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# **INVESTMENT ADVISORY COUNCIL**

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

**INVESTMENT ADVISORY COUNCIL  
MEETING  
February 25, 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**

**February 25, 2025**

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

**Tuesday, February 25, 2025**  
**12:00 p.m.**  
**Retirement Systems Building**  
**Room 106 – Main Floor**  
**60 Empire Drive, St. Paul, MN**

**TAB**

**1. Call to Order**

**2. Election of Chair and Vice Chair** **Motion Needed**

**3. Approval of Minutes of November 19, 2024** **Motion Needed**

**4. Report from the Executive Director (J. Schurtz)**

**A. Quarterly Performance Summary** **A**

**B. Administrative Report** **B**

**5. Market Overview**

Erik Knutzen, Co-Chief Investment Officer—Multi-Asset Strategies  
Neuberger Berman

**6. Private Markets Investment Program Report (J. Stacy/C. Boll)** **C Motion Needed**

**7. 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  
November 19, 2024  
IAC Meeting Minutes

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**Minutes**  
**Investment Advisory Council Meeting**  
**November 19, 2024**

The Investment Advisory Council (IAC) met at 12:00 p.m. on Tuesday, November 19, 2024, 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, Tim Maurer, Ify Onyiah, Carol Peterfeso, Dennis Santos, Sunil Swami, and Jen Wilson.

**MEMBERS ABSENT:** Dan McConnell, Nancy Orr, and Shawn Wischmeier.

**SBI STAFF:** Jill Schurtz, Cassie Boll, Andy Christensen, Preston Guttenberg, Ben Harris, Andrew Krech, Mercy Ndungu, Emily Pechacek, Cal Redemske, Erol Sonderegger, Jonathan Stacy, Jeff Weber and Samir Zahar.

**OTHERS ATTENDING** Katie Comstock and John Sullivan, Aon Investments; Sarah Bernstein, Allan Emkin, Nahom Kebede and Gordon Latter, Meketa Investment Group; Jake Smith, Governor's Office; Dana Mitchell, Attorney General's Office; Ramona Advani, State Auditor's Office; and Justin Erickson, Secretary of State's Office.

**Call to Order**

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

**Approval of IAC Minutes**

The minutes of the August 12, 2024, meeting were approved.

**Performance Summary**

Executive Director/CIO Jill Schurtz introduced Mr. Tim Maurer, Interim Director of the Teachers Retirement Association. 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 September 30, 2024:

AUM: The SBI was responsible for \$149.9 billion in assets, of which the Combined Funds represented \$97.6 billion.

Performance: The Combined Funds returned 5.0% for the quarter and 20.2% for the 12-month period ending September 30, 2024. 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 10<sup>th</sup> percentile for the quarter and the 15<sup>th</sup> percentile for the year.

### **Executive Director's Administrative Report**

Ms. Schurtz referred members to Tab B of the meeting materials and reported that the annual audit of the Office of Legislative Auditor is currently underway and that the SBI annual report will be distributed as soon as practicable following completion of the audit. Ms. Schurtz called attention to the annual budget and the report regarding Russia, Belarus and Iran.

### **Organizational Updates**

Deputy Executive Director Andy Christensen reviewed recent organizational updates, which included two new staff members for Financial Services. Mr. Christensen stated that the SBI is preparing for the posting for the summer internship program. With respect to the office remodeling project, Mr. Christensen indicated that SBI has moved into newly remodeled space on the first floor of the Retirement Systems Building and that additional second-floor space is under construction.

### **Asset Allocation Study**

Mr. Christensen introduced Deputy Chief Investment Officer Erol Sonderegger, Ms. Katie Comstock, a partner and general investment consultant of Aon, and Mr. John Sullivan, who represents the investment policy services team at Aon. The three presented an update on the asset allocation study currently underway. Ms. Comstock and Mr. Sullivan provided an overview of the asset allocation study process and goals. Mr. Sonderegger followed up and stated that staff will be forming an IAC asset allocation working group.

### **Public Markets Investment Program Report**

Ms. Schurtz referred members to Tab D of the meeting materials for the Public Markets Investment Program Report. Andrew Krech, Managing Director of Private Markets and Active Equities, and Emily Pechacek, Vice President and Director of Active Equities, along with members of the Public Markets team presented a recommendation to authorize the Executive Director/CIO, with assistance from the SBI's legal counsel, to negotiate and execute an Investment Management Agreement with Fidelity Institutional Asset Management to implement its Concentrated Emerging Markets strategy. The motion passed.

### **Private Markets Investment Program Report**

Ms. Schurtz referred members to Tab E of the meeting materials for the Private Markets Investment Program Report. Co-Director, Private Markets, Cassie Boll, Jon Stacy, and members of the Private Markets team presented six private market recommendations: Blackstone Energy Transition Partners IV; HPS Strategic Investment Partners VI; IK Small Cap IV Fund; KKR North America Fund XIV; Nordic Capital Evolution Fund II; and EQT Infrastructure VI.

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

**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*

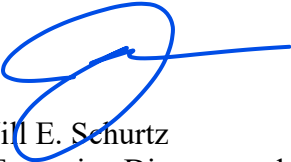
*Meketa Capital Markets Outlook & Risk Metrics Report*

*SBI Comprehensive Performance Report*

**Adjournment of Meeting**

The motion to adjourn the meeting was approved. The meeting adjourned at 1:47 p.m.

Respectfully submitted,



Jill E. Schurtz  
Executive Director and  
Chief Investment Officer

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# TAB A

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## Quarterly Performance Summary

December 31, 2024

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Quarterly Report

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# Performance Summary

## December 31, 2024



## Description of SBI Investment Programs

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The Minnesota State Board of Investment 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.

### **Fire Plans + Other Retirement Plans**

Fire Plans and Other Retirement Plans include assets from volunteer fire relief plans and other public retirement plans with authority to invest with the SBI, if they so choose. Fire Plans that are not eligible to be consolidated with Public Employees Retirement Association (PERA) or elect not to be administered by PERA may invest their assets with the SBI using the same asset pools as the Combined Funds. The Statewide Volunteer Firefighter Retirement Plan is administered by PERA and has its own investment vehicle called the Volunteer Firefighter Account.

### **Participant Directed Investment Program**

The Participant Directed Investment Program (PDIP) provides investment vehicles for a variety of retirement or other tax-advantaged savings plans. Investment goals among the PDIP's many participants are varied. In order to meet the variety of goals, participants may allocate their investments among one or more accounts that are appropriate for their needs within statutory requirements and rules established by the participating organizations.

### **Non-Retirement Funds**

The Non-Retirement Funds are funds established by the State of Minnesota and other government entities for various purposes which include the benefit of public schools, the environment, other post-employment benefits, workers compensation insurance, and other purposes.

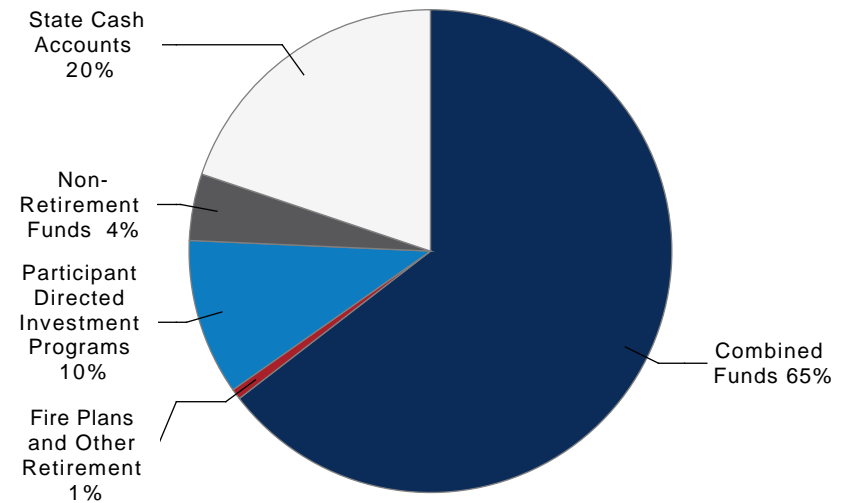
### **State Cash**

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

	<u>\$ Millions</u>
<b>Combined Funds</b>	<b>\$96,601</b>
<b>Fire Plans + Other Retirement Plans</b>	<b>\$1,069</b>
<b>Participant Directed Investment Program</b>	<b>\$15,633</b>
State Deferred Compensation Plan	\$10,564
Health Care Savings Plan	\$2,212
Unclassified Employees Retirement Plan	\$423
Hennepin County Supplemental Retirement Plan	\$185
PERA Defined Contribution Plan	\$108
Minnesota College Savings Plan	\$2,087
Minnesota Achieving a Better Life Experience Plan	\$53
<b>Non-Retirement Funds</b>	<b>\$6,682</b>
Assigned Risk Plan	\$275
Permanent School Fund	\$2,228
Environmental Trust Fund	\$1,981
Closed Landfill Investment Fund	\$159
Miscellaneous Trust Funds	\$1,020
Other Postemployment Benefits Accounts	\$1,020
<b>State Cash</b>	<b>\$29,676</b>
Invested Treasurer's Cash	\$28,580
Other State Cash Accounts	\$1,096
<b>TOTAL SBI AUM</b>	<b>\$149,661</b>



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

<b>Combined Funds</b>	8.5%
<i>Combined Funds - Composite Index</i>	8.2
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

<b>Combined Funds</b>	8.1%
<i>CPI-U</i>	2.6
Excess	5.6

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)

	<u>One Quarter</u>
<b>COMBINED FUNDS</b>	
Beginning Market Value	\$97,619
Net Contributions	-580
Investment Return	-438
Ending Market Value	96,601

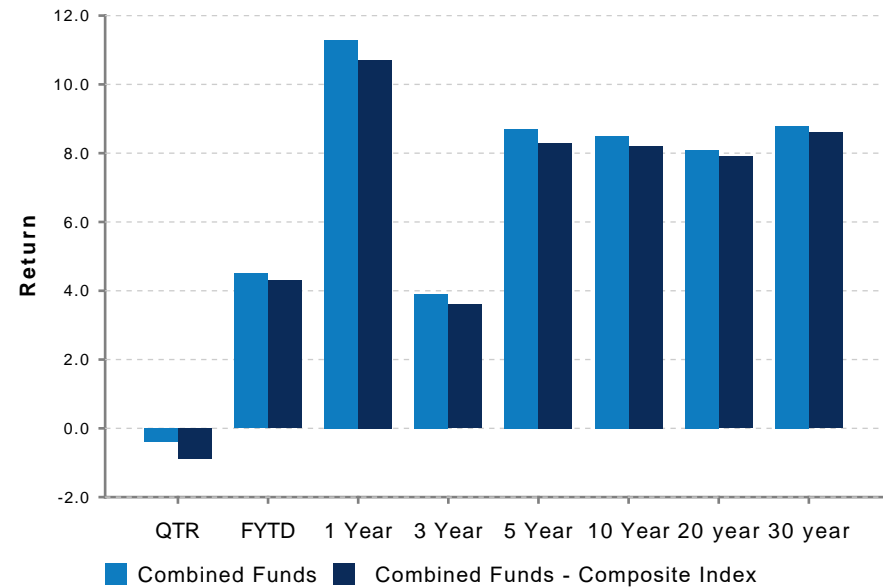
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

### 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.

	<u>QTR</u>	<u>FYTD</u>	<u>1 Yr</u>	<u>3 Yr</u>	<u>5 Yr</u>	<u>10 Yr</u>	<u>20 Yr</u>	<u>30 Yr</u>
Combined Funds	-0.4%	4.5%	11.3%	3.9%	8.7%	8.5%	8.1%	8.8%
Combined Funds-Composite Index	-0.9%	4.3%	10.7%	3.6%	8.3%	8.2%	7.9%	8.6%
Excess	0.4%	0.2%	0.7%	0.3%	0.5%	0.2%	0.3%	0.3%

### Asset Growth



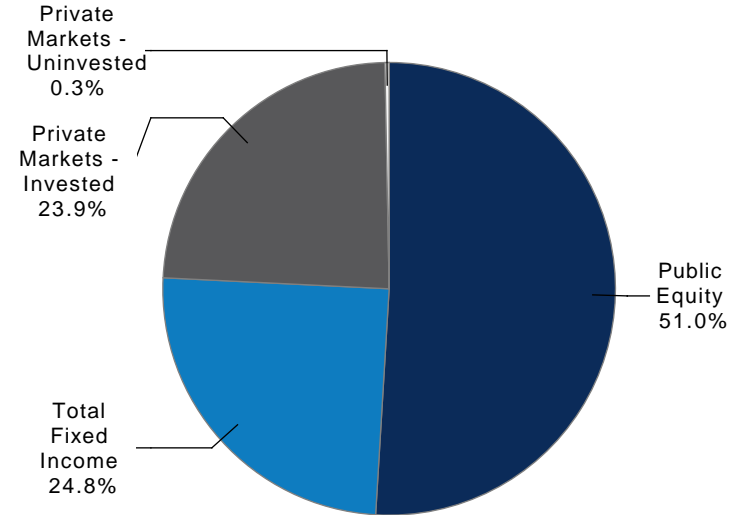


## Combined Funds Summary

### 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.

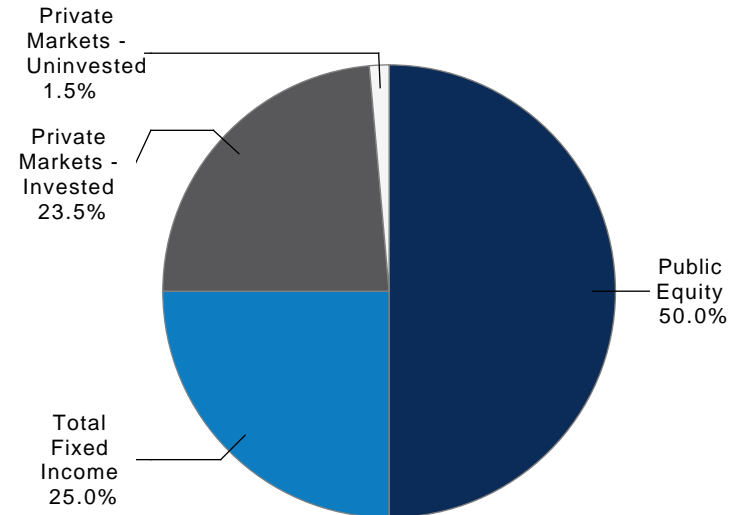
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$49,193	50.9%	50.0%
Total Fixed Income	23,983	24.8	25.0
Private Markets - Total	23,425	24.2	25.0
Private Markets - Invested	23,088	23.9	
Private Markets - Uninvested	338	0.3	
<b>TOTAL</b>	<b>96,601</b>	<b>100.0</b>	



### 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.

	<u>Policy Weight</u>	<u>Market Index</u>
Public Equity	50.0%	Public Equity Benchmark
Total Fixed Income	25.0%	Total Fixed Income Benchmark
Private Markets - Invested	23.5%	Private Markets
Private Markets - Uninvested	1.5%	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).

	<u>Market Value</u>	<u>Actual Weight</u>	<u>Policy Weight</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 Year</u>
Public Equity	\$49.2	50.9%	50.0%	-0.1%	6.2%	18.4%	6.0%	11.1%	10.3%	8.8%	9.5
Public Equity Benchmark				-0.8	6.0	17.6	5.7	10.6	10.1	8.7	9.2
Excess				0.7	0.2	0.8	0.3	0.5	0.2	0.1	0.3
Domestic Equity	33.1	34.3	33.5	2.6	8.9	23.9	8.0	14.0	12.5	10.1	10.6
Domestic Equity Benchmark				2.6	9.0	23.8	8.0	13.8	12.5	10.2	10.6
Excess				-0.0	-0.1	0.1	-0.0	0.2	-0.0	-0.1	-0.1
International Equity	15.0	15.5	16.5	-5.4	0.6	7.8	2.4	5.5	5.7	5.6	5.9
International Equity Benchmark				-7.6	-0.1	5.5	0.8	4.1	4.8	5.0	5.1
Excess				2.2	0.8	2.2	1.6	1.4	0.9	0.6	0.8
Global Equity	1.1	1.1	0.0	-2.7	2.7	11.1	-0.5				
MSCI AC World Index (net)				-1.0	5.6	17.5	5.4				
Excess				-1.8	-2.9	-6.4	-6.0				

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.

	<u>Market Value</u>	<u>Actual Weight</u>	<u>Policy Weight</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 Year</u>
Total Fixed Income	\$24.0	24.8%	25.0%	-3.2%	1.7%	1.3%	-2.4%	0.4%	2.0%	3.5%	5.0%
Total Fixed Income Benchmark				-3.5%	1.3%	0.4%	-3.0%	-0.3%	1.5%	3.1%	4.6%
Excess				0.3%	0.4%	1.0%	0.7%	0.7%	0.6%	0.4%	0.4%
Core/Core Plus	\$5.2	5.4%	5.0	-3.0%	2.2%	1.9%	-2.2%	0.3%	1.9%	3.5%	5.0%
Core Bonds Benchmark				-3.1%	2.0%	1.3%	-2.4%	-0.3%	1.3%	3.0%	4.6%
Excess				0.1%	0.2%	0.6%	0.2%	0.7%	0.6%	0.5%	0.4%
Return Seeking Fixed Income	\$4.7	4.8%	5.0	-1.4%	3.6%	5.1%	0.7%				
Bloomberg U.S. Aggregate				-3.1%	2.0%	1.3%	-2.4%				
Excess				1.7%	1.6%	3.9%	3.1%				
Treasury Protection	\$9.4	9.7%	10.0	-6.2%	-0.0%	-2.8%	-7.0%	-2.7%			
Bloomberg Treasury 5+ Year				-6.2%	-0.0%	-3.0%	-7.1%	-2.7%			
Excess				-0.0%	0.0%	0.1%	0.1%	0.0%			
Laddered Bond + Cash	\$4.7	4.8%	5.0	1.1%	2.7%	5.4%	3.9%	2.4%	1.8%	1.9%	3.0%
ICE BofA US 3-Month Treasury Bill				1.2%	2.6%	5.3%	3.9%	2.5%	1.8%	1.7%	2.5%
Excess				-0.1%	0.2%	0.2%	0.0%	-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

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>25 Year</u>	<u>30 Year</u>
Private Markets - Invested	1.6%	3.8%	7.5%	6.9%	12.8%	11.3%	13.2%	12.6%	13.4%
Private Markets -Uninvested(1)	1.0%	2.1%	5.0%	-2.9%					
Private Equity	2.3%	4.8%	9.5%	6.9%	15.4%	15.2%	15.5%	13.9%	15.4%
Private Credit	1.4%	3.0%	7.8%	9.7%	11.2%	11.5%	12.5%	12.1%	
Resources	-2.3%	-0.3%	0.9%	8.0%	6.1%	0.2%	11.3%	12.8%	12.7%
Real Estate	-0.2%	0.7%	-2.6%	2.7%	7.9%	9.3%	8.4%	8.9%	9.4%

### 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

	<u>12/31/2024</u> <u>(\$ millions)</u>	<u>12/31/2024</u> <u>Weights</u>	<u>Category Range</u>	
<b><u>Growth - Appreciation</u></b>				
Public Equity	\$ 49,219.9	51.0%		
Private Equity	\$ 16,735.1	17.3%		
Non-Core Real Assets	\$ 3,784.1	3.9%		
	<b>\$ 69,739.2</b>	<b>72.2%</b>	50%	75%
<b><u>Growth - Income-oriented</u></b>				
Core Fixed Income	\$ 5,249.4	5.4%		
Private Credit	\$ 2,045.3	2.1%		
Return-Seeking Fixed Income	\$ 4,669.5	4.8%		
	<b>\$ 11,964.2</b>	<b>12.4%</b>	15%	30%
<b><u>Real Assets</u></b>				
Core Real Estate		0.0%		
Real Assets	\$ 466.0	0.5%		
	<b>\$ 466.0</b>	<b>0.5%</b>	0%	10%
<b><u>Inflation Protection</u></b>				
TIPS		0.0%		
Commodities		0.0%		
		<b>0.0%</b>	0%	10%
<b><u>Protection</u></b>				
U.S. Treasuries	\$ 9,404.5	9.7%		
	<b>\$ 9,404.5</b>	<b>9.7%</b>	5%	20%
<b><u>Liquidity</u></b>				
Cash	\$ 5,027.3	5.2%		
	<b>\$ 5,027.3</b>	<b>5.2%</b>	0%	5%
<b><u>Opportunity</u></b>				
Opportunity		0.0%		
		<b>0.0%</b>	0%	10%
<b>Total</b>	<b>\$ 96,601.4</b>	<b>100%</b>		
<b>Illiquid Asset Exposure</b>	<b>\$ 23,030.6</b>	<b>23.8%</b>	0%	32%



### Volatility Equivalent Benchmark Comparison

	As of December 31, 2024						
	<i>1-year</i>	<i>3-year</i>	<i>5-year</i>	<i>10-year</i>	<i>15-year</i>	<i>20-year</i>	<i>30-year</i>
SBI Combined Funds Return	11.3%	3.9%	8.7%	8.5%	9.5%	8.1%	8.8%
Volatility Equivalent Benchmark Return			5.0%	5.8%	6.4%	5.9%	6.8%
Value Added			3.8%	2.7%	3.1%	2.2%	2.1%
Standard Deviation: Benchmark = Combined Funds			10.8%	9.2%	8.9%	9.4%	9.6%
Benchmark Stock Weight			49%	54%	56%	56%	60%
Benchmark Bond Weight			51%	46%	44%	44%	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.

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## Combined Funds Summary

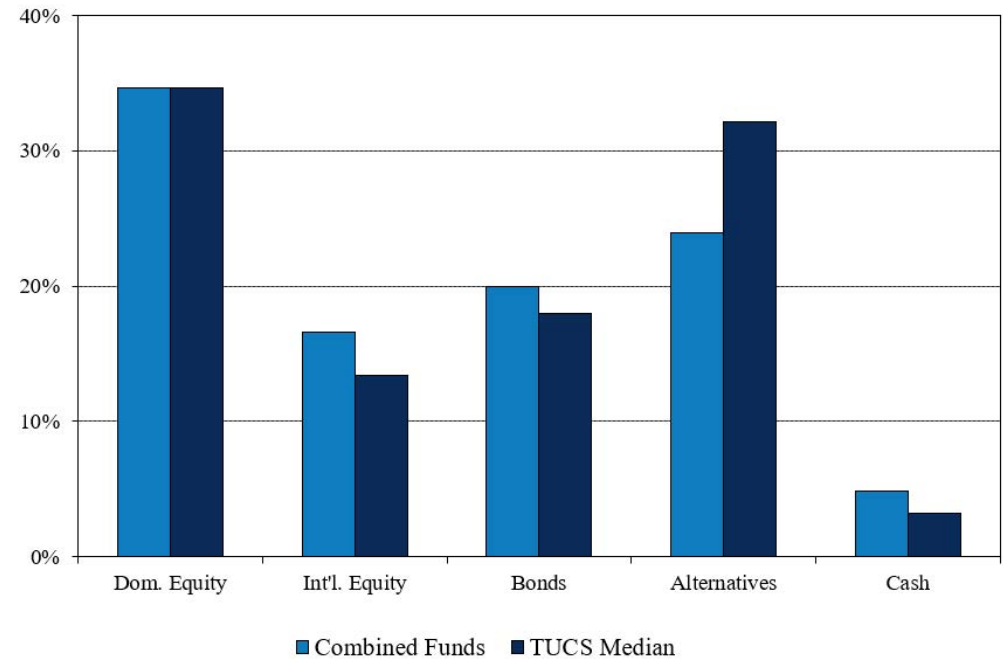
### Asset Mix Compared to Other Pension Funds

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:

#### Combined Funds Asset Mix

	<u>(\$Millions)</u>	<u>Actual Mix</u>
Public Equity	49,193	50.9
Total Fixed Income	23,983	24.8
Private Markets - Invested	23,088	23.9
Private Markets - Uninvested	338	0.3
<b>TOTAL</b>	<b>96,601</b>	<b>100.0</b>



	<u>Domestic Equity</u>	<u>International Equity</u>	<u>Bonds</u>	<u>Alternatives</u>	<u>Cash</u>
Combined Funds	34.7%	16.6%	20.0%	23.9%	4.8%
Median in TUCS	34.7%	13.4%	18.0%	32.2%	3.2%



## Combined Funds Summary

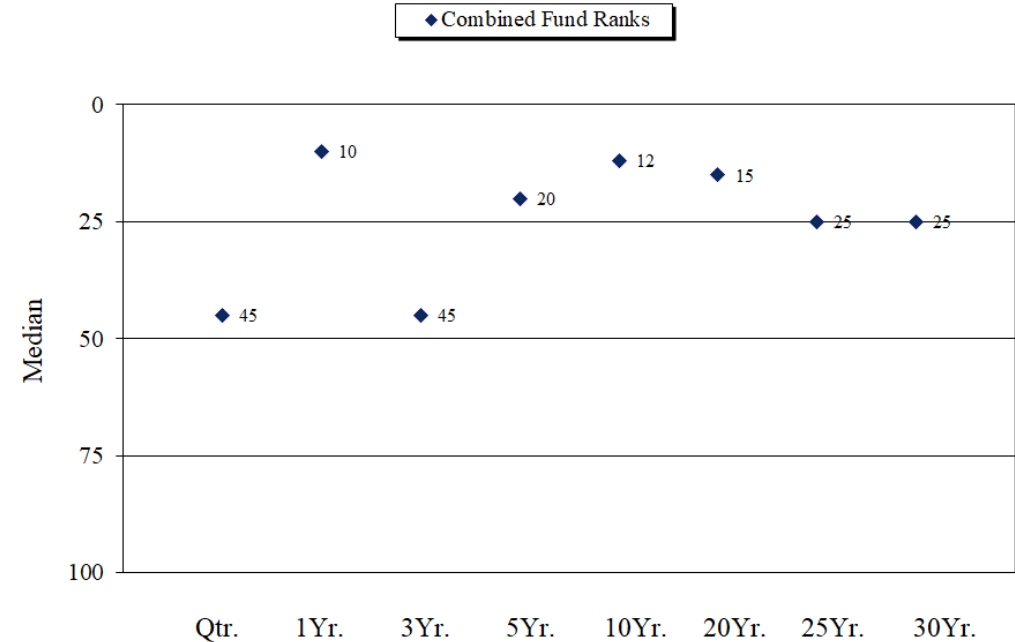
### Performance Compared to Other Pension Funds

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.



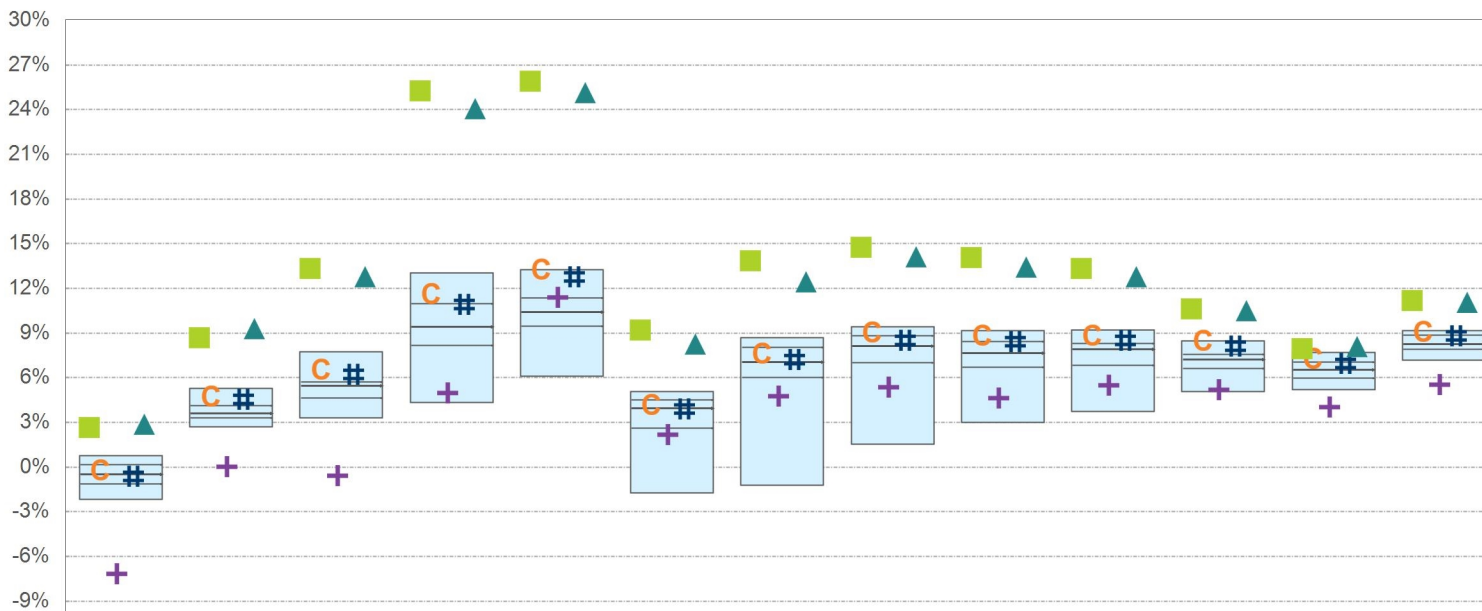
Periods Ended 12/31/2024

	Qtr	1 Yr	3 Yrs	5 Yrs	10 Yrs	20 Yrs	25 Yrs	30 Yrs
Combined Funds	45th	10th	45th	20th	12th	15th	25th	25th
Percentile Rank in TUCS								



# Minnesota State Board of Investments Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$20 Billion  
Cumulative Periods Ending : December 31, 2024



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	0.78	5.27	7.75	13.05	13.25	5.07	8.67	9.44	9.15	9.19	8.49	7.70	9.15
25th	0.18	4.14	5.72	10.96	11.34	4.49	8.04	8.80	8.41	8.30	7.55	7.03	8.86
50th	-0.47	3.60	5.47	9.43	10.40	3.96	7.03	8.12	7.65	7.92	7.24	6.52	8.25
75th	-1.12	3.30	4.66	8.15	9.48	2.63	6.01	7.02	6.72	6.84	6.63	5.96	7.93
95th	-2.17	2.70	3.32	4.35	6.09	-1.72	-1.21	1.52	3.00	3.75	5.09	5.19	7.16

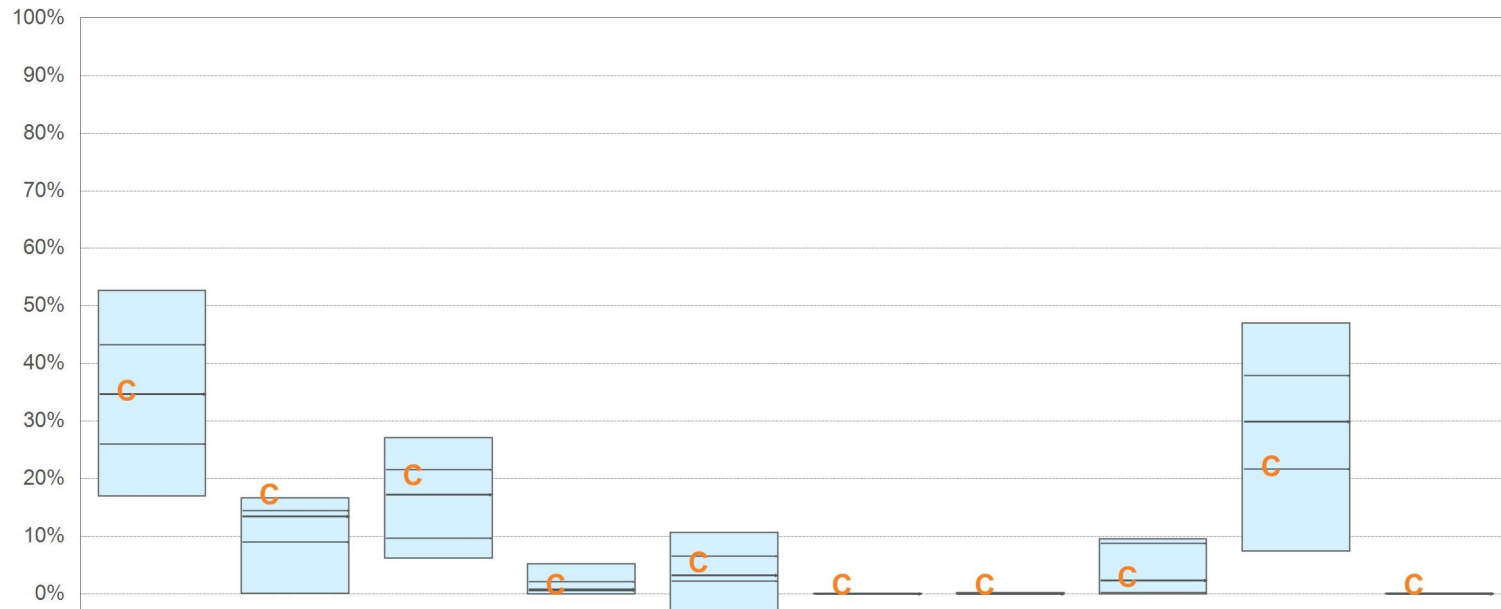
No. Of Obs	22	22	22	22	22	22	22	22	19	19	16	15	14
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<b>C</b> Combined Funds	-0.43 (45)	4.52 (20)	6.30 (15)	11.41 (10)	13.03 (10)	3.97 (45)	7.39 (45)	8.82 (20)	8.60 (18)	8.58 (12)	8.24 (15)	7.03 (25)	8.86 (25)
<b>#</b> SBI Combined Funds Ind	-0.86 (70)	4.28 (20)	5.97 (15)	10.66 (25)	12.52 (20)	3.64 (60)	6.95 (60)	8.27 (40)	8.15 (30)	8.24 (25)	7.87 (15)	6.69 (37)	8.56 (33)
<b>■</b> S&P 500	2.41 (1)	8.44 (1)	13.08 (1)	25.02 (1)	25.65 (1)	8.94 (1)	13.58 (1)	14.52 (1)	13.83 (1)	13.10 (1)	10.36 (1)	7.70 (5)	10.92 (1)
<b>▲</b> Russell 3000	2.63 (1)	9.03 (1)	12.53 (1)	23.81 (1)	24.88 (1)	8.01 (1)	12.17 (1)	13.86 (1)	13.16 (1)	12.54 (1)	10.22 (1)	7.84 (1)	10.81 (1)
<b>+</b> MSCI Wld Ex US (Net)	-7.41 (99)	-0.22 (99)	-0.82 (99)	4.72 (94)	11.13 (30)	1.91 (79)	4.49 (89)	5.10 (94)	4.38 (93)	5.26 (93)	4.95 (99)	3.78 (99)	5.28 (100)

## Minnesota State Board of Investments

### Asset Allocation of Master Trusts - Public : Plans > \$20 Billion

*Quarter Ending December 31, 2024*



Percentile Rankings	US Equity	Non-US Equity	US Fixed	Non-US Fixed	Cash	Convertible	GIC GAC	Real Estate	Alternative Investments	Other
5th	52.68	16.65	27.15	5.16	10.64	0.05	0.13	9.56	46.99	0.06
25th	43.28	14.48	21.55	2.11	6.51	0.00	0.00	8.75	37.88	0.06
50th	34.65	13.38	17.25	0.74	3.22	0.00	0.00	2.31	29.85	0.00
75th	25.99	8.93	9.60	0.49	2.20	0.00	0.00	0.19	21.62	0.00
95th	17.01	0.09	6.23	0.00	-3.38	0.00	0.00	0.00	7.36	0.00
<b>C Combined Funds</b>	34.65 (50)	16.62 (12)	20.00 (31)	0.00 (100)	4.82 (40)	0.00 (100)	0.00 (100)	2.31 (50)	21.59 (81)	0.00 (100)

# TAB B

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## Executive Director's Administrative Report

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DATE: February 18, 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 December 31, 2024, is included as **Attachment A**.

### **2. FY24 Audit Report**

The Office of the Legislative Auditor (OLA) issued a letter dated January 7, 2025 reflecting the results of the financial audit of the State Board of Investment for Fiscal Year 2024, which is included in **Attachment B**. The OLA issued an unqualified (clean) opinion, with no written findings or recommendations.

### **3. FY24 Annual Report**

The Fiscal Year 2024 Annual Report is complete and available on the SBI website.

### **4. 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 fourth calendar quarter of 2024, seven Russian holdings were sold. As of December 31, 2024, eight holdings and Russian 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 December 18, 2024, staff sent a letter to each applicable external manager containing the most recent restricted list.

## **5. 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 third quarter, the SBI Combined Funds portfolio held no companies with operations in Iran.

On December 18, 2024, staff sent a letter to each applicable external manager containing the most recent restricted list.

## **6. 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 December 31, 2024, the MSBI portfolio held no thermal coal-connected assets.

On December 18, 2024, staff sent a letter to each applicable external manager containing the most recent restricted list.

**7. Litigation Update**

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

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**ATTACHMENT A**

**STATE BOARD OF INVESTMENT  
FISCAL YEAR 2025 ADMINISTRATIVE BUDGET REPORT  
FISCAL YEAR TO DATE THROUGH DECEMBER 31, 2024**

<b>ITEM</b>	<b>FISCAL YEAR 2025 BUDGET</b>	<b>FISCAL YEAR 2025 12/31/2024</b>
<b>PERSONNEL SERVICES</b>		
FULL TIME EMPLOYEES	\$ 12,500,000	\$ 5,606,084
PART TIME EMPLOYEES	50,000	24,558
MISCELLANEOUS PAYROLL	200,000	49,478.20
<b>SUBTOTAL</b>	<b>\$ 12,750,000</b>	<b>\$ 5,680,120</b>
<b>STATE OPERATIONS</b>		
RENT & LEASES	\$ 435,000	\$ 188,799
REPAIRS/ALTERATIONS/MAINTENANCE	2,066,000	1,740,738
PRINTING & BINDING	1,500	324
PROFESSIONAL/TECHNICAL SERVICES/IT PROF	510,000	77,390
COMPUTER SYSTEMS SERVICES	557,011	64,347
COMMUNICATIONS	25,000	2,612
TRAVEL, IN-STATE	3,000	266
TRAVEL, OUT-STATE	236,500	87,830
SUPPLIES	50,000	22,876
EQUIPMENT	372,452	50,543
EMPLOYEE DEVELOPMENT	392,400	46,981
OTHER OPERATING COSTS	210,000	115,529
INDIRECT COSTS	427,537	201,165
<b>SUBTOTAL</b>	<b>\$ 5,286,400</b>	<b>\$ 2,599,400</b>
<b>TOTAL ADMINISTRATIVE BUDGET</b>	<b>\$ 18,036,400</b>	<b>\$ 8,279,520</b>

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Judy Randall, Legislative Auditor  
State of Minnesota

January 7, 2025

Jill Schurtz, Executive Director and Chief Investment Officer  
Minnesota State Board of Investment  
60 Empire Drive, Suite 355  
Saint Paul, MN 55103  
Sent via e-mail: [Jill.Schurtz@state.mn.us](mailto:Jill.Schurtz@state.mn.us)

Dear Executive Director Schurtz:

The Office of the Legislative Auditor has completed its audit of certain financial activities at the Minnesota State Board of Investment (SBI). This work supports our audit of the State of Minnesota's financial statements for the fiscal year ended June 30, 2024. The primary objective of the audit was to render an opinion on the State of Minnesota's financial statements, which is included in the *Annual Comprehensive Financial Report*, prepared by Minnesota Management and Budget. The work in your department also supported our audit opinions on the financial statements of the three state retirement systems: Minnesota State Retirement System, Public Employees Retirement Association, and Teachers Retirement Association. This was not a comprehensive audit of the Minnesota State Board of Investment.

