P. | 100,000,000 | 34,353,005 | 38,665,000 | 13,520,000 | 22,554,000 | 1.78 | 11.7 | 2014 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| **Real Estate** | **4,548,147,868** | **3,648,451,551** | **2,239,952,419** | **1,300,532,295** | **2,269,213,895** | **1.24** | **7.1** | |
| Angelo, Gordon & Co. | 750,000,000 | 534,504,987 | 364,487,097 | 265,780,000 | 311,658,283 | 1.26 | 7.2 | |
| AG Asia Realty Fund III, L.P. | 50,000,000 | 47,587,261 | 47,125,000 | 6,196,250 | 13,028,810 | 1.26 | 7.6 | 2016 |
| AG Asia Realty Fund IV, L.P. | 100,000,000 | 88,596,321 | 82,500,000 | 27,047,500 | 35,577,693 | 1.33 | 10.4 | 2018 |
| AG Asia Realty Fund V | 100,000,000 | 37,643,361 | 0 | 61,000,000 | 39,991,926 | 1.06 | 6.6 | 2023 |
| AG Europe Realty Fund II, L.P. | 75,000,000 | 68,316,673 | 45,724,666 | 12,768,750 | 46,059,881 | 1.34 | 6.3 | 2018 |
| AG Europe Realty Fund III | 75,000,000 | 56,328,427 | 3,750,000 | 19,312,500 | 66,233,487 | 1.24 | 7.1 | 2020 |
| AG Europe Realty Fund IV | 100,000,000 | 7,464,615 | 0 | 92,000,000 | 6,783,080 | 0.91 | -9.1 | 2024 |
| AG Realty Fund IX | 100,000,000 | 92,141,126 | 95,750,000 | 11,650,000 | 20,591,444 | 1.26 | 5.1 | 2014 |
| AG Realty Fund X, L.P. | 150,000,000 | 136,427,203 | 89,637,431 | 35,805,000 | 83,391,961 | 1.27 | 8.7 | 2018 |
| Blackstone | 1,224,500,000 | 1,074,071,704 | 957,780,741 | 346,685,779 | 613,835,573 | 1.46 | 11.3 | |
| Blackstone Real Estate Partners Asia II | 74,500,000 | 74,394,362 | 23,469,802 | 12,051,171 | 62,468,606 | 1.16 | 3.8 | 2017 |
| Blackstone Real Estate Partners Asia III | 100,000,000 | 46,546,853 | 779,968 | 58,427,638 | 42,069,361 | 0.92 | -6.7 | 2021 |
| Blackstone Real Estate Partners Europe Fund VII | 100,000,000 | 26,171,398 | 572,365 | 76,593,183 | 26,488,418 | 1.03 | 5.7 | 2023 |
| Blackstone Real Estate Partners V | 100,000,000 | 104,231,092 | 209,183,155 | 417,405 | 81,922 | 2.01 | 10.8 | 2006 |
| Blackstone Real Estate Partners VI, L.P. | 100,000,000 | 109,582,860 | 220,304,818 | 736,180 | 26,372 | 2.01 | 13.1 | 2007 |
| Blackstone Real Estate Partners VII, LP | 100,000,000 | 116,505,734 | 185,866,090 | 6,744,367 | 11,935,438 | 1.70 | 14.2 | 2011 |
| Blackstone Real Estate VIII.TE.1 L.P. | 150,000,000 | 183,131,595 | 191,767,410 | 14,777,603 | 89,213,077 | 1.53 | 12.0 | 2015 |
| Blackstone Real Estate Partners IX, L.P. | 300,000,000 | 331,057,791 | 118,968,214 | 45,668,067 | 301,412,068 | 1.27 | 8.5 | 2018 |
| Blackstone Real Estate Partners X | 200,000,000 | 82,450,021 | 6,868,920 | 131,270,165 | 80,140,313 | 1.06 | 6.1 | 2022 |
| Brookfield Asset Management Inc. | 400,000,000 | 239,853,783 | 24,787,574 | 184,867,692 | 244,046,130 | 1.12 | 6.3 | |
| Brookfield Strategic Real Estate Partners IV | 300,000,000 | 239,853,783 | 24,787,574 | 84,867,692 | 244,046,130 | 1.12 | 6.3 | 2021 |
| Brookfield Strategic Real Estate Partners V | 100,000,000 | 0 | 0 | 100,000,000 | | | | 2023 |
| Carlyle Group | 450,000,000 | 306,208,924 | 145,038,899 | 233,271,809 | 230,516,813 | 1.23 | 14.2 | |
| Carlyle Realty Partners VIII, L.P. | 150,000,000 | 134,106,882 | 135,864,983 | 96,199,935 | 58,868,262 | 1.45 | 19.4 | 2017 |
| Carlyle Realty Partners IX | 300,000,000 | 172,102,042 | 9,173,916 | 137,071,874 | 171,648,551 | 1.05 | 4.0 | 2021 |
| Kohlberg, Kravis, Roberts & Co. | 125,000,000 | 128,388,222 | 19,470,090 | 19,549,218 | 112,820,666 | 1.03 | 1.4 | |
| KKR Real Estate Partners Americas III | 125,000,000 | 128,388,222 | 19,470,090 | 19,549,218 | 112,820,666 | 1.03 | 1.4 | 2021 |
| Landmark Partners | 249,500,000 | 146,174,494 | 73,076,578 | 125,307,037 | 103,101,012 | 1.21 | 8.4 | |
| Landmark Real Estate Partners VIII, L.P. | 149,500,000 | 121,814,526 | 73,076,578 | 49,667,006 | 78,137,135 | 1.24 | 8.6 | 2016 |
| Landmark Real Estate Partners IX | 100,000,000 | 24,359,968 | 0 | 75,640,032 | 24,963,876 | 1.02 | 3.4 | 2021 |
| Lubert Adler | 174,147,868 | 162,338,042 | 100,552,018 | 17,694,886 | 103,601,801 | 1.26 | 9.6 | |
| Lubert-Adler Real Estate Fund VII-B, L.P. | 74,147,868 | 67,585,213 | 90,575,207 | 7,414,787 | 14,340,746 | 1.55 | 14.6 | 2017 |
| Lubert-Adler Recovery and Enhancement Capital Fund | 100,000,000 | 94,752,829 | 9,976,811 | 10,280,099 | 89,261,055 | 1.05 | 2.0 | 2021 |
| Oaktree Capital Management, LLC | 200,000,000 | 180,487,140 | 51,080,691 | 54,000,000 | 129,764,247 | 1.00 | 0.1 | |
| Oaktree Real Estate Opportunities Fund VIII | 200,000,000 | 180,487,140 | 51,080,691 | 54,000,000 | 129,764,247 | 1.00 | 0.1 | 2020 |
| Rockpoint | 200,000,000 | 201,054,234 | 80,692,531 | 22,918,781 | 124,797,882 | 1.02 | 0.6 | |
| Rockpoint Real Estate Fund V, L.P. | 100,000,000 | 104,279,536 | 58,755,434 | 14,217,829 | 34,124,996 | 0.89 | -2.9 | 2014 |
| Rockpoint Real Estate Fund VI, L.P. | 100,000,000 | 96,774,698 | 21,937,097 | 8,700,952 | 90,672,887 | 1.16 | 5.1 | 2019 |
| Rockwood | 200,000,000 | 191,344,668 | 61,784,022 | 12,836,035 | 90,012,299 | 0.79 | -7.0 | |
| Rockwood Capital RE Partners X, L.P. | 100,000,000 | 99,845,593 | 57,507,174 | 1,838,936 | 28,100,760 | 0.86 | -4.1 | 2015 |
| Rockwood Capital RE Partners XI | 100,000,000 | 91,499,075 | 4,276,848 | 10,997,099 | 61,911,539 | 0.72 | -10.4 | 2019 |

| Investments | Commitments | Contributions | Distributions | Remaining Commitment | Market Value | Investment Multiple | IRR | Vintage Year |
|---|---|---|---|---|---|---|---|---|
| Silverpeak Real Estate Partners | 225,000,000 | 144,150,353 | 109,436,602 | 7,496,058 | 2,717,887 | 0.78 | -4.0 | |
| Silverpeak Legacy Pension Partners II, L.P. | 75,000,000 | 73,069,012 | 92,033,940 | 7,496,058 | 380,744 | 1.26 | 4.2 | 2005 |
| Silverpeak Legacy Pension Partners III, L.P. | 150,000,000 | 71,081,341 | 17,402,663 | 0 | 2,337,142 | 0.28 | -12.1 | 2008 |
| TA Associates Realty | 350,000,000 | 339,875,000 | 251,765,575 | 10,125,000 | 202,341,302 | 1.34 | 10.4 | |
| Realty Associates Fund XI | 100,000,000 | 100,000,000 | 160,175,911 | 0 | 115,964 | 1.60 | 10.8 | 2015 |
| Realty Associates Fund XII | 100,000,000 | 100,000,000 | 71,187,012 | 0 | 70,397,784 | 1.42 | 9.7 | 2018 |
| Realty Associates Fund XIII | 150,000,000 | 139,875,000 | 20,402,652 | 10,125,000 | 131,827,554 | 1.09 | 10.2 | 2023 |
| **Total** | **40,738,735,235** | **33,201,338,272** | **27,465,412,372** | **11,558,906,206** | **22,223,293,367** | **1.50** | **11.48** | |
| *Difference*** | | | | | *82,374,834* | | | |
| **Private Markets Total with Difference** | | | | | **22,305,668,201** | | | |

| *Private Markets Portfolio Status* | Managers | Funds |
|---|---|---|
| Private Equity | 60 | 195 |
| Private Credit | 19 | 42 |
| Real Assets | 12 | 32 |
| Real Estate | 12 | 36 |
| **Total** | **103** | **305** |

**Notes**

None of the data presented herein has been reviewed or approved by either the general partner or investment manager. The performance and valuation data presented herein is not a guarantee or prediction of future results and may slightly differ from final fiscal year-end report. Ultimately, the actual performance and value of any investment is not known until final liquidation. Because there is no industry-standardized method for valuation or reporting comparisons of performance and valuation data among different investments is difficult.

Data presented in this report is made public pursuant to Minn. Stat. Chs. 13 and 13D, and Minn. Stat. § 11A.24, subd. 6(c). Additional information on private markets investments may be classified as non-public and not subject to disclosure.

*Partnership interests transferred to the MSBI during 1Q2015. All data presented as of the transfer date.

**Difference is from an in-kind stock distribution liquidating account, cash transactions posted to next day and distributions received in foreign currency during the month.

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# Other Retirement Funds and Tax-Advantaged Savings Plans

## June 30, 2025

Important Notes:

All performance figures and market data presented are unaudited and preliminary. Performance history includes terminated managers and reflects the deduction of investment management expenses. Performance greater than one year is annualized. Past performance does not guarantee future results.

## Performance of Investment Options

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year | Option Since |
|---|---|---|---|---|---|---|---|
| **Active Large-Cap Domestic Equity** | | | | | | | |
| **U.S. EQUITY ACTIVELY MANAGED FUND** | **$100,273,032** | **12.0%** | **15.0%** | **19.8%** | **15.8%** | **13.2%** | **07/1986** |
| Russell 3000 | | 11.0% | 15.3% | 19.1% | 16.0% | 13.0% | 07/1986 |
| Excess | | 1.0% | -0.3% | 0.8% | -0.1% | 0.3% | |
| **VANGUARD DIVIDEND GROWTH FUND** | **$1,021,639,577** | **3.5%** | **8.3%** | **9.3%** | **11.7%** | | **10/2016** |
| VANGUARD DIVIDEND GROWTH INDEX | | 6.0% | 14.2% | 14.8% | 14.0% | | 10/2016 |
| Excess | | -2.5% | -5.9% | -5.6% | -2.3% | | |
| **Passive Large-Cap Domestic Equity** | | | | | | | |
| **U.S. EQUITY INDEX FUND** | **$321,762,947** | **11.0%** | **15.3%** | **19.1%** | **16.1%** | **13.1%** | **07/1986** |
| Russell 3000 | | 11.0% | 15.3% | 19.1% | 16.0% | 13.0% | 07/1986 |
| Excess | | -0.0% | 0.0% | 0.1% | 0.2% | 0.1% | |
| **VANGUARD TOTAL STOCK MARKET INDEX FUND** | **$1,161,096,131** | **11.0%** | **15.1%** | **19.0%** | **15.9%** | | **07/2019** |
| CRSP US Total Market Index | | 11.0% | 15.1% | 19.0% | 15.9% | | 07/2019 |
| Excess | | 0.0% | -0.0% | 0.0% | 0.0% | | |
| **VANGUARD INSTITUTIONAL INDEX FUND** | **$2,392,603,119** | **10.9%** | **15.1%** | **19.7%** | **16.6%** | **13.6%** | **07/1999** |
| S&P 500 | | 10.9% | 15.2% | 19.7% | 16.6% | 13.6% | 07/1999 |
| Excess | | -0.0% | -0.0% | -0.0% | -0.0% | -0.0% | |
| **Passive Mid-Cap Domestic Equity** | | | | | | | |
| **VANGUARD MID-CAP INDEX FUND** | **$884,512,077** | **8.7%** | **17.5%** | **14.3%** | **13.0%** | **10.0%** | **01/2004** |
| CRSP US Mid Cap Index | | 8.7% | 17.6% | 14.3% | 13.0% | 10.0% | 01/2004 |
| Excess | | -0.0% | -0.0% | -0.0% | -0.0% | -0.0% | |
| **Active Small-Cap Domestic Equity** | | | | | | | |
| **T. ROWE PRICE SMALL-CAP FUND** | **$890,128,040** | **6.6%** | **11.3%** | **10.3%** | **9.8%** | **9.5%** | **04/2000** |
| Russell 2000 | | 8.5% | 7.7% | 10.0% | 10.0% | 7.1% | 04/2000 |
| Excess | | -1.9% | 3.6% | 0.3% | -0.2% | 2.3% | |