In planning and performing this audit, we considered SBI's internal control system to determine the appropriate audit procedures. We gained an understanding of, but did not test, SBI's internal controls. As part of this audit, we also reviewed certain investment-related financial activity presented in the financial statements and notes to the financial statements for the State of Minnesota and the three state retirement systems. This activity included, but was not limited to, investment balances, investment fees, and securities lending.

On December 13, 2024, we issued an unqualified (clean) opinion on the State of Minnesota's financial statements for the fiscal year ended June 30, 2024. Following that, we issued an unqualified (clean) opinion on the financial statements of each of the three state retirement systems. For the fiscal year ending June 30, 2024, we had no written findings or recommendations directed toward SBI.

We appreciate the cooperation and assistance provided by the staff and administration of SBI throughout our audit process.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori Leysen".

Lori Leysen, CPA  
Deputy Legislative Auditor

cc: Members, Minnesota State Board of Investment  
Paul Anderson, Director, Financial Services and Operations

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## Private Markets Investment Program Report

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DATE: February 18, 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 Inc.	Blackstone Capital Partners Asia III L.P.	up to \$300 million
Private Credit	Sixth Street Partners	Sixth Street Opportunities Partners VI, L.P.	up to \$150 million

**New Managers:**

Private Equity	Stone Point Capital	Trident X US Fund, L.P.	up to \$100 million
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**SBI action is required on item B.**

## A. Status of SBI Current Private Markets Commitments

### Minnesota State Board of Investment Combined Funds December 31, 2024

Combined Funds Market Value \$96,601,399,603

	% of Combined Funds	Current Level	Target Level <sup>1</sup>	Difference
Market Value (MV)	23.9%	\$23,087,662,768	\$24,150,349,901	\$1,062,687,133
<i>Policy Target</i>	25%			
<i>Statutory Limit</i>	35%			
MV + Unfunded	36.2%	\$34,928,849,110	\$48,300,699,802	\$13,371,850,691
<i>Policy Limit</i>	50.0%			

Asset Class	% of Combined Funds	Market Value	Unfunded Commitment	Total
Private Equity	17.3%	\$16,735,116,634	\$8,498,515,721	\$25,233,632,356
Private Credit	2.1%	\$2,045,321,831	\$1,198,073,965	\$3,243,395,796
Real Assets	2.1%	\$2,023,107,027	\$674,252,083	\$2,697,359,110
Real Estate	2.3%	\$2,227,085,081	\$1,470,344,573	\$3,697,429,654
Other <sup>2</sup>		\$57,032,195		\$57,032,195
<b>Total</b>		\$23,087,662,768	\$11,841,186,343	\$34,928,849,110

### Cash Flows December 31, 2024

Calendar Year	Capital Calls	Distributions	Net Invested
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)

<sup>1</sup> There is no target level for MV + Unfunded. This amount represents the maximum allowed by policy

<sup>2</sup> 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, Blackstone Inc., in Blackstone Capital Partners Asia III (“Fund”).**

Blackstone Inc. is forming Blackstone Capital Partners Asia III to make large-scale control and control-oriented private equity investments in the Asia Pacific region, primarily India, Australia, Southeast Asia, Korea and Japan. Control-oriented transactions allow Blackstone to implement its operating intervention playbook, influence key management decisions and exercise exit optionality. The Fund strategy focuses heavily on sectors with understandable business models, free cash flow generation and healthy returns on invested capital. Sectors of focus include technology, healthcare, industrials, services, financial services, and consumer/leisure. The Fund stands to benefit from Blackstone’s efforts over the last 15 years building a dedicated private equity team in Asia, which today is comprised of seasoned, local market experts who are firmly grounded in Blackstone’s core investment and operating philosophies.

In addition to reviewing the attractiveness of the Blackstone Capital Partners Asia III investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, 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 Blackstone Capital Partners Asia III is included as **Attachment A beginning on page 7.**

### **RECOMMENDATION:**

**Staff is recommending a commitment of up to \$300 million to Blackstone Capital Partners Asia III 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 Blackstone Capital Partners Asia III 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 Blackstone Inc. 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 Blackstone Inc. or a reduction or termination of the commitment.**

**2) Investment with an existing private credit manager, Sixth Street Partners (“Sixth Street”), in Sixth Street Opportunities Partners VI, L.P. (“Fund”).**

Sixth Street is forming Sixth Street Opportunities VI to pursue thematic, actively managed investments exhibiting downside protection across three major “hunting grounds”: (1) control-oriented opportunities, (2) asset opportunities, and (3) corporate dislocations. These investments will be purchased or originated across the economic and credit cycle by targeting deep value opportunities with embedded complexity that are difficult for others to source, analyze, or execute. Sixth Street gravitates towards situations where it believes it has a high probability of being able to gain control or influence outcomes to protect the downside and maximize value creation to the upside. When constructing portfolios, Sixth Street seeks top-down investment themes in dislocated sectors as well as bottom-up opportunities where it can provide capital to businesses with capital needs caused by secular or idiosyncratic changes. Sixth Street’s cycle-agnostic investment approach enables it to navigate each opportunity’s complexity to create a customized solution and drive value creation.

In addition to reviewing the attractiveness of the Sixth Street Opportunities Partners VI, L.P. investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, 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 Sixth Street Opportunities Partners VI, L.P. is included as **Attachment B beginning on page 11.**

**RECOMMENDATION:**

**Staff is recommending a commitment of up to \$150 million to Sixth Street Opportunities Partners VI, 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 Sixth Street Opportunities Partners VI, 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 Sixth Street 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 Sixth Street Partners or a reduction or termination of the commitment.**

**3) Investment with a new private equity manager, Stone Point Capital LLC (“Stone Point”), in Trident X US Fund, L.P. (“Fund”).**

Stone Point Capital LLC is forming Trident X US Fund, L.P., to make private equity investments in businesses within the financial services industry. The Fund expects to invest primarily in North America and Western Europe and generally will target control or substantial minority positions with board representation and extensive shareholder rights. Stone Point has identified specific sub-sectors that it believes will present attractive investment opportunities, including, but not limited to, insurance distribution and services, health insurance & workers’ compensation services, employee benefits & human capital management, and wealth management & fund administration. The investment team employs a top-down and bottom-up approach to source new opportunities and works collaboratively with portfolio companies to enhance value. Stone Point’s long history within its sub-sectors will enable the Fund to leverage Stone Point’s experience identifying leading companies within thematically attractive sectors.

In addition to reviewing the attractiveness of the Trident X US Fund, L.P. investment opportunity, staff conducted appropriate due diligence, including but not limited to reference checks, database searches, 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 Trident X US Fund, L.P. is included as **Attachment C beginning on page 15.**

**RECOMMENDATION:**

**Staff is recommending a commitment of up to \$100 million to Trident X US Fund, 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 Trident X US Fund, 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 Stone Point Capital 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 Stone Point Capital LLC or a reduction or termination of the commitment.**

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## ATTACHMENT A

### PRIVATE EQUITY MANAGER SUMMARY PROFILE

#### I. Background Data

<b><i>Name of Fund:</i></b>	Blackstone Capital Partners Asia III L.P.
<b><i>Type of Fund:</i></b>	Private Equity
<b><i>Target Fund Size:</i></b>	\$12.9 Billion
<b><i>Fund Manager:</i></b>	Blackstone Inc.
<b><i>Manager Contact:</i></b>	Kelly Stephens 345 Park Avenue New York, NY 10154

#### II. Organization and Staff

Blackstone Inc. (together with its affiliates “Blackstone” or the “Firm”) is sponsoring Blackstone Capital Partners Asia III L.P. (“BCP Asia III” or the “Fund”), a private investment fund that will make large scale control and control-oriented private equity investments in the Asia Pacific region. The Fund stands to benefit from Blackstone’s efforts over the last 15 years building a dedicated private equity team in Asia, which today is comprised of seasoned, local market experts who are firmly grounded in Blackstone’s core investment and operating philosophies.

Blackstone 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, tactical opportunities, infrastructure and insurance solutions. As of December 31, 2024, Blackstone had 254 Senior Managing Directors, and approximately 4,900 employees across 28 offices globally, and the Firm’s total assets under management was approximately \$1,100 billion.

Blackstone Asia has a dedicated team of 80 investment and operating professionals across 7 offices in Asia (Mumbai, Hong Kong, Shanghai, Singapore, Seoul, Sydney and Tokyo). BCP Asia III will be led by Amit Dixit, who has been with Blackstone since 2007, and a single global Investment Committee comprised of Stephen A. Schartzman, Jonathan Gray, Joseph Baratta, Lionel Assant, Prakash Melwani and Blackstone’s Asia Senior Managing Directors. Amit and the other 6 Senior Managing Directors in Asia have an average of 19 years of experience in local markets.

Blackstone’s commitment to diversity and inclusion is reflected at all levels of the organization. The Firm aims to drive value by supporting its portfolio companies in the recruitment, development, and advancement of top talent at all levels from a broad range of talent networks. Blackstone partners with and provides direct support to multiple diversity

focused organizations such as Sponsors for Educational Opportunity, Toigo Foundation, Year Up, Girls Who Invest, Ladders for Leaders, Cristo Rey Brooklyn, 30 Percent Coalition, Declare, and Level 20.

### **III. Investment Strategy**

Blackstone Capital Partners Asia III will focus solely on investing in the Asia Pacific region, primarily India, Japan, Australia, Southeast Asia, and Korea. China has historically comprised less than five percent of the strategy, but to the extent BCP Asia III makes any investments in China, BCP Asia III will offer investors the option to opt out of any such investments in China. Since August 2012 during BCP VI, Blackstone Asia has invested or committed \$12.6 billion in the Asia Pacific region. Investing in Asia is a long-term strategic priority, and today Blackstone is one of the largest alternative asset managers in the region.

BCP Asia III is primarily focused on control-oriented transactions which allows Blackstone to implement its operating intervention playbook, influence key leadership and management decisions, and exercise exit optionality. BCP Asia I and II each consist of 100% control-oriented transactions. Blackstone believes it has established itself as the leader in control-oriented growth buyouts in Asia.

Sector-based, theme-driven deal sourcing is the primary responsibility and mandate of Blackstone's investment professionals. Blackstone's presence in the market for over 19 years has allowed it to leverage a deep track record in the region and a deep network to generate differentiated access to bilateral sourcing and the ability to attract and retain management teams. 77% of Blackstone's transactions in BCP Asia I and II have been exclusive/proprietary (non-auction) transactions. Blackstone's scale and depth in the region allow it to act with speed and certainty to navigate complex situations to secure investments in high-quality businesses. Blackstone believes that its sourcing and deal execution capabilities allow it to set up transactions at an attractive valuation, materially below comparable companies.

Blackstone's sector specialization is a crucial component of its investment process. The Fund targets sectors which leverage Blackstone's existing portfolio/BX platform and deep domain expertise within high growth, resilient sectors. Prior funds have been diversified across six sectors: technology, healthcare, industrials, services, financial services, and consumer/leisure. Blackstone focuses heavily on sectors with understandable business models, free cash flow generation and healthy returns on invested capital. For the purposes of the Asia investment strategy, this often means avoiding sectors heavily exposed to government regulation and/or spending.

Blackstone sets itself apart from peers by actively targeting companies where significant equity value can be created through identifiable, executable strategic and operational change. The Firm's strategic/operational change initiatives might focus on, for example, leveraging data science for new sales leads, entry into new geographies, upgrading existing

management, pricing, cost reduction, lean process, acquisitions and/or deployment of capital to fund new businesses or product lines. Blackstone strives for each portfolio company to have a fit-for-purpose chairperson to work closely with the executive management teams of its companies to implement the “Operating Intervention Plan”. These chairpersons are recruited specifically for each portfolio company and possess relevant skills and domain expertise to help drive value creation in Blackstone companies. The chairpersons are not Blackstone employees but are engaged by their portfolio companies and are recruited from Blackstone’s vast network of operating executives established over many years.

Maintaining a robust process for evaluating exits is also a crucial part of risk management and optimizing returns. When contemplating a potential exit, the deal team considers factors including the opportunity presented, the timing and operating risks if they postpone, the risk-adjusted reinvestment or “do nothing” rate of return and the distributed proceeds. The investment team then discusses the exit scenario with the Investment Committee and makes an informed, probability weighted exit decision in the best interests of Limited Partners and the overall fund return. As a general rule of thumb, if Blackstone is no longer intervening to drive value and if the markets are functioning, the Firm’s practice is to sell.

Blackstone takes a comprehensive approach to sustainability by integrating it in the management of their portfolios and assets. Each business vertical at the Firm has a dedicated Head of Sustainability and the teams utilize data during the diligence and ownership phases to provide transparency and accountability through annual reporting. Blackstone will seek to encourage and implement appropriate governance structures, policies, controls, and processes across all their portfolios and assets to strengthen them and enhance returns.

#### **IV. Investment Performance**

Previous fund performance as of September 30, 2024 for Blackstone and the SBI's investments with previous funds, where applicable, is shown below:

<b>Fund</b>	<b>Vintage Year</b>	<b>Total Commitments</b>	<b>SBI Investment</b>	<b>Net IRR*</b>	<b>Net MOIC*</b>	<b>Net DPI*</b>
BCP Asia	2017	\$2.29 billion	--	26%	2.0x	0.9x
BCP Asia II	2021	\$6.3 billion	\$270 million	35%	1.5x	0.0x

\* 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 Blackstone.

## **V. Investment Period and Term**

The Investment Period will last for a period of six years. The term of the Fund is eleven years, subject to two (one-year) extensions without L.P. Advisory Committee approval (but subject to L.P. Advisory Committee objection) and further additional one-year extensions subject to L.P. Advisory Committee approval.

*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 B

### PRIVATE CREDIT MANAGER SUMMARY PROFILE

#### I. Background Data

<b>Name of Fund:</b>	Sixth Street Opportunities Partners VI, L.P.
<b>Type of Fund:</b>	Private Credit
<b>Target Fund Size:</b>	\$4.0 – \$5.0 billion
<b>Fund Manager:</b>	Sixth Street Partners
<b>Manager Contact:</b>	Brian D’Arcy 1 Letterman Drive, Building B, Suite B6-100 San Francisco, CA 94129

#### II. Organization and Staff

Sixth Street Partners (the “Firm”) is raising Sixth Street Opportunities VI, L.P. (the “Fund “or “Opps VI”), to pursue thematic, actively managed investments exhibiting downside protection across three major hunting grounds: control-oriented opportunities, asset opportunities and corporate dislocations. Opps VI seeks to have a bias toward high-touch, cash yielding opportunities backed by attractive asset value. The Fund will continue to focus on investing in its core regions of North America and Europe and may pursue investment opportunities in other geographies.

Sixth Street is a global investment firm with approximately \$100 billion<sup>1</sup> in assets under management. Founded in 2009 by Alan Waxman and several other partners, Sixth Street is led by 41 Partners, who oversee approximately 650 people across offices in San Francisco, New York, Houston, Dallas, Boston, Chicago, Austin, London, Luxembourg and Hong Kong. Prior to forming Sixth Street, the founding partner group worked together in the largest proprietary investment business at Goldman Sachs & Co. (“Goldman Sachs”), where Alan Waxman was Chief Investment Officer of the Americas Special Situations Group (“AmSSG”). Sixth Street Opps VI will be led by Alan Waxman with support from the Investment Committee. The Committee will include Messrs. Waxman (Co-CIO), Josh Easterly (Co-CIO), Julian Salisbury (Co-CIO) and Steven Pluss (Chief Risk Officer).

In January 2025, Sixth Street Partners announced the formation of a strategic partnership with Northwestern Mutual, a Milwaukee based insurance and wealth company. Upon completion of the transaction, Northwestern Mutual will retain a passive minority economic stake in Sixth

<sup>1</sup> AUM is presented as of 9/30/2024, unless otherwise noted. AUM includes the total fair value of investments of private investment funds (including leverage, where applicable), certain co-investment vehicles and accounts for which Sixth Street provides investment management or advisory services, as well as capital that such funds, vehicles and accounts have the right to call from investors pursuant to the terms of their capital commitments, and additional fundraising commitments and fund, vehicle and account liquidations since 9/30/2024. In the case of Sixth Street-managed business development companies and certain accounts for which Sixth Street provides investment management or advisory services, the value of non-investment assets is also included. With respect to Sixth Street-managed collateralized loan obligations, AUM reflects the face amount of debt and equity outstanding. AUM includes capital to be managed in connection with the strategic partnership discussed in the Sixth Street press release that can be accessed at sixthstreet.com. Effective 1/1/2025, Sixth Street has revised its methodology for calculating AUM. If AUM were calculated under the prior methodology, it would have been lower. Additional information about the AUM calculation is available upon request. Calculation of AUM differs from the calculation of regulatory assets under management in Form ADV filings and may differ from the AUM calculation methodologies used by other investment managers.

Street alongside Blue Owl, who completed its passive minority economic stake in 2017. The majority of the Firm is owned by Sixth Street's 41 Partners<sup>2</sup>.

Sixth Street operates under a "one-team" construct, in which team members have key focus areas but frequently act as generalists and are incentivized to share opportunities across the platform, independent of particular vehicles or strategies, when sourcing and underwriting potential investments. The senior leadership team is based in San Francisco, New York, Houston, Dallas and London, with additional team members located in Boston, Luxembourg, Austin, Chicago and Hong Kong

Sixth Street's long-standing committee on inclusion and diversity, comprised of leaders across different functions and levels of the firm, is responsible for setting Sixth Street's strategic priorities related to its One Team culture, recruiting initiatives, and promoting an inclusive work environment. Its Employee Affinity Groups ("EAGs") strengthen the Sixth Street community, create opportunities for shared engagement, and offer leadership and mentoring opportunities. Its EAGs are inclusive, welcoming every team member across Sixth Street.

### **III. Investment Strategy**

Sixth Street Opportunities Funds ("Opps Fund" or "Opps") will seek to pursue thematic, control-oriented, actively managed investments exhibiting downside protection. These investments will be purchased or originated across the economic and credit cycle by targeting deep value opportunities with embedded complexity that are difficult to source, analyze, or execute. Investment selection is largely based upon 15-25 migrating themes across the Sixth Street Platform. Sixth Street expects to build the Opportunities VI portfolio across three major hunting grounds: "Control Orientation," "Asset Opportunities," and "Corporate Dislocations" each of which are described below.

Sixth Street gravitates towards situations where it believes it has a high probability of being able to gain control or influence outcomes in order to protect the downside and maximize value creation to the upside. The Opps Fund will seek to target investments in the senior parts of the capital structure. These opportunities typically consist of bank debt secured by a lien on the company's assets. Second, Opps seeks to create last-dollar risk at deep discounts to intrinsic value. Finally, Opps targets Control Orientation investments where Sixth Street can improve the business's trajectory through new management, capital allocation, or operation efforts. Operational efforts may include leading the restructuring process or improving operations post-restructuring.

Asset Opportunities involve (i) the acquisition of non-performing, sub-performing, or orphaned loan portfolios and related origination, asset management, and servicing businesses, and (ii) the acquisition of individual real estate assets or portfolios across a wide range of real estate sectors, as well as structured real estate investments which may include mezzanine debt or preferred equity.

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<sup>2</sup> As of January 2025

Corporate Dislocations are highly structured “new money” transactions. Sixth Street seeks to be a solution provider to companies undergoing some type of dislocation, or to companies confronted with an idiosyncratic issue. Key characteristics of these dislocations include (i) structural changes that create an unmet economic need, (ii) flight of traditional capital providers creating a supply/demand imbalance due to illiquidity, market shocks, negative perception of sectors, or poor regulatory capital treatment of the asset class, and/or (iii) complexity in accessing or analyzing the asset class. Sixth Street seeks to identify these areas of dislocation globally and across core sectors that will enable it to leverage its proprietary diligence and innovative structures across multiple deals. Sixth Street constructs top-down investment themes in dislocated sectors as well as bottom-up opportunities where it can provide funds to businesses with capital needs caused by secular or idiosyncratic changes. Sixth Street believes it is well positioned to target under-managed assets or companies which may be operating in an environment that is undergoing change, whether caused by internal or external factors. Its cycle-agnostic investment approach enables it to navigate each opportunity’s complexity to create a customized solution and drive value creation. Sixth Street aims to deliver value and/or improve outcomes through active operating and servicing capabilities and by driving or influencing the restructuring process.

Sixth Street’s “One Team” approach to sourcing allows all teams to benefit from the collective effort, relationships, and information of Sixth Street’s sourcing and deal professionals. Further, the experience and depth of the Sixth Street professionals within the opportunistic credit landscape has created a strong brand name for Sixth Street. Sixth Street believes this brand name allows them to attract high-quality deal flow from both market and off-market sources. Further, Sixth Street has established multiple external platforms and strategic relationships with various groups and individuals, which allow Sixth Street to operate as locals in various geographies, sectors, and asset types in pursuit of opportunities.

Sixth Street is a signatory to the United Nations-supported Principles for Responsible Investment. Sixth Street seeks to deliver compelling risk-adjusted returns while conducting its business with high standards of integrity. Sixth Street believes that sustainability and governance factors can affect the risk profile, profitability, and general performance of investments. Considering the impact and potential impact of these factors allows the Firm to spot investment risks, anticipate trends, and inform investment decisions.

#### **IV. Investment Performance**

Previous fund performance as of September 30, 2024 is shown below:

<b>Fund</b>	<b>Vintage Year</b>	<b>Total Commitments</b>	<b>SBI Investment</b>	<b>Net IRR*</b>	<b>Net MOIC*</b>	<b>Net DPI*</b>
OPPS I <sup>1</sup>	2009	\$2.2 billion	--	26.4% (GROSS)	2.3x (GROSS)	--
OPPS II	2011	\$2.2 billion	--	16.1%	1.7x	1.4x
OPPS III	2014	\$3.4 billion	--	8.5%	1.5x	1.1x
OPPS IV	2019	\$3.2 billion	\$50 million	10.5%	1.4x	0.7x
OPPS V	2022	\$4.1 billion	\$75 million	7.8%	1.1x	0.2x

1. Opps I consists of a series of investments made across multiple former affiliate funds and therefore does not have actual net performance figures.

\* Net IRR, Net MOIC, and Net DPI provided by Sixth Street Partners.

#### **V. Investment Period and Term**

The Investment Period will last for a period of four years from the final closing. The term of the Fund is 8 years, subject to a one-year extension without L.P. Advisory Committee approval and thereafter, an additional one-year extension subject to either the L.P. Advisory Committee approval or approval from a majority of 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 C

### PRIVATE EQUITY MANAGER SUMMARY PROFILE

#### I. Background Data

<b>Name of Fund:</b>	Trident X
<b>Type of Fund:</b>	Private Equity Limited Partnership
<b>Total Fund Size:</b>	\$9 billion
<b>Fund Manager:</b>	Stone Point Capital LLC
<b>Manager Contact:</b>	Anne Gilliland 20 Horseneck Lane Greenwich, CT 06830

#### II. Organization and Staff

Stone Point Capital LLC (“Stone Point” or the “Firm”) is sponsoring Trident X US Fund, L.P. (the “Fund” and, together with its parallel funds, “Fund X”), to make private equity investments in businesses within the financial services industry.

The Fund’s investment activities will be led by Investment Committee members James D. Carey, Charles A. Davis, Stephen Friedman, Agha S. Khan, Fayez S. Muhtadie, David J. Wermuth, and Nicolas D. Zerbib, who bring substantial industry experience. A subset of this group has had primary responsibility for managing the Trident Funds since 1998, and all seven have been with the firm since 2003. The Investment Committee will be responsible for making all investment and disposition decisions. Stone Point has an experienced investment team with a long, successful record of making private equity investments and managing businesses in the financial services industry. The investment team is comprised of 18 Managing Directors, over 75 dedicated investment professionals, and senior advisors who bring considerable experience to Stone Point.

Stone Point has a history of successfully investing in the global financial services industry over a period of more than thirty years. The platform began in 1985 and operated as MMC Capital under the ownership of Marsh & McLennan Companies, Inc. until 2005. Certain members of the Investment Committee of Stone Point led the management of MMC Capital from 1998 until 2005 when they formed Stone Point to acquire the business from Marsh & McLennan. In 1994, the Firm formed its first private equity fund with committed capital to invest in underwriting companies operating principally within the insurance industry. During the last twenty years, investment activities have broadened to include other financial services and adjacent sectors. In 2012, Stone Point sold a passive minority stake in the Trident Funds to an affiliate of Wafra Inc., which has been an investor in Stone Point since Trident I. The employees of Stone Point remain the majority owners. Stone Point is headquartered in Greenwich, CT, and has additional offices in New York and Florida.

Stone Point believes that people are the most important and greatest asset. The Firm's DEI Committee, led by senior investment team members, was formed in 2018 to evaluate additional opportunities to foster a diverse and inclusive environment. Initiatives include partnerships with external organizations, such as The Veterans Scholars at U Chicago, Sponsors for Educational Opportunity, and Women's Association of Venture & Equity. In 2020, the Firm joined ILPA's Diversity in Action Initiative as a founding signatory and continues to enhance its DEI program and initiatives in coordination with ILPA's best practices.

### **III. Investment Strategy**

Consistent with its predecessor funds, Fund X will seek investment in the global financial services industry. Stone Point has identified specific sectors that it believes will present attractive investment opportunities, including insurance distribution, insurance services, health insurance & workers' compensation services, employee benefits & human capital management, insurance underwriting, business services, wealth management & fund administration, asset management, real estate finance & services and lending & markets. Fund X expects to invest primarily in North America and Western Europe and generally will target control or substantial minority positions with board representation and extensive shareholder rights. The Fund will generally seek to make investments with aggregate commitments of \$100 million to \$1 billion per investment.

Stone Point has invested over \$30 billion in more than 160 companies in the financial services industry since 1994. The Firm believes that focusing its activities on proactive deal sourcing produces higher-quality investment opportunities. Stone Point regularly evaluates sectors within the financial services industry based on an investment thesis (top-down approach) and designates a team of investment professionals to identify leading companies in these sectors (bottom-up approach). This process includes Firm-wide discussions to prioritize the identified sub-sectors, dedicating small teams of investment professionals to study the sectors, interaction with industry experts and attendance at key industry events, and proactive outbound efforts to meet with the management teams. Identifying an opportunity through this targeted process can take many years. However, it enables Stone Point to source proprietary investment opportunities that are not part of a competitive auction process and respond quickly when attractive opportunities emerge. Further, Stone Point's investment team's experience, knowledge, reputation, contacts, and track record provide an advantage in recruiting proven management teams.

The Firm's core business has been to identify and invest in service companies with proven business models led by outstanding management teams. Stone Point seeks to invest in service businesses, which are identified as companies that provide a product or service to a financial services business or that otherwise participate in the value chain served by the applicable business. The Firm has made these investments in several ways, including buyouts from larger parent organizations and purchases of majority or significant minority stakes from owner-operators seeking a private equity partner to help them continue to build their business. In addition to investing in service companies, Stone Point has

opportunistically invested in balance sheet or capital-intensive companies in response to dislocations in the financial services space.

Post acquisitions, the team works closely and collaboratively with its portfolio companies to enhance the value of the portfolio companies, including, but not limited to, the following:

- Utilizing Stone Point’s extensive network of contacts to identify and recruit talented management and directors and to assist with the development of the business;
- Working closely with management teams to analyze business plans and strategic objectives, including identifying and evaluating acquisition opportunities, new business initiatives, and restructuring plans;
- Employing its experience in working with regulators in select countries;
- Assisting in developing extensive financial reporting, governance, compliance, and risk management practices; and
- Developing and executing optimal exit strategies.

Stone Point recognizes that a responsible approach to investing, which considers environmental, social, and governance (ESG) risks, is an essential element of its investment strategy. Stone Point is committed to considering material ESG issues relevant to its investment strategy during its due diligence and portfolio investment monitoring. The Firm’s Chief Compliance Officer and other members of Stone Point’s ESG committee oversee the maintenance and implementation of its Responsible Investment policy, which incorporates consideration of ESG factors into its risk assessment, monitoring, and investment process.

#### **IV. Investment Performance**

Previous fund performance as of September 30, 2024, is shown below:

<b>Fund</b>	<b>Vintage Year</b>	<b>Total Commitments</b>	<b>SBI Investment</b>	<b>Net IRR*</b>	<b>Net MOIC*</b>	<b>Net DPI*</b>
Fund I	1994	\$667 million	--	21%	1.4x	1.4x
Fund II	1999	\$1.4 billion	--	16%	2.0x	2.0x
Fund III	2004	\$1.1 billion	--	19%	2.3x	2.3x
Fund IV	2007	\$2.3 billion	--	16%	2.2x	2.2x
Fund V	2010	\$3.6 billion	--	12%	2.0x	1.7x
Fund VI	2014	\$4.5 billion	--	21%	2.5x	2.1x
Fund VII	2017	\$5.5 billion	--	19%	2.1x	0.8x
Fund VIII	2020	\$7.0 billion	--	14%	1.5x	0.2x
Fund IX	2022	\$9.1 billion	--	20%	1.3x	0.0x

\* Previous Fund investments may be relatively immature and, therefore, returns may not be indicative of future results. Net IRR, net Multiple of Invested Capital (MOIC), and net DPI are provided by Stone Point.

**V. Investment Period and Term**

The Investment Period will last for a period of six years from the commencement date of the Fund. The term of the Fund is ten years, subject to two (one-year) extensions without L.P. Advisory Committee approval (but subject to L.P. Advisory Committee objection) and further additional one-year extensions subject to L.P. Advisory Committee approval.

*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.*



# REPORTS

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- ❖ 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

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## Public Markets Investment Program

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DATE: February 18, 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 December 31, 2024. 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:

	<b>Page</b>
• Market Review and Combined Funds Performance	3
• Public Markets Managers' Performance	5
• Organizational Updates and Summary of Manager Meeting Activity	11

*Important Notes:*

*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 Fourth Quarter 2024 (CY)

### Market Summary

Global equity markets stalled in the fourth calendar quarter of 2024, with the MSCI All Country World (ACWI) Index of global stocks falling -1.0% in U.S. dollar terms. Despite a continued rally in U.S. shares, overall the broader market declined as foreign equity markets succumbed to concerns over tariffs and intensifying trade tensions following the outcome of the U.S. Presidential election. During the quarter, the U.S. dollar rose sharply, further exacerbating the decline in foreign markets when measured in U.S. dollar terms.

In the U.S., the Fed delivered two 25-basis point cuts to its overnight policy rate during the quarter. However, noting the lack of recent progress in the path of inflation towards its 2% target, the Fed signaled its intention to slow the pace of further rate cuts. The prospect of a “higher-for-longer” policy rate, continued strong economic growth, and above-target inflation all served to drive interest rates sharply higher during the quarter. As the result of higher interest rates, the U.S. Aggregate Bond Index fell -3.1% during the quarter. Outside the U.S., most international bond markets outperformed the U.S. market in local terms, aided by slowing economic growth, lower inflation and central bank policy rate cuts. However, the impact of the stronger U.S. dollar significantly eroded returns when translated back to U.S. dollars across most markets. For the quarter, the Bloomberg Global Aggregate Bond Index fell -5.1%.

U.S. equity markets ended the quarter higher but experienced significant intra-quarter volatility. Equities rallied initially on the outcome of the U.S. Presidential election, viewing a continuation or acceleration of corporate tax cuts as likely. Notably, mega-cap technology stocks saw their shares rise on the expectation of a more favorable regulatory environment. However, as the quarter progressed, market euphoria faded in the face of sharply higher interest rates and the potential disruption to corporate supply chains from tariffs and the impact of a stronger dollar on the earnings outlook for U.S.-based multinationals.

### Overall Combined Funds Portfolio Performance – Quarter and Last 12 Months

The overall Combined Funds portfolio returned -0.4% during the **calendar fourth quarter**, outperforming the composite benchmark’s return of -0.9%. The Combined Funds portfolio benefited from a modest overweight to equities relative to the policy target, particularly the emphasis on U.S. equities over international stocks. The portfolio’s currency hedging program aided performance during the quarter by mitigating the adverse impact of a significant strengthening in the U.S. dollar on the portfolio’s developed international equity holdings. Within fixed income, the portfolio benefited from its allocation to return-seeking fixed income. Returns within the private markets portfolio during the quarter were positive relative to the broader market. The private markets invested portfolio gained +1.6% during the quarter, led by the Private Equity allocation which returned +2.3% for the quarter.

For the **one-year period ended December 31, 2024**, the portfolio posted a return of +11.3%, outperforming the composite benchmark’s return of +10.7%. The portfolio benefited from a positive contribution from active management, particularly within domestic and developed

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*See Page 1 for important notes regarding the performance and market data included in this report.*

international equities, as well as within core/core plus fixed income. Mark-to-market gains from the portfolio's currency hedging program helped performance as the U.S. dollar climbed over the 12-month period amid pronounced volatility. Within equities, an underweight to international stocks helped relative performance, while a modest overweight to U.S. small caps was negative. Within fixed income, the portfolio's allocation to return-seeking managers was a positive contributor to performance over the one-year period. The invested private markets portfolio returned +7.5% for the 12 months ended December 31, 2024, led by the Private Equity allocation which returned +9.5% for the one-year period.

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*See Page 1 for important notes regarding the performance and market data included in this report.*



## Review of Public Markets Manager Performance Fourth Quarter 2024 (CY)

### Domestic Equity

Domestic equities, as measured by the Russell 3000 Index, returned +2.6% during the quarter. Sector-specific performance dispersion over the quarter was pronounced. Consumer discretionary (+12.3%), technology (+5.8%) and financials (7.5%) helped lead the index higher, while the materials (-10.9%) and healthcare (-9.8%) sectors were notable laggards for the quarter.

The collection of mega-cap technology stocks known collectively as the “Magnificent Seven” or “Mag 7” reclaimed their spot atop the index during the quarter. Six of the seven stocks posted positive gains, marking a return to trend after the prior quarter saw the group underperform the broader market. Tesla led the way on the back of a strong post-election rally, while Microsoft was the only stock of the group to finish the quarter lower. As a group the Mag 7, which make up 28% of the Russell 3000, returned +9.9% during the quarter, while the remainder of the index trailed significantly, posting a decline of -0.2%.

The Combined Funds domestic equity portfolio gained +2.6% during the quarter, matching the Russell 3000 Index. The portfolio’s performance within each sector also closely tracked the index during the quarter as modest gains from security selection in the healthcare and utilities sectors were offset by negative selection in the technology sector.

Large cap stocks exhibited significant dispersion in returns based on style during the quarter, as value stocks significantly lagged growth stocks (-2.0% Russell 1000 Value vs. +7.1% Russell 1000 Growth). Much of this dispersion was attributable to higher weightings within the Value index to defensive sectors such as healthcare, which performed poorly during the quarter. Conversely, the Growth index benefitted from its higher weightings to the technology and consumer discretionary sectors, both of which performed well over the period.

Small cap stocks underperformed large cap stocks during the quarter (Russell 2000 Index +0.3% vs. Russell 1000 Index +2.7%), giving up momentum from the previous quarter’s rally. Within small caps, growth stocks outperformed value stocks, though not to the same degree as observed in the large cap universe (Russell 2000 Growth Index +1.7% vs. Russell 2000 Value Index -1.1%).

Sector performance across small cap names mirrored the broader domestic equity market. Strong performance within technology shares (+9.7%) and the underperformance of the healthcare sector (-7.5%) were the most notable drivers of small cap index performance during the quarter. Elsewhere, the consumer staples (+5.8%) and industrials (+4.3%) sectors were among the top performing sectors, while real estate (-6.3%) and materials (-3.9%) lagged alongside healthcare.

The portfolio’s large cap growth managers slightly underperformed their benchmark, the Russell 1000 Growth index (+7.0% Managers vs. +7.1% Benchmark). Stock selection within technology was key to performance for both managers during the quarter. Sands outperformed the index (+8.9%), benefitting from positive contributions in software and IT services, which outweighed negative selection in semiconductors. Quality growth manager Winslow’s performance for the

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*See Page 1 for important notes regarding the performance and market data included in this report.*

quarter (+5.4%) was hurt by issue selection within the technology sector. All-cap growth manager Zevenbergen delivered strong outperformance relative to its benchmark, the Russell 3000 Growth Index (+9.7% Manager vs. +6.8% Benchmark). Positive selection within industrials and technology benefitted Zevenbergen's performance for the quarter, while positioning within the consumer discretionary sector was a detractor, despite an overweight position in Tesla which rallied over +54% during the quarter.

Large cap value managers outperformed the Russell 1000 Value Index during the quarter (-0.8% Managers vs. -2.0% Benchmark). Barrow Hanley outperformed (-0.5%) due to good stock selection in consumer discretionary, utilities, and technology names. Quantitative deep value manager LSV outperformed (-1.1%) as stock selection was additive across utilities, healthcare and financials names.

The portfolio's two semi-passive large cap managers both trailed their benchmark during the quarter (+2.2% Managers vs. +2.8% Benchmark). While the managers have divergent investment approaches, this quarter both managers lagged the index in part due to underweight positions in momentum-driven names in the technology sector.

Small cap growth managers modestly outperformed their benchmark in aggregate during the quarter (+1.8% Managers vs. +1.7% Russell 2000 Growth Index) as strong stock selection within healthcare was offset by weaker selection within technology names. Fundamental manager Hood River achieved strong outperformance (+3.4%), driven by positive security selection within the healthcare and energy sectors. Rice Hall James also outperformed (+2.7%), with strong stock selection in healthcare offsetting weaker picks in technology. In contrast, Wellington lagged this quarter (-1.0%), primarily due to weak stock selection in the technology and consumer discretionary sectors.

The portfolio's small-cap value managers outperformed their benchmark for the quarter (+0.1% Managers vs. -1.1% Russell 2000 Value Index), driven by strong picks in the financials and consumer discretionary sectors. Fundamental manager Peregrine delivered strong performance for the quarter (+1.9%) driven by good issue selection within the consumer discretionary, financials, and energy sectors. Quantitative manager Martingale slightly lagged the benchmark (-1.4%), hurt by weak stock selection in industrials, particularly stocks connected to global shipping and trade which were impacted by threats of higher tariffs on imports from the incoming Trump administration.

The portfolio's passive domestic equity portfolios performed in-line with their respective benchmarks, posting a combined return of +2.7% during the quarter.

### **Developed International Equity and Currency Overlay**

International developed markets equities, as measured by the MSCI World ex USA Index (net), returned -7.4% in U.S. dollar terms during the quarter, significantly lagging U.S. equities. Much of the underperformance in foreign shares was due to a sharp rally in the value of the U.S. dollar, which rose over 7% versus a trade-weighted basket of foreign currencies. In local currency terms, the MSCI World ex USA Index (net) fell just -0.5% for the quarter.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

Measured in U.S. dollar terms, the performance of 19 of the Index's 22 developed markets ended the quarter in negative territory. At the country level, Canadian and Japanese shares fared best among major markets (-1.8% and -3.6%, respectively), while stocks in the U.K., Sweden, Switzerland, France, and the Netherlands all marked double-digit declines in U.S. dollar terms.

The portfolio's active developed markets managers outperformed the MSCI World ex USA Index (net), returning -6.7% versus the benchmark's -7.4% return. Positive stock selection within healthcare, and an underweight to the healthcare sector overall, boosted relative performance. In addition, good stock selection within the U.K., Canada, and Germany were also additive to performance for the quarter.

Quantitative manager Acadian significantly outperformed (-2.9% Manager vs. -7.4% Benchmark) as growth and technical signals within its models drove strong stock selection during the quarter, particularly within the U.K., France, and Australia. Quality growth manager J.P. Morgan underperformed (-8.7%) as stock selection in technology names detracted for the quarter.

The passive developed markets portfolio returned -7.5%, which closely tracked the MSCI World ex USA Index (net) return of -7.4%.