## Performance of Investment Options

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year | Option Since |
|---|---|---|---|---|---|---|---|
| **Active International Equity** | | | | | | | |
| **BROAD INTERNATIONAL EQUITY FUND** | **$172,401,468** | **11.3%** | **16.6%** | **14.5%** | **11.1%** | **6.7%** | **09/1994** |
| International Equity Benchmark | | 12.0% | 17.7% | 14.0% | 10.1% | 6.1% | 09/1994 |
| Excess | | -0.8% | -1.2% | 0.5% | 1.0% | 0.6% | |
| **FIDELITY DIVERSIFIED INTERNATIONAL TRUST** | **$402,263,215** | **11.8%** | **15.7%** | **15.7%** | **9.3%** | **7.0%** | **07/1999** |
| MSCI EAFE FREE (NET) | | 11.8% | 17.7% | 16.0% | 11.2% | 6.5% | 07/1999 |
| Excess | | 0.0% | -2.0% | -0.2% | -1.8% | 0.5% | |
| **Passive International Equity** | | | | | | | |
| **VANGUARD TOTAL INTERNATIONAL STOCK INDEX** | **$498,067,889** | **12.1%** | **18.3%** | **13.9%** | **10.3%** | **6.3%** | **07/2011** |
| FTSE Global All Cap ex US Index Net | | 12.3% | 17.7% | 13.8% | 10.2% | 6.2% | 07/2011 |
| Excess | | -0.2% | 0.7% | 0.1% | 0.1% | 0.2% | |
| **Active Fixed Income** | | | | | | | |
| **BOND FUND** | **$121,483,085** | **1.5%** | **6.5%** | **3.4%** | **-0.1%** | **2.3%** | **07/1986** |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 2.5% | -0.7% | 1.8% | 07/1986 |
| Excess | | 0.2% | 0.4% | 0.9% | 0.7% | 0.6% | |
| **DODGE & COX CORE BOND ACCOUNT** | **$310,653,046** | **1.4%** | **6.7%** | **4.3%** | **1.1%** | **2.9%** | **07/1999** |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 2.5% | -0.7% | 1.8% | 07/1999 |
| Excess | | 0.2% | 0.6% | 1.8% | 1.8% | 1.2% | |
| **Passive Fixed Income** | | | | | | | |
| **VANGUARD TOTAL BOND MARKET INDEX FUND** | **$360,907,132** | **1.3%** | **6.1%** | **2.6%** | **-0.7%** | **1.8%** | **12/2003** |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 2.5% | -0.7% | 1.8% | 12/2003 |
| Excess | | 0.1% | -0.0% | 0.1% | -0.0% | 0.0% | |

International Equity Benchmark: Since 12/01/2020 equals the MSCI ACWI ex-US(Net). From 01/01/2018 to 01/01/2019 it was 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). From 06/01/2008 to 12/31/2018 the International Equity asset class target was the Standard (large + mid) MSCI ACWI ex U.S. (net). From 10/01/2007 through 05/31/2008 the benchmark was the Provisional Standard MSCI ACWI ex U.S. (net). From 10/01/2003 to 09/30/2007 the target was MSCI ACWI ex U.S. (net). From 01/01/2001 to 09/30/03, the target was MSCI EAFE Free (net) plus Emerging Markets Free (net), and from 07/01/1999 to 12/31/2000 the target was MSCI EAFE Free (net) plus Emerging Markets Free (gross). From 070/1/1999 to 09/30/2003, the weighting of each index fluctuated with market capitalization. From 10/1/2001 to 05/31/2002 all international benchmarks being reported were the MSCI Provisional indices. From 12/31/1996 to 06/30/1999 the benchmark was fixed at 87% EAFE Free (net)/13% Emerging Markets Free (gross). On 05/01/1996, the portfolio began transitioning from 100% EAFE Free (net) to the 12/31/1996 fixed weights. Prior to 05/01/1996 it was 100% the EAFE Free (net).

## Performance of Investment Options

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year | Option Since |
|---|---|---|---|---|---|---|---|
| **Capital Preservation** | | | | | | | |
| **MONEY MARKET ACCOUNT** | **$1,003,778,935** | **1.1%** | **5.0%** | **5.0%** | **3.0%** | **2.2%** | **07/1986** |
| ICE BofA US 3-Month Treasury Bill | | 1.0% | 4.7% | 4.6% | 2.8% | 2.0% | 07/1986 |
| Excess | | 0.1% | 0.3% | 0.4% | 0.3% | 0.2% | |
| **STABLE VALUE ACCOUNT** | **$1,486,939,525** | **0.9%** | **3.4%** | **3.0%** | **2.6%** | **2.5%** | **11/1994** |
| Fixed Interest Blended Benchmark | | 1.1% | 4.5% | 4.6% | 3.3% | 2.6% | 11/1994 |
| Excess | | -0.2% | -1.0% | -1.6% | -0.6% | -0.2% | |
| **Asset Allocation** | | | | | | | |
| **BALANCED FUND** | **$123,491,573** | **7.6%** | **12.3%** | **13.0%** | **9.9%** | **9.0%** | **01/1980** |
| SIF BALANCED FUND BENCHMARK | | 7.0% | 11.7% | 12.5% | 9.4% | 8.7% | 01/1980 |
| Excess | | 0.5% | 0.6% | 0.5% | 0.4% | 0.3% | |
| **VANGUARD BALANCED INDEX FUND** | **$1,594,375,397** | **7.4%** | **12.0%** | **12.5%** | **9.2%** | **8.6%** | **12/2003** |
| Vanguard Balanced Fund Benchmark | | 7.1% | 11.6% | 12.4% | 9.2% | 8.6% | 12/2003 |
| Excess | | 0.3% | 0.3% | 0.1% | 0.0% | 0.0% | |
| **VOLUNTEER FIREFIGHTER ACCOUNT** | **$270,231,999** | **6.6%** | **11.6%** | **10.7%** | **7.4%** | **7.0%** | **01/2010** |
| SIF Volunteer Firefighter Account BM | | 6.2% | 11.1% | 10.2% | 6.9% | 6.5% | 01/2010 |
| Excess | | 0.4% | 0.5% | 0.5% | 0.5% | 0.4% | |

Fixed Interest Blended Benchmark: Since 6/1/2002, equals 3 Year Constant Maturity Treasury Yield + 45 bps. Prior to this change it was the 3 Year Constant Maturity Treasury Yield + 30 bps.
SIF Balanced Fund Benchmark: Weighted 60% Russell 3000, 35% Bloomberg U.S. Aggregate, 5% 3-month T-Bills.
SIF Volunteer Firefighter Account Benchmark: Weighted 35% Russell 3000, 15% MSCI ACWI ex USA (net), 45% Bloomberg U.S. Aggregate, 5% 3-month T-Bills.

## Performance of Investment Options

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active Large-Cap Domestic Equity** | | | | | |
| **U.S. EQUITY ACTIVELY MANAGED FUND** | **24.3%** | **26.8%** | **-20.7%** | **23.4%** | **27.6%** |
| Russell 3000 | 23.8% | 26.0% | -19.2% | 25.7% | 20.9% |
| Excess | 0.5% | 0.9% | -1.5% | -2.2% | 6.7% |
| **VANGUARD DIVIDEND GROWTH FUND** | **9.0%** | **8.1%** | **-4.9%** | **24.8%** | **12.0%** |
| VANGUARD DIVIDEND GROWTH INDEX | 17.1% | 14.5% | -9.7% | 23.7% | 15.6% |
| Excess | -8.0% | -6.4% | 4.8% | 1.1% | -3.6% |
| **Passive Large-Cap Domestic Equity** | | | | | |
| **U.S. EQUITY INDEX FUND** | **23.8%** | **26.0%** | **-19.2%** | **26.2%** | **21.2%** |
| Russell 3000 | 23.8% | 26.0% | -19.2% | 25.7% | 20.9% |
| Excess | 0.0% | 0.1% | 0.0% | 0.5% | 0.3% |
| **VANGUARD TOTAL STOCK MARKET INDEX FUND** | **23.8%** | **26.0%** | **-19.5%** | **25.7%** | **21.2%** |
| CRSP US Total Market Index | 23.8% | 26.0% | -19.5% | 25.7% | 21.0% |
| Excess | -0.0% | 0.1% | -0.0% | 0.0% | 0.2% |
| **VANGUARD INSTITUTIONAL INDEX FUND** | **25.0%** | **26.3%** | **-18.1%** | **28.7%** | **18.4%** |
| S&P 500 | 25.0% | 26.3% | -18.1% | 28.7% | 18.4% |
| Excess | -0.0% | -0.0% | -0.0% | -0.0% | 0.0% |
| **Passive Mid-Cap Domestic Equity** | | | | | |
| **VANGUARD MID-CAP INDEX FUND** | **15.2%** | **16.0%** | **-18.7%** | **24.5%** | **18.3%** |
| CRSP US Mid Cap Index | 15.3% | 16.0% | -18.7% | 24.5% | 18.2% |
| Excess | -0.0% | 0.0% | -0.0% | 0.0% | 0.0% |
| **Active Small-Cap Domestic Equity** | | | | | |
| **T. ROWE PRICE SMALL-CAP FUND** | **11.7%** | **17.6%** | **-23.3%** | **16.8%** | **25.0%** |
| Russell 2000 | 11.5% | 16.9% | -20.4% | 14.8% | 20.0% |
| Excess | 0.2% | 0.6% | -2.9% | 2.0% | 5.0% |

## Performance of Investment Options

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Active International Equity** | | | | | |
| **BROAD INTERNATIONAL EQUITY FUND** | **7.8%** | **15.6%** | **-13.7%** | **9.0%** | **11.3%** |
| International Equity Benchmark | 5.5% | 15.6% | -16.0% | 7.8% | 10.5% |
| Excess | 2.2% | -0.1% | 2.3% | 1.2% | 0.8% |
| **FIDELITY DIVERSIFIED INTERNATIONAL TRUST** | **6.8%** | **17.7%** | **-23.4%** | **13.1%** | **19.8%** |
| MSCI EAFE FREE (NET) | 3.8% | 18.2% | -14.5% | 11.3% | 7.8% |
| Excess | 3.0% | -0.5% | -8.9% | 1.8% | 12.0% |
| **Passive International Equity** | | | | | |
| **VANGUARD TOTAL INTERNATIONAL STOCK INDEX** | **5.2%** | **15.5%** | **-16.0%** | **8.7%** | **11.3%** |
| FTSE Global All Cap ex US Index Net | 5.4% | 15.6% | -16.2% | 8.7% | 11.1% |
| Excess | -0.2% | -0.0% | 0.3% | -0.0% | 0.2% |
| **Active Fixed Income** | | | | | |
| **BOND FUND** | **1.9%** | **7.0%** | **-14.1%** | **-1.1%** | **9.7%** |
| Bloomberg U.S. Aggregate | 1.3% | 5.5% | -13.0% | -1.5% | 7.5% |
| Excess | 0.6% | 1.5% | -1.1% | 0.5% | 2.2% |
| **DODGE & COX CORE BOND ACCOUNT** | **2.3%** | **7.7%** | **-10.9%** | **-0.9%** | **9.5%** |
| Bloomberg U.S. Aggregate | 1.3% | 5.5% | -13.0% | -1.5% | 7.5% |
| Excess | 1.1% | 2.2% | 2.1% | 0.6% | 1.9% |
| **Passive Fixed Income** | | | | | |
| **VANGUARD TOTAL BOND MARKET INDEX FUND** | **1.3%** | **5.7%** | **-13.1%** | **-1.7%** | **7.7%** |
| Bloomberg U.S. Aggregate | 1.3% | 5.5% | -13.0% | -1.5% | 7.5% |
| Excess | 0.0% | 0.2% | -0.1% | -0.1% | 0.2% |

International Equity Benchmark: Since 12/01/2020 equals the MSCI ACWI ex-US(Net). From 01/01/2018 to 01/01/2019 it was 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). From 06/01/2008 to 12/31/2018 the International Equity asset class target was the Standard (large + mid) MSCI ACWI ex U.S. (net). From 10/01/2007 through 05/31/2008 the benchmark was the Provisional Standard MSCI ACWI ex U.S. (net). From 10/01/2003 to 09/30/2007 the target was MSCI ACWI ex U.S. (net). From 01/01/2001 to 09/30/03, the target was MSCI EAFE Free (net) plus Emerging Markets Free (net), and from 07/01/1999 to 12/31/2000 the target was MSCI EAFE Free (net) plus Emerging Markets Free (gross). From 070/1/1999 to 09/30/2003, the weighting of each index fluctuated with market capitalization. From 10/1/2001 to 05/31/2002 all international benchmarks being reported were the MSCI Provisional indices. From 12/31/1996 to 06/30/1999 the benchmark was fixed at 87% EAFE Free (net)/13% Emerging Markets Free (gross). On 05/01/1996, the portfolio began transitioning from 100% EAFE Free (net) to the 12/31/1996 fixed weights. Prior to 05/01/1996 it was 100% the EAFE Free (net).

## Performance of Investment Options

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Capital Preservation** | | | | | |
| **MONEY MARKET ACCOUNT** | **5.5%** | **5.4%** | **1.9%** | **0.1%** | **0.7%** |
| ICE BofA US 3-Month Treasury Bill | 5.3% | 5.0% | 1.5% | 0.0% | 0.7% |
| Excess | 0.3% | 0.4% | 0.4% | 0.1% | 0.0% |
| **STABLE VALUE ACCOUNT** | **3.3%** | **2.9%** | **2.1%** | **1.9%** | **2.5%** |
| Fixed Interest Blended Benchmark | 4.7% | 4.8% | 3.5% | 0.9% | 0.9% |
| Excess | -1.4% | -1.9% | -1.4% | 1.0% | 1.6% |
| **Asset Allocation** | | | | | |
| **BALANCED FUND** | **14.8%** | **18.1%** | **-16.5%** | **15.1%** | **17.3%** |
| SIF BALANCED FUND BENCHMARK | 14.6% | 17.5% | -15.8% | 14.3% | 15.9% |
| Excess | 0.2% | 0.6% | -0.7% | 0.9% | 1.4% |
| **VANGUARD BALANCED INDEX FUND** | **14.6%** | **17.6%** | **-16.9%** | **14.2%** | **16.4%** |
| Vanguard Balanced Fund Benchmark | 14.4% | 17.5% | -16.7% | 14.2% | 16.4% |
| Excess | 0.2% | 0.0% | -0.2% | -0.0% | -0.1% |
| **VOLUNTEER FIREFIGHTER ACCOUNT** | **10.4%** | **14.7%** | **-15.2%** | **9.7%** | **14.7%** |
| SIF Volunteer Firefighter Account BM | 9.7% | 14.0% | -14.7% | 9.0% | 13.1% |
| Excess | 0.7% | 0.7% | -0.5% | 0.7% | 1.6% |

Fixed Interest Blended Benchmark: Since 6/1/2002, equals 3 Year Constant Maturity Treasury Yield + 45 bps. Prior to this change it was the 3 Year Constant Maturity Treasury Yield + 30 bps.
SIF Balanced Fund Benchmark: Weighted 60% Russell 3000, 35% Bloomberg U.S. Aggregate, 5% 3-month T-Bills.
SIF Volunteer Firefighter Account Benchmark: Weighted 35% Russell 3000, 15% MSCI ACWI ex USA (net), 45% Bloomberg U.S. Aggregate, 5% 3-month T-Bills.

## Performance of Investment Options

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year | Option Since |
|---|---|---|---|---|---|---|---|
| **MN TARGET DATE RETIREMENT INCOME FUND** | **$421,827,405** | **4.1%** | **9.7%** | **7.3%** | **5.6%** | **4.9%** | **07/2011** |
| INCOME FUND BENCHMARK | | 4.2% | 9.7% | 7.3% | 5.6% | 4.9% | 07/2011 |
| Excess | | -0.1% | 0.0% | 0.0% | -0.0% | 0.0% | |
| **2030 MN TARGET DATE RETIREMENT FUND** | **$292,335,915** | **5.4%** | **11.1%** | **9.5%** | **7.4%** | **6.9%** | **07/2011** |
| 2030 FUND BENCHMARK | | 5.4% | 11.0% | 9.5% | 7.4% | 6.9% | 07/2011 |
| Excess | | -0.1% | 0.1% | 0.0% | 0.0% | 0.0% | |
| **2035 MN TARGET DATE RETIREMENT FUND** | **$270,969,659** | **7.1%** | **12.4%** | **11.4%** | **8.4%** | **7.6%** | **07/2011** |
| 2035 FUND BENCHMARK | | 7.3% | 12.4% | 11.4% | 8.4% | 7.6% | 07/2011 |
| Excess | | -0.1% | 0.0% | 0.0% | 0.0% | 0.0% | |
| **2040 MN TARGET DATE RETIREMENT FUND** | **$234,252,649** | **8.2%** | **13.3%** | **12.4%** | **9.2%** | **8.1%** | **07/2011** |
| 2040 FUND BENCHMARK | | 8.4% | 13.2% | 12.4% | 9.2% | 8.1% | 07/2011 |
| Excess | | -0.2% | 0.0% | 0.0% | -0.0% | 0.0% | |
| **2045 MN TARGET DATE RETIREMENT FUND** | **$226,131,405** | **8.9%** | **14.0%** | **13.2%** | **9.9%** | **8.5%** | **07/2011** |
| 2045 FUND BENCHMARK | | 9.1% | 13.9% | 13.2% | 9.9% | 8.5% | 07/2011 |
| Excess | | -0.2% | 0.0% | 0.0% | 0.0% | 0.0% | |

## Performance of Investment Options

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year | Option Since |
|---|---|---|---|---|---|---|---|
| **2050 MN TARGET DATE RETIREMENT FUND** | **$207,961,150** | **9.6%** | **14.6%** | **13.9%** | **10.6%** | **8.8%** | **07/2011** |
| 2050 FUND BENCHMARK | | 9.8% | 14.5% | 13.8% | 10.6% | 8.8% | 07/2011 |
| Excess | | -0.2% | 0.1% | 0.0% | 0.0% | 0.0% | |
| **2055 MN TARGET DATE RETIREMENT FUND** | **$147,994,690** | **10.1%** | **15.1%** | **14.5%** | **11.1%** | **9.0%** | **07/2011** |
| 2055 FUND BENCHMARK | | 10.3% | 15.0% | 14.5% | 11.1% | 9.0% | 07/2011 |
| Excess | | -0.2% | 0.1% | 0.0% | 0.0% | 0.0% | |
| **2060 MN TARGET DATE RETIREMENT FUND** | **$107,025,312** | **10.3%** | **15.4%** | **14.7%** | **11.2%** | **9.1%** | **07/2011** |
| 2060 FUND BENCHMARK | | 10.6% | 15.3% | 14.6% | 11.1% | 9.0% | 07/2011 |
| Excess | | -0.2% | 0.1% | 0.0% | 0.0% | 0.0% | |
| **2065 MN TARGET DATE RETIREMENT FUND** | **$33,202,492** | **10.3%** | **15.4%** | **14.7%** | **11.2%** | | **04/2020** |
| 2065 FUND BENCHMARK | | 10.6% | 15.3% | 14.6% | 11.1% | | 04/2020 |
| Excess | | -0.2% | 0.1% | 0.0% | 0.0% | | |

Note: Each SSgA Fund benchmark is the aggregate of the returns of the Fund's underlying index funds weighted by the Fund's asset allocation

## Performance of Investment Options

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **MN TARGET DATE RETIREMENT INCOME FUND** | **6.9%** | **9.7%** | **-11.0%** | **8.0%** | **9.7%** |
| INCOME FUND BENCHMARK | 6.9% | 9.7% | -11.0% | 8.1% | 9.6% |
| Excess | 0.0% | 0.0% | -0.0% | -0.0% | 0.1% |
| **2030 MN TARGET DATE RETIREMENT FUND** | **8.6%** | **12.9%** | **-14.9%** | **11.0%** | **15.1%** |
| 2030 FUND BENCHMARK | 8.6% | 12.9% | -14.8% | 11.0% | 15.0% |
| Excess | 0.0% | 0.1% | -0.0% | 0.0% | 0.1% |
| **2035 MN TARGET DATE RETIREMENT FUND** | **10.0%** | **15.8%** | **-17.0%** | **11.5%** | **17.5%** |
| 2035 FUND BENCHMARK | 10.0% | 15.7% | -17.0% | 11.5% | 17.5% |
| Excess | -0.0% | 0.1% | -0.0% | 0.0% | 0.1% |
| **2040 MN TARGET DATE RETIREMENT FUND** | **10.7%** | **17.0%** | **-17.9%** | **12.4%** | **18.4%** |
| 2040 FUND BENCHMARK | 10.7% | 16.9% | -17.9% | 12.4% | 18.4% |
| Excess | -0.0% | 0.1% | -0.0% | -0.0% | 0.1% |
| **2045 MN TARGET DATE RETIREMENT FUND** | **11.4%** | **17.9%** | **-18.4%** | **13.3%** | **19.0%** |
| 2045 FUND BENCHMARK | 11.5% | 17.8% | -18.4% | 13.3% | 18.9% |
| Excess | -0.1% | 0.1% | 0.0% | 0.0% | 0.0% |

## Performance of Investment Options

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **2050 MN TARGET DATE RETIREMENT FUND** | **12.0%** | **18.7%** | **-18.8%** | **14.1%** | **19.5%** |
| 2050 FUND BENCHMARK | 12.1% | 18.6% | -18.8% | 14.1% | 19.5% |
| Excess | -0.1% | 0.1% | 0.0% | 0.0% | 0.0% |
| **2055 MN TARGET DATE RETIREMENT FUND** | **12.6%** | **19.5%** | **-19.1%** | **14.6%** | **19.9%** |
| 2055 FUND BENCHMARK | 12.7% | 19.4% | -19.1% | 14.6% | 19.9% |
| Excess | -0.1% | 0.1% | 0.0% | 0.0% | -0.1% |
| **2060 MN TARGET DATE RETIREMENT FUND** | **12.8%** | **19.5%** | **-19.1%** | **14.6%** | **19.9%** |
| 2060 FUND BENCHMARK | 12.8% | 19.4% | -19.1% | 14.6% | 19.9% |
| Excess | -0.1% | 0.1% | 0.0% | 0.0% | -0.1% |
| **2065 MN TARGET DATE RETIREMENT FUND** | **12.8%** | **19.5%** | **-19.1%** | **14.6%** | |
| 2065 FUND BENCHMARK | 12.8% | 19.4% | -19.1% | 14.6% | |
| Excess | -0.1% | 0.1% | 0.0% | 0.0% | |

Note: Each SSgA Fund benchmark is the aggregate of the returns of the Fund's underlying index funds weighted by the Fund's asset allocation

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## Descriptions of Investment Options

### Large-Cap Domestic Equity

**U.S. Equity Actively Managed Fund**

The fund invests alongside the Combined Funds by investing in the same asset class pools as the Domestic Equity Program. The actively managed strategies include investment managers benchmarked to various Russell styles, including large-cap growth and value, small-cap growth and value, and all-cap growth. The fund also invests in semi-passive investment managers benchmarked to a large-cap core style.
**Vehicle:** Supplemental Investment Fund (SIF) investment pool managed by the SBI.

**Vanguard Dividend Growth Fund**

An actively managed fund of dividend paying large cap stocks, which is expected to outperform the S&P U.S. Dividend Growers Index, over time. The fund focuses on high-quality companies that have a history of paying a stable dividend, or increasing the dividend, over time.
**Vehicle**: Investor share class Mutual Fund, VDIGX, managed by Wellington Capital.

**U.S. Equity Index Fund**

The fund invests in a passively managed Russell 3000 Index, which is a capitalization-weighted stock market index of the entire U.S. stock market.
**Vehicle:** Supplemental Investment Fund (SIF) investment pool managed by the SBI.

**Vanguard Total Stock Market Index Fund**

A passive domestic stock fund that tracks the CRSP US Total Market Index, which is a market-capitalization index comprised of the entire U.S. stock market.
**Vehicle:** Institutional share class Mutual Fund, VSMPX, managed by Vanguard.

**Vanguard Institutional Index Fund**

The fund invests in a passively managed S&P 500 strategy, which is a stock market index tracking the stock performance of 500 of the largest companies listed on stock exchanges in the U.S. stock market.
**Vehicle:** Institutional share class Mutual Fund, VIIIX, managed by Vanguard.

### Mid-Cap Domestic Equity

**Vanguard Mid-Cap Index Fund**

A passive domestic stock fund that tracks the CRSP U.S. Mid-Cap Index, which measures the investment return of U.S. mid-market capitalization stocks.
**Vehicle:** Institutional share class Mutual Fund, VMCPX, managed by Vanguard.

### Small-Cap Domestic Equity

**T. Rowe Price Small Cap Stock Fund**

An actively managed fund that primarily invests in companies with small-market capitalization and is expected to outperform the Russell 2000 Index. The diversified portfolio will invest opportunistically across both growth and value stocks, while maintaining close sector allocations to the benchmark.
**Vehicle:** Institutional share class Mutual Fund, TRSSX, managed by T. Rowe Price.