The U.S. dollar appreciated strongly versus most developed markets currencies during the quarter, leading to gains in the portfolio's currency overlay program. For the quarter, the program added +2.9% to the performance of the developed international equity portfolio, offsetting a significant portion of the underlying decline in value of the portfolio's foreign shares due to currency movements. The dollar rallied during the quarter as continued strong economic data in the U.S., higher interest rates, and the threat of steep tariffs on U.S. imports by the incoming Trump administration all boosted demand for U.S. dollars. Program gains were most pronounced in the Japanese yen and the euro, but gains were broad-based across all hedging currencies. Over the quarter, the overall hedge ratio rose from a low of 12% to end the quarter at 61%.

### **Emerging Markets Equity**

Emerging markets equities, as measured by the MSCI Emerging Markets Index (net), fell -8.0% in U.S. dollar terms during the quarter. As in developed markets, most emerging markets currencies fell versus the U.S. dollar over the quarter. Adjusting for the impact of currency, in local currency terms, the MSCI Emerging Markets Index (net) fell -4.4%.

Nearly all the 26 markets which make up the EM Index posted negative returns for the quarter, as fears of renewed trade tensions and tariffs weighed on markets around the globe. Major exporters Brazil and South Korea both experienced significant selloffs during the quarter, leading the broader index lower. Brazil's currency, the real, fell sharply against the U.S. dollar in the face of renewed concerns over the country's fiscal policy and economic outlook, while South Korea experienced significant political upheaval after the impeachment and removal in December of both its President and the subsequent acting President in rapid succession.

China's equity market, which represents 27% of the EM index, fell nearly -7.7% in U.S. dollar terms during the quarter. Chinese equities pulled back as investors expressed skepticism in the effectiveness of the stimulus package put forward by the Chinese government, which had fueled a

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*See Page 1 for important notes regarding the performance and market data included in this report.*

sharp rally in the Chinese equity market when initially announced. U.S. election results also introduced uncertainty to markets as investors weighed the potential for heightened trade and geopolitical tensions between the U.S. and China.

Indian stocks also fell sharply in the final calendar quarter of 2024 following a rapid rise over the preceding 11 months, during which the market rose over +110%. The Indian market, which makes up over 19% of the EM Index, was weighed down by the cumulative effects of tighter monetary policy, expectations of a reduction in government spending and shifting investor sentiment over the market's lofty equity valuations.

The portfolio's active emerging markets managers underperformed the MSCI Emerging Markets Index (net), returning -8.6% vs. the benchmark's -8.0% return. Manager performance was particularly impacted by weak stock selection within China and a collective overweight to Brazil.

Deep value manager Pzena underperformed (-10.4% Manager vs. -8.0% Benchmark) as the result of negative stock selection effects within China and an underweight to the technology sector. Quality growth manager Morgan Stanley outperformed for the quarter (-6.9%), benefitting from stock selection within India and South Korea.

Earnest Partners' China A-share strategy outperformed the MSCI China A Index during the quarter (-4.7% Manager vs. -6.7% Benchmark). Strong stock selection in financials and consumer discretionary names contributed to outperformance for the quarter.

The passive emerging markets portfolio outperformed the MSCI Emerging Markets Index (net) for the quarter (-7.6% Manager vs. -8.0% Benchmark). During the quarter, the pullback in the value of Indian stocks led to a reduction in the amount withheld for capital gains taxes on unrealized gains within the portfolio's India allocation, which is invested in a unitized collective investment trust. This effect produced positive tracking error relative to the index, which does not account for capital gains taxes.

### **Global Equity and ACWI ex USA Equity**

The MSCI All Country World Index (ACWI) (net) returned -1.0% during the calendar fourth quarter. Performance across sectors was mixed, while most geographies posted declines for the quarter. Only eight out of 47 countries generated positive performance for the quarter. The U.S. market, which represents fully 66% of the index, rose +2.7 during the period.

European markets such as France (-10.3%), Denmark (-21.5%), and the Netherlands (-12.4%) all saw substantial declines in U.S. dollar terms. Returns across the Asia Pacific region were also lower, with China (-7.7%), India (-11.3%), South Korea (-19.2%), and Japan (-3.6%) all experiencing declines during the quarter.

From a sector perspective, healthcare (-11.4%), materials (-15.1%), and industrials (-4.9%) led the index lower, more than offsetting positive performance within the technology (+4.3%) and consumer discretionary (+5.5%) sectors.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

As a group, the Combined Funds' global equity managers trailed the MSCI All Country World Index (ACWI) (net) for the quarter (-2.7% Managers vs. -1.0% Benchmark). Collectively, the global managers maintained a substantial underweight to the United States in favor of non-U.S. markets, which detracted from performance. On the positive side, managers' security selection within Canada and underweights to Japan and India were additive to performance during the quarter.

Quality growth manager Martin Currie underperformed (-7.2% Manager vs. -1.0% Benchmark) due to poor stock selection within the consumer staples sector in the United States. Additionally, overweights to French luxury goods stocks, Danish pharmaceutical maker Novo Nordisk and Netherlands-based semiconductor equipment supplier ASML further detracted from performance. Growth-oriented manager Baille Gifford (+5.1%) outperformed its benchmark, with performance attributable to strong stock selection within U.S. technology stocks. On the negative side, the manager's overweight to Chinese consumer discretionary names detracted from performance.

The portfolio's ACWI ex USA manager, Earnest Partners, ended the quarter ahead of the benchmark (-4.9% Manager vs. -7.6% Benchmark) as the result of strong stock selection within China and Taiwan.

### **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 -3.1% during the calendar fourth quarter. Performance was negatively impacted by a sharp rise in U.S. Treasury yields, which came despite the U.S. Federal Reserve (Fed) delivering two 25-basis point cuts to its overnight policy rate during the quarter. The yield on the benchmark 10-year U.S. Treasury note rose by 79 basis points (bps) during the quarter to end at 4.57%.

Against a backdrop of rising Treasury yields and continued strong economic activity, credit spreads tightened for both investment grade (IG) and high yield (HY) issuers, with some measures of high yield spreads reaching historic lows. The Bloomberg Investment Grade Corporate Index declined -3.0% during the quarter, outperforming equivalent duration U.S. Treasuries by +0.8%.

Asset-backed securities (ABS) posted the best total return (-0.1%) among securitized sectors over the quarter, supported by tighter spreads, attractive carry, and continued low default experience across most collateral types. In contrast, U.S. agency mortgage-backed securities (MBS) modestly underperformed during the quarter, posting a return of -3.2%. Increased rate volatility, coupled with the move higher in yields, negatively impacted the cost of hedging agency MBS and stifled potential refinancing activity.

The Bloomberg U.S. High Yield Index rose +0.2% during the quarter, outpacing equivalent duration U.S. Treasuries by nearly +1.2%. Within the sector, lower quality (CCC-rated) bonds outperformed higher quality (BB-rated and B-rated) bonds during the quarter. High yield bond issuance totaled a robust \$60 billion over the quarter. High yield bank loans returned +2.3% for the quarter, outperforming all other fixed income sectors as floating rate nature of the asset class cushioned it from the impact of rising interest rates.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

Emerging market debt (EMD) posted negative results for the quarter. The J.P. Morgan EMBI Global Diversified Index of dollar-denominated EM sovereign debt fell -1.9%. Local currency debt was also negatively impacted by strength in the U.S. dollar, with the J.P. Morgan index of local currency sovereign debt (JPM GBI-EM) falling -6.4% in dollar terms. Hard currency sovereign and EM corporate debt both benefitted from tightening spreads, although this effect was more than offset by rising rates during the quarter.

The portfolio's core/core plus bond managers modestly outperformed the Bloomberg U.S. Aggregate Bond Index during the quarter (-3.0% Managers vs. -3.1% Benchmark). Managers' sector allocation and security selection across the spread sectors of the market helped relative performance, particularly within corporate credit (both investment grade and high yield). On the negative side, the managers' longer-than-benchmark duration positioning detracted from portfolio performance as yields rose during the quarter.

During the quarter, the assets of terminated core plus manager Western Asset were re-allocated to two existing core plus managers. Both managers received a combination of in-kind security contributions and cash into their respective portfolios. SBI Staff managed the transition event in coordination with custodian State Street Bank.

The portfolio's return-seeking bond managers returned -1.4% during the quarter, outperforming the portfolio's policy benchmark (the Bloomberg U.S. Aggregate Bond Index) return of -3.1%. Overall, the return-seeking managers have less exposure to U.S. government debt than the policy benchmark, both in terms of sector allocation and interest rate duration, and therefore can be expected to outperform in periods of rising interest rates. Relative to a weighted composite of the managers' individual benchmarks, as a group, the return-seeking managers modestly underperformed their composite benchmark (-1.4% Managers vs. -1.1% Benchmark).

### **Treasury Protection Portfolio**

The Treasury Protection Portfolio returned -6.2% during the quarter, matching the return of Bloomberg Treasury 5+ Year Index. During the quarter interest rates rose sharply, causing significant price declines for longer maturity fixed income securities. The managers' active positioning within out-of-benchmark U.S. Agency securities provided a modest performance boost over the quarter, but this advantage was offset by negative impact from the managers' modest overweight duration positioning and yield curve tilts.

### **Laddered Bonds + Cash Portfolio**

The Laddered Bonds + Cash portfolio returned +1.1% during the quarter, modestly underperforming its benchmark, the ICE BofA U.S. 3 Month Treasury Bill Index, which gained +1.2%. The sharp rise in yields on shorter-maturity U.S. Treasuries during the quarter resulted in modest negative mark-to-market price performance within the Laddered Bond portfolio. Over time, however, the Laddered Bond portfolio's higher yield relative to the benchmark can be expected to translate into modest outperformance. Over the same period, the Cash portfolio managed by State Street Global Advisors (SSgA) returned +1.2%, matching the return of the ICE BofA U.S. 3 Month Treasury Bill Index.

## **Public Markets Managers' Organizational Updates Fourth Quarter 2024**

### **Acadian (Int'l Equity)**

Acadian's parent company Brightsphere Investment Group (BSIG) announced it would be rebranding as Acadian Asset Management (AAMI) effective January 2025. Acadian's current CEO Kelly Young has been appointed to the Board of Directors and will serve as President and CEO of AAMI.

### **Ariel (Global Equity)**

Andrew Pon, Vice President and Research Analyst, joined the Global Equities team in the fourth quarter of 2024. Mr. Pon will cover the utilities and commodities sectors. Mr. Pon's previous investment experience includes research analyst positions at Duff & Phelps Investment Management and Causeway Capital Management. Separately, Ken Slovin, Senior Vice President and Head of Global Operations, retired from Ariel in December 2024.

### **Ashmore (Fixed Income)**

Ricardo Xavier, Deputy Chair of the Investment Committee, announced his retirement in late 2024 for medical reasons, and will exit the firm in March 2025. Chairman Mark Coombs will continue to lead the Investment Committee and Mr. Xavier's role on the Committee will not be immediately backfilled. Also during the quarter, two portfolio managers departed the firm. David Muller, a portfolio manager on the EM debt team, left the firm with the intention to retire from the investment industry. Thomas Christiansen, a recently hired Portfolio Manager on the External Debt team, left the firm during the quarter to pursue other opportunities.

### **Dodge & Cox (Fixed Income)**

On January 15, 2025, Jose Ursua joined the U.S. Fixed Income Investment Committee, while continuing to serve as a Fixed Income Analyst. Mr. Ursua has been with Dodge & Cox for 10 years and has served on the Global Fixed Income Committee. On December 31, 2025, Dana Emery, Chair and Chief Executive Officer (CEO), will retire. Ms. Emery will gradually transition her leadership responsibilities over the course of 2025. On January 1, 2026, David Hoeft will succeed Ms. Emery as Chair and will continue to serve in his Chief Investment Officer role. Roger Kuo will succeed Ms. Emery as CEO and Chair of the Dodge & Cox Funds, while continuing to serve as President of the firm.

### **KKR (Fixed Income)**

Wade Pontius joined KKR as a Managing Director within the firm's Credit business. As a member of the Leveraged Credit team, Mr. Pontius will focus on the software sector. Prior to joining KKR, Mr. Pontius was a managing director within Blackstone's credit and insurance business, where he focused on the firm's liquid credit strategies. He holds a B.A. in Interdisciplinary Studies from the University of California, Berkeley.

**Morgan Stanley (Emerging Markets Equity)**

Jacques Chappuis, Co-Head of Morgan Stanley Investment Management (MSIM) departed the firm in October. Following Mr. Chappuis's departure, Ben Huneke, who served as Co-Head of MSIM alongside Mr. Chappuis, was named the sole head for MSIM.

**Payden & Rygel (Fixed Income)**

Simon Deery, Senior Vice President, will depart the firm in January 2025. Mr. Deery is a member of the Securitized Products Group with primary coverage of the commercial mortgage-backed securities (CMBS) sector. Existing team members will assume coverage of the sector until a replacement is hired.

**PGIM (Fixed Income)**

David Hunt, President and CEO, will retire on April 30, 2025. He will remain on as Chairman of PGIM through July 31, 2025. Jacques Chappuis, former co-head of Morgan Stanley Investment Management (MSIM), has been hired to serve as President and CEO beginning on May 1, 2025.

**Sands Capital (Domestic Equity)**

Kelly Rogal joined the firm as a research analyst covering life sciences in November 2024. Ms. Rogal has experience as a director at Wafra and portfolio manager at Franklin Templeton. Separately, Jason Harden, formerly a senior research analyst covering financials, departed in December 2024.

**TCW (Fixed Income)**

As was announced earlier in the year, Steven Kane, Generalist Portfolio Manager, retired at the end of 2024. The remaining Generalist Portfolio Managers, Bryan Whalen, Jerry Cudzil and Ruben Hovhannisyan, have absorbed Mr. Kane's responsibilities and will continue to co-lead TCW's Fixed Income team. Separately, TCW hired Simon Deery as a CMBS analyst. Mr. Deery most recently served as Senior Vice President at Payden & Rygel, where his responsibilities included primary coverage for the CMBS sector.



## Q4 2024 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 below.

<b>Investment Manager</b>	<b>Asset Class</b>
Arrowmark	Domestic Equity
Ashmore Investment Management Limited	Fixed Income
BlackRock Financial Management, Inc.	Fixed Income
Columbia Threadneedle Investments	Domestic Equity
Earnest Partners	Global ex U.S. Equity
Earnest Partners	China Only Equity
Fidelity	Developed Markets Equity
Goldman Sachs Asset Management, LP	Fixed Income
Goldman Sachs Asset Management	Domestic Equity
Hood River	Domestic Equity
Hotchkis & Wiley	Domestic Equity
JP Morgan	Developed Markets Equity
LSV Asset Management	Domestic Equity
Macquarie Investment Management Advisers	Emerging Markets Equity
Martin Currie Inc.	Emerging Markets Equity
Martin Currie Inc.	Global Equity
Morgan Stanley Investment Management Inc.	Emerging Markets Equity
Neuberger Berman Investment Advisers LLC	Fixed Income
Oaktree Capital Management, L.P.	Fixed Income
Pacific Investment Management Company LLC (PIMCO)	Fixed Income
Payden & Rygel	Fixed Income
Pzena	Emerging Markets Equity
PGIM	Fixed Income
Record Currency LLC	Currency Overlay
Rice Hall James	Domestic Equity
Sands Capital	Domestic Equity
Wellington	Domestic Equity
Zevenbergen	Domestic Equity

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# REPORT

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Participant Directed  
Investment Program  
and  
Non-Retirement  
Investment Program

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DATE: February 18, 2025

TO: Members, Investment Advisory Council

FROM: SBI Staff

**SUBJECT: Participant Directed Investment Program and Non-Retirement Program**

This section of the report provides commentary on the Participant Directed Investment Program (PDIP) investment options and Non-Retirement Program managers for the quarter ending December 31, 2024. It includes organizational updates relevant to the strategies used and a list of due diligence meetings staff conducted during the fourth calendar quarter of 2024.

The report includes the following sections:

	<b>Page</b>
• Participant Directed Investment Program Fund Commentaries	3
• Non-Retirement Fund Commentaries	6
• Organizational Updates and Summary of Manager Meeting Activity	7

*Important Notes:*

*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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**Participant Directed Investment Program Fund Commentaries  
Fourth Quarter 2024**

**Domestic Equities**

**Vanguard Total Stock Market Index Institutional Plus**

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 +2.6% return.

**Vanguard Institutional Index Plus**

The Fund employs a full replication indexing approach designed to track the S&P 500 Index. The Fund's performance matched the benchmark for the quarter with a +2.4% 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 -4.7% for the quarter, underperforming the S&P U.S. Dividend Growers Index return of -0.7%. For the quarter, the Fund's underweight position in the technology and financial sectors, and weak stock selection in each sector, detracted from benchmark relative performance. Stock selection in the consumer staples sector also detracted from performance. Nearly half of the Fund's underperformance was due to not owning two stocks, Broadcom (BCOM) and JPMorgan Chase (JPM). In the case of BCOM, the manager holds a negative view of the cyclicity of the chip industry, while within Financials, the team favors payment processors and insurance companies with stable growth and compounding returns relative to traditional banks such as JPM.

**Vanguard Mid-Cap Index**

The Fund employs a full replication indexing approach designed to track the performance of a broadly diversified pool of mid-cap U.S. stocks. The Fund returned +0.4% for the quarter, underperforming the CRSP US Mid-Cap Index, which returned +0.5%.

**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 +1.5% for the quarter, outperforming the Russell 2000 Index's return of +0.3%. The Fund's stock selection in the communication services, energy, and technology sectors added to relative return for the quarter.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

## **International Equities**

### **Fidelity Diversified International Equity Fund**

The Fund actively selects international companies, primarily located in developed markets. The Fund focuses on companies with significant long-term earnings potential, durable business models, and attractive growth prospects. The Fund returned -7.2% for the quarter, outperforming the MSCI EAFE Index, which returned -8.1%. The Fund's performance was aided by stock selection within the technology and materials sectors. Regionally, a small allocation to emerging markets stocks and good stock selection within Europe benefited returns.

### **Vanguard Total International Stock Index**

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 -7.4%, outperforming the benchmark's return of -7.5%.

## **Fixed Income and Capital Preservation Options**

### **Dodge & Cox Core Bond Account (Previously Dodge & Cox Income Fund)**

This investment option is a diversified portfolio that consists primarily of investment-grade debt securities, with a higher allocation to corporate and securitized debt relative to the benchmark. The portfolio returned -3.3% for the quarter, underperforming the Bloomberg U.S. Aggregate Index, which posted a return of -3.1%. Performance for the quarter was negatively impacted by the portfolio's longer duration vs. the benchmark and an overweight to intermediate maturity bonds. On the positive side, the manager's security selection and sector allocation decisions were slightly additive to performance for the quarter.

On October 30, 2024, participant-directed plans invested in the Dodge and Cox Income Fund were migrated to a dedicated separately managed account managed by Dodge & Cox. Securities from the Income Fund were transferred in-kind to the new account. The investment strategy, team and investment process were unchanged. Under the new separate account structure, investment management fees were significantly reduced from 0.33% to approximately 0.16% per annum.

### **Vanguard Total Bond Market Index**

The Fund employs an index sampling approach designed to track the performance of the Bloomberg U.S. Aggregate Bond Index. For the quarter, the Fund returned -3.0%, slightly outperforming the benchmark's return of -3.1%.

### **Stable Value Fund**

Galliard Capital Management manages the Stable Value Fund in a separately managed account. The Fund's assets are invested in short- and intermediate-duration fixed-income securities combined with investment contracts from financial institutions. The 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 Fund 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.

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*See Page 1 for important notes regarding the performance and market data included in this report.*



The relative performance of the Stable Value Fund continues to be impacted as the result of the steep increase in yields experienced over the last several years, which saw short-term yields rise from near zero in early-2022 to over 5% by the end of 2023. In this environment, stable value strategies tend to lag their respective benchmarks due to their longer-duration positioning. Since September 2024, the Fed has reduced its target rate by 1.0%. A continued normalization in short-term rates should result in a more favorable environment for Stable Value relative returns going forward. The performance of the Fund's underlying fixed-income strategies versus their respective performance benchmarks remained positive.

### **Money Market Fund**

State Street Global Advisors manages the cash option in a commingled pool called the Short-Term Investment Strategy. The Fund returned +1.2% for the quarter, matching the performance of its benchmark, the ICE BofA 3-Month U.S. T-Bill Index.

### **Balanced Option**

#### **Vanguard Balanced Index**

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 of 60% CRSP U.S. Total Stock Market Index and 40% Bloomberg U.S. Aggregate Float Adjusted Index. The Fund matched the benchmark's performance for the quarter with a +0.4% return.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

## **Non-Retirement Fund Commentaries Fourth Quarter 2024**

### **Non-Retirement Program Domestic Equity Manager**

Mellon Investments Corporation passively manages the Non-Retirement Domestic Equity Portfolio in a separately managed portfolio. The Portfolio employs a full replication indexing approach designed to track the performance of its benchmark, the S&P 500 Index. For the quarter, the portfolio's performance matched the benchmark, returning +2.4%.

### **Non-Retirement Program Fixed Income Manager**

Prudential Global Investment Management (PGIM) actively manages the Non-Retirement Fixed Income Portfolio in a separately managed portfolio. The Fund returned -2.8% for the quarter, outperforming its benchmark, the Bloomberg U.S. Aggregate Bond Index, which returned -3.1%. The portfolio's overweight positioning in non-agency CMBS, investment grade corporate bonds, asset-backed securities all contributed to portfolio outperformance for the quarter. Portfolio performance also benefited from positive security selection across a range of sectors.

### **Assigned Risk Plan Fixed Income Manager**

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's performance matched the benchmark for the quarter, returning -1.7%. During the quarter, the portfolio's yield advantage relative to the index contributed positively to relative performance, while the portfolio's higher-than-benchmark duration positioning negatively impacted returns.

### **Non-Retirement Program Money Market Manager**

State Street Global Advisors manages the Non-Retirement Money Market Fund against the ICE BofA 3-Month U.S. T-Bill Index. The Fund's performance matched the benchmark for the quarter with a +1.2% return.

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*See Page 1 for important notes regarding the performance and market data included in this report.*

**Organizational Updates  
Participant-Directed Investment Program Funds  
and Non-Retirement Managers  
Fourth Quarter 2024**

**Dodge & Cox (PDIP)**

On January 15, 2025, Jose Ursua joined the U.S. Fixed Income Investment Committee, while continuing to serve as a Fixed Income Analyst. Mr. Ursua has been with Dodge & Cox for 10 years and has served on the Global Fixed Income committee and has strong expertise in macroeconomics. Separately, the firm announced that Dana Emery, Chair and Chief Executive Officer (CEO), will retire on December 31, 2025. Ms. Emery will gradually transition her leadership, Investment Committee, and Chair of Dodge & Cox Funds Board responsibilities over the course of 2025. On January 1, 2026, David Hoeft will succeed Ms. Emery as Chair and will continue to serve in his Chief Investment Officer role. Roger Kuo will succeed Ms. Emery as CEO and Chair of the Dodge & Cox Funds, while continuing to serve as President of the firm.

**Mellon (Non-Retirement Program Domestic Equity)**

In December 2024, Mellon announced plans to close its San Francisco, CA office and consolidate the equity index team to its Pittsburg, PA headquarters. The transition will occur over a two-year period. Stephanie Hill, Head of Index, will relocate to Pittsburg along with other key employees.

**PGIM (Non-Retirement Program Fixed Income)**

David Hunt, President and CEO, will retire on April 30, 2025. He will remain on as Chairman of PGIM through July 31, 2025. Jacques Chappuis, former co-head of Morgan Stanley Investment Management (MSIM), has been hired to serve as President and CEO beginning on May 1, 2025.

**Vanguard Dividend Growth Portfolio (PDIP)**

In November of 2024, Ashley Carew, a generalist analyst on the Wellington team, departed the firm. Going forward, Wellington's Global Industry Analyst team will assume her research responsibilities. On January 1, 2025, Tim Casaletto joined the Wellington team as a Portfolio Manager focused on idea generation and portfolio construction, primarily with U.S. companies. Mr. Casaletto started with Wellington in 2014 as a research associate and, in 2019, was promoted to a Managing Director position on the Global Industry Analyst team covering developed market infrastructure sectors. Lastly, Donald Kilbride, Portfolio Manager on the Dividend Growth Team, announced he will retire from the firm on December 31, 2025. Mr. Kilbride was the lead Portfolio Manager for the strategy prior to the transition of that role to Peter Fisher in January 2024.

**Manager Meetings  
Fourth Quarter 2024**

During the quarter, Staff conducted the following manager due diligence meetings:

<b>Investment Manager</b>	<b>Management Style/ Asset Class</b>	<b>Investment Program</b>
Ascensus	Multi-Asset Class Platform	PDIP (MN ABLE Plan)
PGIM	Active, Fixed Income	Non-Retirement
TIAA	Multi-Asset Platform	PDIP (MN 529 Plan)
Vanguard	Passive, Domestic All Cap Equity	PDIP
	Passive, Domestic Large Cap Equity (S&P)	PDIP
	Passive, Domestic Mid Cap Equity	PDIP
	Passive, International Equity	PDIP
	Passive, Fixed Income	PDIP
	Passive, Balanced Fund	PDIP
	Active, Domestic Large Cap Equity (Wellington)	PDIP

# REPORT

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## AON Market Environment Report

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# Market Environment

Fourth Quarter 2024

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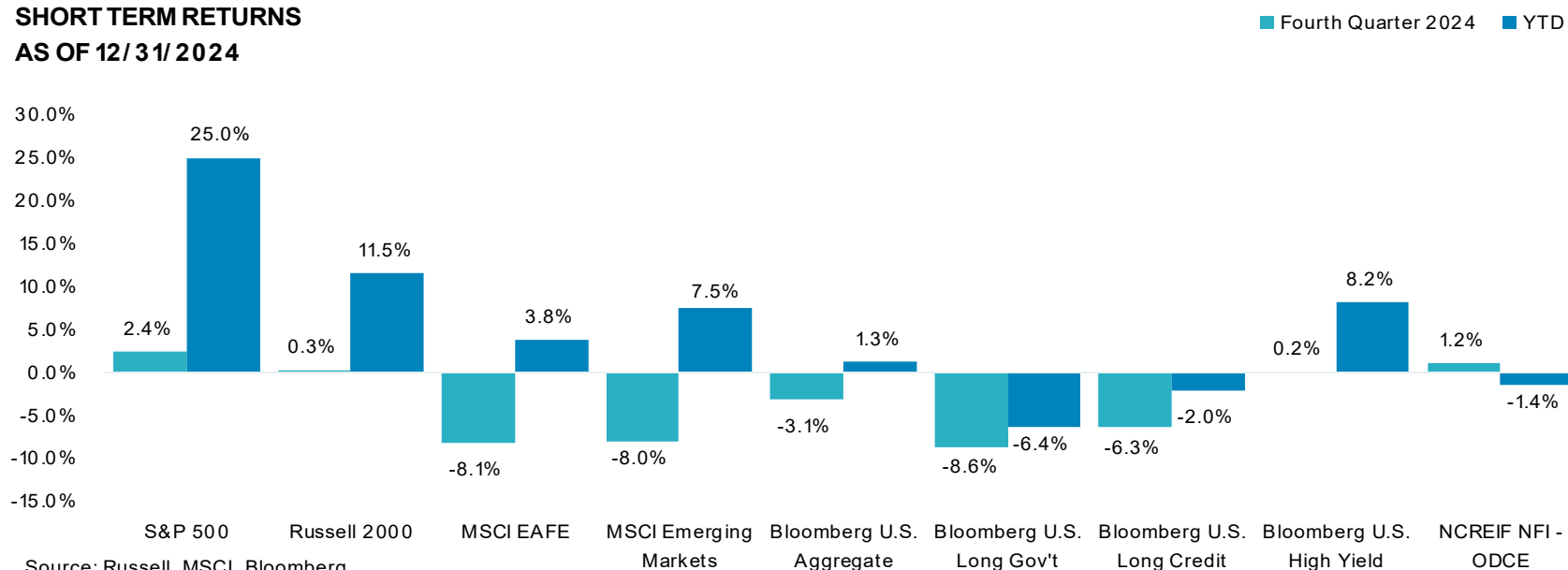
Private and Confidential | Investment advice and consulting services provided by Aon Investments USA Inc.



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# Market Highlights

## SHORT TERM RETURNS AS OF 12/31/2024



Source: Russell, MSCI, Bloomberg

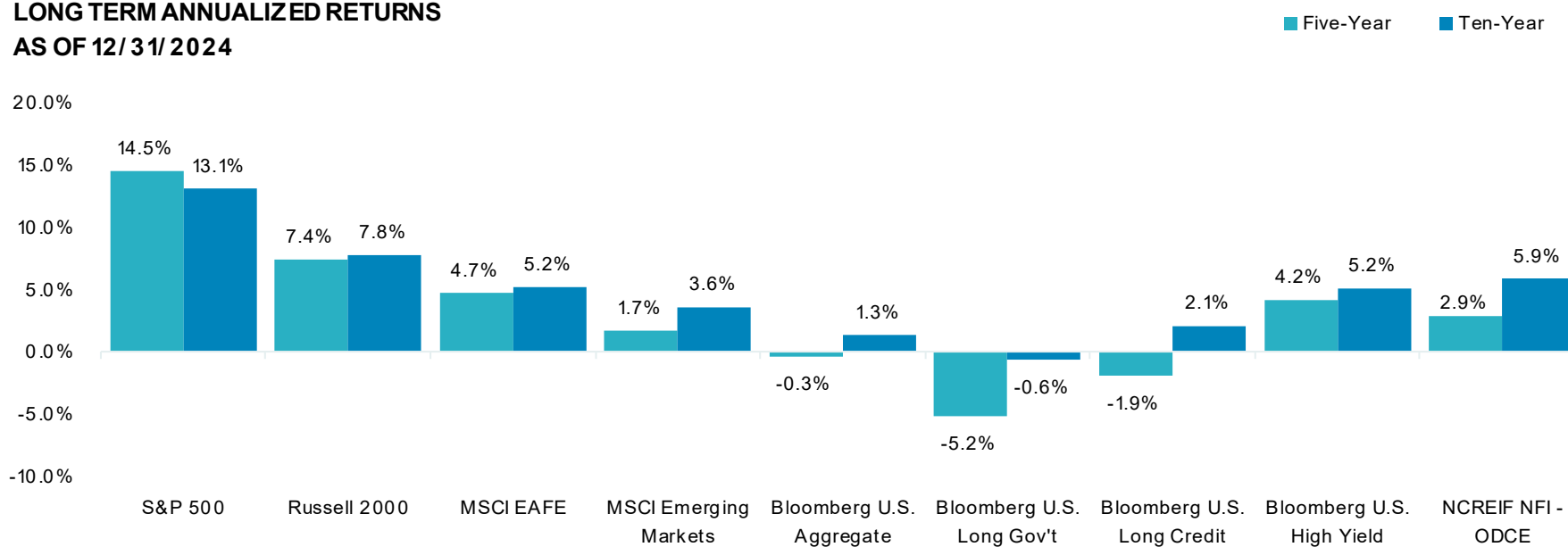
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

**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.



# Market Highlights

## LONG TERM ANNUALIZED RETURNS AS OF 12/31/2024



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.

# Market Highlights

Returns of the Major Capital Markets						
	Period Ending 12/31/2024					
	Fourth Quarter	YTD	1-Year	3-Year <sup>1</sup>	5-Year <sup>1</sup>	10-Year <sup>1</sup>
<b>Equity</b>						
MSCI All Country World IMI	-1.24%	16.37%	16.37%	4.90%	9.67%	9.00%
MSCI All Country World	-0.99%	17.49%	17.49%	5.44%	10.06%	9.23%
Dow Jones U.S. Total Stock Market	2.71%	23.88%	23.88%	7.91%	13.78%	12.48%
Russell 3000	2.63%	23.81%	23.81%	8.01%	13.86%	12.55%
S&P 500	2.41%	25.02%	25.02%	8.94%	14.53%	13.10%
Russell 2000	0.33%	11.54%	11.54%	1.24%	7.40%	7.82%
MSCI All Country World ex-U.S. IMI	-7.61%	5.23%	5.23%	0.50%	4.12%	4.91%
MSCI All Country World ex-U.S.	-7.60%	5.53%	5.53%	0.82%	4.10%	4.80%
MSCI EAFE	-8.11%	3.82%	3.82%	1.65%	4.73%	5.20%
MSCI EAFE (Local Currency)	-0.62%	11.28%	11.28%	6.33%	7.55%	7.14%
MSCI Emerging Markets	-8.01%	7.50%	7.50%	-1.92%	1.70%	3.64%
<b>Equity Factors</b>						
MSCI World Minimum Volatility (USD)	-3.75%	11.53%	11.53%	3.04%	5.34%	7.92%
MSCI World High Dividend Yield	-5.63%	8.91%	8.91%	4.84%	6.33%	7.30%
MSCI World Quality	-3.15%	18.85%	18.85%	7.27%	13.82%	13.15%
MSCI World Momentum	0.29%	30.56%	30.56%	6.60%	12.38%	12.54%
MSCI World Enhanced Value	-4.48%	5.90%	5.90%	4.96%	6.18%	6.19%
MSCI World Equal Weighted	-4.55%	8.26%	8.26%	2.03%	6.18%	7.11%
MSCI World Index Growth	3.85%	26.16%	26.16%	7.12%	14.89%	13.18%
MSCI USA Minimum Volatility (USD)	-2.26%	15.99%	15.99%	4.97%	8.16%	10.36%
MSCI USA High Dividend Yield	-4.18%	11.66%	11.66%	4.71%	7.32%	9.07%
MSCI USA Quality	-0.62%	24.03%	24.03%	9.34%	15.45%	15.00%
MSCI USA Momentum	1.38%	32.33%	32.33%	6.18%	11.86%	13.33%
MSCI USA Enhanced Value	-2.48%	7.35%	7.35%	1.85%	6.37%	7.45%
MSCI USA Equal Weighted	0.01%	14.75%	14.75%	3.86%	10.18%	9.94%
MSCI USA Growth	8.47%	35.99%	35.99%	10.72%	19.64%	16.84%

Returns of the Major Capital Markets						
	Period Ending 12/31/2024					
	Fourth Quarter	YTD	1-Year	3-Year <sup>1</sup>	5-Year <sup>1</sup>	10-Year <sup>1</sup>
<b>Fixed Income</b>						
Bloomberg Global Aggregate	-5.10%	-1.69%	-1.69%	-4.52%	-1.96%	0.15%
Bloomberg U.S. Aggregate	-3.06%	1.25%	1.25%	-2.41%	-0.33%	1.35%
Bloomberg U.S. Long Gov't	-8.60%	-6.37%	-6.37%	-11.91%	-5.17%	-0.61%
Bloomberg U.S. Long Credit	-6.26%	-2.01%	-2.01%	-6.76%	-1.92%	2.11%
Bloomberg U.S. Long Gov't/ Credit	-7.42%	-4.15%	-4.15%	-9.20%	-3.26%	0.99%
Bloomberg U.S. TIPS	-2.88%	1.84%	1.84%	-2.30%	1.87%	2.24%
Bloomberg U.S. High Yield	0.17%	8.19%	8.19%	2.92%	4.21%	5.17%
Bloomberg Global Treasury ex U.S.	-7.44%	-5.59%	-5.59%	-7.49%	-4.45%	-1.28%
JP Morgan EMBI Global (Emerging Markets)	-2.12%	5.73%	5.73%	-0.82%	0.35%	3.08%
<b>Commodities</b>						
Bloomberg Commodity Index	-0.45%	5.38%	5.38%	4.05%	6.77%	1.28%
Goldman Sachs Commodity Index	3.81%	9.25%	9.25%	9.63%	7.12%	1.24%
<b>Hedge Funds</b>						
HFRF Fund-Weighted Composite <sup>2</sup>	1.49%	9.83%	9.83%	4.41%	7.00%	5.26%
HFRF Fund of Funds <sup>2</sup>	2.30%	9.40%	9.40%	3.19%	5.28%	3.81%
<b>Real Estate</b>						
NAREIT U.S. Equity REITS	-6.21%	8.73%	8.73%	-2.20%	4.27%	5.73%
NCREIF NFI - ODCE	1.16%	-1.43%	-1.43%	-2.32%	2.87%	5.88%
FTSE Global Core Infrastructure Index	-5.50%	9.81%	9.81%	1.67%	4.23%	6.16%
<b>Private Equity</b>						
Burgiss Private IQ Global Private Equity <sup>3</sup>			5.14%	4.60%	13.68%	12.67%

MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

<sup>1</sup> Periods are annualized.

<sup>2</sup> Latest 5 months of HFR data are estimated by HFR and may change in the future.

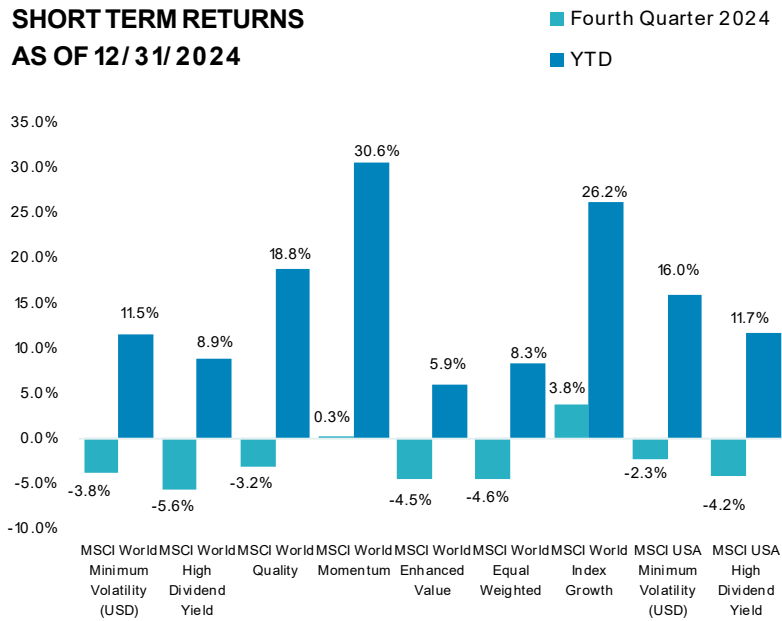
<sup>3</sup> Burgiss Private IQ Global Private Equity data is as at June 30, 2024

Source: Russell, MSCI, Bloomberg

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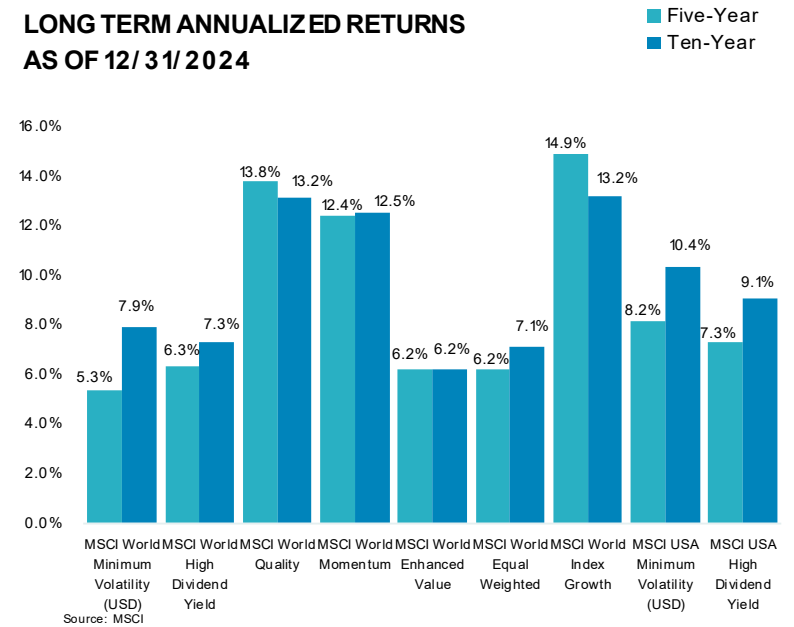
# Factor Indices

## SHORT TERM RETURNS AS OF 12/31/2024



Source: MSCI  
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

## LONG TERM ANNUALIZED RETURNS AS OF 12/31/2024

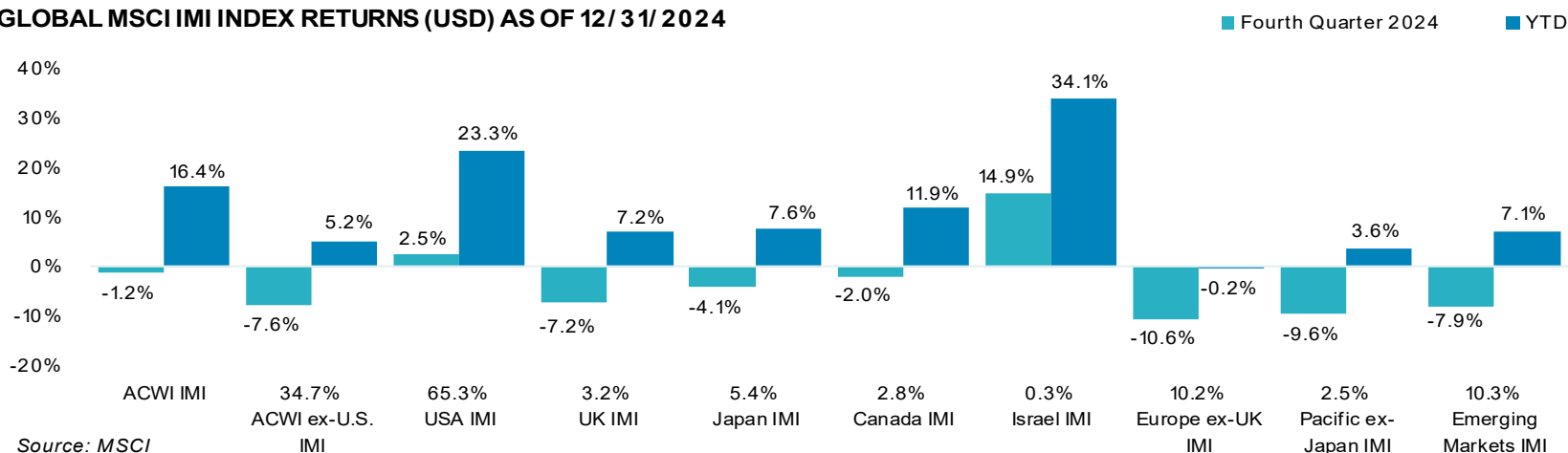


Source: MSCI  
MSCI Indices show net total returns throughout this report. All other indices show gross total returns.