## Descriptions of Investment Options

### International Equity

| | |
|---|---|
| **Broad International Equity Fund** | The Fund invests alongside the Combined Funds by investing in the same asset class pools as the Combined Funds' International Equity Program. Active managers use a variety of investment styles and approaches as they seek to outperform the market. The Program's passive manager seeks to approximate the returns of the international markets in developed and emerging markets at a low cost. The Program's currency overlay program manager seeks to actively manage the portfolio's currency risk and provide a hedge against a decline in the value of the Fund's equity investments caused by currency fluctuations.<br>**Vehicle:** Supplemental Investment Fund (SIF) investment pool managed by the SBI. |
| **Fidelity Diversified International Trust** | An actively managed fund that invests in foreign market stocks and seeks to outperform the MSCI EAFE Index. The portfolio's universe includes non-U.S. common stocks with market capitalization consistent with the MSCI EAFE Index, though the portfolio's investable universe extends beyond the EAFE Index to include emerging market, Canadian, US, and other international stocks seeking to identify companies with superior growth prospects trading at attractive valuations.<br>**Vehicle:** Commingled Investment Trust (CIT) managed by Fidelity. |
| **Vanguard Total International Stock Index Fund** | A passive domestic stock fund that tracks the FTSE Global All Cap ex U.S. Index, which measures the investment return of stocks issued by companies located in developed and emerging countries, excluding the U.S.<br>**Vehicle:** Institutional share class Mutual Fund, VTPSX, managed by Vanguard. |

### Fixed Income

| | |
|---|---|
| **Bond Fund** | The Fund invests alongside the Combined Funds Core/Core Plus Bond segment. Investment managers in the core bond strategy invest in high-quality fixed income securities across all investment-grade sectors of the market. Managers in the core plus bond strategy invest in high-quality fixed income securities and are also allowed expanded flexibility to invest in high-yield corporate bonds, international securities, and bonds issued by emerging market sovereign and corporate issuers.<br>**Vehicle:** Supplemental Investment Fund (SIF) investment pool managed by the SBI. |

## Descriptions of Investment Options

### Fixed Income Cont'd:

| | |
|---|---|
| **Dodge & Cox Core Bond Account** | An actively managed account that invests primarily in investment-grade securities in the U.S. bond market, which is expected to outperform the Bloomberg U.S. Aggregate Index over time. The strategy opportunistically pursues areas the benchmark may not cover, such as below investment-grade debt, debt of non-U.S. issuers, and other structured products.<br>**Vehicle:** Supplemental Investment Fund separately managed account invested by Dodge & Cox. |
| **Vanguard Total Bond Market Index Fund** | A passive bond fund that tracks the Bloomberg U.S. Aggregate Bond Index, which measures the investment grade, US dollar denominated, fixed-rate taxable bond market.<br>**Vehicle:** Institutional share class Mutual Fund, VBMPX, managed by Vanguard. |

### Capital Preservation

| | |
|---|---|
| **Money Market Account** | The Account seeks to provide safety of principal, a high level of liquidity and a competitive yield. The Account's return is based on the interest income produced by the Account's investments. The Account performance is measured against the ICE BofA 3-Month Treasury Bill Index.<br>**Vehicle:** Commingled pool of assets managed by State Street Global Advisors, SSGA. |
| **Stable Value Account** | The Account seeks to preserve principal, maintain adequate liquidity to meet withdrawals, and generate a level of income consistent with a short- to intermediate-duration, high-quality fixed-income portfolio.<br>**Vehicle:** Supplemental Investment Fund (SIF) separately managed account invested by Galliard Global Asset Management. |

## Descriptions of Investment Options

### Asset Allocation Funds

| | |
|---|---|
| **Balanced Fund** | The Fund's long-term asset allocation is 60% in domestic equities, 35% in fixed income, and 5% in cash. The domestic equity allocation invests in the U.S. Equity Index Fund, the fixed income allocation invests in the Bond Fund, and the cash allocation invests in the Money Market Account.<br>**Vehicle:** Supplemental Investment Fund (SIF) investment pools managed by the SBI. |
| **Vanguard Balanced Index Fund** | A passive allocation fund that invests in a mix of domestic stocks and bonds. The fund is expected to track a weighted benchmark of 60% CRSP U.S. Total Market Index and 40% Bloomberg U.S. Aggregate Bond Index.<br>**Vehicle:** Institutional share class Mutual Fund, VBAIX, managed by Vanguard. |
| **Volunteer Firefighter Account** | The Account's long-term asset allocation is 35% in domestic equities, 15% international equities, 55% in fixed income, and 5% in cash. The domestic equity allocation invests in the U.S. Equity Index Fund, the international equity allocation invests in the Broad International Equity Fund, the fixed income allocation invests in the Bond Fund and the Cash segment invests in the Money Market Account.<br>**Vehicle:** Supplemental Investment Fund investment pool managed by the SBI. |
| **Minnesota Target Retirement Funds** | The Minnesota Target Retirement Fund portfolios offer a diversified mix of stock and fixed income investments based on a targeted retirement date. Each target date fund gradually becomes more conservative, a lower equity allocation and higher fixed income allocation, as the fund nears the retirement date.<br>**Vehicle:** Commingled Investment Trust (CIT) managed by State Street Global Advisors, SSGA. |

## Eligible Investment Options Available by Plan

**Eligible Investment Options Available By Plan**

| Investment Plan | U.S. Equity | | | | | | | International (Int'l) Equity | | | Fixed Income | | | Capital Preservation | | Asset Allocation | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U.S. Equity Actively Managed Fund[1] | Vanguard Dividend Growth Fund[2] | U.S. Equity Index Fund[1] | Vanguard Total Stock Market Inst Index Fund[2] | Vanguard Index Inst Plus Fund[2] | Vanguard Mid-Cap Index Fund[2] | T. Rowe Price Small Cap Fund[2] | Broad Int'l Equity Fund[1] | Fidelity Int'l Equity CIT[2] | Vanguard Total Int'l Stock Index Fund[2] | Bond Fund[1] | Dodge & Cox Core Bond Account[2] | Vanguard Total Bond Market Index Fund[2] | Money Market Account[2] | Stable Value Account[2] | Balanced Fund[1] | Vanguard Balanced Index Fund[2] | Volunteer Firefighter Account[1] | Target Retirement Fund[2] |
| **Other Public Retirement Funds** | | | | | | | | | | | | | | | | | | | |
| Individual Public Retirement Funds[3] | X | | X | | | | | X | | | X | | | X | | X | | | |
| PERA Defined Contribution Plan | X | | X | | | | | X | | | X | | | X | X | X | | | |
| Statewide Volunteer Firefighter Retirement Plan | | | | | | | | | | | | | | | | | | X | |
| Unclassified Retirement Plan | | X | | X | | X | X | | | X | | X | X | X | X | | X | | X |
| Volunteer Fire Relief Associations | X | | X | | | | | X | | | X | | | X | | X | | | |
| **Tax-Advantaged Savings Plans** | | | | | | | | | | | | | | | | | | | |
| Health Care Savings Plan | | X | | X | | X | X | | | X | | X | X | X | X | | X | | |
| Hennepin County Supplemental Retirement Plan | | X | | X | | X | X | | | X | | X | X | X | | | X | | |
| Minnesota Deferred Compensation Plan | | X | | X | X | X | X | | X | X | | X | X | X | X | | X | | X |

**Footnotes:**

[1]Asset Class Investment Pool managed by the SBI.

[2]Single Manager Investment Option

[3]Represents assets of any public retirement plan or fund authorized by statute to invest in the Asset Class Investment Pools managed by the SBI.

Investment options are available to all plans depending on the regulations, rules, statutes, and operational limitations specific to each plan. Investment vehicle type will vary.

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# State-Sponsored Savings Plans

## June 30, 2025

Important Notes:

All performance figures and market data presented are unaudited and preliminary. Performance history includes terminated managers and reflects the deduction of investment management fees, program management expenses, and state administrative fees. Performance greater than one year is annualized. Past performance does not guarantee future results.

# Minnesota College Savings Plan

The Minnesota College Savings Plan is a tax-advantaged educational savings plan designed to help families save for future higher education expenses. The SBI oversees the investment options, and the Minnesota Office of Higher Education (OHE) is responsible for the overall administration of the Plan. The SBI and OHE have contracted jointly with TIAA-CREF Tuition Financing, Inc. (TFI) to provide administrative, marketing, communication, recordkeeping, and investment management services. Performance information is as reported by TFI. Descriptions of the available investment options and underlying investment funds follow the performance information.

**MINNESOTA COLLEGE SAVINGS PLAN**

**Performance Statistics for the Period Ending: June 30, 2025** **Total = $2,241 Million**

| | | | | Annualized | | | | |
|---|---|---|---|---|---|---|---|---|
| **Fund Name** | **Ending Market** | **3 Months** | **1 Year** | **3 Years** | **5 Years** | **10 Years** | **Since Inception** | **Inception Date** |
| **2042/2043 Enrollment Option** | **$1,011,236** | | | | | | **3.30%** | **5/16/2025** |
| 2042/2043 Custom Benchmark | | | | | | | 3.30% | |
| **2040/2041 Enrollment Option** | **$45,986,369** | **8.10%** | **13.78%** | | | | **15.57%** | **5/12/2023** |
| 2040-2041 Custom Benchmark | | 8.01% | 13.57% | | | | 15.94% | |
| **2038/2039 Enrollment Option** | **$68,213,535** | **7.74%** | **13.34%** | **13.28%** | | | **5.99%** | **6/11/2021** |
| 2038-2039 Custom Benchmark | | 7.68% | 13.24% | 13.51% | | | 6.06% | |
| **2036/2037 Enrollment Option** | **$132,480,777** | **7.46%** | **13.11%** | **12.82%** | **10.39%** | | **9.29%** | **10/28/2019** |
| 2036-2037 Custom Benchmark | | 7.35% | 12.90% | 13.02% | 10.62% | | 9.24% | |
| **2034/2035 Enrollment Option** | **$104,704,375** | **6.87%** | **12.53%** | **12.19%** | **9.85%** | | **8.82%** | **10/28/2019** |
| 2034-2035 Custom Benchmark | | 6.78% | 12.33% | 12.38% | 10.08% | | 8.78% | |
| **2032/2033 Enrollment Option** | **$106,587,665** | **5.97%** | **11.48%** | **11.12%** | **9.02%** | | **8.18%** | **10/28/2019** |
| 2032-2033 Custom Benchmark | | 5.87% | 11.39% | 11.34% | 9.29% | | 8.15% | |
| **2030/2031 Enrollment Option** | **$118,269,908** | **5.08%** | **10.30%** | **9.70%** | **7.94%** | | **7.26%** | **10/28/2019** |
| 2030-2031 Custom Benchmark | | 5.03% | 10.44% | 10.06% | 8.29% | | 7.31% | |
| **2028/2029 Enrollment Option** | **$138,062,937** | **4.07%** | **8.98%** | **8.25%** | **6.70%** | | **6.21%** | **10/28/2019** |
| 2028-2029 Custom Benchmark | | 4.09% | 9.33% | 8.76% | 7.10% | | 6.30% | |
| **2026/2027 Enrollment Option** | **$164,318,224** | **2.95%** | **7.10%** | **6.58%** | **5.30%** | | **5.10%** | **10/28/2019** |
| 2026-2027 Custom Benchmark | | 3.05% | 7.88% | 7.43% | 5.87% | | 5.36% | |
| **In School Option** | **$386,598,589** | **2.36%** | **5.92%** | **4.75%** | **3.30%** | | **3.50%** | **10/28/2019** |
| In School Custom Benchmark | | 2.59% | 7.03% | 6.05% | 3.87% | | 3.76% | |

**MINNESOTA COLLEGE SAVINGS PLAN**
**Performance Statistics for the Period Ending: June 30, 2025**

| | | | | Annualized | | | | |
|---|---|---|---|---|---|---|---|---|
| **Fund Name** | **Ending Market** | **3 Months** | **1 Year** | **3 Years** | **5 Years** | **10 Years** | **Since Inception** | **Inception Date** |
| **U.S. and International Equity Option** | **$309,580,396** | **9.85%** | **15.59%** | **16.23%** | **13.43%** | **10.38%** | **8.14%** | **10/ 1/2001** |
| BB: U.S. and International Equity Option | | 9.83% | 15.40% | 16.48% | 13.72% | 10.36% | 8.76% | |
| **Moderate Allocation Option** | **$129,409,753** | **6.39%** | **11.95%** | **11.02%** | **8.34%** | **7.28%** | **6.15%** | **8/ 2/2007** |
| BB: Moderate Allocation Option | | 6.42% | 11.90% | 11.32% | 8.60% | 7.35% | 6.60% | |
| **100% Fixed-Income Option** | **$21,235,747** | **1.44%** | **6.48%** | **3.46%** | **0.68%** | **2.19%** | **2.99%** | **8/16/2007** |
| BB: 100% Fixed-Income Option | | 1.40% | 6.58% | 3.62% | 0.85% | 2.43% | 3.48% | |
| **International Equity Index Option** | **$14,256,256** | **11.20%** | **17.90%** | **14.72%** | **10.52%** | **6.30%** | **6.17%** | **6/18/2013** |
| BB: International Equity Index Option | | 11.84% | 17.32% | 14.80% | 10.39% | 6.26% | 6.19% | |
| **Money Market Option** | **$45,271,658** | **0.99%** | **4.51%** | **4.47%** | **2.70%** | **1.81%** | **1.16%** | **11/ 1/2007** |
| BB: Money Market Option | | 1.00% | 4.41% | 4.31% | 2.59% | 1.69% | 1.09% | |
| **Principal Plus Interest Option** | **$84,068,652** | **0.75%** | **3.01%** | **2.42%** | **2.01%** | **1.85%** | **2.37%** | **10/10/2001** |
| Citigroup 3-Month U.S. Treasury Bill | | 1.09% | 4.88% | 4.75% | 2.88% | 2.01% | 1.66% | |
| **Aggressive Allocation Option** | **$135,870,799** | **8.16%** | **13.87%** | **13.65%** | **10.89%** | **8.84%** | **8.53%** | **8/12/2014** |
| BB: Aggressive Allocation Option | | 8.12% | 13.65% | 13.90% | 11.17% | 8.88% | 8.52% | |
| **Conservative Allocation Option** | **$21,913,776** | **3.89%** | **8.46%** | **7.04%** | **4.88%** | **4.69%** | **4.44%** | **8/18/2014** |
| BB: Conservative Allocation Option | | 3.87% | 8.88% | 7.84% | 5.31% | 4.87% | 4.64% | |
| **U.S. Large Cap Equity Option** | **$206,933,272** | **10.91%** | **15.01%** | **19.53%** | **16.46%** | **13.45%** | **13.13%** | **8/12/2014** |
| BB: U.S. Large Cap Equity Option | | 10.94% | 15.16% | 19.71% | 16.64% | 13.65% | 13.26% | |
| **Large Cap Responsible Equity Option** | **$5,016,721** | **12.30%** | **15.02%** | **18.08%** | | | **9.11%** | **6/11/2021** |
| BB: Social Choice Equity Option | | 10.94% | 15.16% | 19.44% | | | 10.24% | |
| **Matching Grant** | **$930,934** | **0.75%** | **3.01%** | **2.42%** | **2.01%** | **1.85%** | **2.37%** | **3/22/2002** |
| Citigroup 3-Month U.S. Treasury Bill | | 1.09% | 4.88% | 4.75% | 2.88% | 2.01% | 1.66% | |

## Minnesota College Savings Plan Descriptions of Investment Options

| | |
|---|---|
| **Enrollment Year Investment Options:** | The Enrollment-Based Managed Allocation options are a set of single fund options representing the year the beneficiary will enter higher education. The asset allocation adjusts automatically to a more conservative investment objective and level of risk as the enrollment year approaches. |
| **Risk-Based Investment Options:** | The Risk-Based Allocation options provide a fixed level of risk and do not change as the beneficiary ages. There are three separate Risk-Based Allocation options: Aggressive, Moderate, and Conservative. |
| **Static Investment Options:** | |
| U.S. Large Cap Equity Option | Seeks to provide a favorable long-term total return mainly from capital appreciation. All assets of this options are invested in an underlying S&P 500 Index fund. |
| Large Cap Responsible Equity Option | Seeks to provide a favorable long-term total return mainly from capital appreciation. The underlying fund's evaluation process favors companies with leadership in ESG performance relative to their peers. |
| International Equity Index Option | Seeks to provide a favorable long-term total return, mainly from capital appreciation. Approximately 80% of the underlying fund is allocated to equity securities of issuers located in developed markets and 20% is allocated to equity securities of issuers located in emerging markets. |
| U.S. and International Equity Option | Seeks to provide a favorable long-term total return, mainly from capital appreciation, by allocating primarily to a blend of equity and real estate-related securities. Approximately 60% of the underlying fund is allocated to U.S. equities, 24% to international developed markets equities, 6% to emerging markets equities, and 10% to real estate-related securities. |

## Minnesota College Savings Plan Descriptions of Investment Options

**Static Investment Options Cont'd:**

| | |
|---|---|
| 100% Fixed Income Option | Seeks to provide preservation of capital along with a moderate rate of return through a diversified mix of fixed income investments. Approximately 70% of the underlying fund is allocated to public, investment-grade, taxable fixed income securities denominated in U.S. dollars, 20% to inflation-linked bonds, and 10% to high-yield bonds. |
| Money Market Option | Seeks to provide current income consistent with preserving capital. The underlying fund mainly invests in cash, U.S. government securities, and repurchase agreements that are collateralized fully by cash or U.S. government securities. |
| Principal Plus Interest Option | Seeks to preserve capital and provide a stable return. The assets in this investment option are allocated to a funding agreement issued by TIAA-CREF Life. The funding agreement provides for safety of principal and a minimum guaranteed rate of return declared in advance for a period of up to 12 months. |

## Minnesota College Savings Plan Descriptions of Underlying Investment Funds

**Underlying Investment Funds:**

| | |
|---|---|
| Nuveen Equity Index Fund (TIEIX) | A passive domestic all-cap stock fund that tracks the Russell 3000 Index. |
| Nuveen S&P 500 Index Fund (TISPX) | A passive domestic stock fund that tracks the S&P 500 Index. |
| Nuveen Large Cap Responsible Equity Fund (TISCX) | An active domestic stock fund that attempts to achieve the return of the U.S. equity market as represented by its benchmark, the S&P 500 Index, while investing in companies whose activities are consistent with the Fund's ESG criteria. |
| Nuveen International Equity Index Fund (TCIEX) | A passive international fund that tracks the MSCI EAFE Index. |
| Vanguard Emerging Markets Stock Index Fund (VEMIX) | A passive emerging markets fund that tracks the Vanguard Spliced Emerging Markets Index. |
| DFA Real Estate Securities Fund (DFREX) | An active fund investing in a diversified portfolio of domestic Real Estate Investment Trusts (REITs). |
| Vanguard Total Bond Market Index Fund (VBMPX) | A passive domestic bond fund that provides broad exposure to investment-grade bonds and tracks the Bloomberg U.S. Aggregate Float Adjusted Index. |
| Vanguard Short-Term Inflation Protected Securities Index Fund (VTSPX) | A passive inflation-protected bond fund that tracks the Bloomberg U.S. 0-5 Year TIPS Index. |
| Vanguard High-Yield Corporate Fund (VWEAX) | An active fund that invests in a diversified portfolio of higher-risk corporate bonds with medium- and lower-range credit quality ratings. |
| Nuveen Money Market Fund (TCIXX) | An active fund that invests in high-quality, short-term money market instruments such as cash, U.S. government securities, and repurchase agreements that are collateralized fully by cash or U.S. government securities. |
| TIAA-CREF Life Funding Agreement | A passive investment option issued by TIAA-CREF Life that provides a minimum guaranteed rate of return. |

# Minnesota Achieving a Better Life Experience (ABLE) Plan

The Minnesota Achieving a Better Life Experience (ABLE) Plan is a tax-advantaged savings plan designed to help families save for qualified disability expenses without losing eligibility for certain assistance programs. The SBI is responsible for the investments and the Minnesota Department of Human Services (DHS) is responsible for the overall administration of the Plan. Minnesota is part of the National ABLE Alliance, which is a consortium of nineteen states and territories in order to gain efficiencies of scale as part of the contract with Ascensus. Ascensus provides administrative, recordkeeping, and investment management services. Performance information is as reported by Ascensus. Descriptions of the available investment options and underlying investment funds follow the performance information.

MINNESOTABLE*plan*
A member of The National ABLE Alliance

**Performance as of**
**June 30, 2025**

**Total Market Value:** **$62,301,154**

| Fund Name | Market Value | % of Plan | 3 Months | YTD | 1 Year | 3 Year | 5 Year | 10 Year | Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Annualized | | | | |
| **Aggressive Option** | **$5,497,237** | **8.82%** | **9.38** | **8.89** | **16.20** | **14.18** | **11.46** | | **9.56** | **12/15/16** |
| ABLE Aggressive Custom Benchmark | | | 9.54 | 8.79 | 16.35 | 14.56 | 11.75 | | 9.92 | |
| **Variance** | | | *(0.16)* | *0.10* | *(0.15)* | *(0.38)* | *(0.29)* | | *(0.36)* | |
| **Moderately Aggressive Option** | **$5,852,970** | **9.39%** | **8.01** | **8.07** | **14.59** | **12.34** | **9.75** | | **8.42** | **12/15/16** |
| ABLE Moderately Aggressive Custom Benchmark | | | 8.10 | 7.94 | 14.73 | 12.70 | 10.06 | | 8.77 | |
| **Variance** | | | *(0.09)* | *0.13* | *(0.14)* | *(0.36)* | *(0.31)* | | *(0.35)* | |
| **Growth Option** | **$7,932,368** | **12.73%** | **6.76** | **7.33** | **12.87** | **10.50** | **8.07** | | **7.23** | **12/15/16** |
| ABLE Growth Custom Benchmark | | | 6.76 | 7.17 | 13.03 | 10.87 | 8.37 | | 7.58 | |
| **Variance** | | | *0.00* | *0.16* | *(0.16)* | *(0.37)* | *(0.30)* | | *(0.35)* | |
| **Moderate Option** | **$7,583,092** | **12.17%** | **5.37** | **6.46** | **11.12** | **8.64** | **6.35** | | **6.03** | **12/15/16** |
| ABLE Moderate Custom Benchmark | | | 5.33 | 6.30 | 11.34 | 9.01 | 6.65 | | 6.35 | |
| **Variance** | | | *0.04* | *0.16* | *(0.22)* | *(0.37)* | *(0.30)* | | *(0.32)* | |
| **Moderately Conservative Option** | **$6,246,875** | **10.03%** | **3.84** | **5.01** | **8.94** | **7.05** | **5.02** | | **4.75** | **12/15/16** |
| ABLE Moderately Conservative Custom Benchmark | | | 3.88 | 4.96 | 9.24 | 7.53 | 5.32 | | 5.07 | |
| **Variance** | | | *(0.04)* | *0.05* | *(0.30)* | *(0.48)* | *(0.30)* | | *(0.32)* | |
| **Conservative Option** | **$10,606,020** | **17.02%** | **2.07** | **3.30** | **6.03** | **4.85** | **3.13** | | **2.96** | **12/15/16** |
| ABLE Conservative Custom Benchmark | | | 2.03 | 3.26 | 6.50 | 5.50 | 3.49 | | 3.27 | |
| **Variance** | | | *0.04* | *0.04* | *(0.47)* | *(0.65)* | *(0.36)* | | *(0.31)* | |
| **Money Market Option** | **$884,896** | **1.42%** | **0.99** | **2.00** | | | | | **2.20** | **12/13/24** |
| ABLE Money Market Benchmark | | | 1.07 | 2.13 | | | | | 2.33 | |
| **Variance** | | | *(0.08)* | *(0.13)* | | | | | *(0.13)* | |
| **Checking Account Option** | **$17,697,696** | **28.41%** | | | | | | | | **03/30/17** |

## Minnesota Achieving a Better Life (ABLE) Plan Descriptions of Investment Options

| **Investment Options:** | |
|---|---|
| Aggressive Option | The investment option seeks to provide long-term capital appreciation. Approximately 90% of the assets are allocated to equities and 10% to investment-grade fixed income. |
| Moderately Aggressive Option | The investment option seeks to provide long-term capital appreciation with low current income potential. Approximately 75% of the assets are allocated to equities and 25% to investment-grade fixed income. |
| Growth Option | The investment option seeks to provide capital appreciation and low current income. Approximately 60% of the assets are allocated to equities and 40% to investment-grade fixed income. |
| Moderate Option | The investment option seeks to provide capital appreciation and secondarily provide moderate current income. Approximately 45% of the assets are allocated to equities and 55% to investment-grade fixed income. |
| Moderately Conservative Option | The investment option seeks to provide moderate current income and low capital appreciation. Approximately 30% of the assets are allocated to equities, 45% to investment-grade fixed income, and 25% to cash. |
| Conservative Option | The investment option seeks to provide substantial capital preservation, limited current income and very low capital appreciation. Approximately 10% of the assets are allocated to equities, 30% to investment-grade fixed income, and 60% to cash. |

## Minnesota Achieving a Better Life (ABLE) Plan Descriptions of Investment Options

**Investment Options Cont'd:**

| | |
|---|---|
| Money Market Option | The investment option seeks to provide income consistent with the preservation of principal and invests all of its assets in the Vanguard Cash Reserves Federal Money Market Fund. |
| Checking Account Option | The Checking Account Option invests 100% of its assets in FDIC-insured checking accounts held at Fifth Third Bank. |

## Minnesota Achieving a Better Life (ABLE) Plan Descriptions of Underlying Investment Funds

**Underlying Investment Funds:**

| | |
|---|---|
| Vanguard Total Stock Market Index Fund (VSMPX) | A passive domestic stock fund that tracks the CRSP U.S. Total Market Index. |
| Vanguard Developed Markets Index Fund (VTMNX) | A passive international stock fund that tracks the Vanguard Spliced Developed ex U.S. Index. |
| Vanguard Emerging Markets Stock Index Fund (VEMIX) | A passive emerging markets fund that tracks the Vanguard Spliced Emerging Markets Index. |
| Schwab U.S. REIT ETF (SCHH) | A passive Real Estate Investment Trust (REIT) fund that tracks the Dow Jones Equity All REIT Capped Index. |
| Vanguard Total Bond Market Index Fund (VBMPX) | A passive domestic bond fund that provides broad exposure to investment-grade bonds and tracks the Bloomberg U.S. Aggregate Float Adjusted Index. |
| Vanguard Short-Term Bond Index Fund (VBIPX) | A passive short-term bond fund that tracks the Bloomberg U.S. 1–5 Year Government/Credit Float Adjusted Index. |
| Vanguard Short-Term Inflation-Protected Securities Index Fund (VTSPX) | A passive inflation-protected bond fund that tracks the Bloomberg U.S. 0-5 Year TIPS Index. |
| American Funds High-Income Fund (HIGFX) | An active fund that invests in a diversified portfolio of higher yielding corporate bonds with lower credit quality ratings. |
| iShares Core International Aggregate Bond ETF (IAGG) | A passive international investment-grade bond fund that tracks the Bloomberg Global Aggregate ex USD 10% Issuer Capped (Hedged) Index. |
| Vanguard Cash Reserves Federal Money Market Fund (VMRXX) | An active fund that invests in high-quality, short-term money market instruments such as cash, U.S. government securities, and repurchase agreements that are collateralized solely by cash or U.S. government securities. |

# Non-Retirement Investment Program

## June 30, 2025

# Non-Retirement Investment Program

The SBI established the Non-Retirement Funds to provide eligible Minnesota public sector entities with the opportunity to invest in broad asset class options to aid them in achieving their investment objectives. Eligible Minnesota public sector entities include designated trust funds, Other Postemployment Benefit (OPEB) trusts, Qualifying Governmental Entities, and other programs created by the Minnesota Constitution and Legislature.