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# Global Equity Markets

GLOBAL MSCI IMI INDEX RETURNS (USD) AS OF 12/31/2024



Source: MSCI

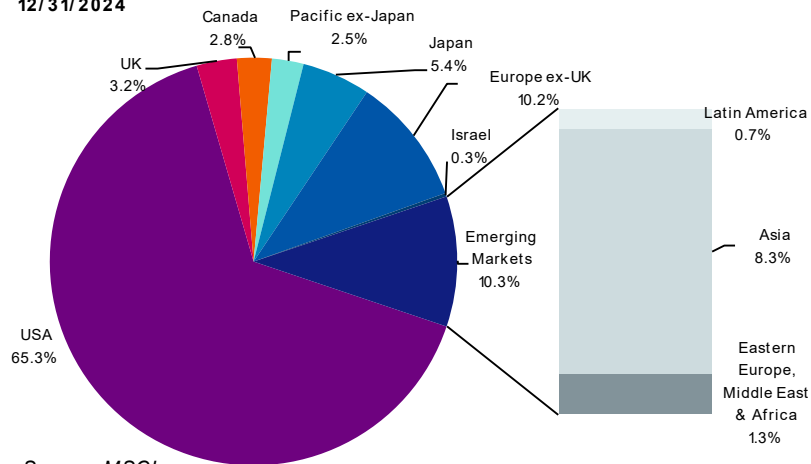
- In Q4 2024, the U.S. economy showed signs of strength while global equity markets fell. The S&P 500 increased by 2.4% over the quarter while Global equities (excluding the U.S.) fell by 7.5%, with developed markets posting a marginal decline of 0.1%, outperforming emerging markets, which decreased by 7.8%. Following Fed's December meeting, a sharp correction in U.S. markets led to the CBOE Volatility Index (VIX) rising to 27.6 before reverting to 17.4 and staying below its 20-year average of 19.1.
- Across international markets, all regions posted negative returns (except U.S. and Israel). The strength of the U.S. dollar against major currencies over the quarter further contributed towards negative returns by other major economies. The MSCI USA IMI equities outperformed with a return of 2.5%. Consumer Discretionary (12.0%) and Communication Services (8.8%) were the best performing sectors.
- Europe ex-UK IMI was the worst performer with a return of -10.6% over the quarter. Real Estate (-16.8%) and Consumer Staples (-16.5%) were the worst-performing sectors.

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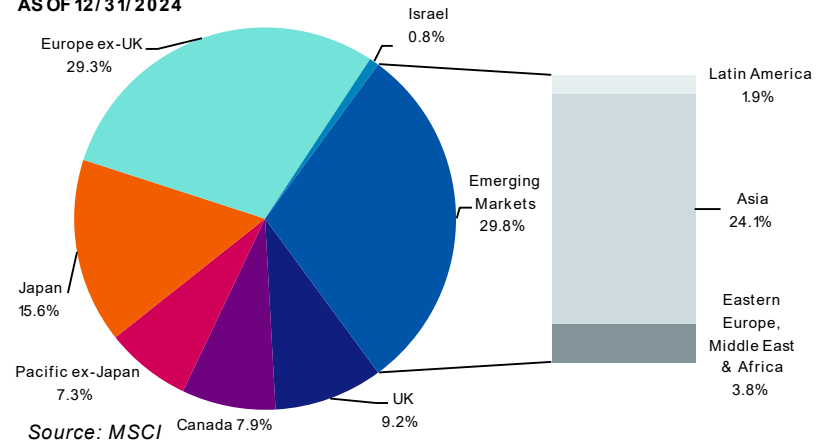
# Global Equity Markets

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 12/31/2024**



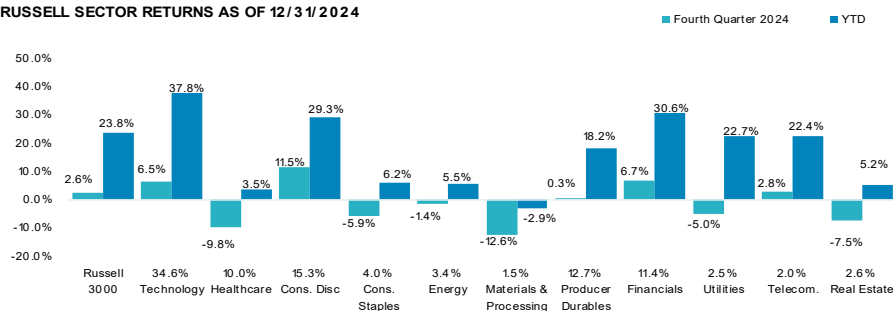
**MSCI ALL COUNTRY WORLD EX-U.S. IMI INDEX GEOGRAPHIC ALLOCATION AS OF 12/31/2024**



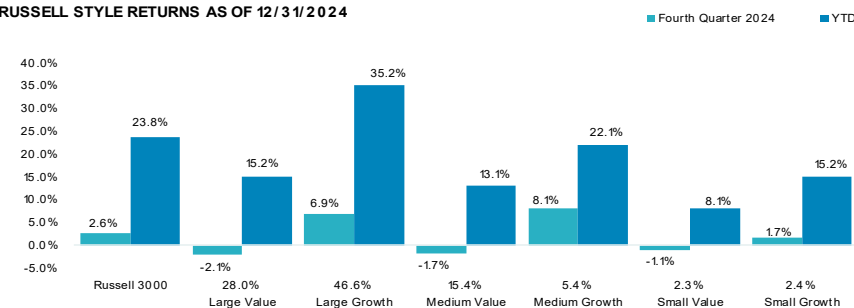
# U.S. Equity Markets

- The S&P 500 Index continued making new highs throughout the quarter in response to lowering interest rates by the Federal Reserve, range-bound inflation, better than expected economic growth, and a post-election “relief rally,” delivering 2.4% during the quarter. The NASDAQ Composite Index outperformed over the quarter with a return of 6.3%.
- Political developments dominated the quarter with U.S. elections delivering a clear mandate favouring the Republicans and President-elect Donald Trump.
- The U.S. economy grew at an annualized rate of 3.1% in the third quarter of 2024, higher than the economists expected 2.8% and above the previous quarter’s annualized growth rate of 3.0%. The acceleration was largely boosted by strong exports, consumer and federal government spending.
- The Russell 3000 Index rose 2.6% during the fourth quarter and 23.8% on a YTD basis. Consumer Discretionary (11.5%) and Financials (6.7%) were the best performers while Materials & Processing (-12.6%) and Healthcare (-9.8%) were the worst performers.
- On a style basis, growth outperformed value across market capitalizations over the quarter. Medium-cap stocks outperformed Small and Large-cap stocks in growth style, while Large-cap value stocks underperformed Medium and Small-cap value.
- over the quarter.

RUSSELL SECTOR RETURNS AS OF 12/31/2024



RUSSELL STYLE RETURNS AS OF 12/31/2024

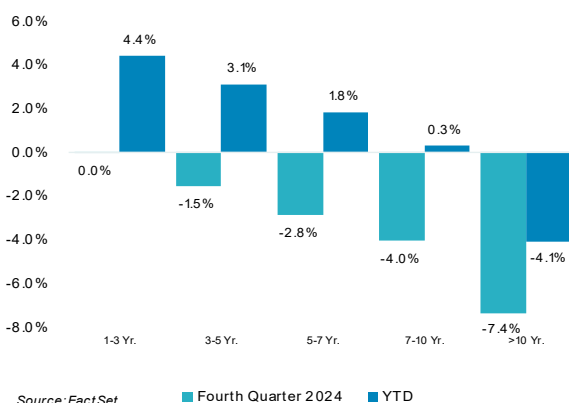


Source: Russell Indexes

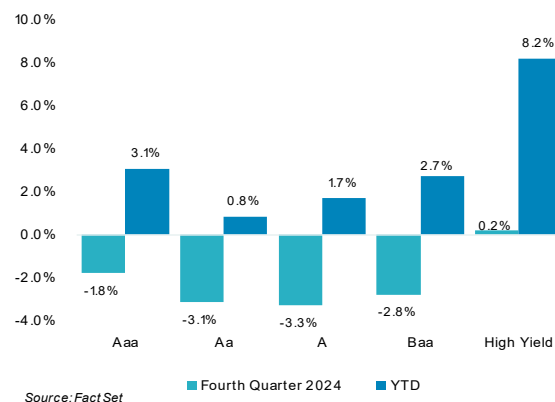
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# U.S. Fixed Income Markets

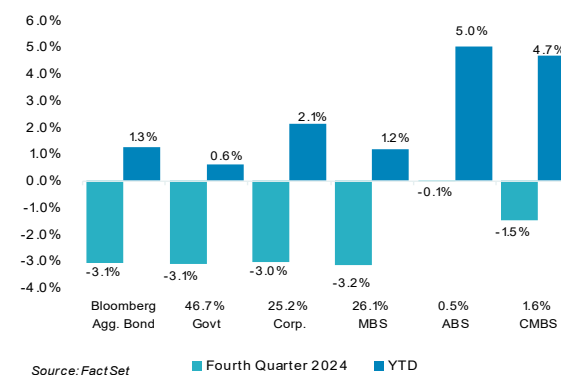
**BLOOMBERG AGGREGATE RETURNS BY MATURITY AS OF 12/31/2024**



**BLOOMBERG AGGREGATE RETURNS BY QUALITY AND HIGH YIELD RETURNS AS OF 12/31/2024**



**BLOOMBERG AGGREGATE RETURNS BY SECTOR AS OF 12/31/2024**

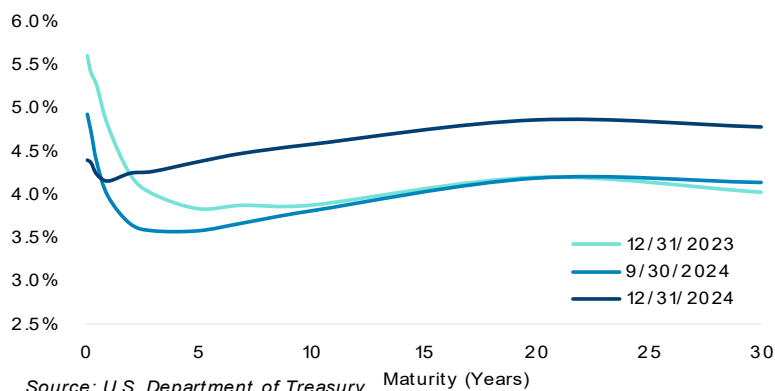


- The U.S. Fed cut its benchmark interest rate twice over the quarter by 0.25% each to a range of 4.25%- 4.50%. In its December 2024 meeting, the Federal Open Market Committee (FOMC) stated that the risks to achieving its employment and inflation targets are fairly balanced. The latest Fed "dot plot," showed FOMC members projecting a reduction of only half a percentage point in interest rates for 2025 with the rate expected to decline to 3% beyond 2027.
- The Bloomberg U.S. Aggregate Bond Index fell by 3.1% over the quarter and is up by 1.3% on a YTD basis.
- Across durations, almost all maturities finished the quarter in negative territory with longer maturities falling more.
- Within investment-grade bonds, lower-quality issues generally underperformed higher-quality issues, with A-rated bonds returning -3.3% during the quarter. High-yield bonds rose by 0.2%. On a YTD basis, high-yield bonds have outperformed indicating an increase in risk appetite.

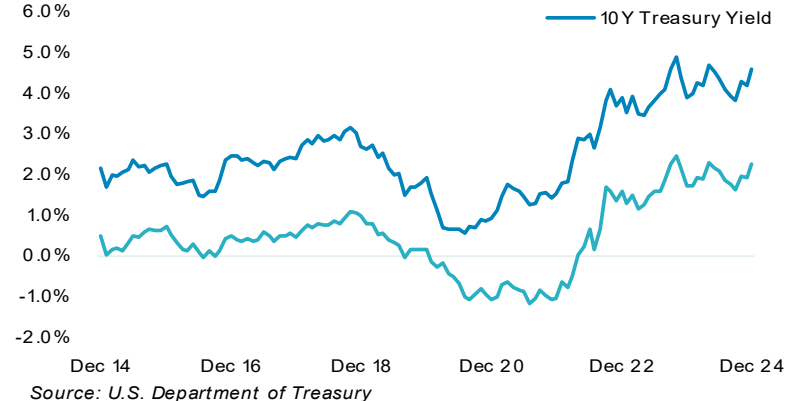
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# U.S. Fixed Income Markets

**U.S. TREASURY YIELD CURVE**



**U.S. 10-YEAR TREASURY AND TIPS YIELDS**

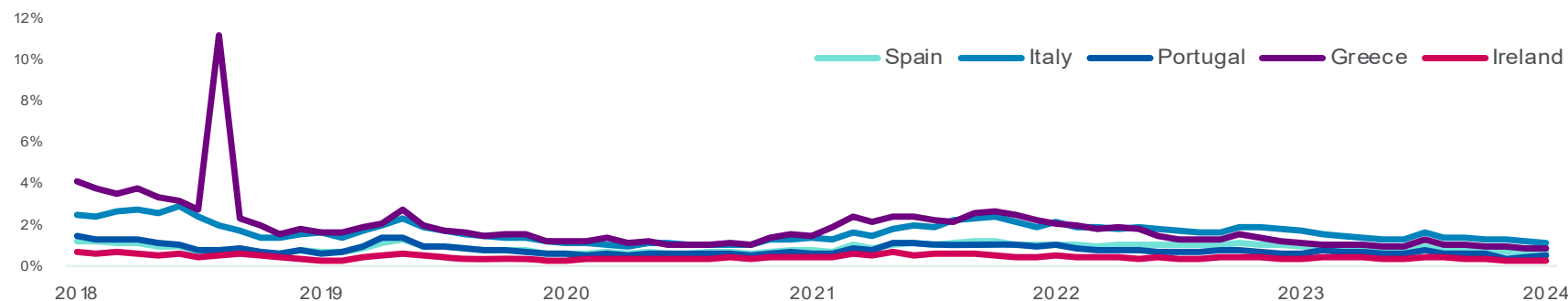


- U.S. Treasury yields generally rose across maturities as the yield curve shifted upwards over the quarter (except for less than 1-year maturities). The 10-year Treasury yield rose by 77bps to 4.58%, and the 30-year Treasury yield rose by 64bps to 4.78% over the quarter.
- U.S. headline consumer price index (CPI) rose to 2.7% year-on-year in November, in line with the economists' expectations and above October's reading of 2.6%. U.S. core inflation, which excludes energy and food prices, rose by 3.3% year-on-year in November, the same as the previous month and in line with economist expectations.
- The 10-year TIPS yield rose by 61bps over the quarter to 2.24%.



# 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 narrowed across the Euro Area. Over Q4 2024, the European Central Bank (ECB) reduced its policy interest rate twice by 0.25% each to 3.0%, marking four rate cuts in 2024. The bank also revised its economic growth projections downwards from those made in September, now forecasting growth rates of 0.7% for 2024, 1.1% for 2025, and 1.4% for 2026. Additionally, headline inflation is expected to rise to 2.4% in 2024, 2.1% in 2025, and 1.9% in 2026.
- Greek and Italian government bond yields rose by 13bps and 7bps to 3.23% and 3.51%, respectively over the quarter while Portugal government bond yields rose by 14bps to 2.84%. Irish and Spain government bond yields rose by 16bps and 12bps to 2.63% and 3.04%, respectively over the quarter.
- German bund yields rose by 24bps to 2.35% over the quarter.
- Eurozone headline inflation gathered pace as the CPI increased 2.3% year-on-year in November, higher than the 2.0% increase recorded in October but lower than economists' expectations of 2.4%. Core inflation rose 2.7% year-on-year in November, the same as the previous month and below economists' expectations.

# Credit Spreads

Spread (bps)	12/31/2024	9/30/2024	12/31/2023	Quarterly Change (bps)	YTD
U.S. Aggregate	34	36	42	-2	-8
Long Gov't	0	0	2	0	-2
Long Credit	100	108	117	-8	-17
Long Gov't/ Credit	50	55	62	-5	-12
MBS	43	42	47	0	-4
CMBS	80	93	126	-13	-46
ABS	44	64	68	-20	-24
Corporate	80	89	99	-9	-19
High Yield	287	295	323	-8	-36
Global Emerging Markets	219	244	294	-25	-75

Source: FactSet, Bloomberg

- Credit markets fell amid lowering risk tolerance sentiment, with spreads generally narrowing.
- High Yield and Global Emerging Markets spreads narrowed by 8bps and 25bps, respectively. Meanwhile, ABS spreads narrowed by 20bps.

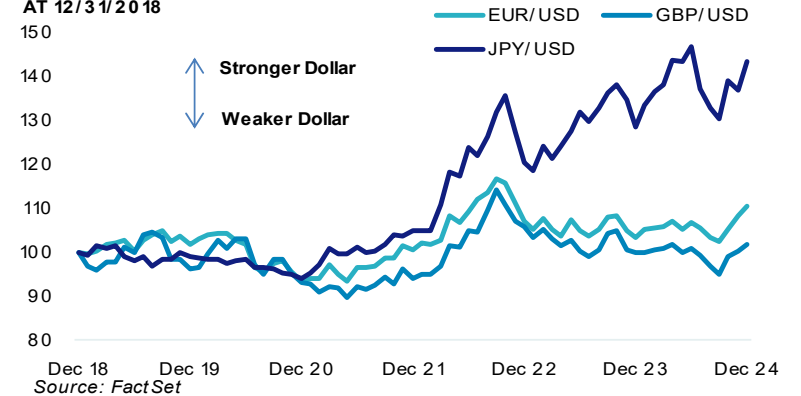
# Currency

**TRADE WEIGHTED U.S. DOLLAR INDEX  
(2006 = 100)**



Source: Federal Reserve

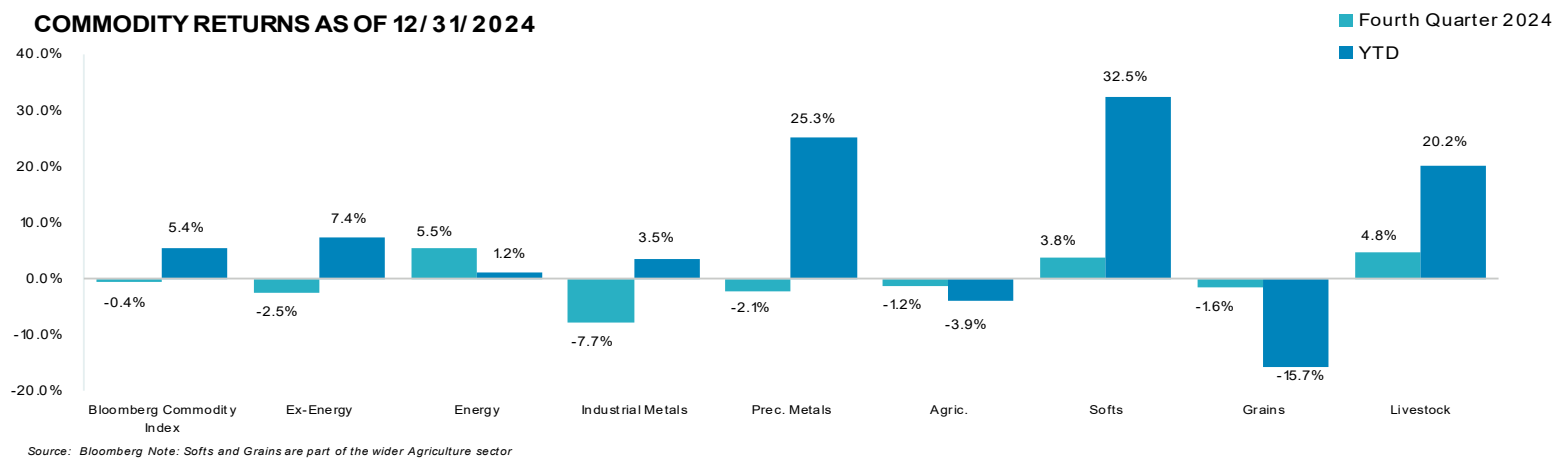
**U.S. DOLLAR RELATIVE TO EUR, GBP AND JPY REBASED TO 100  
AT 12/31/2018**



Source: FactSet

- The U.S. Dollar appreciated against all major currencies over the quarter. On a trade-weighted basis, the U.S. dollar appreciated by 6.5%.
- Sterling depreciated by 7.1% against the U.S. dollar. In its November meeting, the Bank of England (BoE) reduced its policy interest rate by 0.25% to 4.75%. The BoE has indicated a weakness in near-term activity indicators, projecting zero GDP growth for the fourth quarter of 2024, a revision from the previously anticipated growth of 0.3%. The MPC also expressed uncertainty about how the measures announced in the Autumn budget and the trade policy of the incoming U.S. administration will affect the overall economic outlook.
- The U.S. dollar appreciated by 7.8% against the euro and by 9.9% against the yen.

# Commodities

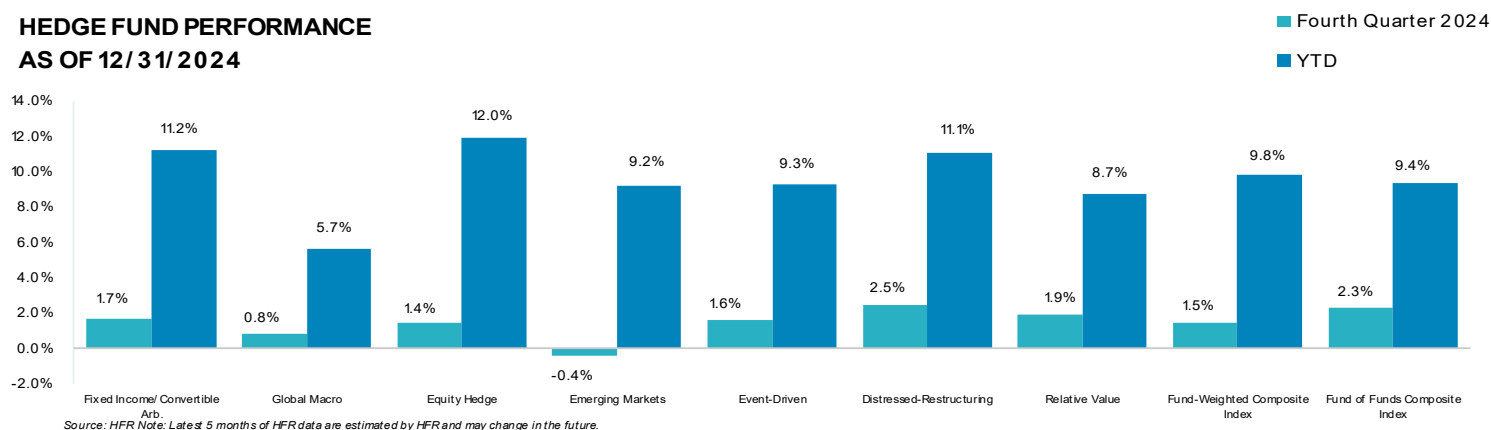


- Commodity prices fell over the quarter (except Energy, Livestock & Softs sub-sector) with the Bloomberg Commodity Index returning -0.4%.
- The Industrial Metals sector was the worst performer over the quarter at -7.7%. The price of Copper fell by 10.9% to U.S.\$8,706/MT.
- The Energy sector rose the most over the quarter at 5.5%. The price of WTI crude oil rose by 5.2% to U.S.\$72/B.
- The OPEC+ members have agreed to postpone the 2.2 million barrels planned increases in oil production until the end of March 2025, phasing out the adjustments gradually by the end of September 2026.

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# Hedge Funds Market Overview

## HEDGE FUND PERFORMANCE AS OF 12/31/2024

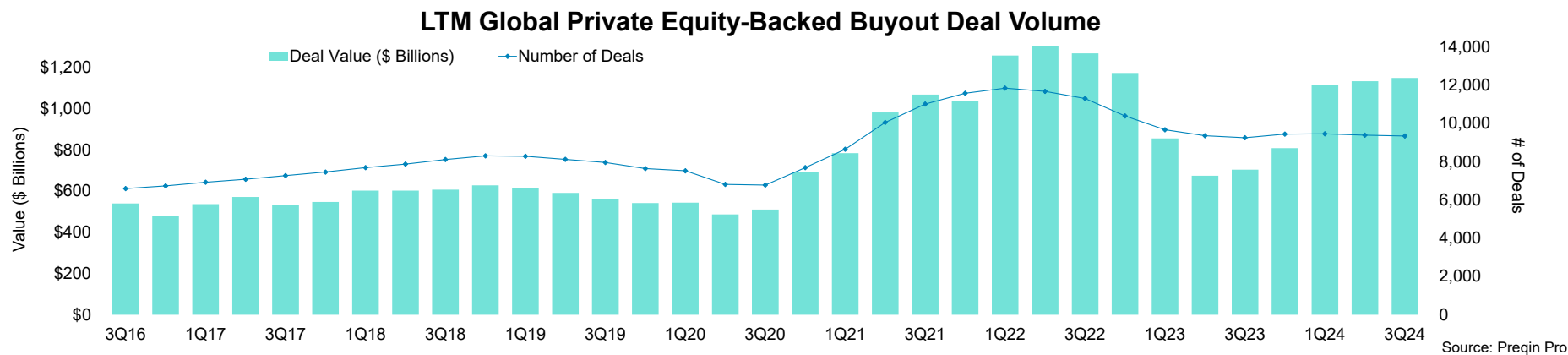


- Hedge fund performance was generally positive over the quarter.
- The HFRI Fund-Weighted Composite produced a return of 1.5% and the HFRI Fund of Funds Composite Index produced a return of 2.3% over the quarter.
- Over the quarter, Distressed Restructuring was the best performer with a return of 2.5%.
- Emerging Markets was the worst performer with a return of -0.4% over the quarter.
- On a YTD basis, Equity Hedge has outperformed all other strategies while Global Macro has performed the worst.

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# Private Equity Overview

## Third Quarter 2024

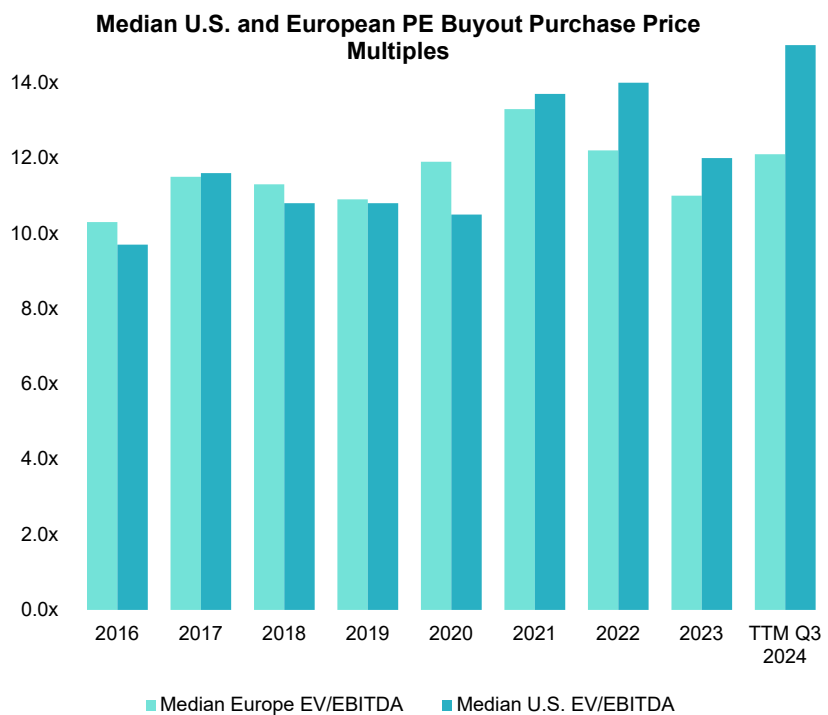


- **Fundraising:** In Q3 2024, \$211.4 billion was raised by 605 funds, which was a decrease of 11.3% on a capital basis and a decrease of 4.6% by number of funds over the prior quarter. Dry powder stood at \$3.2 trillion at the end of the quarter, equal to the prior quarter, but an increase of 20.8% compared to the five-year average.<sup>1</sup>
- **Buyout:** Global private equity-backed buyout deals totaled \$200.4 billion in Q3 2024, which was a decrease on a capital basis of 0.7% compared to Q2 2024 and a decrease of 13.4% compared to the five-year quarterly average.<sup>1</sup> On a TTM basis, median U.S. private equity EV/EBITDA multiples reached 15.0x at the end of Q3 2024, a meaningful jump above the 13.3x seen at the end of 2023 and up from the five-year average (11.8x). In Europe, on a TTM basis, median private equity EV/EBITDA multiples reached 12.1x at the end of Q3 2024, above the 11.0x multiple seen at the end of 2023 and above the five-year average of 11.7x.<sup>2</sup> Globally, buyout exit value totaled \$106.7 billion across 641 deals during the quarter, up from \$101.6 billion in value from 599 deals during the prior quarter. Through Q3 2024, YTD exit value across buyout transactions equaled 63.3% of 2023's total value.<sup>1</sup>
- **Venture:** During the quarter, 2,794 U.S. venture-backed transactions totaling \$37.5 billion were completed, which was a decrease of 32.3% on a capital basis and a decrease of 23.7% by deal count over the prior quarter, which saw 3,661 deals completed totaling \$55.5 billion. This was also a decrease of 31.4% on a capital basis compared to the five-year quarterly average of \$54.7 billion. Total U.S. venture-backed exit value decreased during the quarter, totaling approximately \$10.4 billion across an estimated 327 completed transactions. This compares to \$39.6 billion of value across 271 exits in Q3 2023. Q3 2024 exit value was meaningfully below the five-year quarterly average of \$68.3 billion from 352 transactions.<sup>3</sup>

Sources: <sup>1</sup> Preqin <sup>2</sup> Pitchbook/LCD <sup>3</sup> PitchBook/NVCA Venture Monitor <sup>4</sup> Fitch Ratings <sup>5</sup> 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



Sources: <sup>1</sup> Preqin <sup>2</sup> Pitchbook/LCD <sup>3</sup> PitchBook/NVCA Venture Monitor <sup>4</sup> Fitch Ratings <sup>5</sup> Jefferies

- **Mezzanine:** 7 funds closed on \$3.3 billion during the quarter, an increase from the prior quarter's total of \$1.5 billion raised by 6 funds. However, this represented a decrease of 49.6% from the five-year quarterly average of \$6.5 billion. Estimated dry powder was \$52.4 billion at the end of Q3 2024, down from \$58.2 billion at the end of the Q4 2023.<sup>1</sup>
- **Distressed Debt/Special Situations:** The TTM U.S. high-yield default rate was 1.94% as of September 2024, which was down slightly from June 2024's TTM rate of 2.34%.<sup>4</sup> During the quarter, \$16.4 billion was raised by 11 funds, up significantly from the \$4.5 billion raised by 13 funds during Q2 2024. Dry powder was estimated at \$131.0 billion at the end of Q3 2024, which was down 22.4% from year-end 2023. This was down from the five-year average level of \$150.8 billion.<sup>1</sup>
- **Secondaries:** 17 funds raised \$30.3 billion during Q3 2024, up substantially from the \$16.9 billion raised by 21 funds in Q2 2024. This was an increase compared to the five-year quarterly average of \$14.7 billion.<sup>1</sup> The average discount rate for LP buyout and venture capital portfolios finished 1H 2024 at 6.0% and 30.0%, respectively.<sup>5</sup>
- **Infrastructure:** \$15.5 billion of capital was raised by 17 funds in Q3 2024 compared to \$19.3 billion of capital raised by 28 funds in Q2 2024. The 10 largest funds in market are currently seeking a combined \$176.3 billion in capital. Infrastructure managers completed 518 deals for an aggregate deal value of \$100.5 billion in Q3 2024, an increase compared to 429 deals totaling \$64.9 billion completed in Q2 2024.<sup>1</sup>
- **Natural Resources:** During Q3 2024, 9 funds closed on \$2.5 billion compared to 8 funds closing on \$2.5 billion during the prior quarter. 62 energy and utilities buyout deals were completed in Q3 2024 totaling \$9.7 billion, an increase, on a capital basis, compared to 63 completed deals totaling \$4.2 billion in Q2 2024.<sup>1</sup>

# Appendix

## Index Definitions

Index	Definition
MSCI AC World Index	The MSCI ACWI Index, MSCI's flagship global equity index, is designed to represent performance of the full opportunity set of large- and mid-cap stocks across 23 developed and 24 emerging markets. As of May 2022, it covers more than 2,933 constituents across 11 sectors and approximately 85% of the free float-adjusted market capitalization in each market.
MSCI All Country World Investable Market Index	A capitalization-weighted index of stocks representing approximately 49 developed and emerging countries, including the U.S. and Canadian markets and covering all investable large-, mid- and small-cap securities.
MSCI World Index	A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets, representing 24 developed market country indices.
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 US and Canada. With 783 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 1,441 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
MSCI Emerging Markets Investable Market Index	A capitalization-weighted index of stocks representing approximately 26 emerging countries, and covering all investable large-, mid- and small-cap securities.
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.
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.



# Appendix

## Index Definitions

Index	Definition
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.
Bloomberg U.S. Aggregate Index	The Bloomberg US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US 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.
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+.
Bloomberg Commodity Index	The Bloomberg Commodity Index is a broadly diversified commodity price index distributed by Bloomberg Index Services Limited.
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 US 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.