## Performance of Investment Options

| | Ending Market Value | Last Qtr | Fiscal YTD | 1 Year | 3 Year | 5 Year | 10 Year | Since Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|
| **Non-Retirement Funds** | | | | | | | | | |
| **NON-RETIREMENT EQUITY FUND - MELLON** | **$3,837,730,633** | **10.9%** | **15.1%** | **15.1%** | **19.7%** | **16.6%** | **13.6%** | **10.7%** | **07/1993** |
| S&P 500 (DAILY) | | 10.9% | 15.2% | 15.2% | 19.7% | 16.6% | 13.6% | 10.6% | 07/1993 |
| Excess | | -0.0% | -0.0% | -0.0% | -0.0% | -0.0% | -0.0% | 0.0% | |
| **NON-RETIREMENT BOND FUND - PGIM** | **$1,915,997,839** | **1.2%** | **6.4%** | **6.4%** | **3.1%** | **-0.3%** | **2.1%** | **5.0%** | **07/1994** |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 6.1% | 2.5% | -0.7% | 1.8% | 4.6% | 07/1994 |
| Excess | | 0.0% | 0.3% | 0.3% | 0.6% | 0.5% | 0.3% | 0.5% | |
| **NON-RETIREMENT MONEY MARKET FUND** | **$688,475,337** | **1.1%** | **5.0%** | **5.0%** | **4.8%** | **3.0%** | | **2.6%** | **12/2017** |
| ICE BofA US 3-Month Treasury Bill | | 1.0% | 4.7% | 4.7% | 4.6% | 2.8% | | 2.5% | 12/2017 |
| Excess | | 0.1% | 0.3% | 0.3% | 0.3% | 0.2% | | 0.1% | |
| **Non-Retirement Separate Accounts** | | | | | | | | | |
| **ASSIGNED RISK PLAN FIXED INCOME PORTFOLIO - RBC** | **$228,283,892** | **1.4%** | **6.2%** | **6.2%** | **2.8%** | **0.2%** | **1.6%** | **4.3%** | **07/1991** |
| ARP Fixed Income Portfolio Benchmark | | 1.5% | 6.3% | 6.3% | 2.8% | 0.2% | 1.5% | 4.3% | 07/1991 |
| Excess | | -0.0% | -0.1% | -0.1% | -0.0% | 0.1% | 0.1% | -0.1% | |
| **DULUTH OPEB LADDERED BOND FUND** | **$111,441,566** | **0.1%** | **4.2%** | **4.2%** | | | | **4.8%** | **07/2024** |
| **MET COUNCIL OPEB LADDERED BOND FUND** | **$127,823,923** | **1.3%** | **6.1%** | **6.1%** | **3.2%** | **1.0%** | | | **02/2009** |

Note: The current benchmark for the Assigned Risk Plan Fixed Income Portfolio, ARP Fixed Income Portfolio Benchmark, is the Bloomberg U.S. Government Intermediate Index.
Prior to 12/1/17, the Non-Retirement Equity Fund and Non-Retirement Fixed Income Funds were managed internally by SBI staff.

## Performance of Investment Options

| | 2024 Calendar Return | 2023 Calendar Return | 2022 Calendar Return | 2021 Calendar Return | 2020 Calendar Return |
|---|---|---|---|---|---|
| **Non-Retirement Funds** | | | | | |
| **NON-RETIREMENT EQUITY FUND - MELLON** | **25.0%** | **26.3%** | **-18.1%** | **28.7%** | **18.4%** |
| S&P 500 (DAILY) | 25.0% | 26.3% | -18.1% | 28.7% | 18.4% |
| Excess | -0.0% | -0.0% | -0.0% | -0.0% | 0.0% |
| **NON-RETIREMENT BOND FUND - PGIM** | **2.1%** | **6.3%** | **-13.6%** | **-1.5%** | **8.2%** |
| Bloomberg U.S. Aggregate | 1.3% | 5.5% | -13.0% | -1.5% | 7.5% |
| Excess | 0.8% | 0.8% | -0.6% | 0.0% | 0.7% |
| **NON-RETIREMENT MONEY MARKET FUND** | **5.5%** | **5.3%** | **1.7%** | **0.1%** | **0.6%** |
| ICE BofA US 3-Month Treasury Bill | 5.3% | 5.0% | 1.5% | 0.0% | 0.7% |
| Excess | 0.2% | 0.3% | 0.2% | 0.0% | -0.1% |
| **Non-Retirement Separate Accounts** | | | | | |
| **ASSIGNED RISK PLAN FIXED INCOME PORTFOLIO - RBC** | **2.3%** | **4.5%** | **-7.6%** | **-1.6%** | **6.0%** |
| ARP Fixed Income Portfolio Benchmark | 2.4% | 4.3% | -7.7% | -1.7% | 5.7% |
| Excess | -0.1% | 0.1% | 0.1% | 0.1% | 0.3% |
| **DULUTH OPEB LADDERED BOND FUND** | | | | | |
| **MET COUNCIL OPEB LADDERED BOND FUND** | **3.6%** | **4.1%** | **-5.6%** | **-0.4%** | **3.0%** |

Note:
The current benchmark for the Assigned Risk Plan Fixed Income Portfolio, ARP Fixed Income Portfolio Benchmark, is the Bloomberg U.S. Government Intermediate Index.
Prior to 12/1/17, the Non-Retirement Equity Fund and Non-Retirement Fixed Income Funds were managed internally by SBI staff.

## Descriptions of Investment Options

### Funds:

| | |
|---|---|
| **Non-Retirement Equity Fund** | The Non-Retirement Equity Fund is passively managed to provide investors with exposure to large-cap domestic equities. It is available to state and other trust funds, OPEB accounts, and Qualifying Governmental Entities. Mellon Investments Corporation passively manages this Fund in a separate account that seeks to track the performance of the S&P 500 Index. |
| **Non-Retirement Bond Fund** | The Non-Retirement Bond Fund is actively managed to provide investors with exposure to investment grade fixed income securities. It is available to state and other trust funds and OPEB accounts. This Fund is actively managed by Prudential Global Investment Management (PGIM) and seeks to outperform the Bloomberg U.S. Aggregate Bond Index. |
| **Non-Retirement Money Market Fund** | The Non-Retirement Money Market Fund invests in high-quality short-term cash investments with the objective of providing current income and protecting invested principal. Entities that may invest in the Fund include state and other trust funds and OPEB accounts. State Street Global Advisors manages this Fund. The SBI measures the Non-Retirement Money Market Fund against the iMoneyNet All Taxable Money Fund Average. |

## Descriptions of Investment Options

### Separate Accounts:

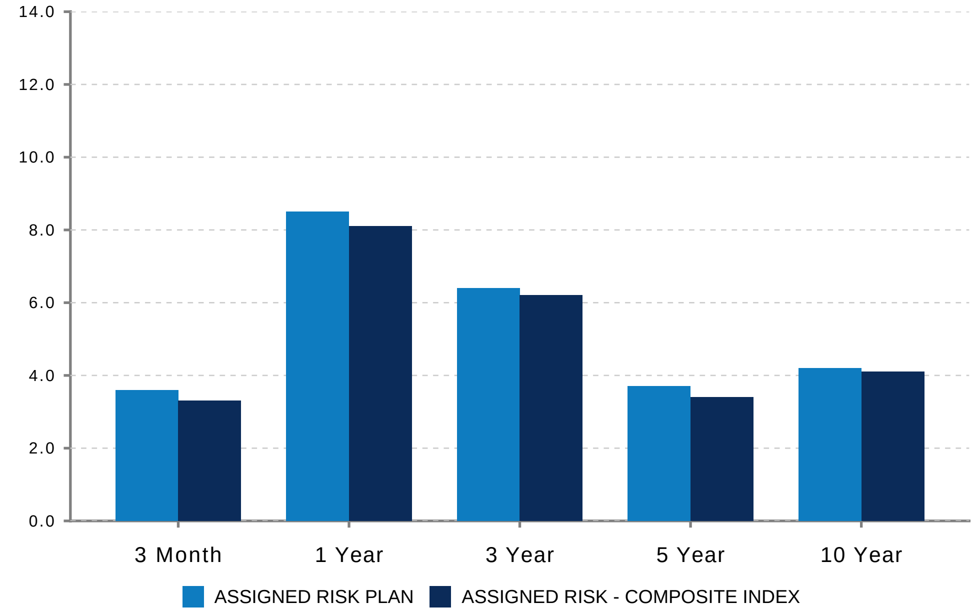
| | |
|---|---|
| **Assigned Risk Plan - Fixed Income Portfolio** | The Assigned Risk Plan fixed income portfolio is actively managed by RBC Global Asset Management to provide income and preserve invested principal to support the payment of worker compensation claims. Because of the uncertainty of the timing and size of premiums and liability cash flows, the assets are invested conservatively in a portfolio of high-quality fixed-income securities. The Assigned Risk Plan fixed income portfolio is benchmarked to the Bloomberg U.S. Government Intermediate Index, which consists of high-quality, U.S. dollar-denominated, fixed income securities issued by the U.S. Government and its agencies with maturities up to 10 years. |
| **Duluth OPEB Laddered Bond** | The City of Duluth first invested with the SBI in July 2007. The City of Duluth is responsible for determining the asset allocation for this account. As of June 30, 2024, the portfolio was invested entirely in a laddered bond portfolio. Before transitioning to this strategy in June 2024, the portfolio was allocated between the Non-Retirement Equity Fund and the Non-Retirement Bond Fund. |
| **Met Council OPEB Laddered Bond** | The Metropolitan Council is the regional policy-making body, planning agency, and provider of essential services for the Twin Cities metropolitan region. The Met Council OPEB Bond account contains assets set aside to fund future OPEB liabilities. OPEB account assets are allocated at the Met Council's direction. . |

## Assigned Risk Quarter-End Review

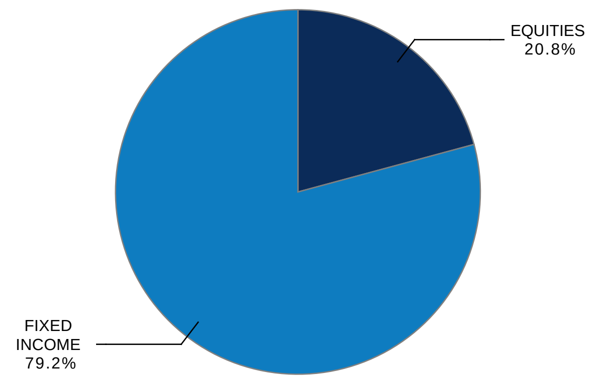
### Assigned Risk Plan

The Assigned Risk Plan has two investment objectives: to minimize any mismatch between assets and liabilities, and to provide sufficient liquidity to pay ongoing claims and operating expenses.

The Assigned Risk Plan is invested in a portfolio of common stocks and bonds. The equity segment is passively managed and seeks to track the performance of the S&P 500 Index. The fixed income segment is actively managed and seeks to outperform the Bloomberg U.S. Government Intermediate Index. The Assigned Risk Plan's benchmark is a combination of the equity and fixed income benchmarks, weighted according to the asset allocation targets of 20% equities and 80% fixed income. The actual asset mix will fluctuate and is shown in the pie graph below.




| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|
| ASSIGNED RISK PLAN | $288,410,785 | 3.6% | 8.5% | 6.4% | 3.7% | 4.2% |
| EQUITIES | $60,126,802 | 10.9% | 15.1% | 19.7% | 16.6% | 13.2% |
| FIXED INCOME | $228,283,983 | 1.4% | 6.2% | 2.8% | 0.2% | 1.6% |
| ASSIGNED RISK - COMPOSITE INDEX | | 3.3% | 8.1% | 6.2% | 3.4% | 4.1% |
| Excess | | 0.3% | 0.4% | 0.2% | 0.2% | 0.2% |
| S&P 500 | | 10.9% | 15.2% | 19.7% | 16.6% | 13.6% |
| Bloomberg U.S. Government: Intermediate | | 1.5% | 6.3% | 2.8% | 0.2% | 1.5% |



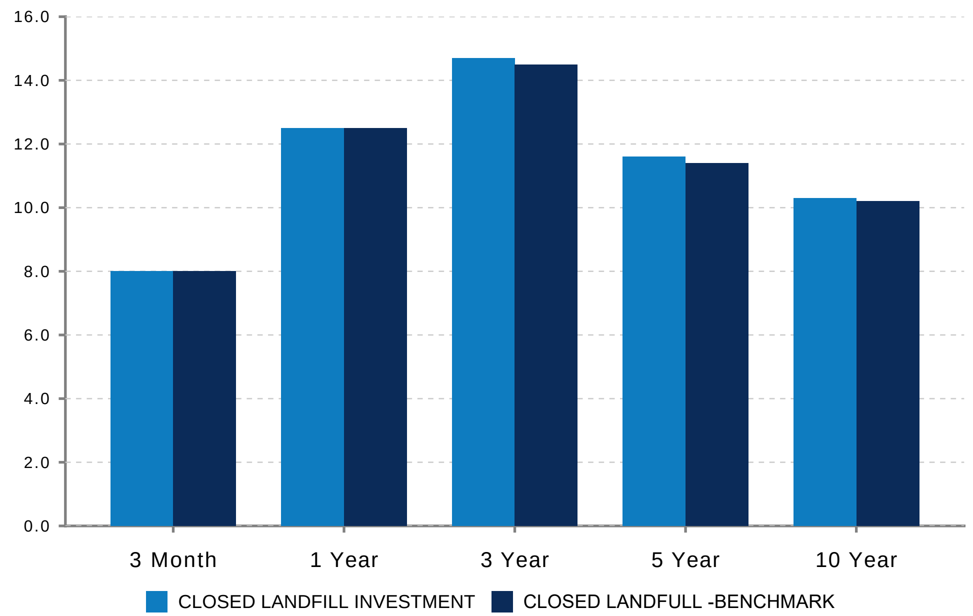

Note: Since 12/1/2017 the Assigned Risk equity segment has been managed by Mellon. From 1/17/2017-11/30/2017 it was managed internally by SBI staff. Prior to 1/17/2017 the equity segment was managed by SSgA (formerly GE Investment Mgmt.). RBC manages the fixed income segment of the Fund.

## Closed Landfill Investment Fund Quarter-End Review

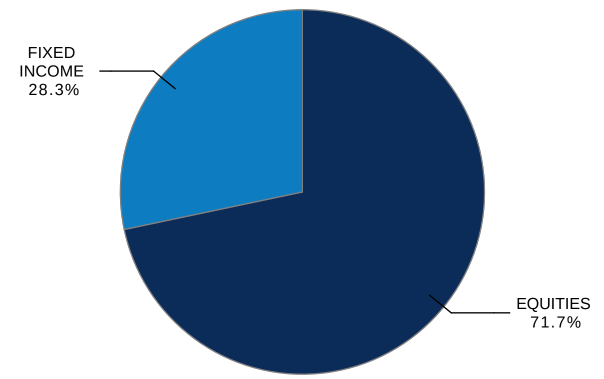
### Closed Landfill Investment Fund

The investment objective of the Closed Landfill Investment Fund is to grow the value of the Fund to meet future expenditure needs while maintaining an appropriate level of market risk.

The Closed Landfill Investment Fund is invested in a portfolio of common stocks and bonds. The equity segment is passively managed and seeks to track the performance of the S&P 500 Index. The fixed income segment is actively managed and seeks to outperform the Bloomberg U.S. Aggregate Bond Index. The Closed Landfill Investment Fund's benchmark is a combination of the equity and fixed income benchmarks, weighted according to the asset allocation targets of 70% equities and 30% fixed income. The actual asset mix will fluctuate and is shown in the pie graph below.




| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|
| CLOSED LANDFILL INVESTMENT | $165,503,695 | 8.0% | 12.5% | 14.7% | 11.6% | 10.3% |
| EQUITIES | $118,626,521 | 10.9% | 15.1% | 19.7% | 16.6% | 13.6% |
| FIXED INCOME | $46,877,175 | 1.2% | 6.4% | 3.1% | -0.3% | 2.1% |
| CLOSED LANDFILL -BENCHMARK | | 8.0% | 12.5% | 14.5% | 11.4% | 10.2% |
| Excess | | 0.0% | 0.0% | 0.2% | 0.3% | 0.1% |
| | | | | | | |
| S&P 500 | | 10.9% | 15.2% | 19.7% | 16.6% | 13.6% |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 2.5% | -0.7% | 1.8% |



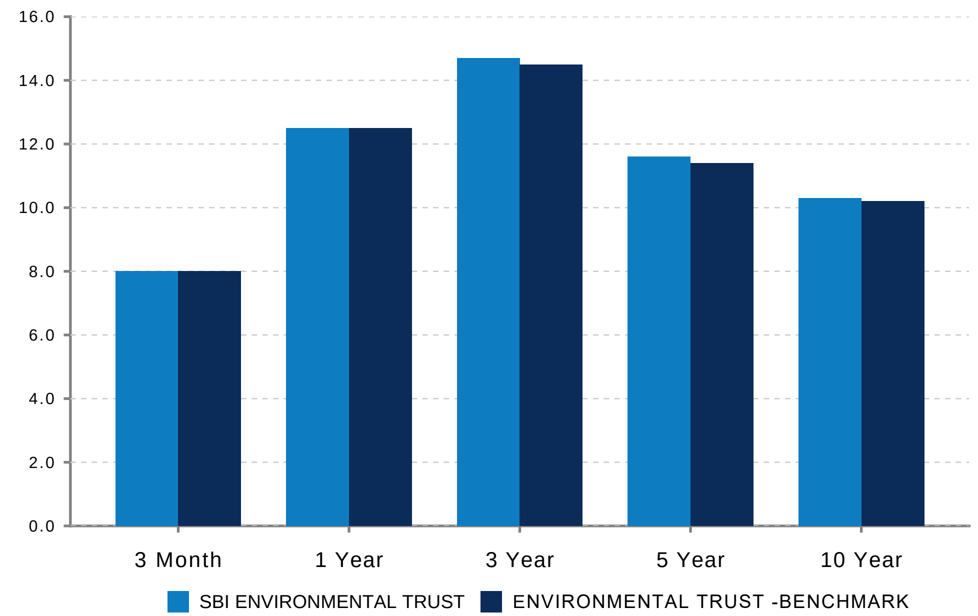

Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by PGIM. Prior to 12/1/2017 both segments were managed internally by SBI staff. Prior to 9/10/14 the Fund's target allocation and benchmark was 100% domestic equity.

## Environmental Trust Fund Quarter-End Review

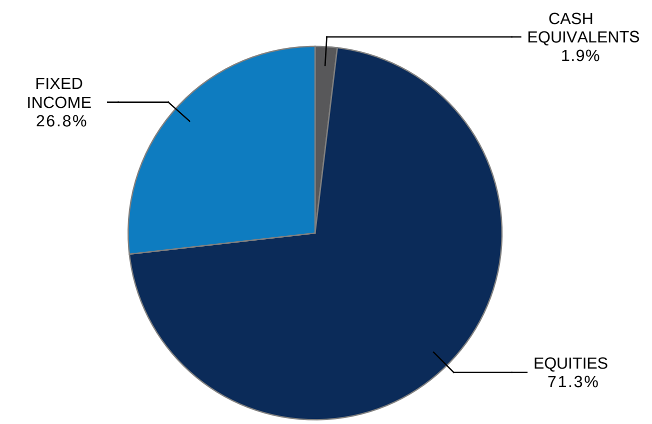
### Environmental Trust Fund

The investment objective of the Environmental Trust Fund is to generate long-term capital growth to support a growing level of funding while maintaining adequate portfolio liquidity.

The Environmental Trust Fund is invested in a portfolio of common stocks, bonds, and cash. The equity segment is passively managed and seeks to track the performance of the S&P 500 Index. The fixed income segment is actively managed and seeks to outperform the Bloomberg U.S. Aggregate Bond Index. The cash segment is actively managed and seeks to outperform the iMoneyNet Money Fund Average. The Environmental Trust Fund's benchmark is a combination of the equity, fixed income, and cash benchmarks, weighted according to the asset allocation targets of 70% equities, 28% fixed income, and 2% cash. The actual asset mix will fluctuate and is shown in the pie graph below.




| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|
| ENVIRONMENTAL TRUST | $2,070,707,644 | 8.0% | 12.5% | 14.7% | 11.6% | 10.3% |
| CASH EQUIVALENTS | $39,043,356 | 1.1% | 4.9% | 4.8% | 2.9% | 2.1% |
| EQUITIES | $1,477,300,591 | 10.9% | 15.1% | 19.7% | 16.6% | 13.6% |
| FIXED INCOME | $554,363,696 | 1.2% | 6.4% | 3.1% | -0.3% | 2.1% |
| ENVIRONMENTAL TRUST -BENCHMARK | | 8.0% | 12.5% | 14.5% | 11.4% | 10.2% |
| Excess | | -0.0% | 0.1% | 0.1% | 0.2% | 0.1% |
| S&P 500 | | 10.9% | 15.2% | 19.7% | 16.6% | 13.6% |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 2.5% | -0.7% | 1.8% |
| iMoneyNet Money Fund Average | | 1.0% | 4.4% | 4.3% | 2.6% | 1.7% |



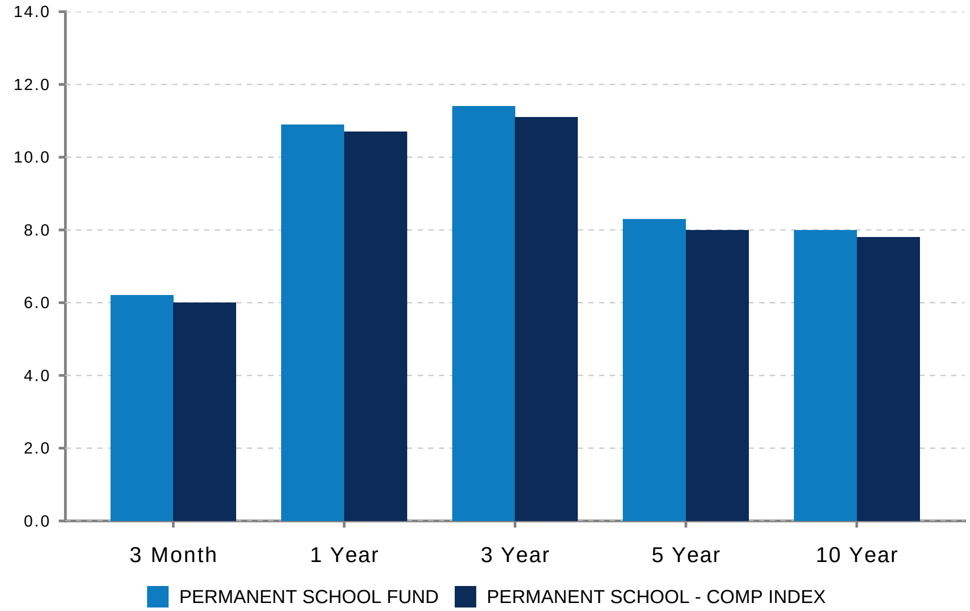

Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by PGIM. Prior to 12/1/2017 both segments were managed internally by SBI staff. From 7/1/94 to 7/1/99, the Fund's target allocation and benchmark was 50% fixed income and 50% stock. Prior to 7/1/94 the Fund was invested entirely in short-term instruments as part of the Invested Treasurer's Cash pool.

## Permanent School Fund Quarter-End Review

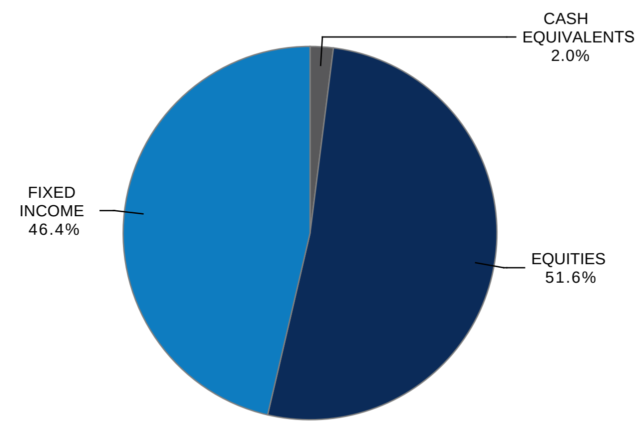
### Permanent School Fund

The investment objectives of the Permanent School Fund are to produce annual distributions in support of Minnesota schools while maintaining the Fund as a perpetual financial resource. The Permanent School Fund's investment objectives are dictated by the legal provisions under which its investments must be managed.

The Permanent School Fund is invested in a portfolio of common stocks, bonds, and cash. The equity segment is passively managed and seeks to track the performance of the S&P 500 Index. The fixed income segment is actively managed and seeks to outperform the Bloomberg U.S. Aggregate Bond Index. The cash segment is actively managed and seeks to outperform the iMoneyNet Money Fund Average. The Permanent School Fund's benchmark is a combination of the equity, fixed income, and cash benchmarks, weighted according to the asset allocation targets of 50% equities, 48% fixed income, and 2% cash. The actual asset mix will fluctuate and is shown in the pie graph below.




| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|
| PERMANENT SCHOOL FUND | $2,316,674,901 | 6.2% | 10.9% | 11.4% | 8.3% | 8.0% |
| CASH EQUIVALENTS | $45,453,501 | 1.1% | 4.9% | 4.8% | 2.9% | 2.1% |
| EQUITIES | $1,197,357,226 | 10.9% | 15.1% | 19.7% | 16.6% | 13.6% |
| FIXED INCOME | $1,073,864,174 | 1.2% | 6.4% | 3.1% | -0.3% | 2.1% |
| PERMANENT SCHOOL - COMP INDEX | | 6.0% | 10.7% | 11.1% | 8.0% | 7.8% |
| Excess | | 0.2% | 0.2% | 0.3% | 0.4% | 0.2% |
| S&P 500 | | 10.9% | 15.2% | 19.7% | 16.6% | 13.6% |
| Bloomberg U.S. Aggregate | | 1.2% | 6.1% | 2.5% | -0.7% | 1.8% |
| iMoneyNet Money Fund Average | | 1.0% | 4.4% | 4.3% | 2.6% | 1.7% |




Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by PGIM. Prior to 12/1/2017 both segments were managed internally by SBI staff.