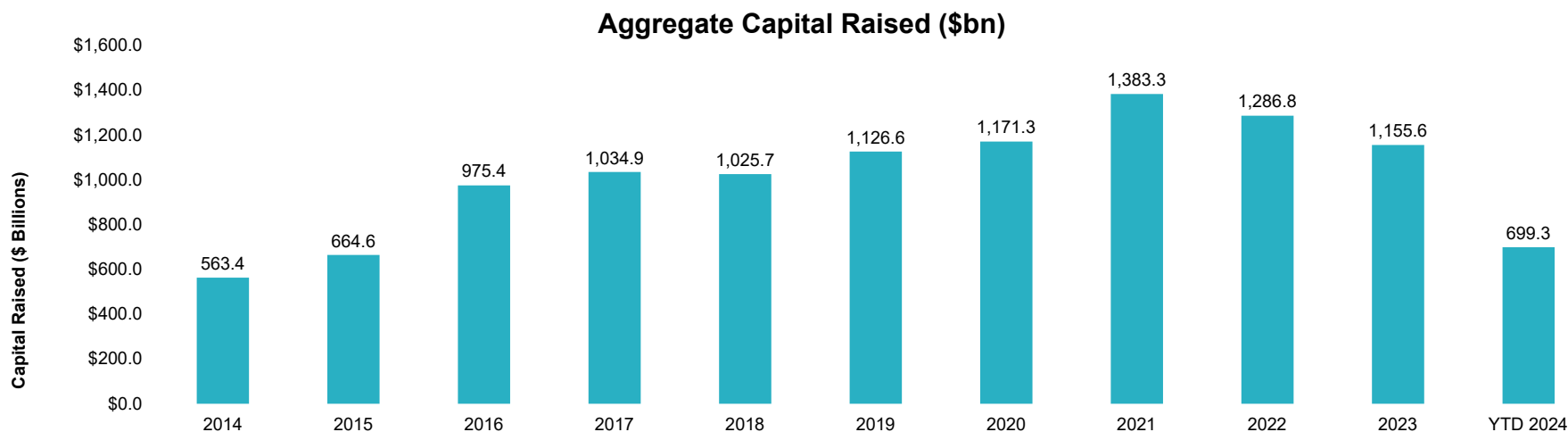
**AON**

# **Q3 2024 Global Private Equity Market Overview**

January 2025



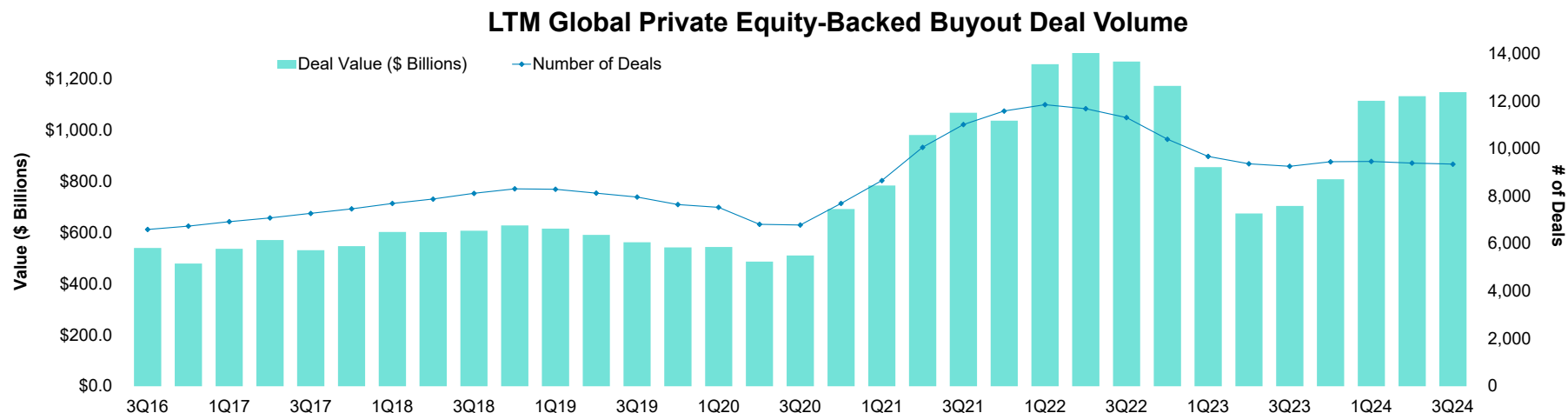
# Private Equity Overview



## Fundraising

- In Q3 2024, \$211.4 billion was raised by 605 funds, which was a decrease of 11.3% on a capital basis and a decrease of 4.6% by number of funds over the prior quarter. Compared to Q3 2023, capital raised decreased by 27.0% while the number of closed funds decreased by 7.2%.<sup>1</sup>
  - Q3 2024 fundraising was 31.2% lower, on a capital basis, and 48.8% lower, by number of funds, compared to the five-year quarterly average.
  - The majority of capital was raised by funds located in North America, comprising 68.5% of the quarter's total. This was up slightly from 67.8% during the prior quarter. Capital raised by European managers accounted for 25.1% of capital raised during the quarter, an increase from 20.6% in Q2 2024. The remainder was attributable to managers located in Asia and other parts of the world.
- Dry powder stood at \$3.2 trillion at the end of the quarter, equal to the prior quarter, but an increase of 20.8% compared to the five-year average.<sup>1</sup>

# Private Equity Overview (cont.)

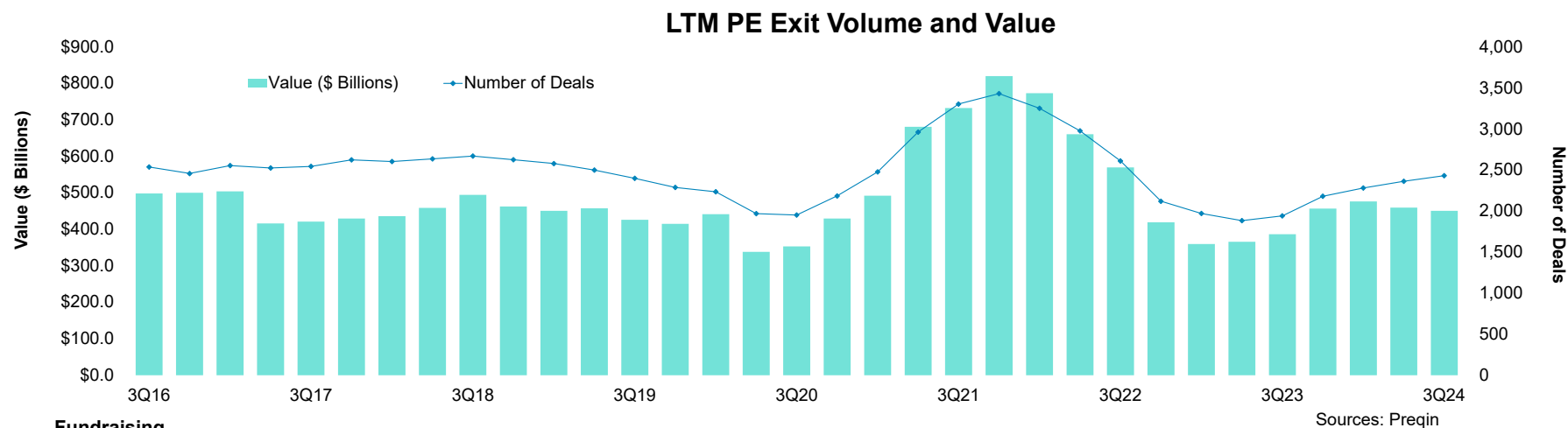


## Activity

- Global private equity-backed buyout deals totaled \$200.4 billion in Q3 2024, which was a decrease on a capital basis of 0.7% compared to Q2 2024. Similarly, on a number of deals basis, the quarter's total fell 1.3% over the prior quarter. On an LTM basis, deal value through Q3 2024 is being impacted by a large PIPE investment in Aramco by Public Investment Fund (estimated at \$163.3 billion of Q1 2024's total deal value), which has boosted the LTM total.<sup>1</sup>
  - Deal value in Q3 2024 was a decrease of 13.4% compared to the five-year quarterly average.
  - Add-on deals comprised the largest number of completed deals by type, accounting for 42.2% of the quarter's total.
- On a TTM basis, median U.S. private equity EV/EBITDA multiples reached 15.0x at the end of Q3 2024, a meaningful jump above the 13.3x seen at the end of 2023 and up from the five-year average (11.8x).<sup>3</sup>
  - The median purchase price multiple for all U.S. PE buyout transactions completed YTD ended at 15.6x EBITDA, an increase of 3.4x (multiple of EBITDA) compared to the five-year average, and 4.4x higher than the ten-year average.
- In Europe, on a TTM basis, median private equity EV/EBITDA multiples reached 12.1x at the end of Q3 2024, above the 11.0x multiple seen at the end of 2023. This was up compared to the five-year average of 11.8x and above the ten-year average of 11.3x EBITDA.<sup>3</sup>
- GPs were able to obtain debt financing but utilized more equity to consummate transactions. For U.S. broadly syndicated loan-funded transactions, debt comprised 47.1% of completed transactions, a slight increase compared to the prior year's 45.7%.<sup>3</sup>



# Buyouts / Corporate Finance



## Fundraising

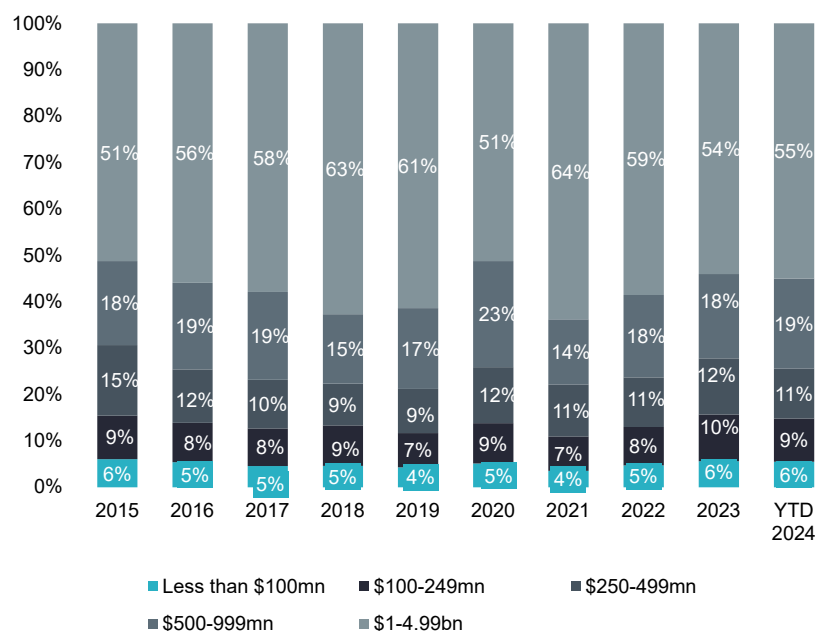
- \$96.9 billion was closed on by 166 buyout and growth funds in Q3 2024, a significant decrease compared to \$152.6 billion raised by 163 funds in Q2 2024. This represented a decrease of 44.1% compared to capital raised in Q3 2023.<sup>1</sup>
  - This was lower, on a capital basis, than the five-year quarterly average of \$141.9 billion raised, and meaningfully lower by the average number of funds raised (267).
  - Capital raised through Q3 2024 represented 66.0% of capital raised in FY 2023.
  - New Mountain Partners VII was the largest fund raised during the quarter, closing on \$15.4 billion of commitments.
- Buyout and growth equity dry powder was estimated at \$1.3 trillion at the end of Q3 2024, down 6.0% compared to the year-end 2023.<sup>1</sup>
  - An estimated 60.0% of buyout dry powder was targeted for North America, while European dry powder comprised 24.3% and Asia/Rest of World accounted for the remainder.

## Activity

- Globally, buyout exit value totaled \$106.7 billion across 641 deals during the quarter, up from \$101.6 billion in value from 599 deals during the prior quarter. Through Q3 2024, YTD exit value across buyout transactions equaled 63.3% of 2023's total value.<sup>1</sup>

# Buyouts / Corporate Finance

## Buyout Deal Value by Deal Size

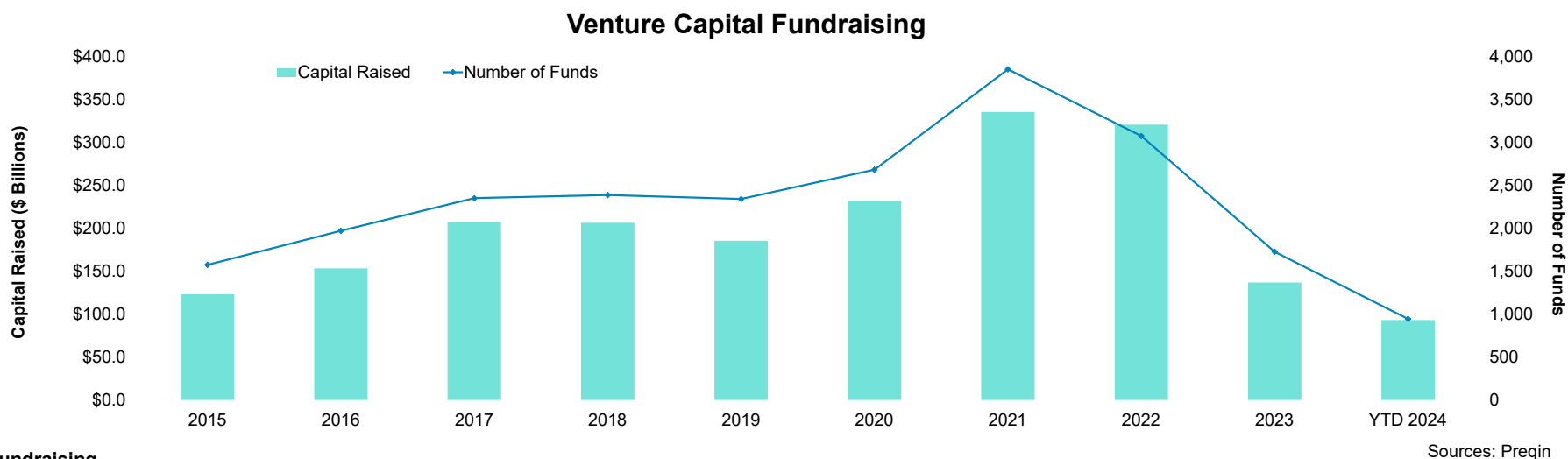


Sources: Preqin

## Activity

- Global private equity-backed buyout deals totaled \$200.4 billion in Q3 2024, which was a decrease on a capital basis of 0.7% compared to Q2 2024, and a decrease of 13.4% compared to the five-year quarterly average. YTD deal value was impacted by a large PIPE investment in Aramco by Public Investment Fund (estimated at \$163.3 billion of the period's total deal value) which has positively impacted the YTD total.<sup>1</sup>
    - By geography, deals in North America accounted for the largest percentage of total deal value at an estimated 56.2% in Q3 2024, followed by Asia (21.3%), while information technology deals accounted for the largest percentage by industry at 27.7% of total deal value, followed by healthcare (16.9%).
  - Of deals less than \$5.0 billion in size, deals valued between \$1.0 billion - \$4.9 billion accounted for an estimated 55.0% of deal value through Q3 2024 compared to 54.3% through Q2 2024. Deals valued between \$500.0 million to \$999.9 million accounted for the second largest weighting, representing 19.4% of total deal value through Q3 2024.
  - On a TTM basis, median U.S. private equity buyout EV/EBITDA multiples reached 15.0x at the end of Q3 2024, a meaningful jump above the 13.3x seen at the end of 2023.<sup>3</sup>
    - This was also significantly above the five-year average and ten-year average of 11.8x EBITDA and 11.2x EBITDA, respectively.
  - On a YTD basis, the median U.S. private equity buyout EV/EBITDA multiple ended the quarter at 15.6x EBITDA.<sup>3</sup>
  - The median European PE buyout purchase price multiple ended the quarter at 12.1x EBITDA on a TTM basis compared to 11.0x EBITDA in 2023. This was above the five-year average multiple (11.7x).<sup>3</sup>
  - The equity contribution for U.S. broadly syndicated loan-funded buyout transactions stood at 52.9% YTD, as transactions were less reliant on debt financing to complete the deals. This remained above the five- and ten-year average levels of 50.2% and 46.6%, respectively.<sup>3</sup>
- Opportunity**<sup>4</sup>
- Mid-market managers with value-creation expertise across business cycles.
  - Managers focused on value-oriented strategies and/or corporate carve-outs.

# Venture Capital

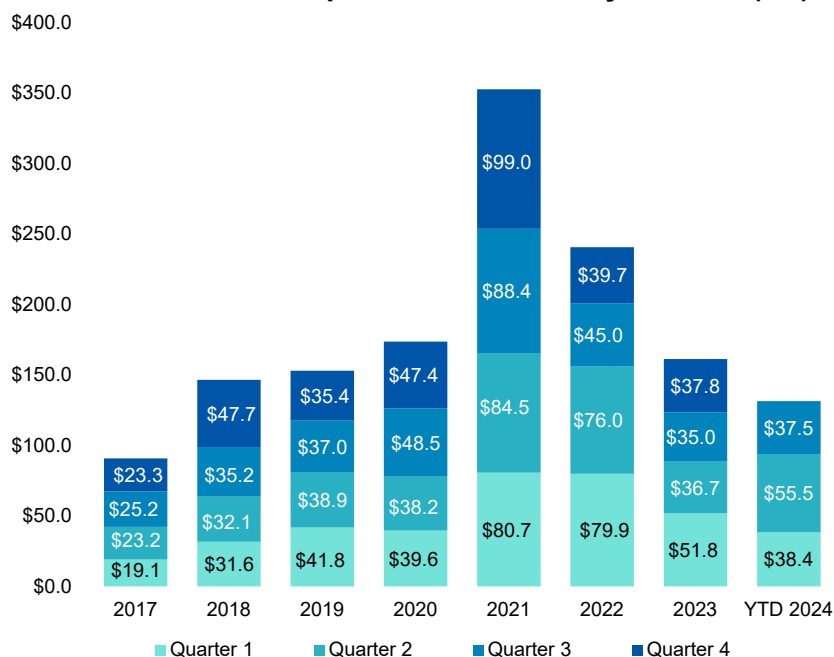


## Fundraising

- \$26.0 billion of capital was raised by 314 funds in Q3 2024, lower by total capital raised, but higher on a number of funds basis from the prior quarter's total of \$30.2 billion raised by 304 funds. However, Q3 2024's capital raised was higher than the \$25.4 billion of capital raised by 318 funds during Q3 2023.<sup>1</sup>
  - Q3 2024 fundraising was 56.5% lower, on a capital basis, compared to the five-year quarterly average of \$59.8 billion.
  - ARCH Venture Fund XIII was the largest fund raised during the quarter with total commitments of \$3.0 billion.
- At the end of Q3 2024, there were an estimated 7,039 funds in market targeting \$469.5 billion.<sup>1</sup>
  - 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 \$573.5 billion at the end of Q3 2024, down from year-end 2023's total of \$625.7 billion.<sup>1</sup>

# Venture Capital

## U.S. Venture Capital Investments by Quarter (\$B)



Source: Pitchbook / NVCA

## Activity

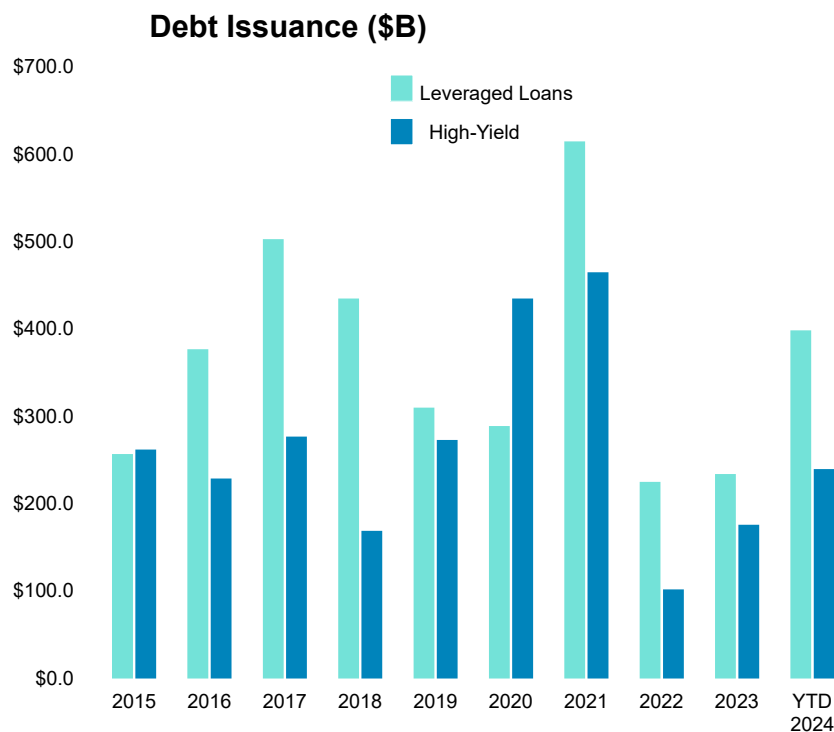
- During the quarter, 2,794 U.S. venture-backed transactions totaling \$37.5 billion were completed, which was a decrease of 32.3% on a capital basis and a decrease of 23.7% by deal count over the prior quarter, which saw 3,661 deals completed totaling \$55.5 billion. This was also a decrease of 31.4% on a capital basis compared to the five-year quarterly average of \$54.7 billion.<sup>7</sup>
  - In Q3 2024, there were 61 U.S.-based deals involving unicorn companies, representing roughly \$9.4 billion in deal value. This was down compared to the prior quarter, which saw 69 unicorn-related deals close at a deal value of \$23.4 billion. This quarter's unicorn deal value was also below the five-year quarterly average of \$18.5 billion.<sup>7</sup>
- Most median pre-money valuations increased relative to the valuations seen at the end of the prior quarter, with the exception of Series A and Series B valuations. Compared to the prior quarter, Seed valuations increased from a median pre-money valuation of \$15.6 million to \$17.7 million, Series C increased from \$130.0 million to \$275.0 million, and Series D and later increased from \$793.7 million to \$1.2 billion. Series A decreased from \$44.0 million to \$39.0 million, while Series B decreased from \$140.0 million to \$120.0 million.<sup>8</sup>
- Total U.S. venture-backed exit value decreased during the quarter, totaling approximately \$10.4 billion across an estimated 327 completed transactions. This compares to \$39.6 billion of value across 271 exits in Q3 2023. Q3 2024 exit value was meaningfully below the five-year quarterly average of \$68.3 billion from 352 transactions.<sup>7</sup>
  - The number of U.S. venture-backed initial public offerings was equal to the prior quarter, with 14 IPOs completed in Q3 2024 at a value of \$2.5 billion. 178 exits occurred by acquisition, marking a decrease over the prior quarter's 201 acquisitions, and accounted for \$7.4 billion in exit value.<sup>7</sup>

## Opportunity<sup>4</sup>

- 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 \$35.8 billion in Q3 2024, compared to \$51.9 billion in Q2 2024. The YTD total represents 111.5% of FY 2023's issuance total of \$120.7 billion.<sup>2</sup>
- High-yield debt issuance totaled \$239.8 billion through Q3 2024. YTD 2024's issuance marks 136.0% of the total issuance in 2023.<sup>2</sup>

## Activity

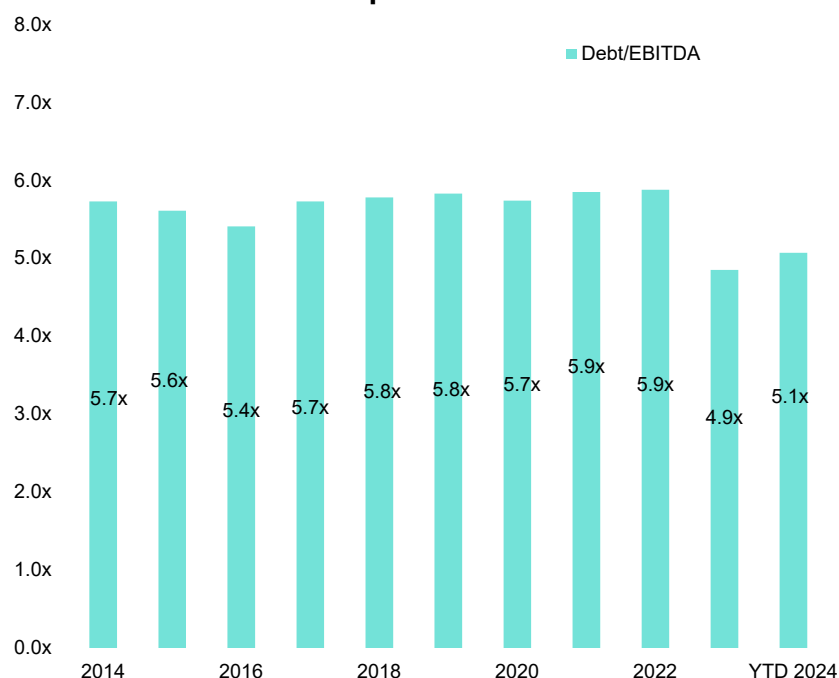
- YTD U.S. institutional leveraged loan primary volume totaled \$398.5 billion through Q3 2024, compared to \$175.4 billion through Q3 2023 (+127.0%).<sup>2</sup>
  - Loan issuance for M&A activity is expected to remain strong through the end of 2024 in addition to continued activity related to repricing and managing loan maturities.
- European institutional loan issuance, including repricing and extensions, totaled €157.0 billion through Q3 2024, exceeding the former peak set in 2021.<sup>3</sup>

## Opportunity<sup>4</sup>

- 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

Debt/EBITDA multiples on U.S. BSL-funded LBOs



Sources: Pitchbook / LCD

## Activity

- For U.S. broadly syndicated loan-funded transactions, debt comprised 47.1% of completed transactions through YTD Q3 2024, a slight increase compared to the prior year's total of 45.7%. This compared to the five- and ten-year averages of 49.8% and 53.4%, respectively.<sup>3</sup>
- UBS predicts junior capital to re-emerge as part of financing packages for M&A/LBO transactions, particularly if interest rates begin to compress in late 2024.<sup>2</sup>

## Mezzanine Fundraising

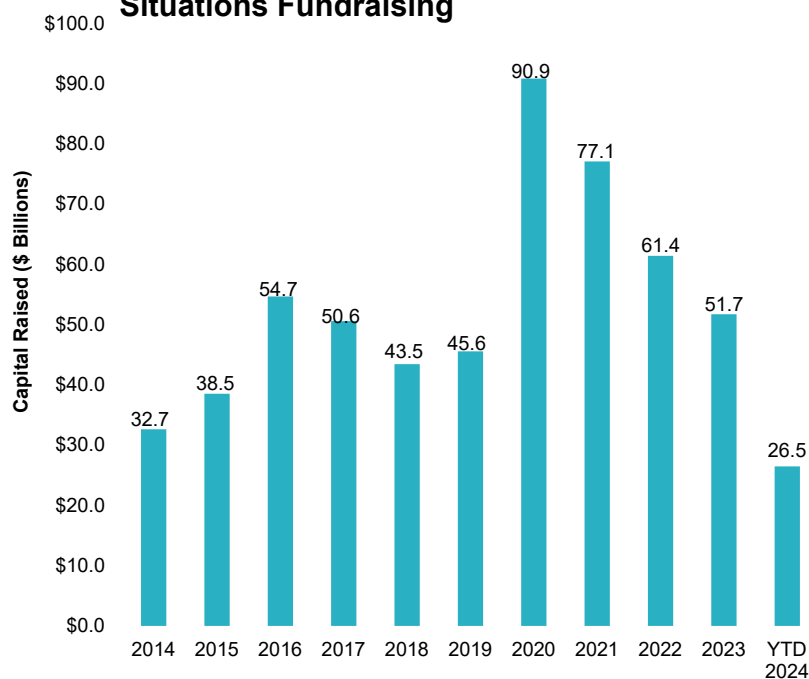
- 7 funds closed on \$3.3 billion during the quarter, an increase from the prior quarter's total of \$1.5 billion raised by 6 funds. However, this represented a decrease of 49.6% from the five-year quarterly average of \$6.5 billion.<sup>1</sup>
- Estimated dry powder was \$52.4 billion at the end of Q3 2024, down from \$58.2 billion at the end of the Q4 2023.<sup>1</sup>
- An estimated 108 funds were in market targeting \$37.7 billion of commitments. Blackstone Capital Opportunities Fund V was the largest fund in market targeting commitments of \$10.0 billion.<sup>1</sup>

## Opportunity<sup>4</sup>

- Funds with the capacity to scale for large sponsored deals

# Distressed Private Markets

## Distressed Debt, Turnaround, & Special Situations Fundraising

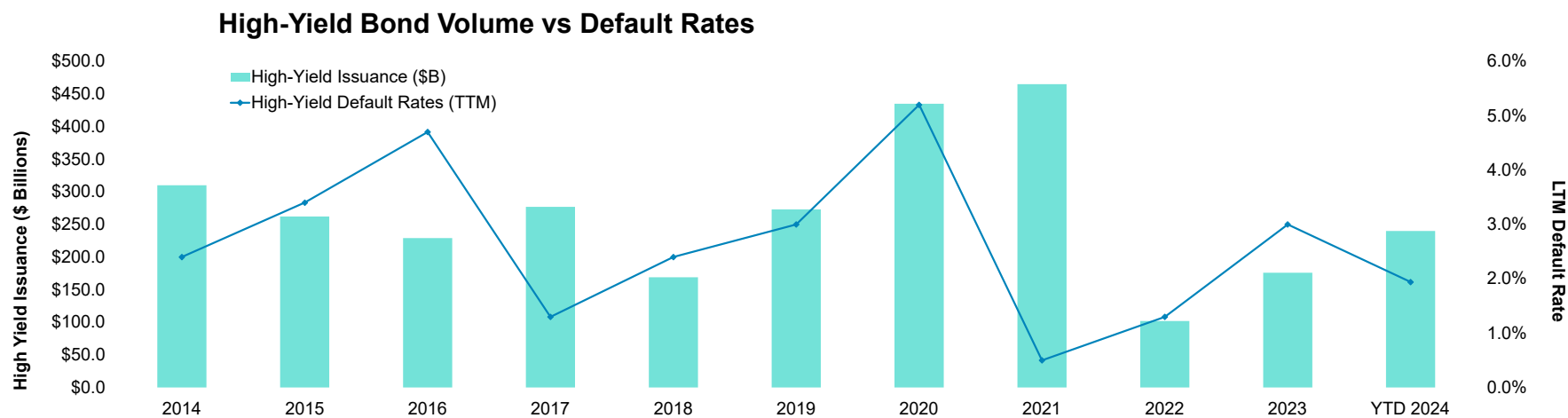


Source: Preqin

## Fundraising

- During the quarter, \$16.4 billion was raised by 11 funds, up significantly from the \$4.5 billion raised by 13 funds during Q2 2024.<sup>1</sup>
  - Capital raised in Q3 2024 increased compared to Q3 2023's total of \$10.7 billion.
  - Q3 2024's fundraising was 2.2% higher than the five-year quarterly average of \$16.0 billion.
  - The average closed fund size was \$2.3 billion in Q3 2024, a significant increase compared to the five-year quarterly average of \$798.0 million.
  - Apollo/Athene Dedicated Investment Program II was the largest fund closed during the quarter with \$6.0 billion in commitments.
- Dry powder was estimated at \$131.0 billion at the end of Q3 2024, which was down 22.4% from year-end 2023. This was down from the five-year average level of \$150.8 billion.<sup>1</sup>
- Roughly 252 funds were in the market at the end of Q3 2024 seeking \$133.6 billion in capital commitments.<sup>1</sup>
  - Special situations managers were targeting the most capital, seeking \$71.3 billion in commitments, followed by distressed debt managers seeking \$61.0 billion.
  - Oaktree Opportunities Fund XII was the largest fund in market with a target fund size of \$18.0 billion.

# Distressed Private Markets



Sources: UBS / Fitch Ratings

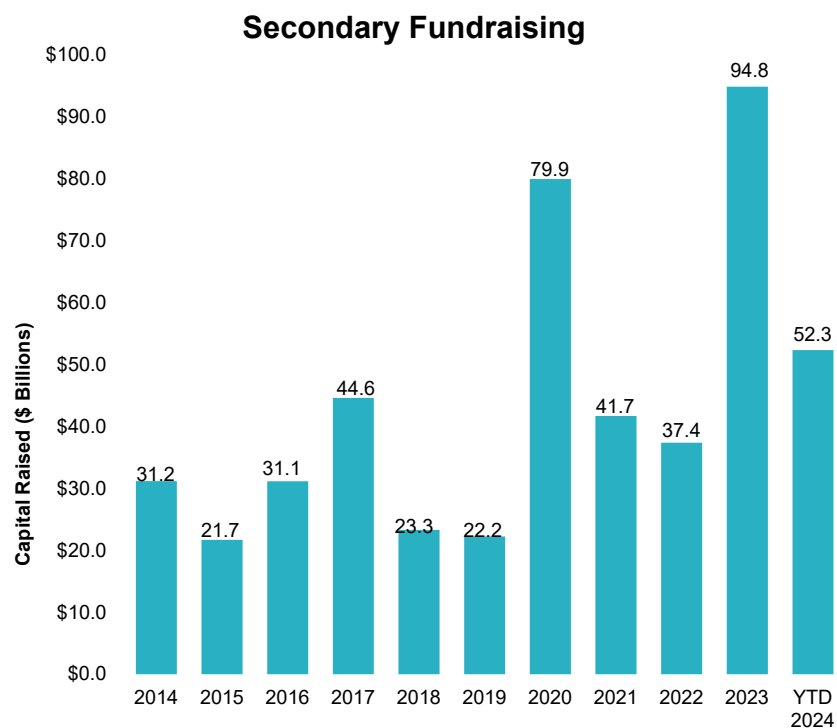
## Activity

- The TTM U.S. high-yield default rate was 1.94% as of September 2024, which was down slightly from June 2024's TTM rate of 2.34%. Fitch expected the high-yield default rate to trend slightly higher through the end of 2024 and into 2025, with forecasted default rates in 2025 of 2.5% to 3.0%.<sup>6</sup>
- Continued market dislocations caused by macroeconomic factors may supply additional distressed opportunities in the next several months, notably if the default rate moves higher.

## Opportunity<sup>4</sup>

- Funds capable of performing operational turnarounds
- Funds with the flexibility to invest globally

# Secondaries



Source: Preqin

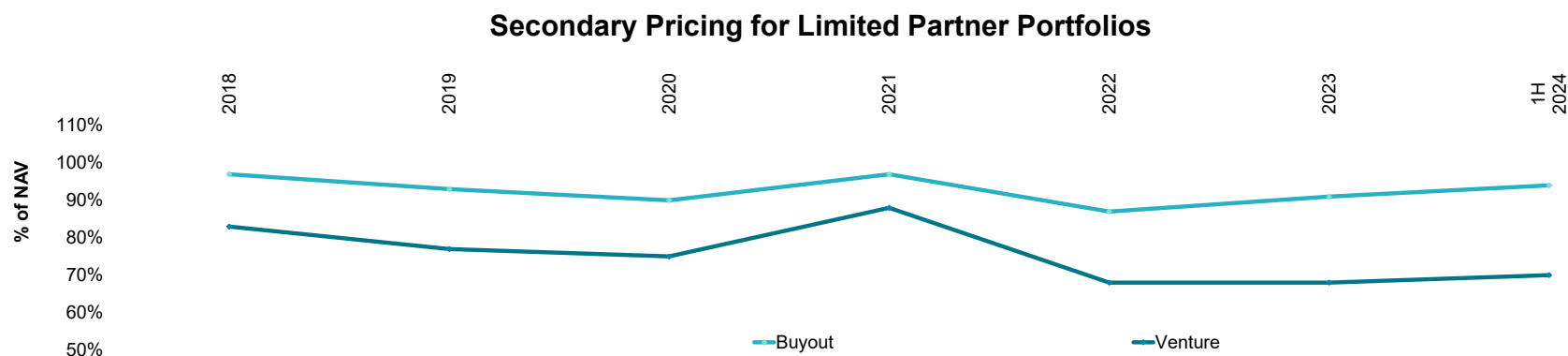
## Fundraising

- 17 funds raised \$30.3 billion during Q3 2024, up substantially from the \$16.9 billion raised by 21 funds in Q2 2024. This was an increase compared to the five-year quarterly average of \$14.7 billion.<sup>1</sup>
  - Dover Street XI was the largest fund closed during the quarter with total commitments of \$15.1 billion.
- At the end of Q3 2024, there were an estimated 205 secondary and direct secondary funds in market targeting roughly \$117.1 billion. The majority of secondary funds are targeting North American investments.<sup>1</sup>
  - ASF IX is the largest fund being raised, seeking \$25.0 billion in commitments. There are currently three funds in market seeking \$10.0 billion or more in capital 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. Given liquidity needs of Limited Partners, and the effects of slower distributions and longer hold periods, Jefferies expects continued adoption of secondaries transactions by Limited Partners.<sup>16</sup>
- Given the substantial amount of dry powder raised by the largest secondary buyers over the last 18 months, firms are writing larger checks to purchase sizable, diversified LP portfolios.<sup>14</sup>
- 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.<sup>16</sup>

# Secondaries



Source: Jefferies

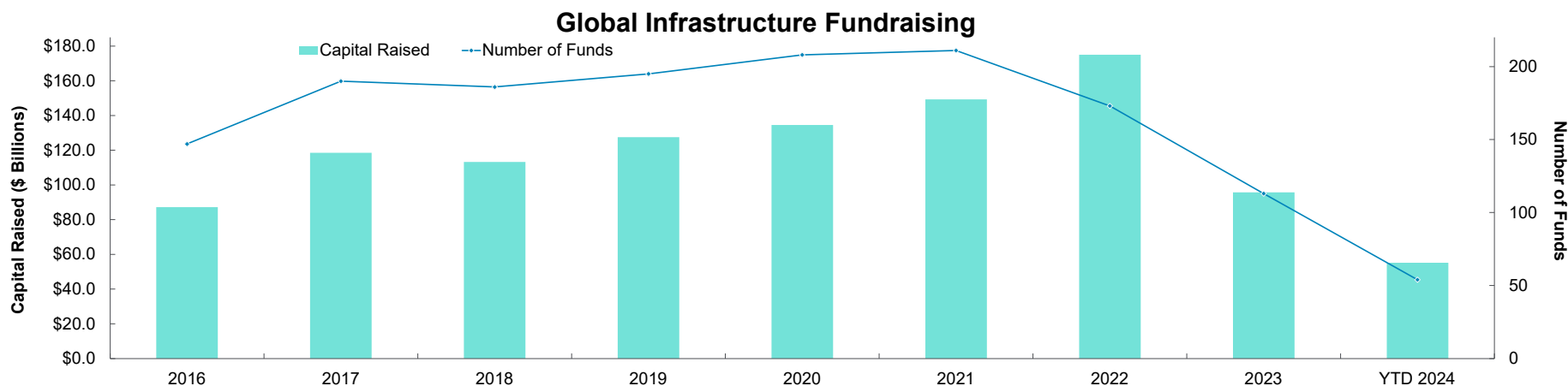
## Activity

- Limited partner portfolio pricing has 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 1H 2024 at 6.0% and 30.0%, respectively.<sup>17</sup>
  - Jefferies expects pricing to further improve as demand increases, notably from retail entrants into the market, and as public markets stabilize. This, coupled with secondary dry powder available to invest, is expected to drive strong transaction volume through the end of 2024.<sup>17</sup>
- 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.<sup>16</sup>
- GP-led volume is expected to increase through the remainder of 2024, according to Jefferies, reaching north of \$30.0 billion in transaction volume. This will mark a notable increase compared to the prior year. Numerous factors support a healthy GP-led market including Limited Partner's desire for increased liquidity, an increase in investment strategies and capital targeting GP-led transactions, and a growing universe of potential syndicate investors.<sup>17</sup>
- Campbell Lutyens suggests GP-led secondaries pricing may improve given the robust fundraising environment, causing increased competition in transactions completed in 2024.<sup>14</sup>

## Opportunity<sup>4</sup>

- Funds that are able to execute complex transactions
- Niche strategies

# Infrastructure

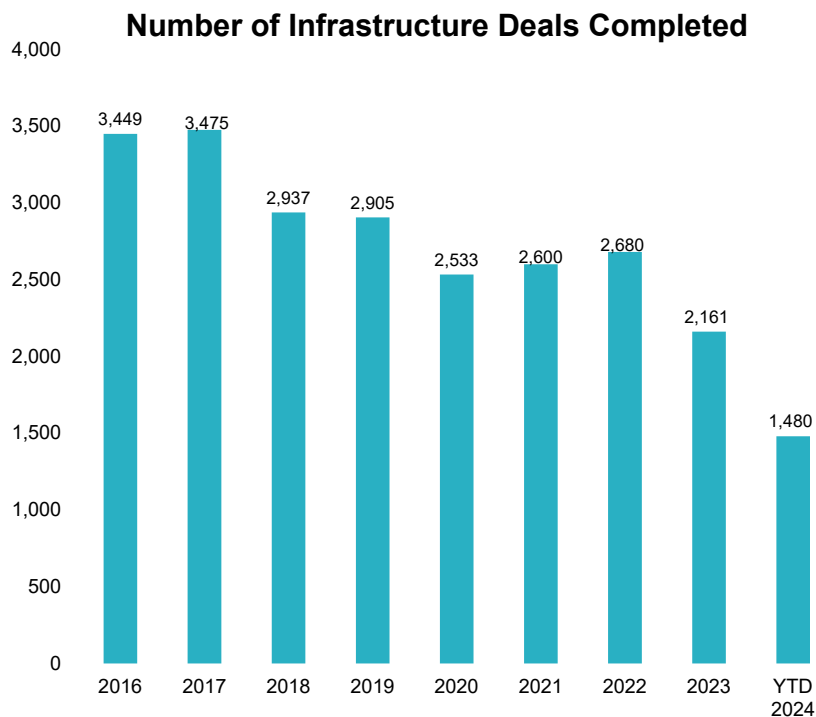


Source: Preqin

## Fundraising

- \$15.5 billion of capital was raised by 17 funds in Q3 2024 compared to \$19.3 billion of capital raised by 28 funds in Q2 2024. This was a decrease of 52.4% compared to the five-year quarterly average of \$33.8 billion. Through Q3 2024, YTD fundraising represented 74.7% of 2023's total.<sup>1</sup>
  - Stonepeak Opportunities Fund was the largest fund closed during the quarter with \$3.2 billion of commitments.
- As of the end of Q3 2024, there were an estimated 419 unlisted infrastructure funds in the market seeking roughly \$563.3 billion.<sup>1</sup>
  - The largest funds in market, Global Infrastructure Partners V and ALTERRA Acceleration, each had target fund sizes of \$25.0 billion.
  - The 10 largest funds in market are currently seeking a combined \$176.3 billion in capital.
- Concerns surrounding the relative availability and pricing of assets remain. Although fundraising has slowed it 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

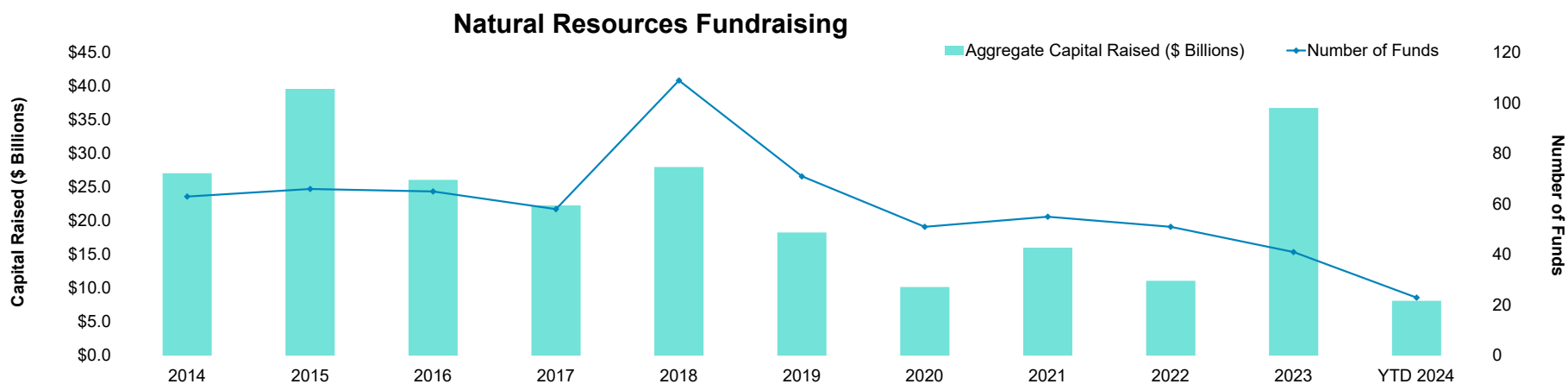
- Infrastructure managers completed 518 deals for an aggregate deal value of \$100.5 billion in Q3 2024, an increase compared to 429 deals totaling \$64.9 billion completed in Q2 2024.<sup>1</sup>
  - By region, Europe saw the largest number of deals, with 43.3% of deals being completed in the region, followed by North America at 23.4%. APAC amassed 19.1% of activity through the end of Q3 2024.