# State Cash

## June 30, 2025

# State Cash Accounts

## Invested Treasurer's Cash

The Invested Treasurer's Cash Pool (ITC) represents the balances in more than 400 separate accounts that flow through the Minnesota State Treasury. These accounts vary greatly in size. The ITC contains the cash balances of certain State agencies and non-dedicated cash in the State Treasury.

The investment objectives of the ITC, in order of priority, are as follows:

- Safety of Principal.  To preserve capital.
- Liquidity.  To meet cash needs without the forced sale of securities at a loss.
- Competitive Rate of Return.  To provide a level of current income consistent with the goal of preserving capital.

The SBI seeks to provide safety of principal by investing all cash accounts in high quality, liquid, short term investments.  These include U.S. Treasury and Agency issues, repurchase agreements, bankers acceptances, commercial paper, and certificates of deposit.

Beginning in January 2003, the Treasurer's Cash Pool is measured against the iMoneyNet, All Taxable Money Fund Report Average.

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|
| Treasurer's Cash | 29,610,483,474 | 1.1 | 5.0 | 4.8 | 2.7 | 2.0 |
| iMoneyNet Money Fund Average-All Taxable | | 1.0 | 4.4 | 4.3 | 2.6 | 1.7 |

## Other State Cash Accounts

Due to differing investment objectives, strategies, and time horizons, some State agencies' accounts are invested seperately. These agencies direct the investments or provide the SBI with investment guidelines and the SBI executes on their behalf. Consequently, returns are shown for informational purposes only and there are no benchmarks for these accounts.

| | Ending Market Value | Last Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|---|---|---|---|---|---|---|
| Debt Service | 133,174,425 | 1.6 | 4.7 | 3.9 | 1.8 | 2.1 |
| Housing Finance | 504,287,746 | 1.0 | 5.0 | | | |

## Addendum

### Combined Funds Benchmark Definitions

**Active Domestic Equity Benchmark:**

A weighted composite each of the individual active domestic equity managers’ benchmarks. Effective 3/1/2017 the calculation uses the average weight of the manager relative to the total group of active managers during the month. Prior to 3/1/2017 the beginning of the month weight relative to the total group was used.

**Benchmark DM:**

Since 6/1/08 the developed markets managers' benchmark, "Benchmark DM," is the Standard (large + mid) MSCI World ex USA (net). From 10/1/07 through 5/31/08 the benchmark was the Provisional Standard MSCI World ex USA (net). From 10/1/03 to 9/30/07 the benchmark was the MSCI World ex USA (net). Prior to that date, it was the MSCI EAFE Free (net), including from 10/1/01 to 5/31/02 when it was the Provisional MSCI EAFE Free (net).

**Benchmark EM:**

Since 6/1/08 the emerging markets managers' benchmark, "Benchmark EM,"is the Standard (large + mid) MSCI Emerging Markets Free (net). From 10/1/07 through 5/31/08 the benchmark was the Provisional Standard MSCI Emerging Markets Free (net). From 1/1/01 to 9/30/07 the benchmark was the MSCI Emerging Markets Free (net), including from 10/1/01 to 5/31/02 when it was the Provisional MSCI Emerging Markets Free (net). Prior to 1/1/01, it was the MSCI Emerging Markets Free (gross).

**Combined Funds Composite Index:**

The Composite Index performance is calculated by multiplying the beginning of month Composite weights by the monthly returns of the asset class benchmarks. Asset class weights for Private Markets - Invested and Private Markets - Uninvested are reset at the start of each month. From 1/1/2018-2/28/2019 the Transitional Policy Target was used to reflect the addition of Treasuries to the Fixed Income portfolio. From 7/1/2016-12/31/2016 the composite weights were set to match actual allocation as the portfolio was brought into line with the new Strategic Asset Allocation Policy Target. 7/1/2016 to 12/1/2020 the uninvested portion of Private Markets allocated to Public Equity. Prior to 7/1/2016 the uninvested portion of the Private Markets was invested in Fixed Income and the Composite Index was adjusted accordingly. When the Strategic Asset Allocation Policy Target changes, so does the Composite Index.

**Core Bonds Benchmark:**

The Core Bonds Benchmark is the Bloomberg U.S. Aggregate. Prior to 2016 this index was called the Barclays Agg. Prior to 9/18/2008 this index was called the Lehman Brothers Aggregate Bond Index. From 7/1/84-6/30/94 the asset class benchmark was the Salomon Brothers Broad Investment Grade Index. The SBI name for this benchmark changed from Fixed Income to Core Bonds on March 31, 2020.

**Credit Plus Benchmark:**

40% Bloomberg US Corporate Bond Index, 30% Bloomberg US Mortgage Backed Index, 20% BofA ML US High Yield BB-B Cash Pay Constrained Index, and 10% JPM EMBI Global Diversified Index.

# Addendum

**Domestic Equity Benchmark:**

Since 12/1/2020 the benchmark is the Russell 3000. From 1/1/2019-11/30/2020 the benchmark was 90% Russell 1000 and 10% Russell 2000. From 10/1/2003 to 12/31/2018 it was the Russell 3000. From 7/1/1999 to 9/30/2003, it was the Wilshire 5000 Investable Index. From 11/1/1993 to 6/30/1999, the target was the Wilshire 5000 as reported with no adjustments. Prior to 11/1/1993, the Wilshire 5000 was adjusted to reflect SBI mandated restrictions, which included liquor and tobacco, American Home Products and South Africa.

**Fixed Interest Blended Benchmark:** Since 6/1/2002, equals 3 Year Constant Maturity Treasury Yield + 45 bps. Prior to this change it was the 3 Year Constant Maturity Treasury Yield + 30 bps.

**International Equity Benchmark:**

Since 12/1/2020 equals the MSCI ACWI ex-US(Net). From 1/1/2018 to 1/1/2019 it was 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). From 6/1/08 to 12/31/2018 the International Equity asset class target was the Standard (large + mid) MSCI ACWI ex U.S. (net). From 10/1/07 through 5/31/08 the benchmark was the Provisional Standard MSCI ACWI ex U.S. (net). From 10/1/03 to 9/30/07 the target was MSCI ACWI ex U.S. (net). From 1/1/01 to 9/30/03, the target was MSCI EAFE Free (net) plus Emerging Markets Free (net), and from 7/1/99 to 12/31/00 the target was MSCI EAFE Free (net) plus Emerging Markets Free (gross). From 7/1/99 to 9/30/03, the weighting of each index fluctuated with market capitalization. From 10/1/01 to 5/31/02 all international benchmarks being reported were the MSCI Provisional indices. From 12/31/96 to 6/30/99 the benchmark was fixed at 87% EAFE Free (net)/13% Emerging Markets Free (gross). On 5/1/96, the portfolio began transitioning from 100% EAFE Free (net) to the 12/31/96 fixed weights. Prior to 5/1/96 it was 100% the EAFE Free (net).

**Multi-Asset Credit Benchmark:**

33.33% ICE BofA High Yield, 33.33% S&P LSTA Leveraged Loan, and 33.33% JPM EMBI Global Diversified Index.

**Passive Domestic Equity Benchmark:**

A weighted average of the Russell 1000, Russell 2000 and Russell 3000 effective 11/1/2018. From 10/1/2016 to 11/1/2018 it was a weighted average of the Russell 1000 and Russell 3000. From 10/1/2003 to 10/1/2016 it was equal to the Russell 3000. From 7/1/2000 to 9/30/2003, it was the Wilshire 5000 Investable Index. From 11/1/1993 to 6/30/2000, the target was the Wilshire 5000 as reported with no adjustments. Prior to 11/1/1993, the Wilshire 5000 was adjusted to reflect SBI mandated restrictions, which included liquor and tobacco, American Home Products and South Africa.

**Passive Manager Benchmark:**

Russell 3000 effective 10/1/2003. From 7/1/2000 to 9/30/2003, it was the Wilshire 5000 Investable Index. From 11/1/1993 to 6/30/2000, the target was the Wilshire 5000 as reported with no adjustments. Prior to 11/1/1993, the Wilshire 5000 was adjusted to reflect SBI mandated restrictions, which included liquor and tobacco, American Home Products and South Africa.

## Addendum

**Public Equity Benchmark:**

Since 12/1/2020 it is 67% Russell 3000 and 33% MSCI ACWI ex-US(net). From 1/1/2019 to 12/1/2020 it was 60.3% Russell 1000, 6.7% Russell 2000, 24.75% MSCI World Ex US (net), and 8.25% MSCI EM (net). From 7/1/2017 thru 12/31/2018 it was 67% Russell 3000 and 33% MSCI ACWI ex USA. Prior to 6/30/16 the returns of Domestic and International Equity were not reported as a total Public Equity return. From 6/30/16-6/30/17 the Public Equity benchmark adjusted by 2% each quarter from 75% Russell 3000 and 25% MSCI ACWI ex USA until it reached 67% and 33%.

**Return Seeking BM:**

A weighted composite of each individual return seeking fixed income managers' benchmarks. The calculation uses the average weight of the manager relative to the total group of active managers during the month.

**Semi-Passive Domestic Equity Benchmark:** Russell 1000 index effective 1/1/2004. Prior to 1/1/2004 it was the Completeness Fund benchmark.

**Total Fixed Income Benchmark:**

Since 7/1/2020 the Total Fixed Income benchmark is 40% Bloomberg U.S. Aggregate Index/ 40% Bloomberg Treasury 5+ Years Index/ 20% ICE BofA US 3-Month Treasury Bill. From 4/1/2019-6/30/2020 it was 50% Bloomberg Aggregate and 50% Bloomberg Treasury 5+ Years Index. From 2/1/2018-3/31/19 the weighting of this benchmark reflected the relative weights of the Core Bonds and Treasuries allocations in the Combined Funds Composite.

**Zevenbergen Benchmark:** Russell 3000 Growth index effective 1/1/2021. Prior to 1/1/2021 it was the Russell 1000 Growth Index.

## Addendum

**Other Retirement Funds, Tax-Advantaged Savings Plans, and Non-Retirement Investment Program Benchmark Definitions**

**Environmental Trust Benchmark:**

Weighted 70% S&P 500, 28% Bloomberg U.S. Aggregate, 2% 3-month T-Bills.

**Fixed Interest Blended Benchmark:**

Since 6/1/2002, equals 3 Year Constant Maturity Treasury Yield + 45 bps. Prior to this change it was the 3 Year Constant Maturity Treasury Yield + 30 bps.

**International Equity Benchmark:**

Since 12/01/2020 equals the MSCI ACWI ex-US(Net). From 01/01/2018 to 01/01/2019 it was 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). From 06/01/2008 to 12/31/2018 the International Equity asset class target was the Standard (large + mid) MSCI ACWI ex U.S. (net). From 10/01/2007 through 05/31/2008 the benchmark was the Provisional Standard MSCI ACWI ex U.S. (net). From 10/01/2003 to 09/30/2007 the target was MSCI ACWI ex U.S. (net). From 01/01/2001 to 09/30/03, the target was MSCI EAFE Free (net) plus Emerging Markets Free (net), and from 07/01/1999 to 12/31/2000 the target was MSCI EAFE Free (net) plus Emerging Markets Free (gross). From 070/1/1999 to 09/30/2003, the weighting of each index fluctuated with market capitalization. From 10/1/2001 to 05/31/2002 all international benchmarks being reported were the MSCI Provisional indices. From 12/31/1996 to 06/30/1999 the benchmark was fixed at 87% EAFE Free (net)/13% Emerging Markets Free (gross). On 05/01/1996, the portfolio began transitioning from 100% EAFE Free (net) to the 12/31/1996 fixed weights. Prior to 05/01/1996 it was 100% the EAFE Free (net).

**Permanent School - Comp Index:**

Weighted 50% S&P 500, 48% Bloomberg U.S. Aggregate, 2% 3-month T-Bills.

**ARP Fixed Income Portfolio Custom Benchmark:**

Bloomberg U.S. Government Intermediate Index. Prior to 7/1/11 the Voyageur Custom Index was 10% 90-day T-Bill, 25% Merrill 1-3 Government, 15% Merrill 3-5 Government, 25% Merrill 5-10 Government, 25% Merrill Mortgage Master.

**SIF Balanced Fund Benchmark:**

Weighted 60% Russell 3000, 35% Bloomberg U.S. Aggregate, 5% 3-month T-Bills.

**SIF Volunteer Firefighter Account Benchmark:**

Weighted 35% Russell 3000, 15% MSCI ACWI ex USA (net), 45% Bloomberg U.S. Aggregate, 5% 3-month T-Bills.

## Addendum

**Vanguard Balanced Fund Benchmark:**

Weighted 60% CRSP US Total Market Index 40% Bloomberg U.S. Aggregate Float Adjusted Index, prior to 01/01/2023 the benchmark was 60% MSCI US Broad Market Index and 40% Bloomberg U.S. Aggregate.

**Vanguard Dividend Growth Fund Benchmark:**

CRSP U.S. Total Market Index, prior to 09/20/2021 the benchmark was NASDAQ US Dividend Achievers Select index.

**Vanguard Mid-Cap Index Fund Benchmark:**

CRSP US Mid Cap Index, prior to 02/01//2013 the benchmark was MSCI US Mid-Cap 450 Index.

**Vanguard Total International Stock Index Fund Benchmark:**

FTSE Global All Cap ex US Index, prior to 06/01/2013 the benchmark was MSCI ACWI ex USA IMI.