## Opportunity<sup>4</sup>

- 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

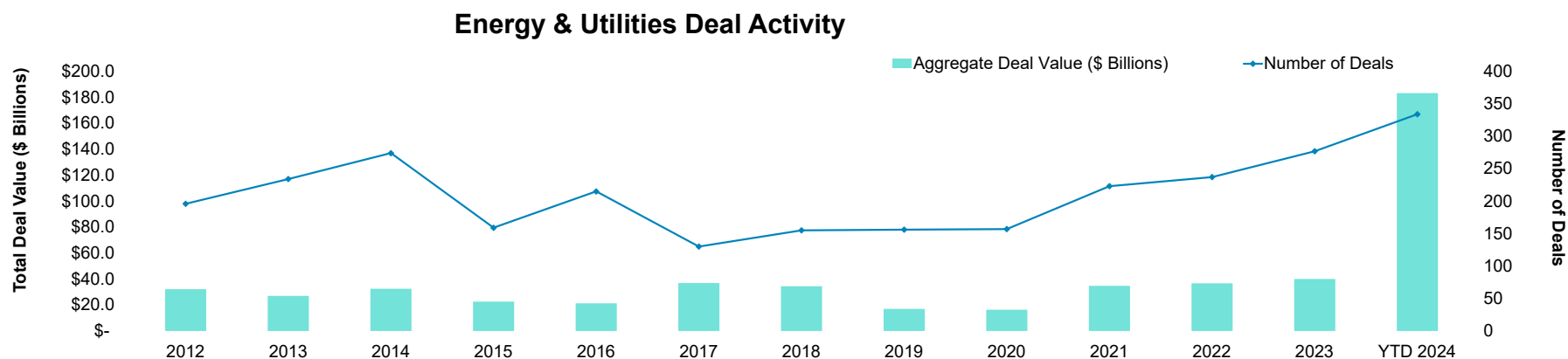
## Fundraising

- During Q3 2024, 9 funds closed on \$2.5 billion compared to 8 funds closing on \$2.5 billion during the prior quarter. This was lower than the five-year quarterly average of \$4.4 billion.<sup>1</sup>
- Dry powder stood at roughly \$52.1 billion at the end of Q3 2024, which was significantly higher than Q4 2023's level of \$38.3 billion. This was also higher than the five-year average of \$38.7 billion.<sup>1</sup>

## Activity

- Crude oil prices and natural gas prices decreased quarter-over-quarter and year-over-year.
  - WTI crude oil prices decreased 11.9% during the quarter to \$70.24 per bbl. This was also a decrease of 21.5% compared to Q3 2023.<sup>10</sup>
  - Brent crude oil prices ended the quarter at \$74.02/bbl, down 10.0% compared to the prior quarter. This was a decrease of 21.0% from Q3 2023.<sup>10</sup>
  - Natural gas prices (Henry Hub) finished Q2 2024 at \$2.28 per MMBtu, which was down 10.2% compared to the prior quarter and down 13.6% from Q3 2023.<sup>10</sup>

# Natural Resources



Source: Preqin

## Activity

- 62 energy and utilities buyout deals were completed in Q3 2024 totaling \$9.7 billion, an increase, on a capital basis, compared to 63 completed deals totaling \$4.2 billion in Q2 2024. YTD 2024 deal value is being driven by a large PIPE investment in Aramco by Public Investment Fund, accounting for \$163.1 billion of the YTD total.<sup>1</sup>
- A total of 586 crude oil and natural gas rotary rigs were in operation in the U.S. at the end of the quarter. This was down by 2.8% from the prior quarter and down 9.7% over Q3 2023.<sup>13</sup>
  - Crude oil rigs represented 82.4% of the total rigs in operation. 302 of the 483 active oil rigs were in the Permian basin.
  - At the end of Q3 2024, 34.7% and 24.5% of natural gas rigs were operating in the Haynesville and Marcellus basins, respectively.
- The price of iron ore (Tianjin Port) ended the quarter at \$96.24 per dry metric ton, down from \$108.10 at the end of Q2 2024.<sup>10</sup>

## Opportunity<sup>4</sup>

- 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

**AON**

# **Q3 2024 Real Estate Market Overview**

January 2025



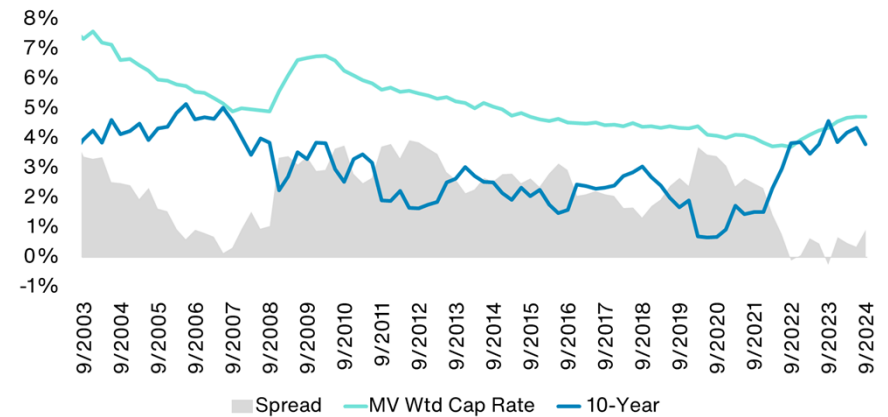
# United States Real Estate Market Update

## 3Q 2024

### General

- The economy remained resilient in the third quarter while inflation continued to moderate from its June 2022 high. The Fed has since to indicate its intentions to cut interest rates, albeit at a slower pace than previously indicated, keeping interest rates within the 5.00%-4.75% target.
- During the third quarter, GDP increased at an annualized rate of 2.8%, relatively unchanged from second quarter. Growth was led by increases in consumer spending, exports, federal government spending, and nonresidential fixed investment partially offset by imports. Investors will continue to monitor economic growth, coupled with headline inflation, 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, Real Capital Analytics, Bloomberg LP, Prequin.



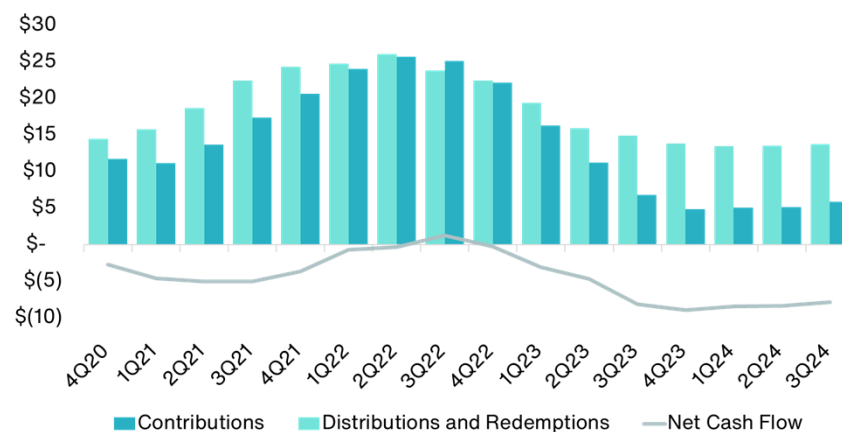
# United States Real Estate Market Update

## 3Q 2024

### Commercial Real Estate

- 10yr Treasury bond yields have declined from prior quarter, ending the quarter at 3.8%. However, 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, albeit at a modestly improving rate. Contributions are showing signs of growth, with distributions and redemptions plateauing. Current investor redemption queues remain elevated at around \$39 billion (or 18-19% of the index), manager payouts remain the range of 5-10% of a given funds' redemption queue.

NFI-ODCE: Rolling 4 Quarter Cash Flows



Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Real Capital Analytics, Bloomberg LP, Prequin.

# United States Property Detail

## 3Q 2024

### Industrial

Strong NOI growth continues to support capital values despite cap rates moving out. Softening demand contributed to slowing rent growth; however, fundamentals still present resilience for industrial properties.

### 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. Losses were broad-based across subtypes.

### 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) has outperformed the other subtypes.

### Other Property Types

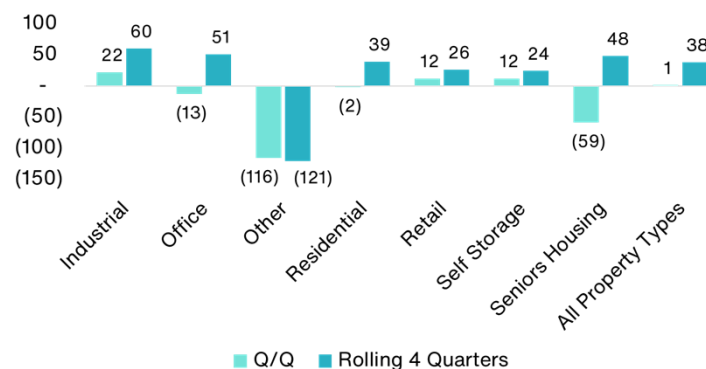
Seniors Housing: as seniors delay assisted living, independent living outperforms due to relative demand

Self-Storage: tends to do well in down cycles when tenants require more storage space

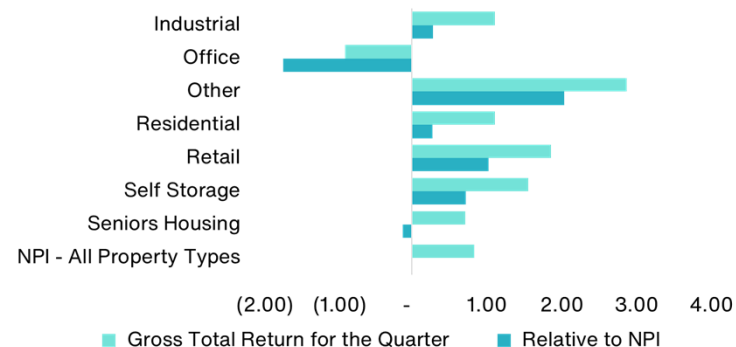
Other: roughly 1.5% of NPI and is made up of data centers, land, parking, and other

Source: NCREIF

**Current Value Cap Rate Change by Property Type**  
(in basis points)



**NPI - Property Type Returns**

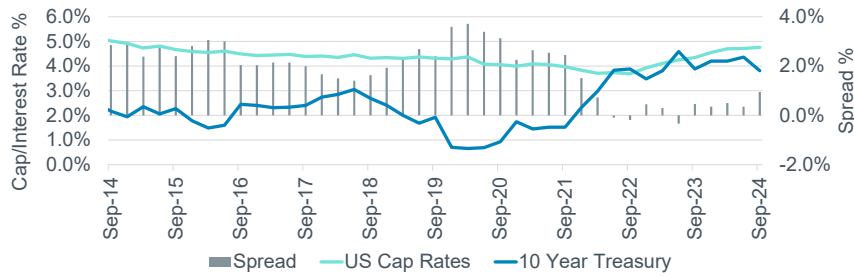


# U.S. Real Estate Market Conditions

## Real Estate spreads and supply declining

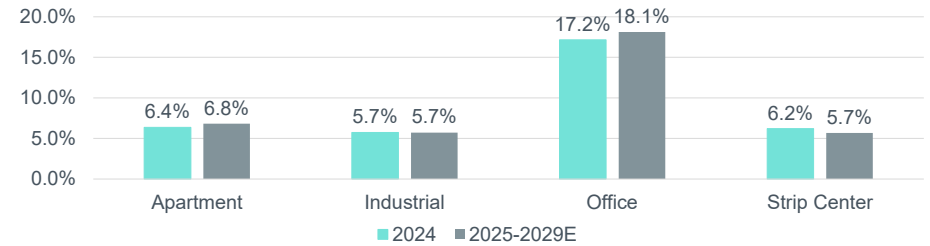
**Private Real Estate Spreads –** Valuations have narrowed the spread towards 10yr Treasury

**U.S. Cap Rates vs. 10 Year Treasury**



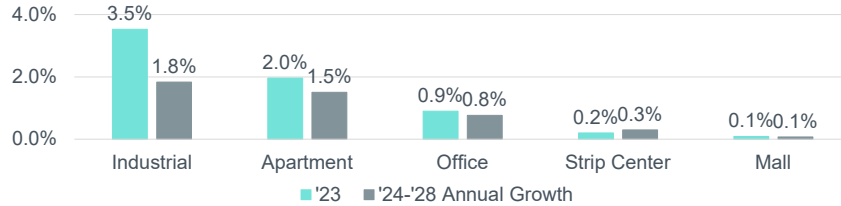
**Real Estate Vacancy –** Remains elevated in Office

**Sector Vacancy Forecasts**



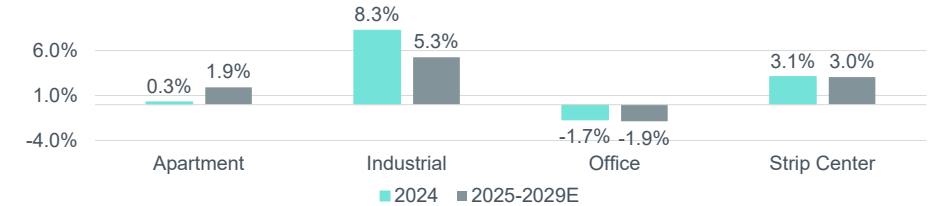
**Supply Growth –** Forecasted to moderate across major property types

**Annual Completions as % of Existing Stock**



**NOI Growth –** Remains strong in Industrial, while Apartment is forecasted to increase with supply decline

**Sector NOI Growth Forecasts**



Source: Townsend Group, NCREIF, St. Louis Fed, Green Street (December 2024).



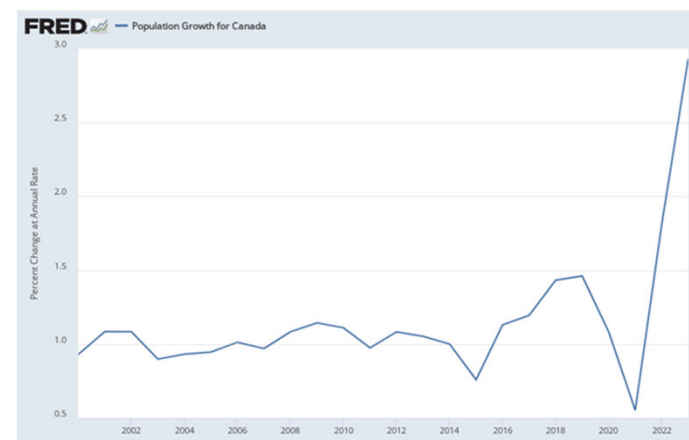
# Canada Real Estate Market Update

## 3Q 2024

- Bank of Canada reduced interest rates by 50 bps in October, bringing overnight lending rate down to 3.75%. Further rate cuts are expected as the BOC works to move inflation closer to target levels. BOC may accelerate its cutting cycle, which will further increase debt valuations. However, the good news is that the subsequent reductions in borrowing costs could provide a boost to real estate values long-term.
- Impacts from the US election are creating heightened risks for the Canadian economy. The US is Canada's largest trading partner, accounting for over ¾ of Canadian exports. The incoming Trump administration has proposed a 25% tariff on all goods imported from Canada, posing a material drag on Canada's economic outlook.
- Sustained population growth, driven by immigration, continues to support demand in Canadian real estate. However, immigration is expected to slowdown with Canada's reduced immigration targets for both permanent and non-permanent residents as part of the 2025-2027 Immigration Levels Plan.
- Canada's unemployment rate sits at 6.5% as of October 2024. While Canada's employment growth matched that of the United States in 2024, stronger population and labor force growth helped to drive the unemployment rate, compared to slightly above 4% in America.
- Institutions have been largely on the sidelines in 2024, with private capital buyers representing 80% of all transaction volume year-to-date.

Source: The Townsend Group, Manulife, Colliers, CBRE, BMO, St. Louis Fred

### September 2024 – Canada Overnight Rate



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# Canada Property Detail

## 3Q 2024

### Residential

Multifamily remains exceptionally tight in 2024, driven by rising home prices, elevated mortgage rates, and rapid population growth. Vacancies in major cities has dropped to multi-year lows, with Toronto and Vancouver seeing vacancy rates below 2%.

### Office

Hardest hit property type; 18.6% vacancy rate as of 3Q24, which is 8.2% above pre-COVID levels. Lack of financing for office further impacting investment activity.

### Industrial

Strong long-term growth drivers, but short-term cyclical headwinds attributed to economic uncertainty and higher interest rates. Downward pressure on appraisal values, as rising interest rates have increased cap rates.

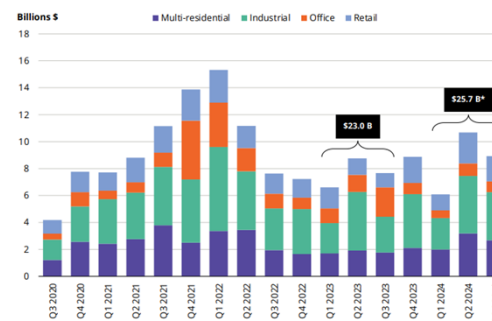
### Retail

Grocery-anchored and necessity-based retail remain resilient, driven by strong population growth. Meanwhile, other retail sectors face headwinds. 3.4% total return over the past year makes retail the second-best performing asset class; income returns are a key driver, with retail achieving the highest return among all property types at 5.4%.

Source: The Townsend Group, Manulife, MSCI, CoStar, Avison Young

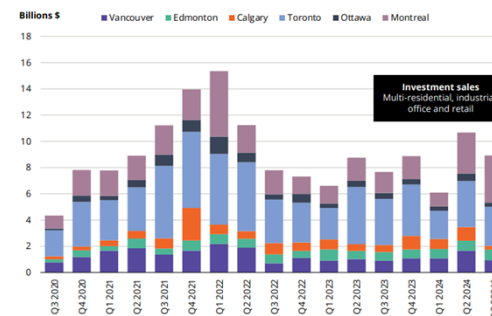
### Overall sales activity by real estate asset

National investment sales volumes



### Overall sales activity by geography

National investment sales volumes



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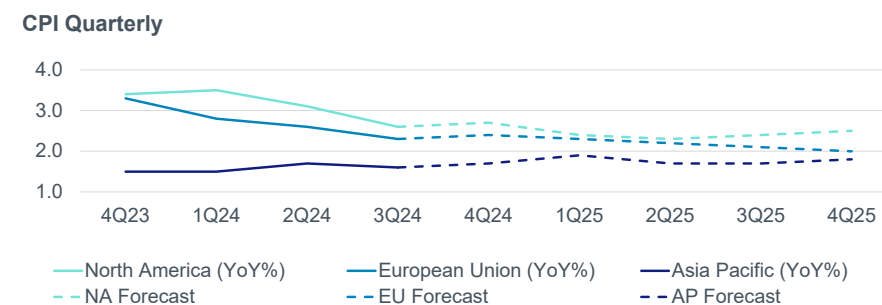
# Global Economic Conditions

Growth outlook remains positive

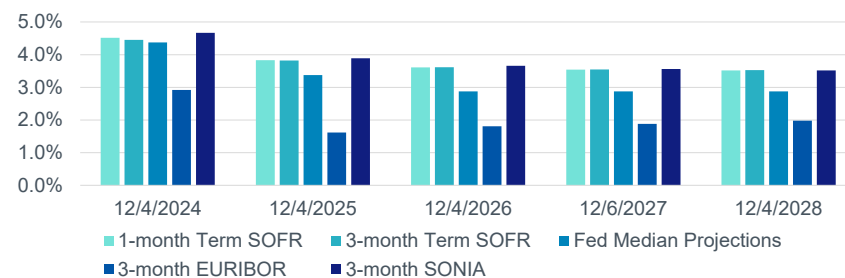
## Economic Growth Outlook – GDP growth remains positive

Real GDP Forecasts (YoY%)		2023	2024	2025	2026
Major Regions	North America	2.8	2.5	2.0	2.0
	European Union	0.4	0.9	1.5	1.6
	Asia Pacific	4.3	3.7	4.1	3.9
Selected Markets	United States	2.9	2.7	2.1	2.0
	United Kingdom	0.4	0.9	1.4	1.5
	Germany	-0.3	-0.1	0.7	1.2
	China	5.2	4.8	4.5	4.1
	Japan	1.7	-0.2	1.2	0.9
	Australia	2.0	1.2	2.0	2.5

## Consumer Price Index – Inflation is projected to stabilize

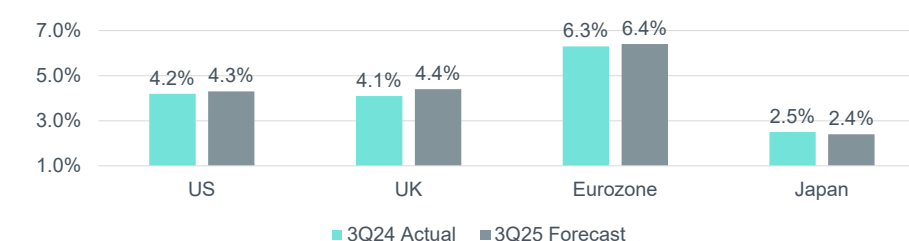


## Forward Curves – Curves indicating decline in rates



Source: Townsend Group, Bloomberg, Chatham Financial (December 2024).

## Unemployment – Unemployment rates remains low

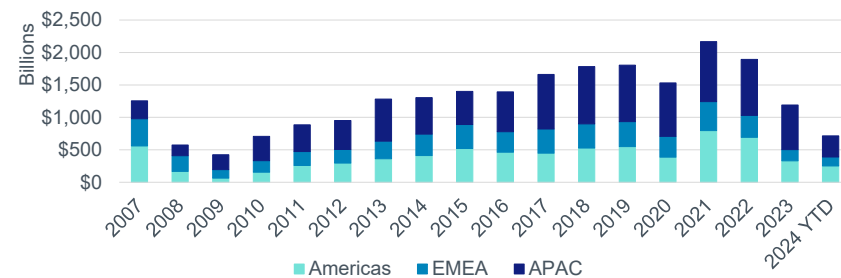


# Global Real Estate Market Conditions

Valuations nearing bottom

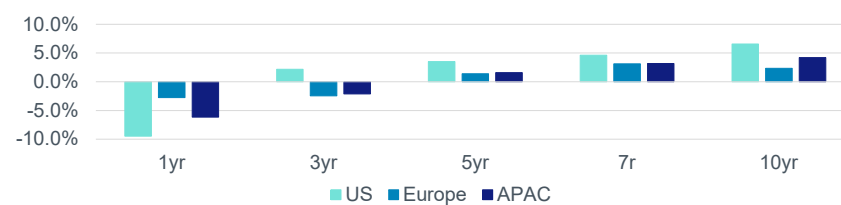
**Global Commercial Real Estate Transactions – Volume muted in 2024 as interest rates remained elevated**

Global Commercial Real Estate Transaction Volume



**Real Estate Performance – Valuations nearing bottom as mid-2024 performance flat to slightly positive**

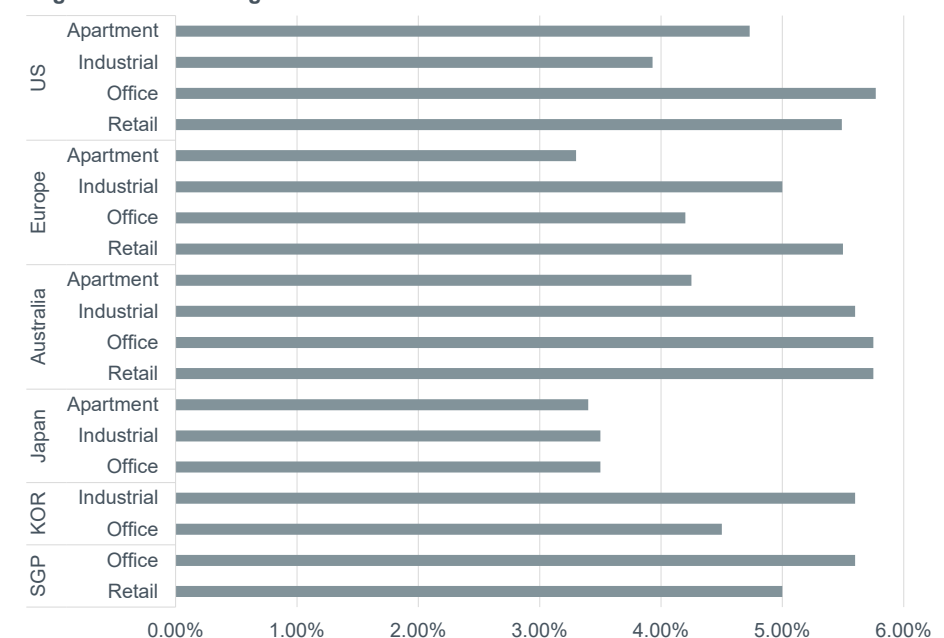
Regional Net Returns Annualized – as of 6/3/24



Source: MSCI Real Assets, St. Louis Fed, NCREIF, INREV Global Real Estate Fund Index (GREFI), Townsend Group (December 2024).

**Real Estate Valuations – Global valuations (mid-2024)**

Regional/Sector Going-In Yields



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# REPORT

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## Meketa Capital Markets Outlook & Risk Metrics

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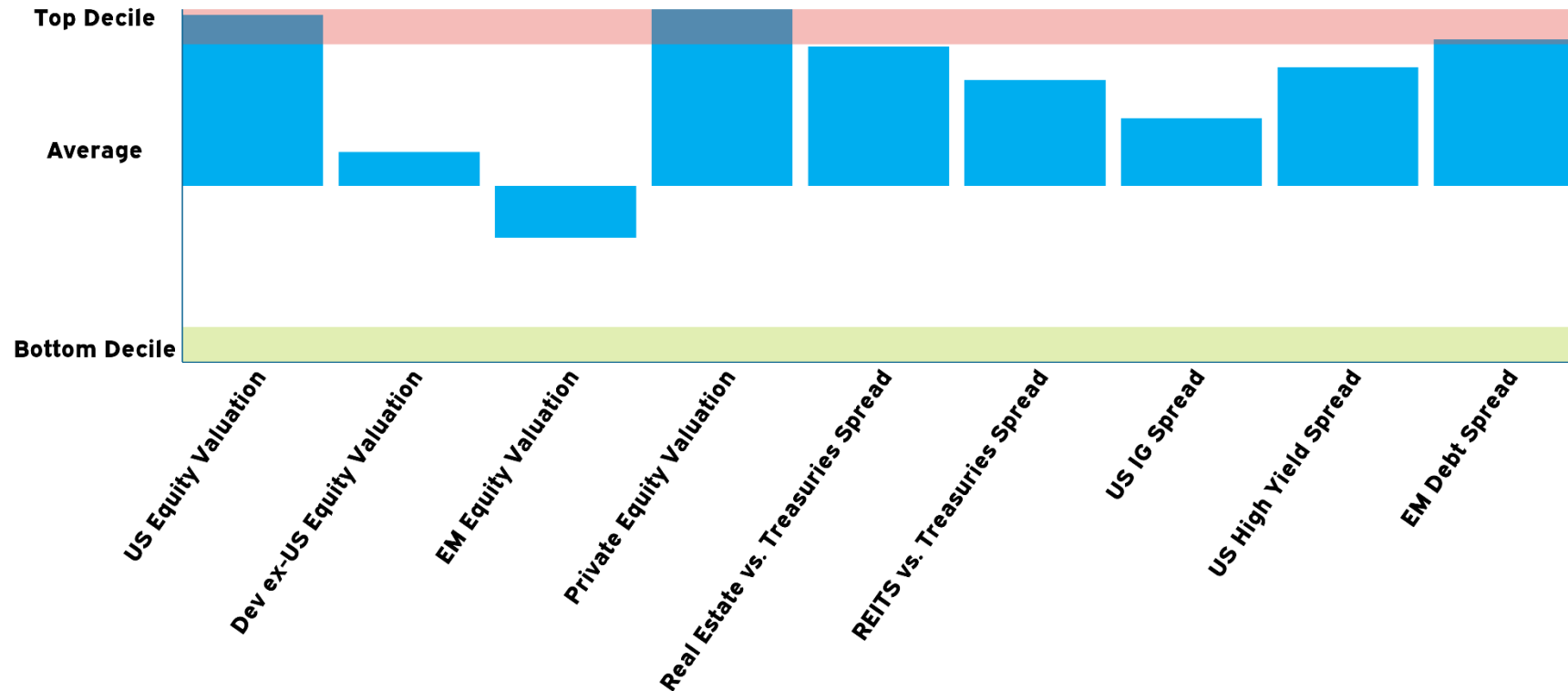
**Capital Markets Outlook & Risk Metrics**  
As of December 31, 2024

## Capital Markets Outlook

In December, most stock and bond markets retreated after a hawkish outlook from the Fed.

- The Federal Reserve cut the Fed Funds Rate by another 0.25% in December but predicted higher inflation and higher policy rates for 2025 than previously anticipated. The hawkish outlook from the Fed surprised markets and forced a repricing of expectations.
- Most global equity markets declined in December with emerging market (MSCI Emerging Market index -0.1%) and non-US developed market stocks (MSCI EAFE Index -2.3%) outperforming US stocks (Russell 3000 -3.1%).
- US large cap growth stocks outperformed small/mid cap and value stocks as markets repriced the potential impact of higher interest rates and policy uncertainty on US companies.
- China's equity markets were a notable exception in the global equity decline, with Chinese stocks finishing the month in positive territory (MSCI China +2.7%).
- Fixed income markets mostly declined in response to the Fed's 'higher-for-longer' guidance. Long-term government bonds fared worst (-5.3%), followed by investment grade bonds (-1.6%), TIPS (-1.6%), and high yield bonds (-0.4%); bank loans were slightly positive (+0.4%).
- REITs declined sharply (-7.4%), as did natural resources (-7.0%) and infrastructure (-4.5%) stocks, while commodities (+1.0%) rose slightly.

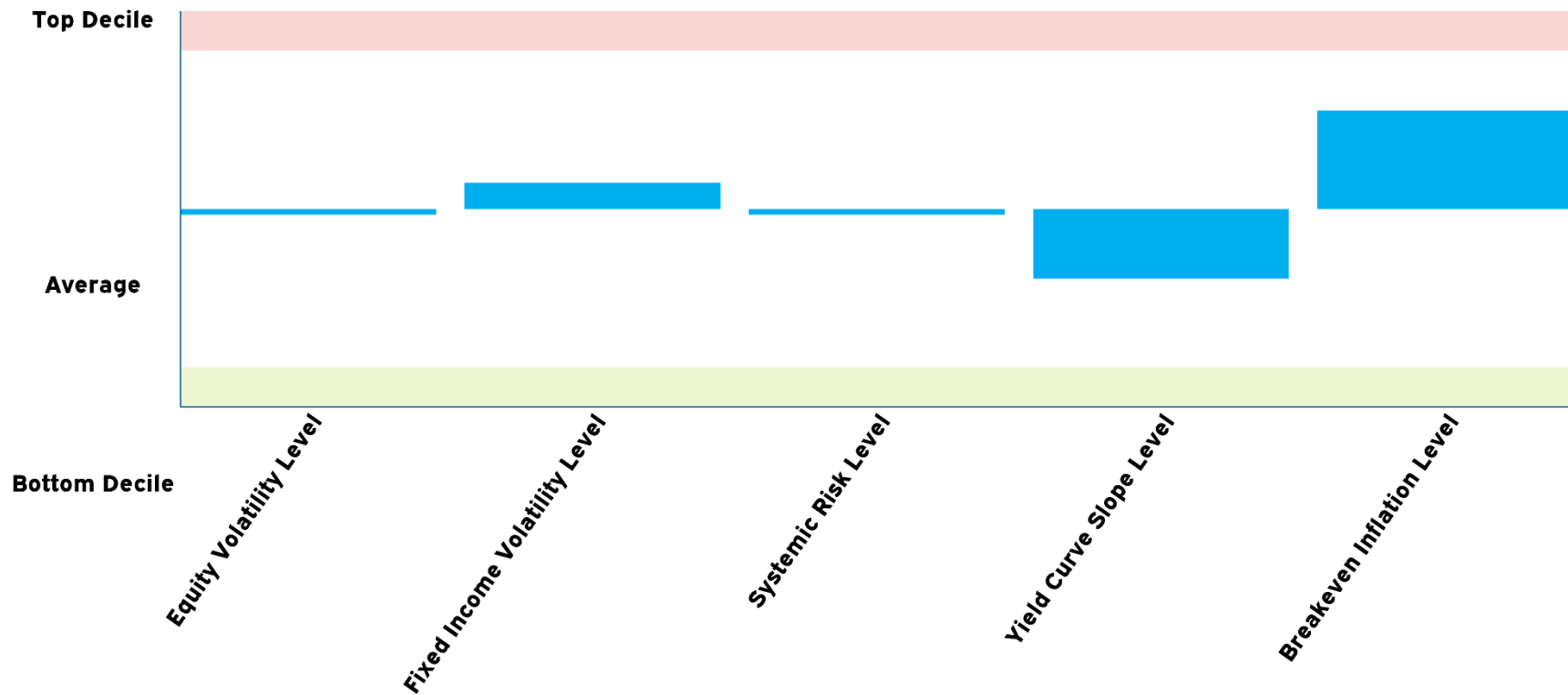
### Risk Overview/Dashboard (1) (As of December 31, 2024)<sup>1</sup>



→ Dashboard (1) summarizes the current state of the different valuation metrics per asset class relative to their own history.

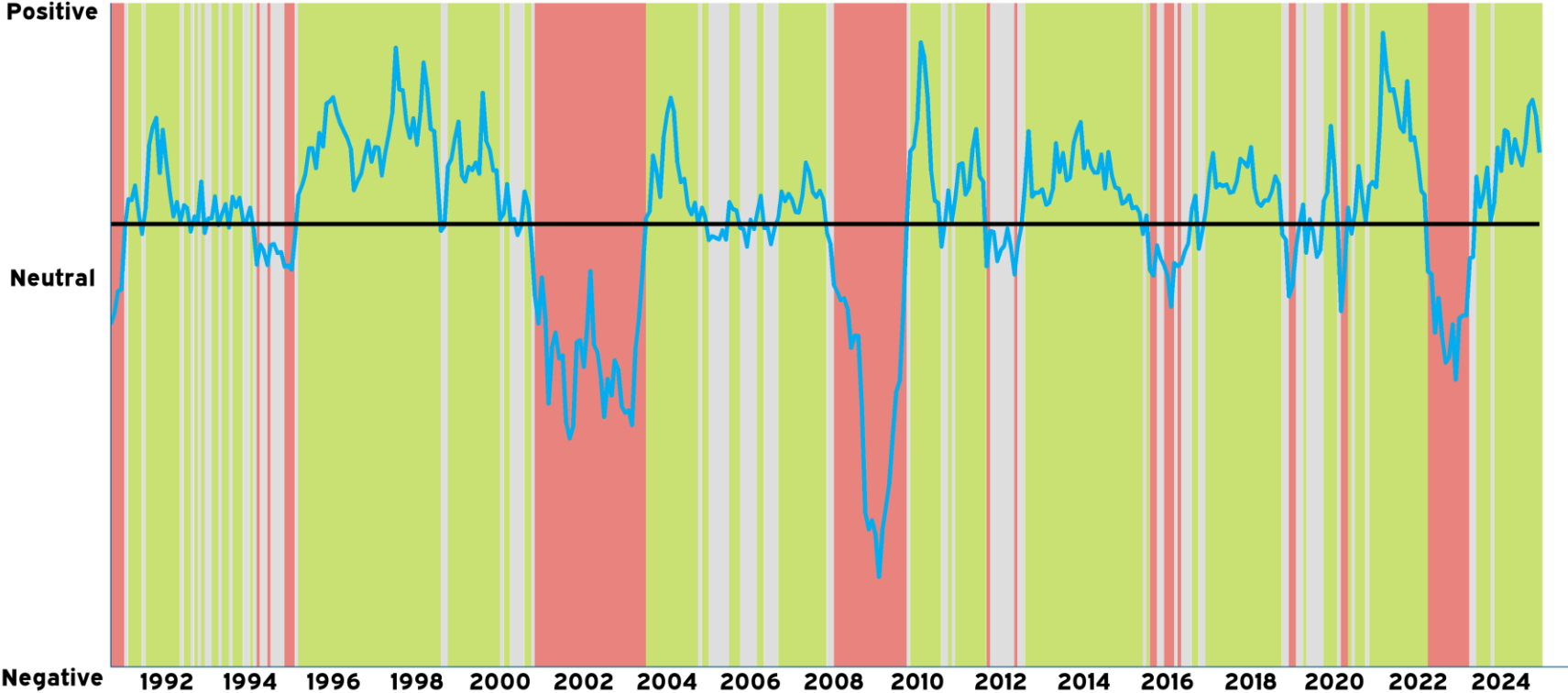
<sup>1</sup> With the exception of Private Equity Valuation, that is YTD as of September 30, 2024.

### Risk Overview/Dashboard (2) (As of December 31, 2024)

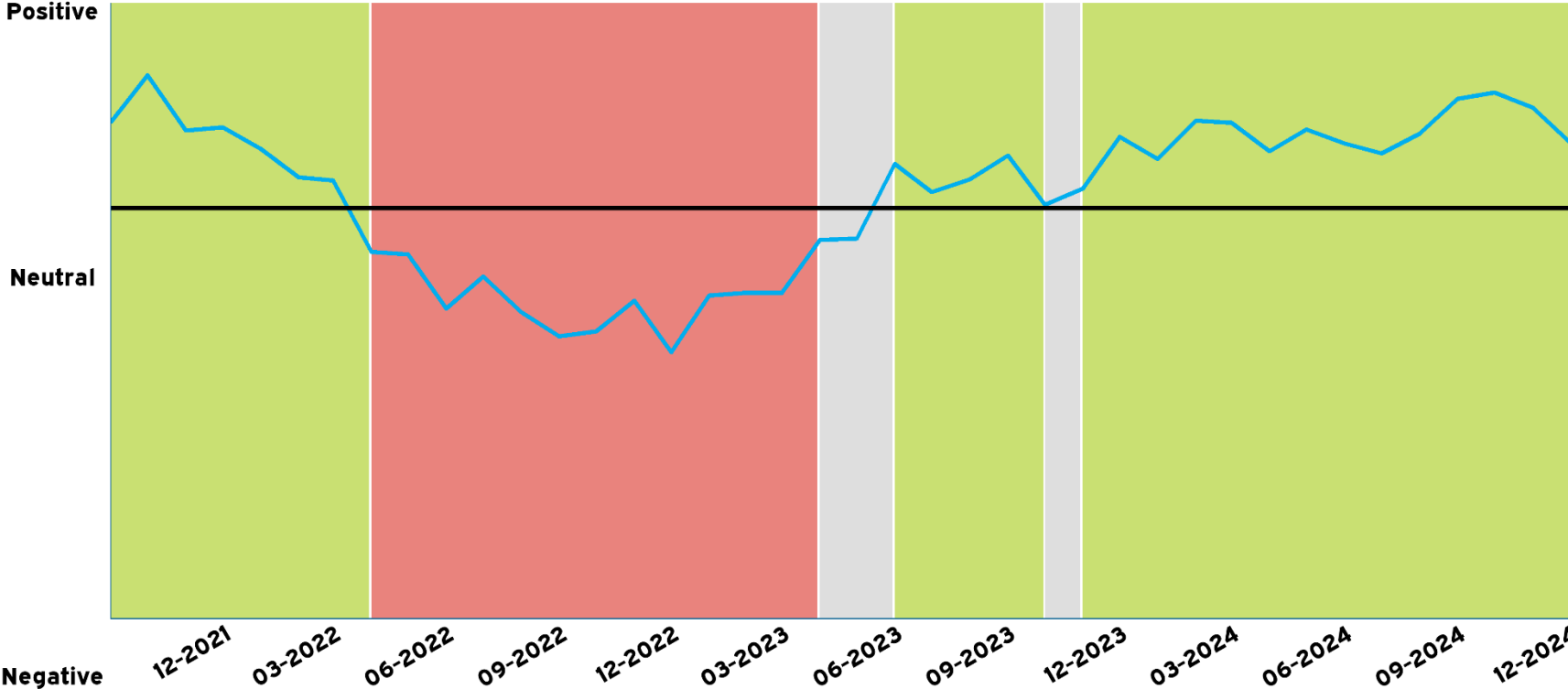


→ Dashboard (2) shows how the current level of each indicator compares to its respective history.

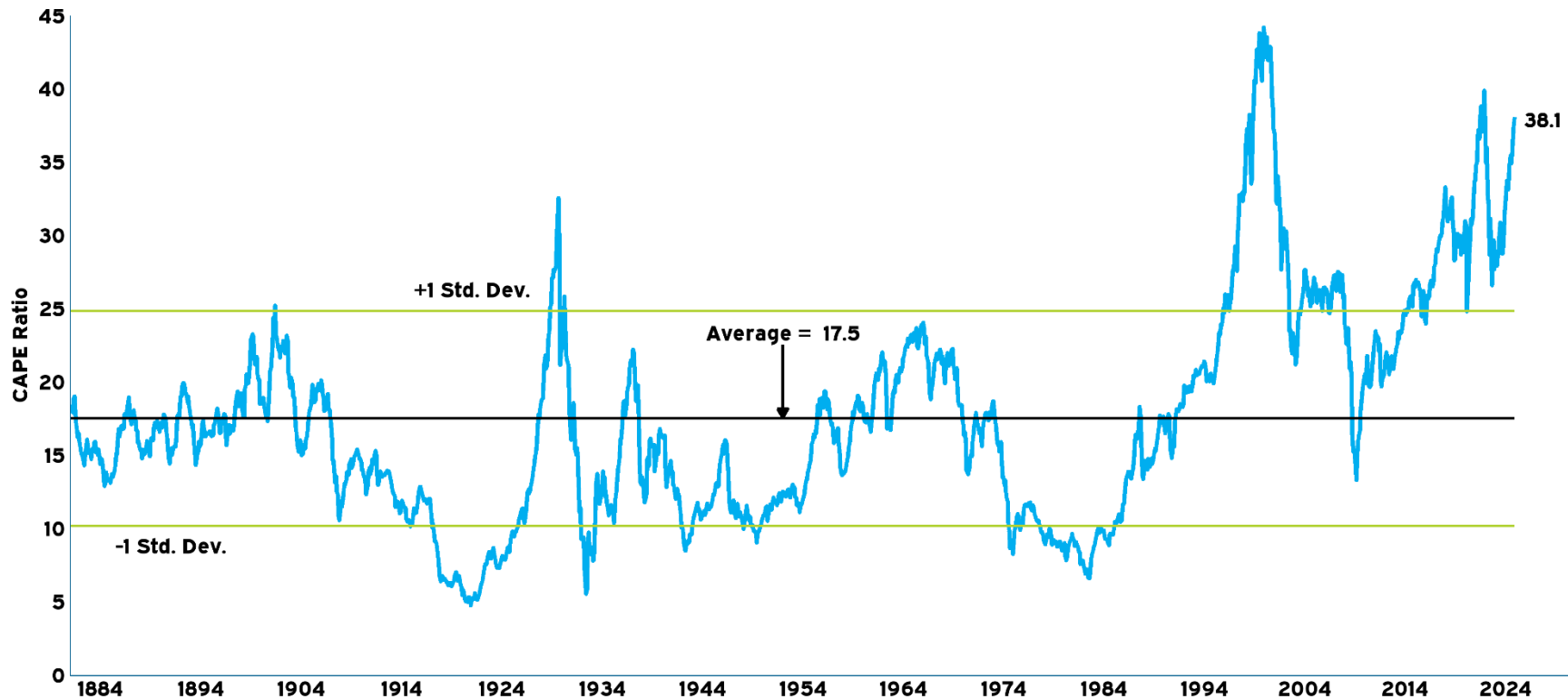
**Market Sentiment Indicator (All History)**  
(As of December 31, 2024)



**Market Sentiment Indicator (Last Three Years)**  
(As of December 31, 2024)



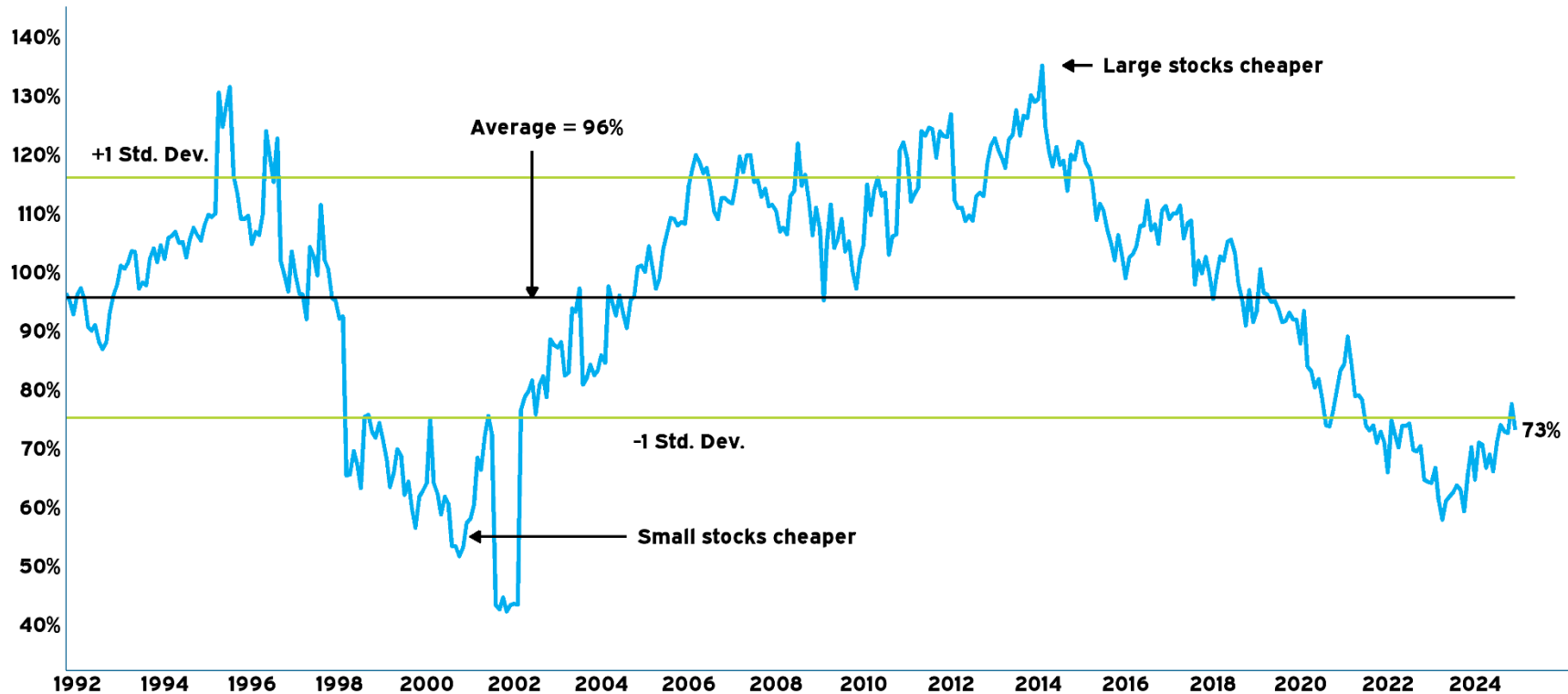
**US Equity Cyclically Adjusted P/E<sup>1</sup>**  
(As of December 31, 2024)



→ This chart details one valuation metric for US equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

<sup>1</sup> 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<sup>1</sup> (As of December 31, 2024)

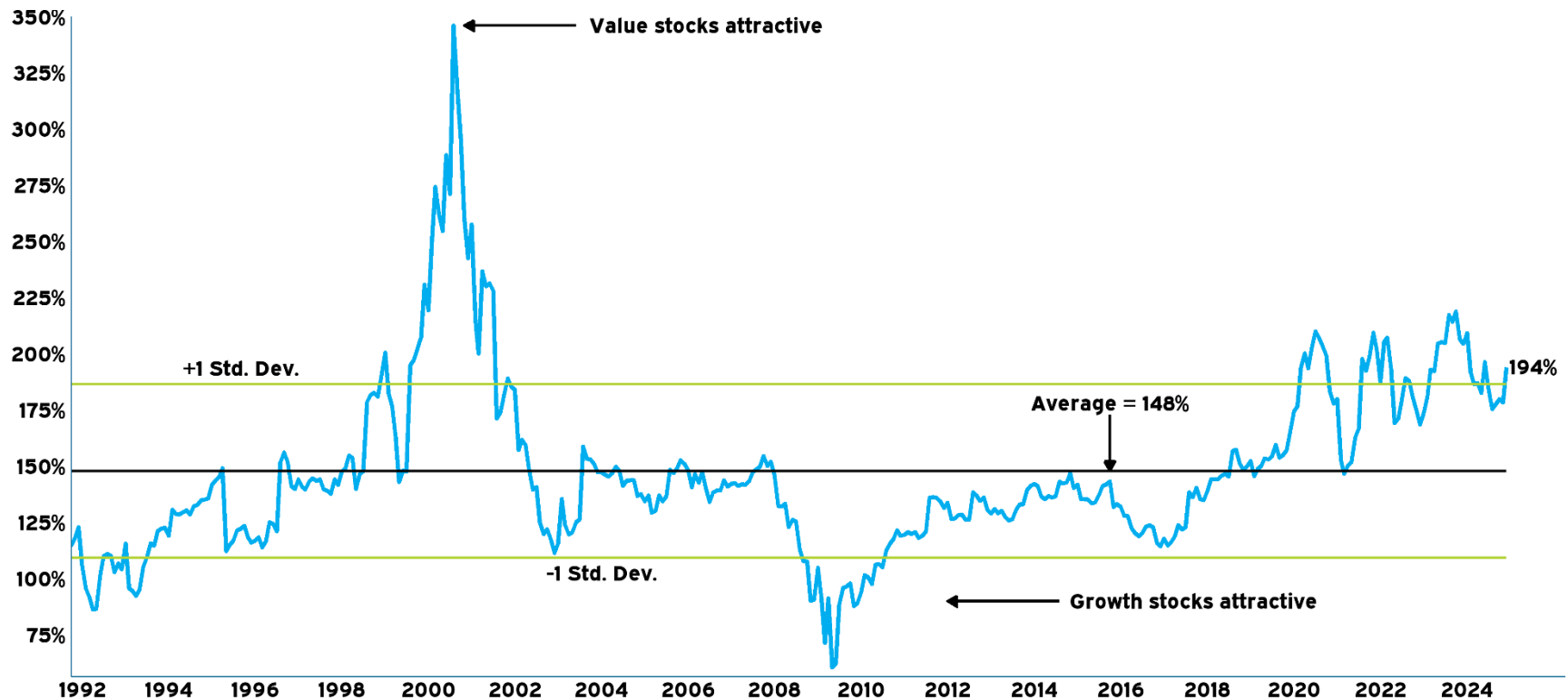


→ This chart compares the relative attractiveness of small cap US equities vs. large cap US equities on a valuation basis. A higher (lower) figure indicates that large cap (small cap) is more attractive.

<sup>1</sup> 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.



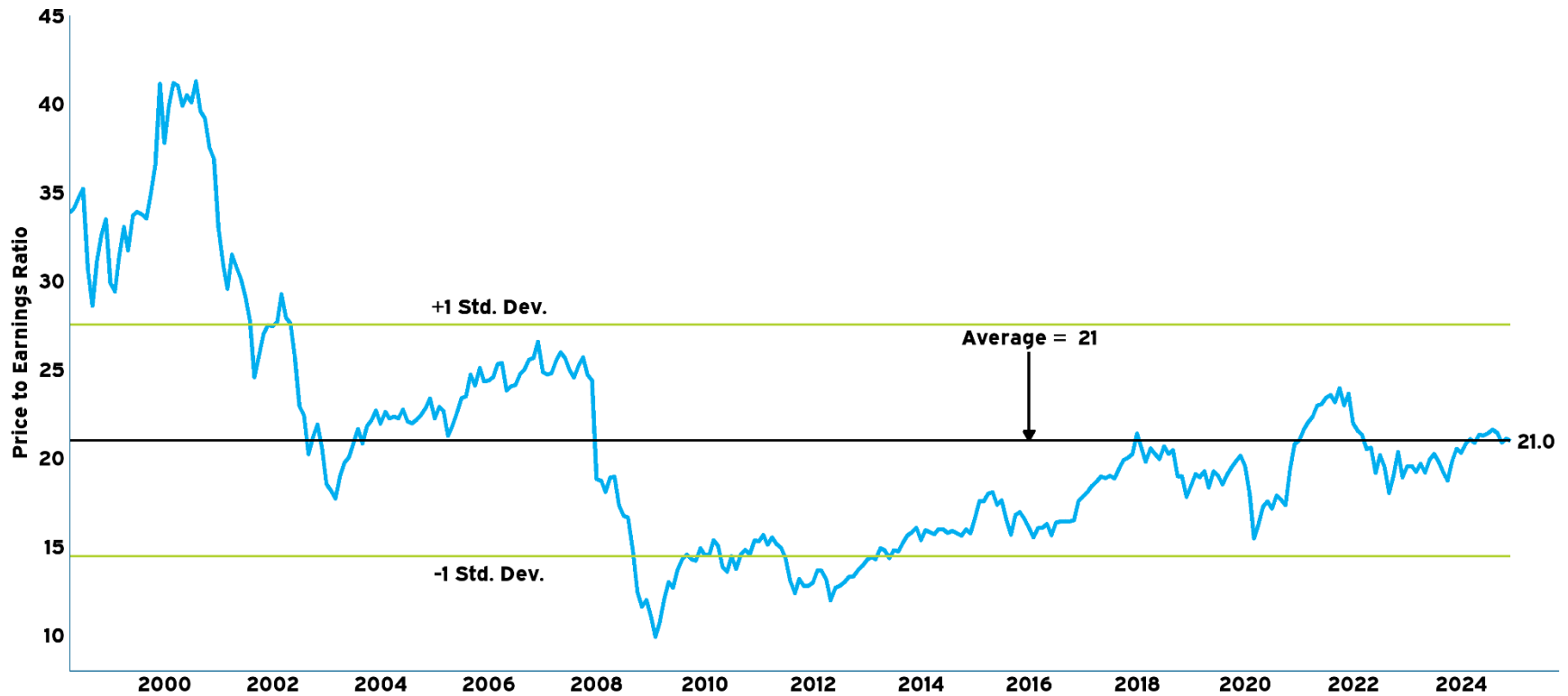
### Growth P/E vs. Value P/E<sup>1</sup> (As of December 31, 2024)



→ 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.

<sup>1</sup> 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.

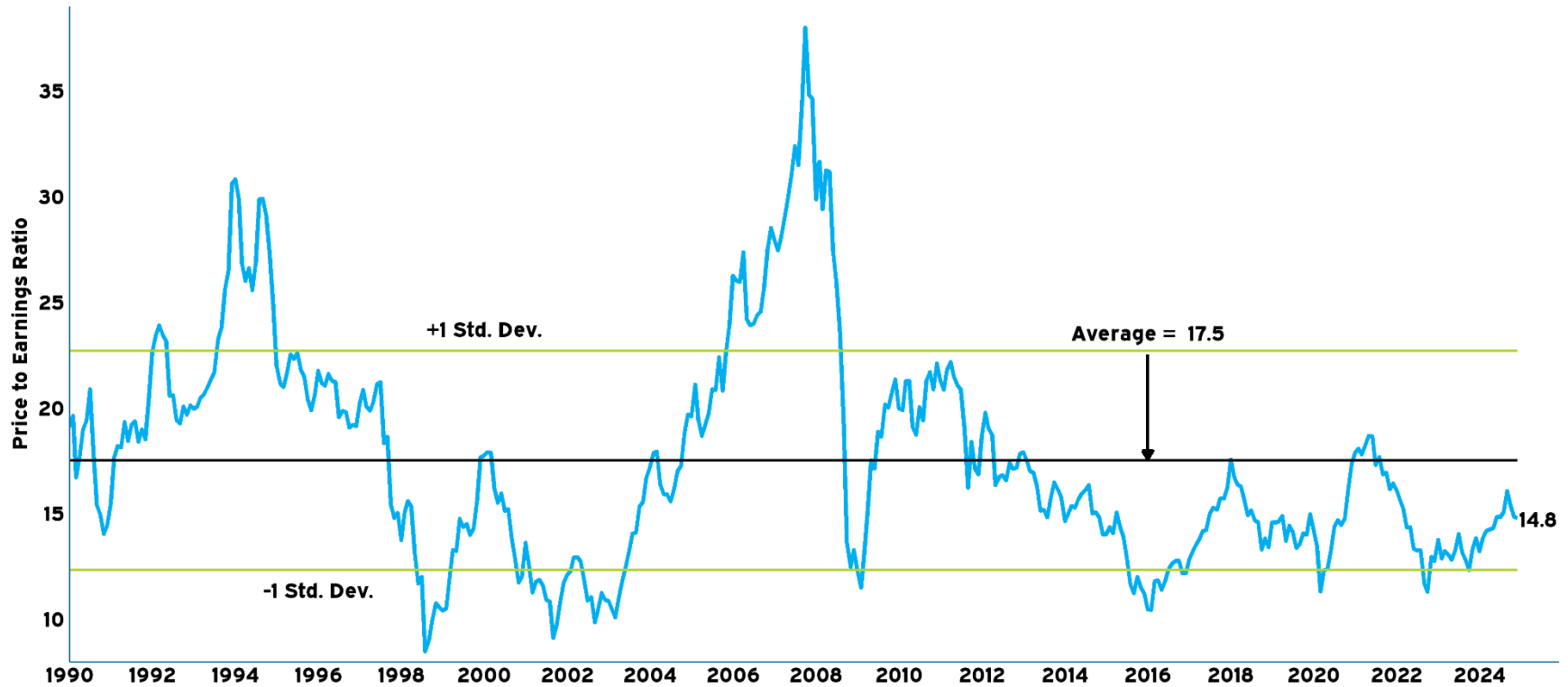
### Developed International Equity Cyclically Adjusted P/E<sup>1</sup> (As of December 31, 2024)



→ This chart details one valuation metric for developed international equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

<sup>1</sup> 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.

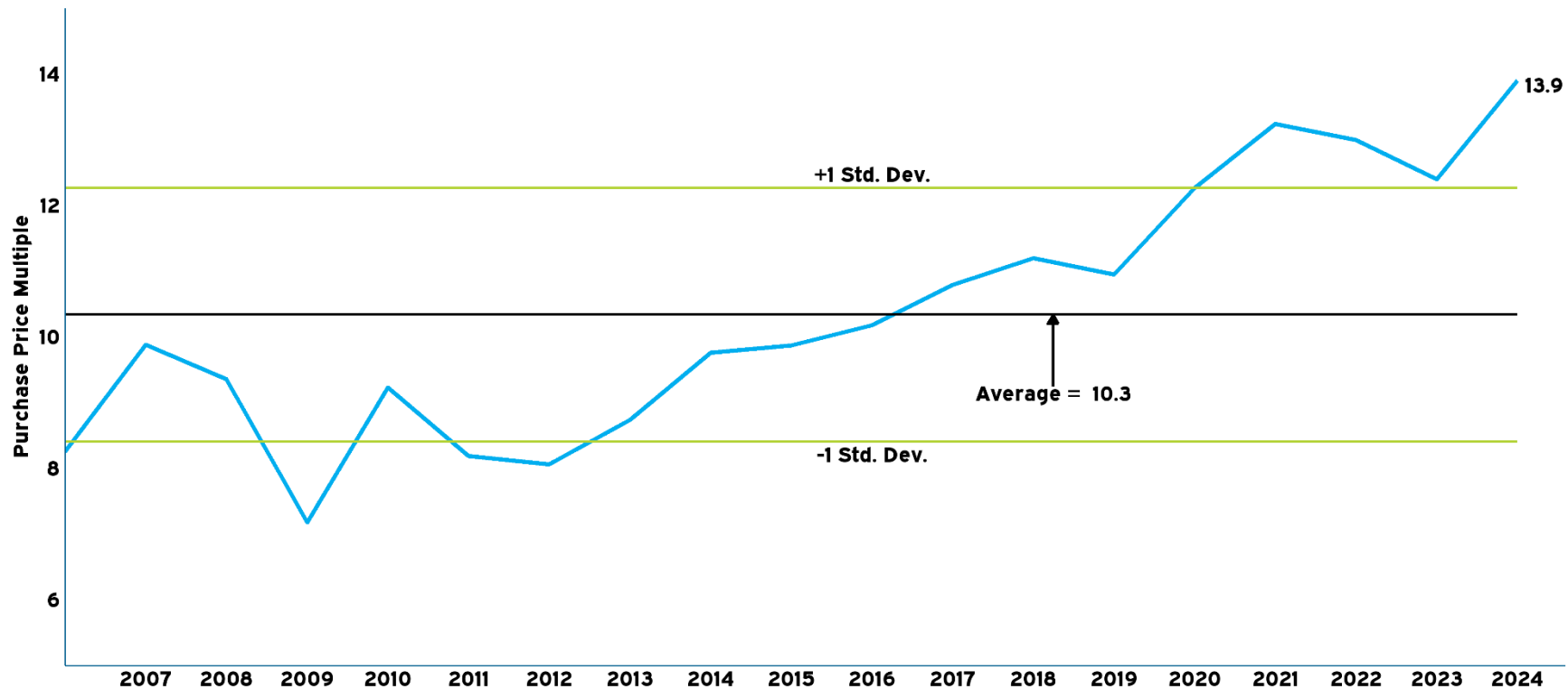
**Emerging Market Equity Cyclically Adjusted P/E<sup>1</sup>**  
(As of December 31, 2024)



→ This chart details one valuation metric for emerging markets equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

<sup>1</sup> 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.

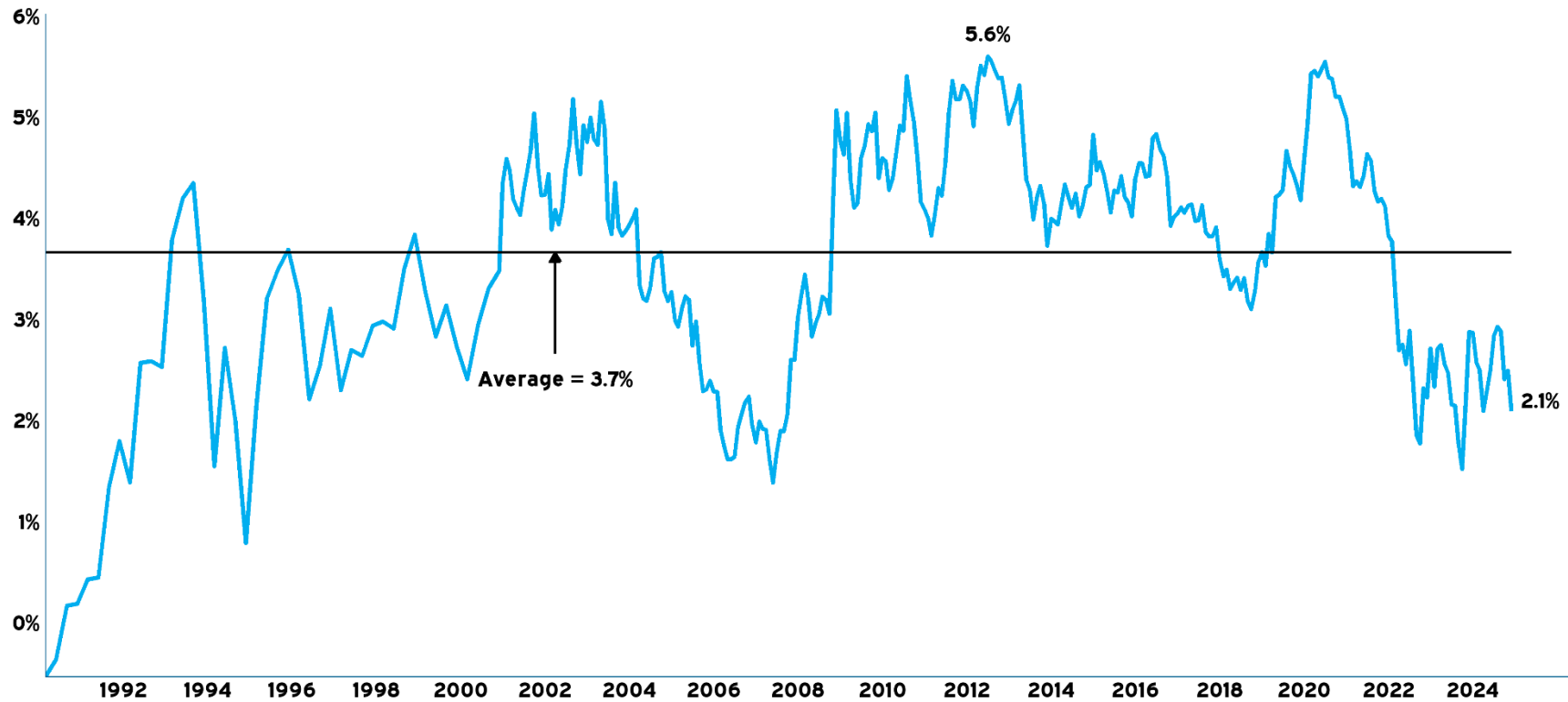
### Private Equity Multiples<sup>1</sup> (As of December 31, 2024)



→ This chart details one valuation metric for the private equity market. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

<sup>1</sup> Private Equity Multiples – Source: Preqin Median EBITDA Multiples Paid in All LBOs.

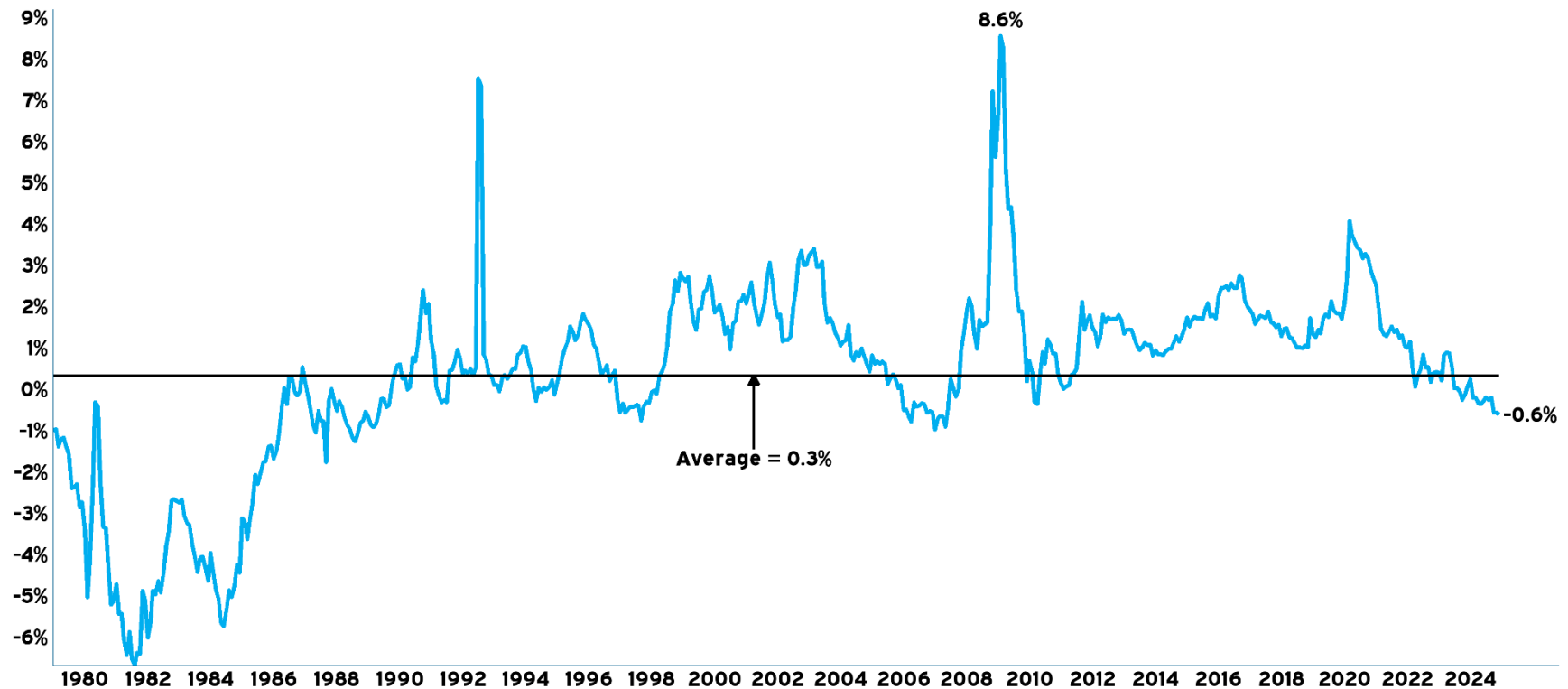
**Core Real Estate Spread vs. Ten-Year Treasury<sup>1</sup>**  
(As of December 31, 2024)



→ This chart details one valuation metric for the private core real estate market. A higher (lower) figure indicates cheaper (more expensive) valuation.

<sup>1</sup> 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.

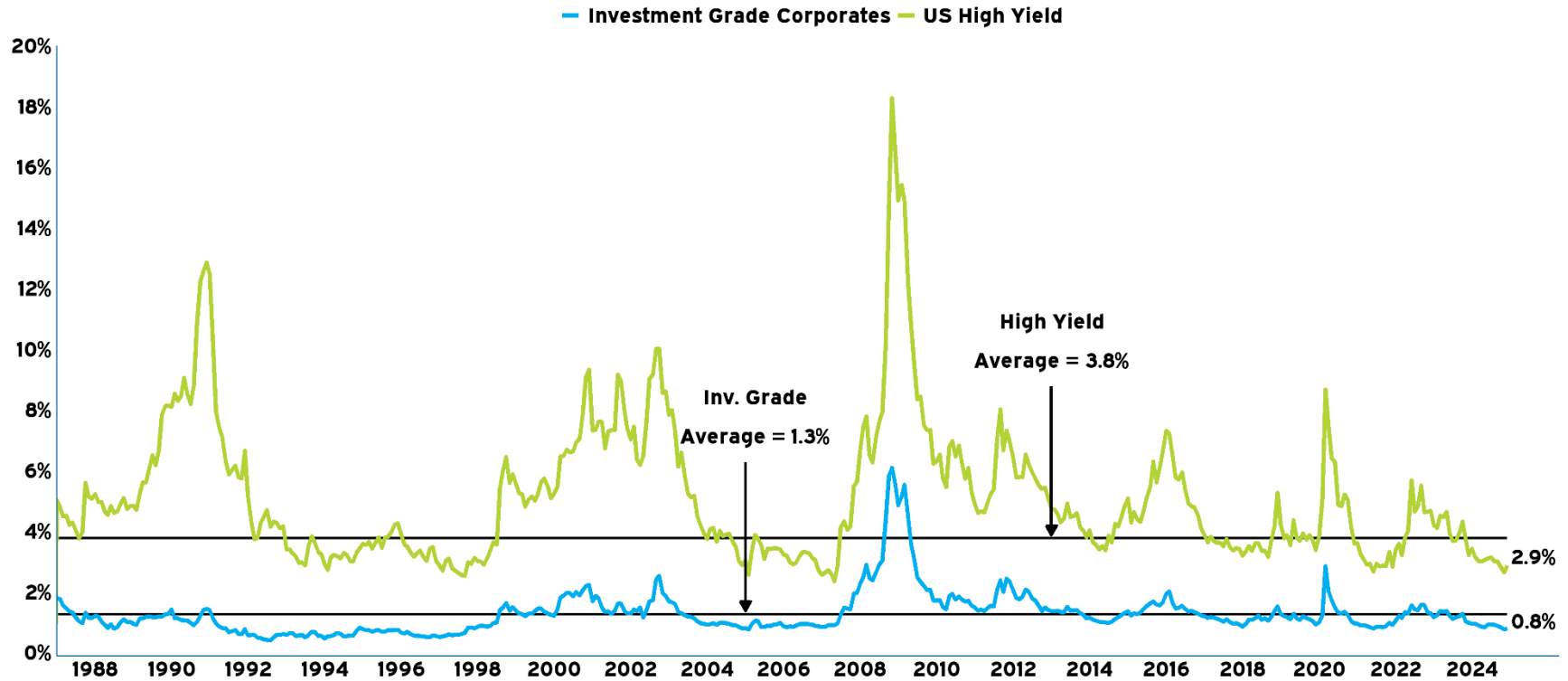
### REITs Dividend Yield Spread vs. Ten-Year Treasury<sup>1</sup> (As of December 31, 2024)



→ This chart details one valuation metric for the public REITs market. A higher (lower) figure indicates cheaper (more expensive) valuation.

<sup>1</sup> REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, Bloomberg, US Treasury. REITs are proxied by the yield for the NAREIT Equity Index.

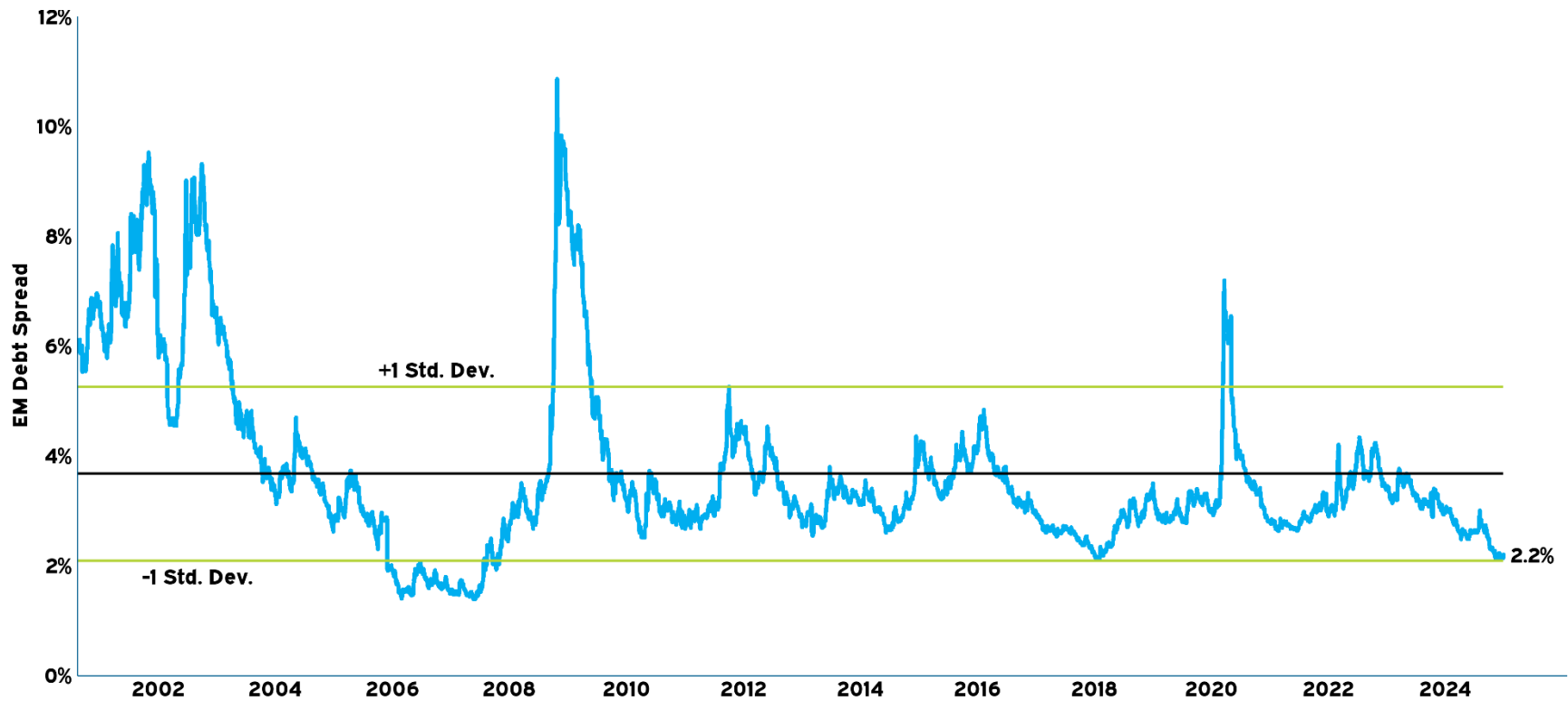
**Credit Spreads<sup>1</sup>**  
(As of December 31, 2024)



→ This chart details one valuation metric for the US credit markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

<sup>1</sup> 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<sup>1</sup> (As of December 31, 2024)

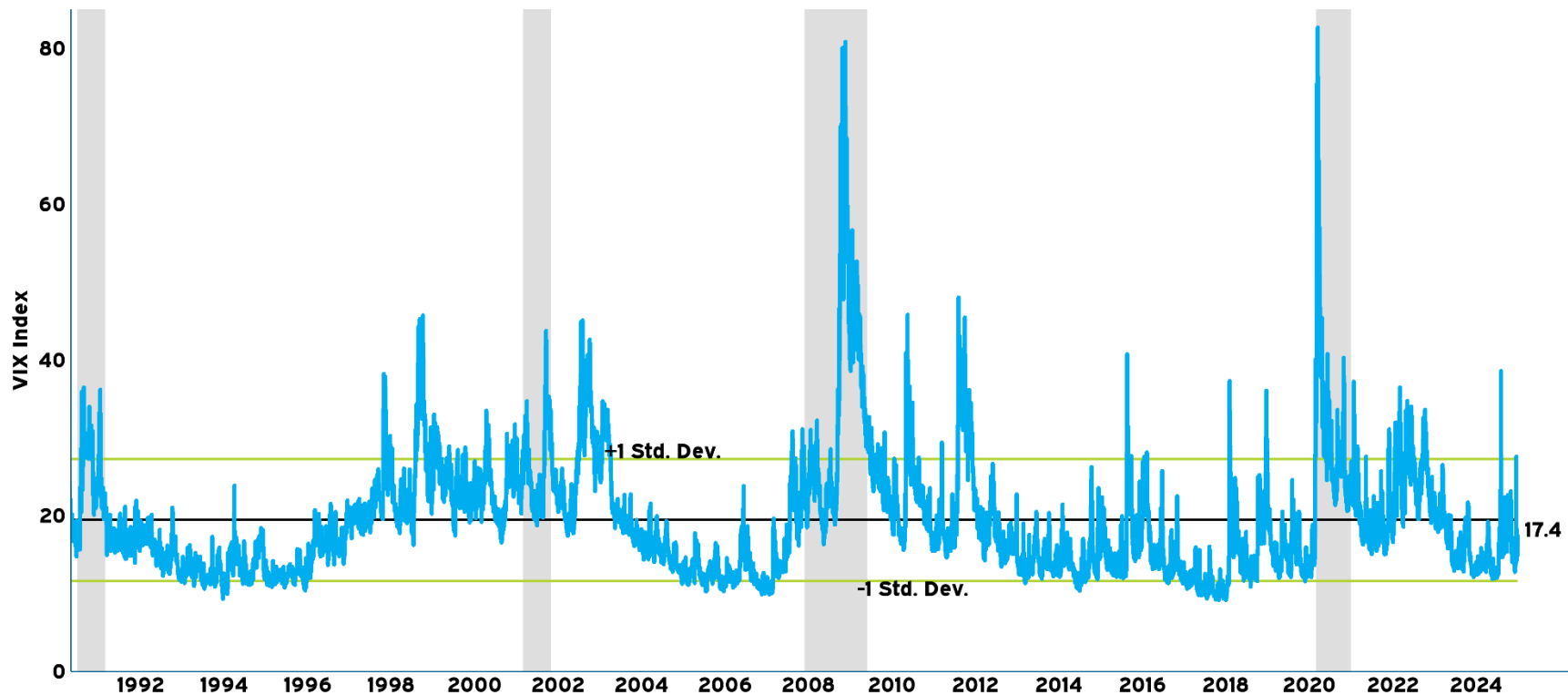


→ This chart details one valuation metric for the EM debt markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

<sup>1</sup> EM Spreads – Source: Bloomberg. Option Adjusted Spread (OAS) for the Bloomberg EM USD Aggregate Index.



### Equity Volatility<sup>1</sup> (As of December 31, 2024)

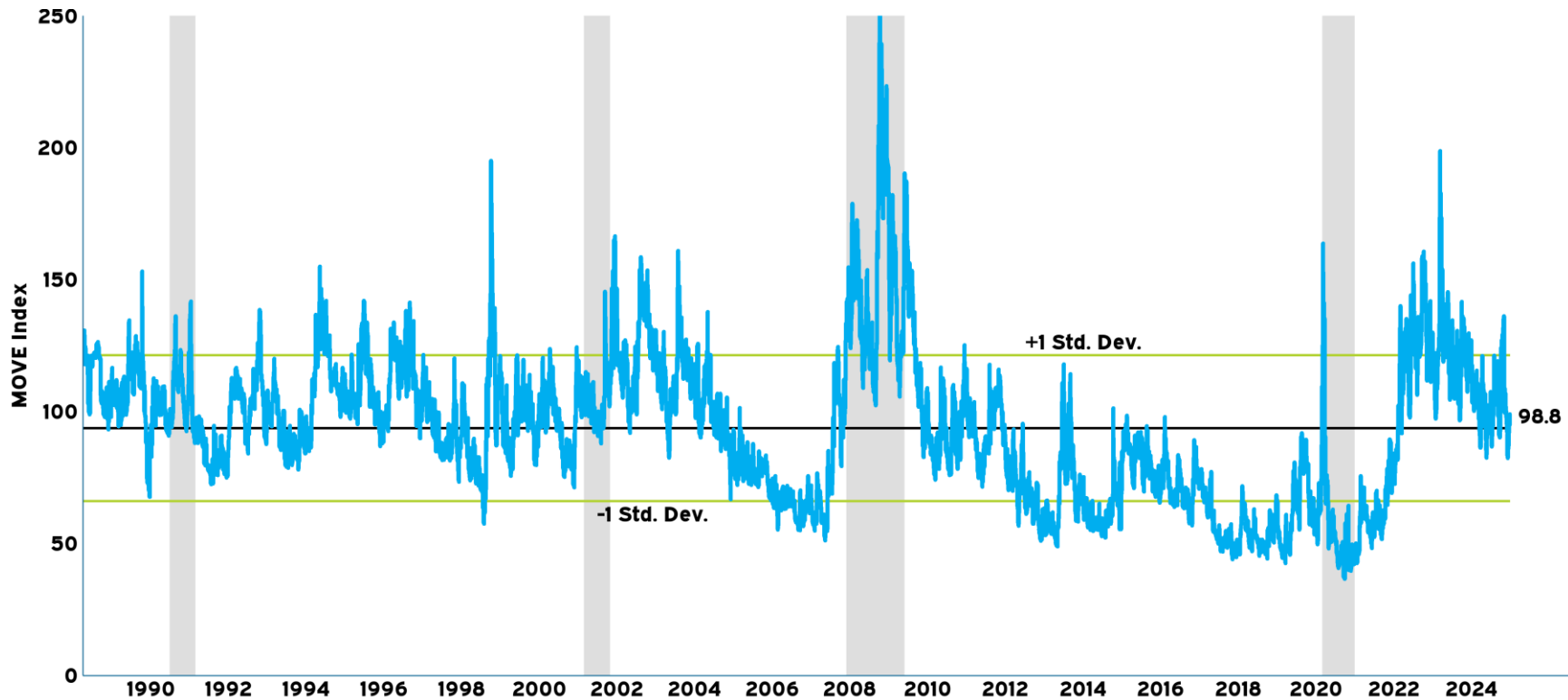


→ This chart details historical implied equity market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

<sup>1</sup> Equity Volatility – Source: FRED, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.

<sup>2</sup> 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.

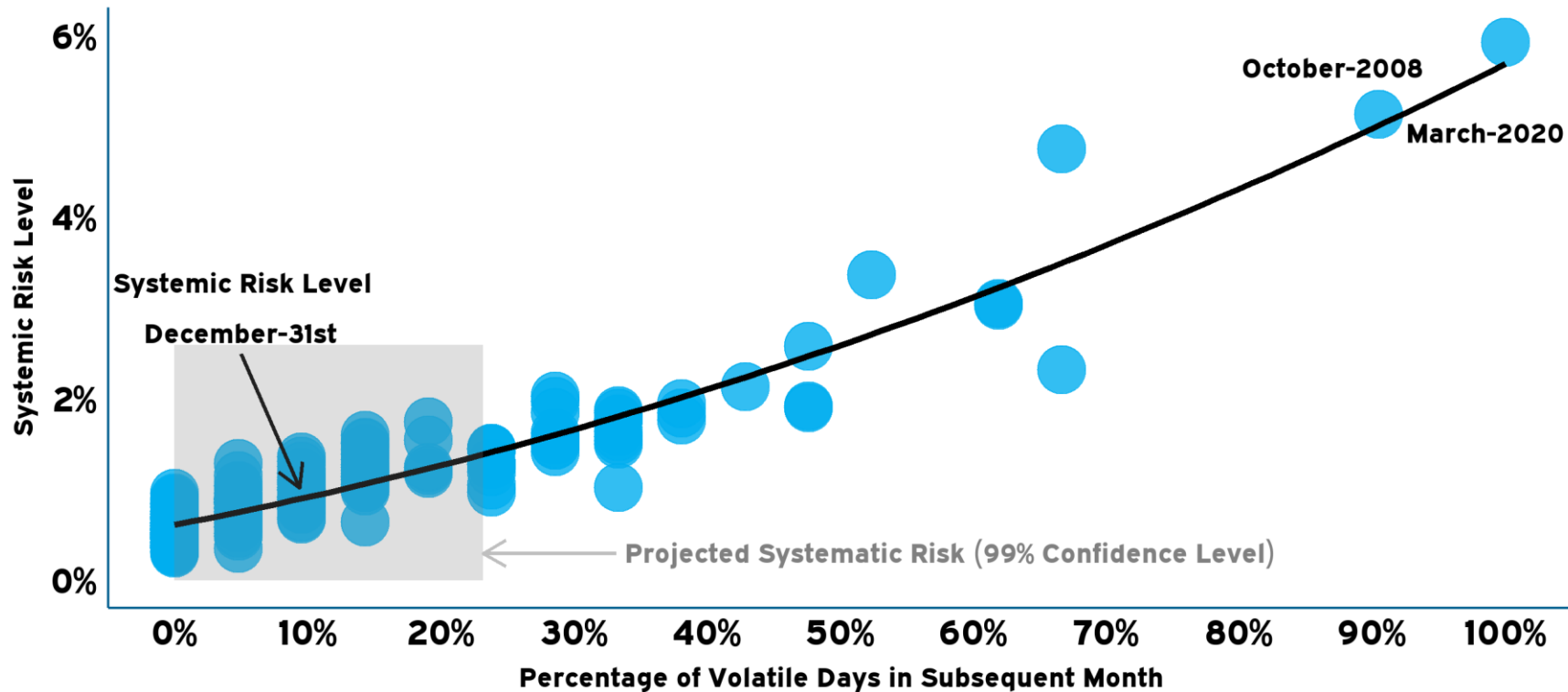
### Fixed Income Volatility<sup>1</sup> (As of December 31, 2024)



→ 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.

<sup>1</sup> 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.

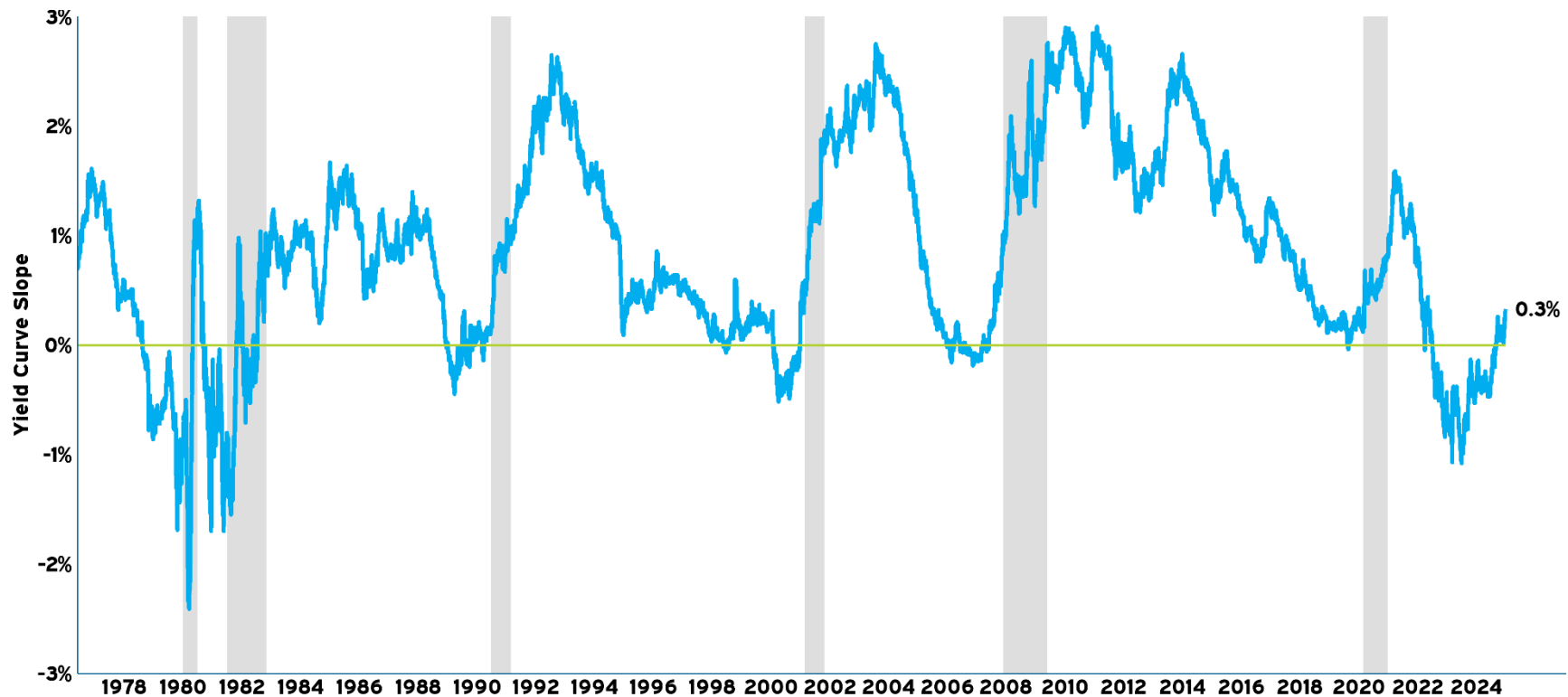
### Systemic Risk and Volatile Market Days<sup>1</sup> (As of December 31, 2024)



→ Systemic Risk is a measure of 'System-wide' risk, which indicates herding type behavior.

<sup>1</sup> Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.

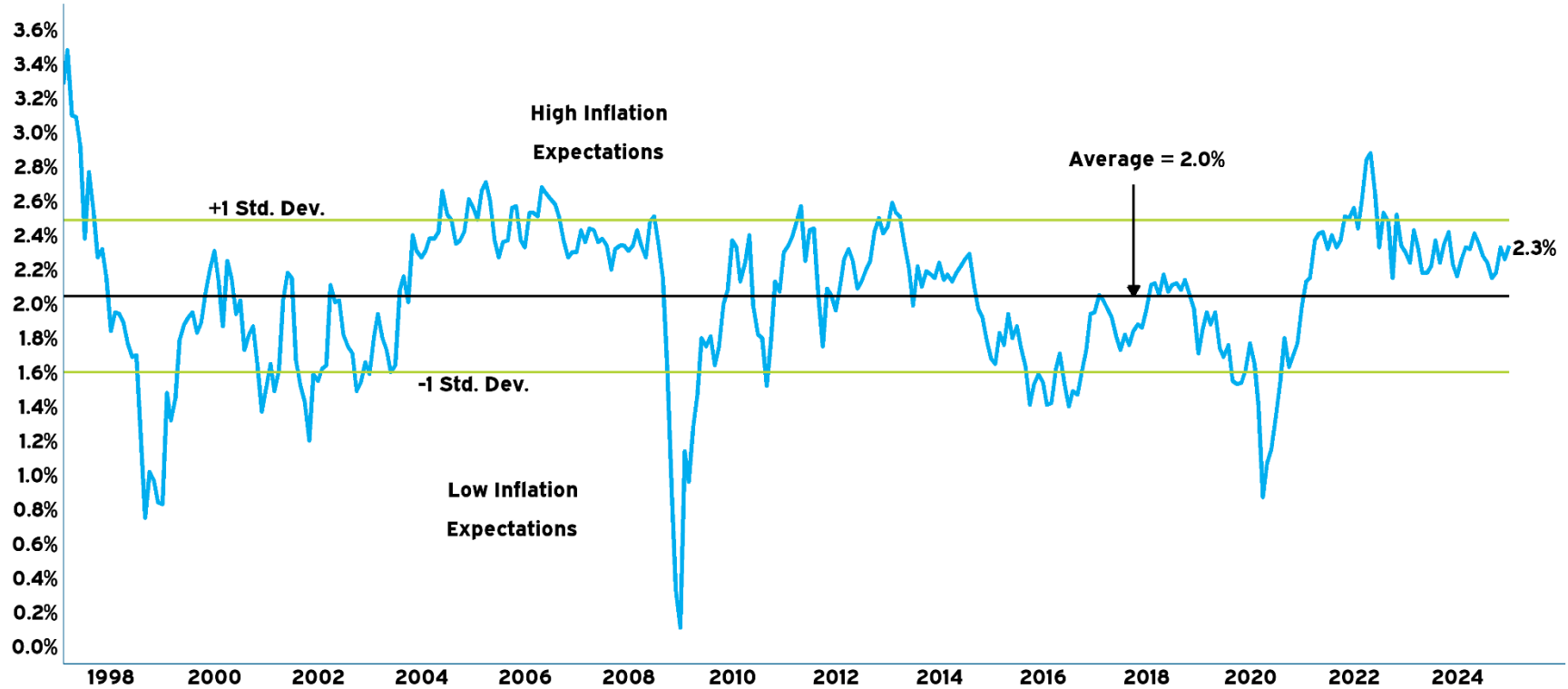
### Yield Curve Slope (Ten Minus Two)<sup>1</sup> (As of December 31, 2024)



→ 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.

<sup>1</sup> 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.

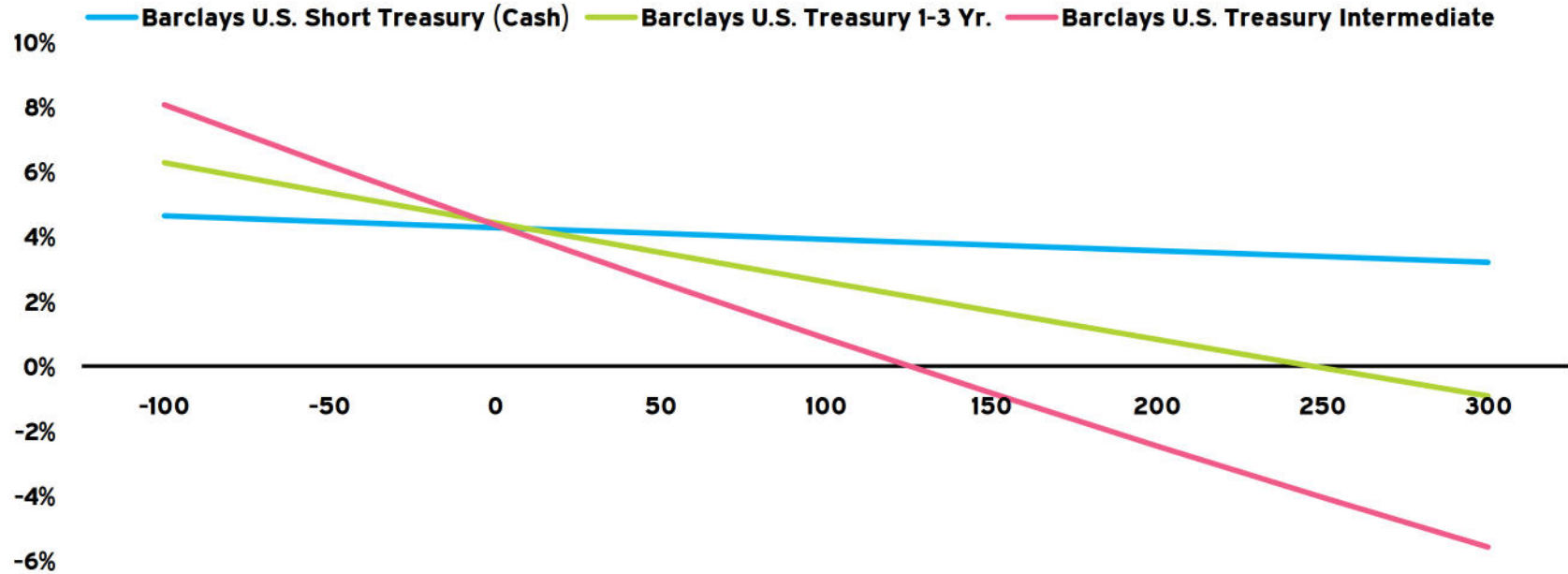
### Ten-Year Breakeven Inflation<sup>1</sup> (As of December 31, 2024)



→ This chart details the difference between nominal and inflation-adjusted US Treasury bonds. A higher (lower) figure indicates higher (lower) inflation expectations.

<sup>1</sup> Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

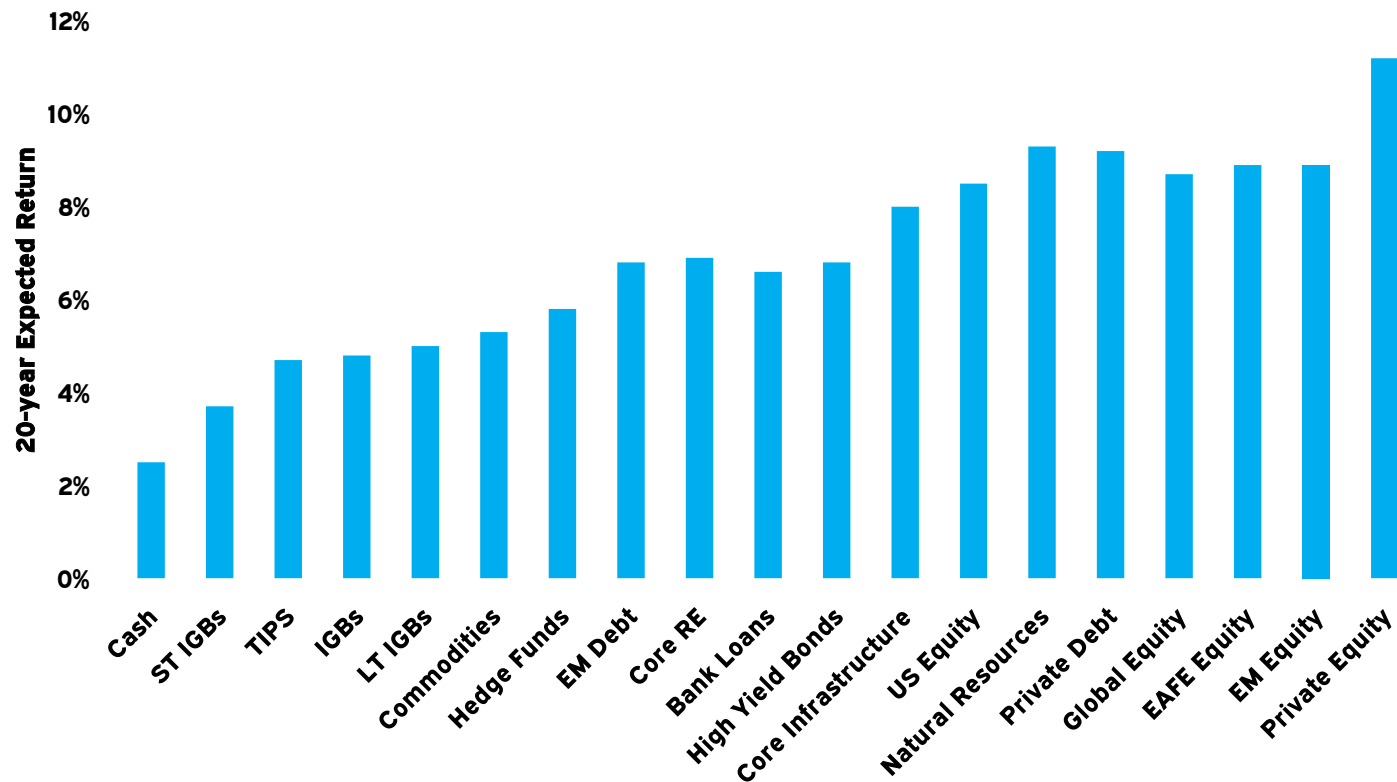
### Total Return Given Changes in Interest Rates (bps)<sup>1</sup> (As December 31, 2024)



	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)	4.6	4.5	4.3	4.1	3.9	3.7	3.6	3.4	3.2	0.36	4.28
Barclays US Treasury 1-3 Yr.	6.3	5.3	4.4	3.5	2.6	1.7	0.8	-0.1	-0.9	1.84	4.42
Barclays US Treasury Intermediate	8.1	6.2	4.4	2.6	0.8	-0.8	-2.5	-4.1	-5.6	3.61	4.36
Barclays US Treasury Long	21.1	12.6	4.9	-2.1	-8.4	-13.9	-18.8	-22.8	-26.2	14.73	4.86

<sup>1</sup> 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<sup>1</sup>



→ This chart details Meketa’s long-term forward-looking expectations for total returns across asset classes.

<sup>1</sup> Source: Meketa Investment Group’s 2024 Asset Study.

## Appendix

### Data Sources and Explanations<sup>1</sup>

- 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.

<sup>1</sup> All Data as of November 30, 2024, unless otherwise noted.



## Appendix

### Data Sources and Explanations<sup>1</sup>

- 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.

<sup>1</sup> All Data as of November 30, 2024, unless otherwise noted.

## Appendix

### Data Sources and Explanations<sup>1</sup>

- 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).

<sup>1</sup> All Data as of November 30, 2024, 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.**

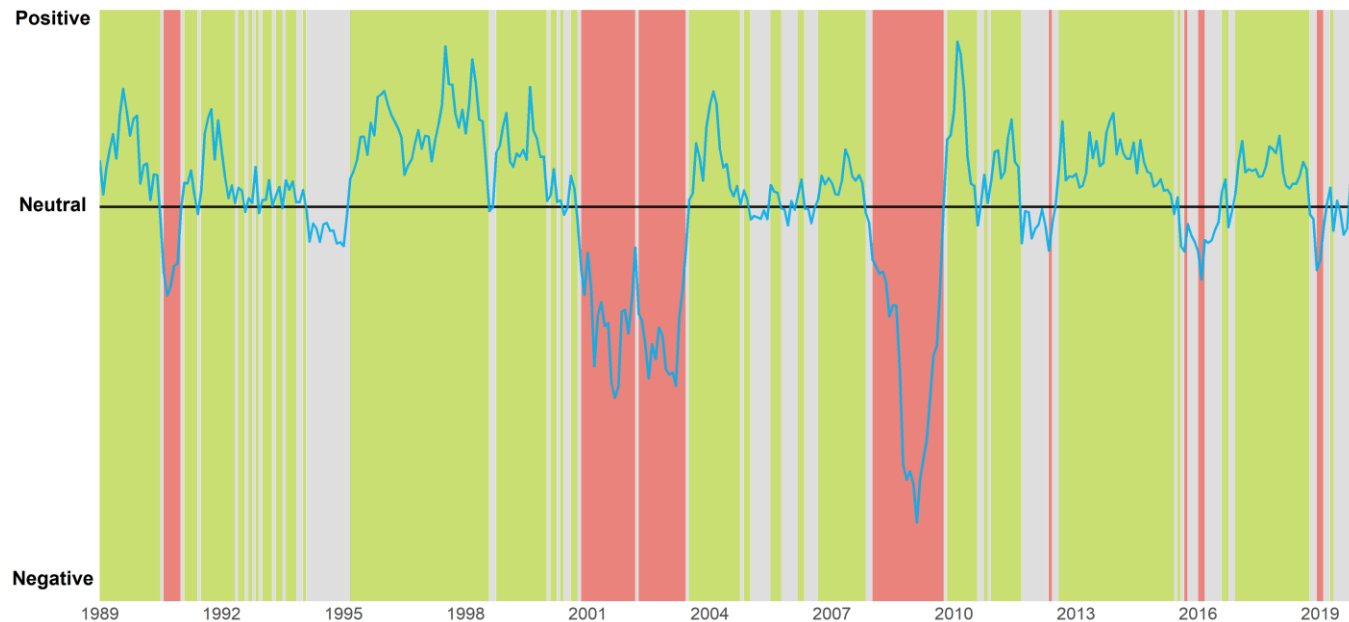
→ Meketa’s Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk 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<sup>1</sup>. 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).

<sup>1</sup> 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

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## SBI Comprehensive Performance Report

December 31, 2024

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Quarterly Report

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# Comprehensive Performance Report

December 31, 2024



## Description of SBI Investment Programs

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The Minnesota State Board of Investment 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.

### **Fire Plans + Other Retirement Plans**

Fire Plans and Other Retirement Plans include assets from volunteer fire relief plans and other public retirement plans with authority to invest with the SBI, if they so choose. Fire Plans that are not eligible to be consolidated with Public Employees Retirement Association (PERA) or elect not to be administered by PERA may invest their assets with the SBI using the same asset pools as the Combined Funds. The Statewide Volunteer Firefighter Retirement Plan is administered by PERA and has its own investment vehicle called the Volunteer Firefighter Account.

### **Participant Directed Investment Program**

The Participant Directed Investment Program (PDIP) provides investment vehicles for a variety of retirement or other tax-advantaged savings plans. Investment goals among the PDIP's many participants are varied. In order to meet the variety of goals, participants may allocate their investments among one or more accounts that are appropriate for their needs within statutory requirements and rules established by the participating organizations.

### **Non-Retirement Funds**

The Non-Retirement Funds are funds established by the State of Minnesota and other government entities for various purposes which include the benefit of public schools, the environment, other post-employment benefits, workers compensation insurance, and other purposes.

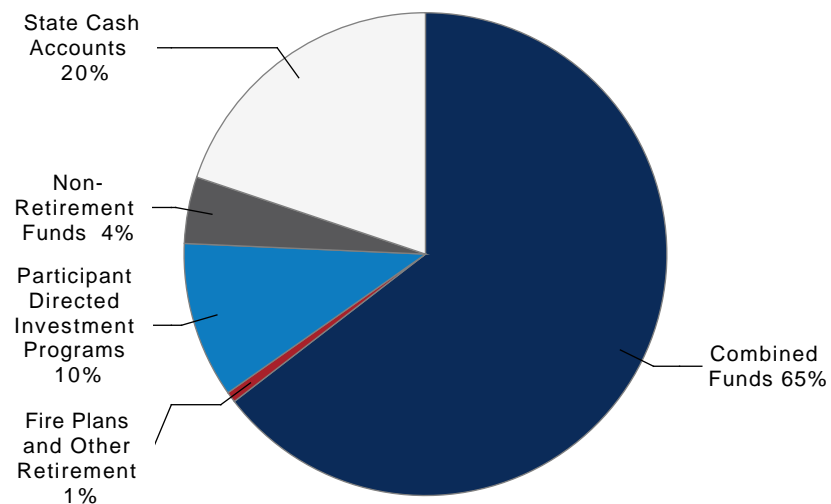
### **State Cash**

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

	<u>\$ Millions</u>
<b>Combined Funds</b>	<b>\$96,601</b>
<b>Fire Plans + Other Retirement Plans</b>	<b>\$1,069</b>
<b>Participant Directed Investment Program</b>	<b>\$15,633</b>
State Deferred Compensation Plan	\$10,564
Health Care Savings Plan	\$2,212
Unclassified Employees Retirement Plan	\$423
Hennepin County Supplemental Retirement Plan	\$185
PERA Defined Contribution Plan	\$108
Minnesota College Savings Plan	\$2,087
Minnesota Achieving a Better Life Experience Plan	\$53
<b>Non-Retirement Funds</b>	<b>\$6,682</b>
Assigned Risk Plan	\$275
Permanent School Fund	\$2,228
Environmental Trust Fund	\$1,981
Closed Landfill Investment Fund	\$159
Miscellaneous Trust Funds	\$1,020
Other Postemployment Benefits Accounts	\$1,020
<b>State Cash</b>	<b>\$29,676</b>
Invested Treasurer's Cash	\$28,580
Other State Cash Accounts	\$1,096
<b>TOTAL SBI AUM</b>	<b>\$149,661</b>



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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Note:  
 Throughout this report performance is calculated net of investment management fees, gross of administrative fees. 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 return are based portfolio management decisions to re-group manager accounts in different or newly created aggregates.





Quarterly Report

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# Combined Funds

## December 31, 2024



## Combined Funds Summary

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

	<u>One Quarter</u>
<b>COMBINED FUNDS</b>	
Beginning Market Value	\$97,619
Net Contributions	-580
Investment Return	-438
Ending Market Value	96,601

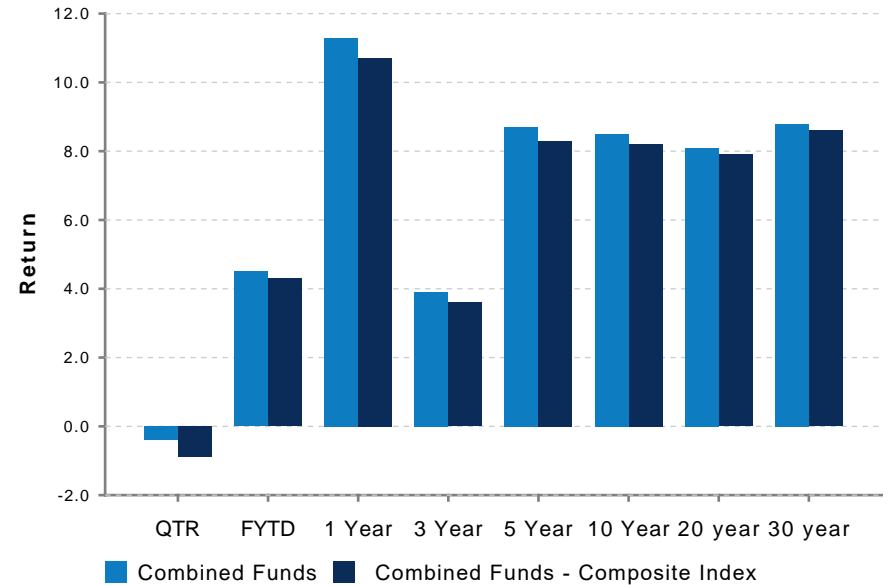
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

### 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.

	<u>QTR</u>	<u>FYTD</u>	<u>1 Yr</u>	<u>3 Yr</u>	<u>5 Yr</u>	<u>10 Yr</u>	<u>20 Yr</u>	<u>30 Yr</u>
Combined Funds	-0.4%	4.5%	11.3%	3.9%	8.7%	8.5%	8.1%	8.8%
Combined Funds-Composite Index	-0.9%	4.3%	10.7%	3.6%	8.3%	8.2%	7.9%	8.6%
Excess	0.4%	0.2%	0.7%	0.3%	0.5%	0.2%	0.3%	0.3%

### Asset Growth



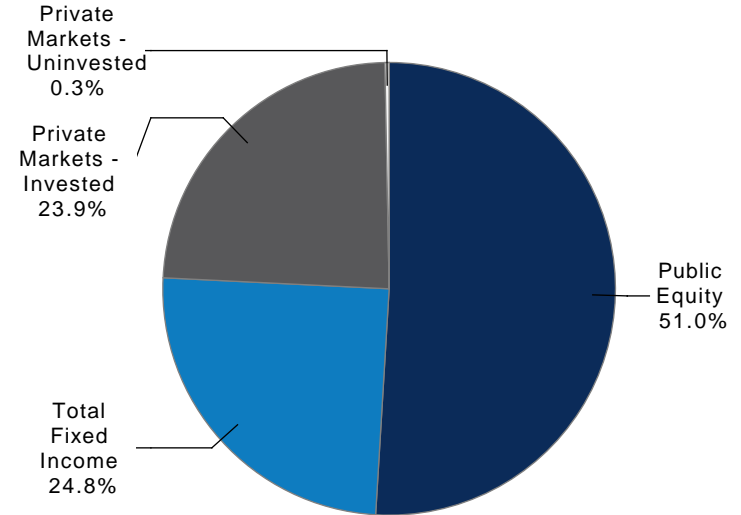


## Combined Funds Summary

### 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.

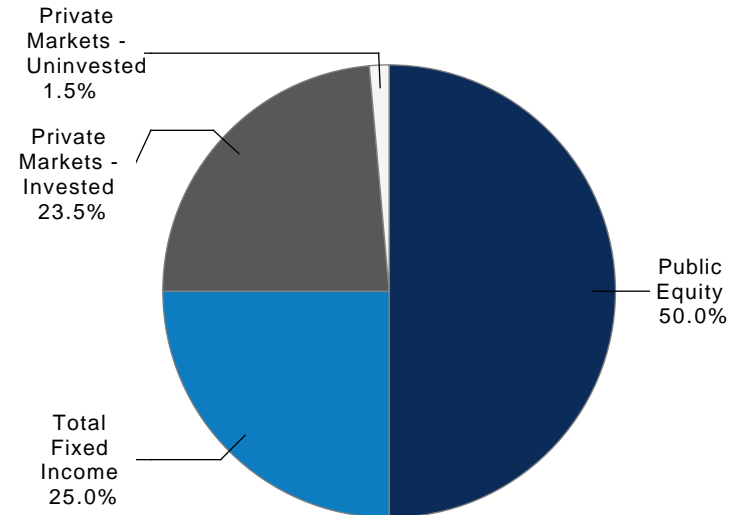
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$49,193	50.9%	50.0%
Total Fixed Income	23,983	24.8	25.0
Private Markets - Total	23,425	24.2	25.0
Private Markets - Invested	23,088	23.9	
Private Markets - Uninvested	338	0.3	
<b>TOTAL</b>	<b>96,601</b>	<b>100.0</b>	



### 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.

	<u>Policy Weight</u>	<u>Market Index</u>
Public Equity	50.0%	Public Equity Benchmark
Total Fixed Income	25.0%	Total Fixed Income Benchmark
Private Markets - Invested	23.5%	Private Markets
Private Markets - Uninvested	1.5%	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).

	<u>Market Value</u>	<u>Actual Weight</u>	<u>Policy Weight</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 Year</u>
Public Equity	\$49.2	50.9%	50.0%	-0.1%	6.2%	18.4%	6.0%	11.1%	10.3%	8.8%	9.5
Public Equity Benchmark				-0.8	6.0	17.6	5.7	10.6	10.1	8.7	9.2
Excess				0.7	0.2	0.8	0.3	0.5	0.2	0.1	0.3
Domestic Equity	33.1	34.3	33.5	2.6	8.9	23.9	8.0	14.0	12.5	10.1	10.6
Domestic Equity Benchmark				2.6	9.0	23.8	8.0	13.8	12.5	10.2	10.6
Excess				-0.0	-0.1	0.1	-0.0	0.2	-0.0	-0.1	-0.1
International Equity	15.0	15.5	16.5	-5.4	0.6	7.8	2.4	5.5	5.7	5.6	5.9
International Equity Benchmark				-7.6	-0.1	5.5	0.8	4.1	4.8	5.0	5.1
Excess				2.2	0.8	2.2	1.6	1.4	0.9	0.6	0.8
Global Equity	1.1	1.1	0.0	-2.7	2.7	11.1	-0.5				
MSCI AC World Index (net)				-1.0	5.6	17.5	5.4				
Excess				-1.8	-2.9	-6.4	-6.0				

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.

	<u>Market Value</u>	<u>Actual Weight</u>	<u>Policy Weight</u>	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 Year</u>
Total Fixed Income	\$24.0	24.8%	25.0%	-3.2%	1.7%	1.3%	-2.4%	0.4%	2.0%	3.5%	5.0%
Total Fixed Income Benchmark				-3.5%	1.3%	0.4%	-3.0%	-0.3%	1.5%	3.1%	4.6%
Excess				0.3%	0.4%	1.0%	0.7%	0.7%	0.6%	0.4%	0.4%
Core/Core Plus	\$5.2	5.4%	5.0	-3.0%	2.2%	1.9%	-2.2%	0.3%	1.9%	3.5%	5.0%
Core Bonds Benchmark				-3.1%	2.0%	1.3%	-2.4%	-0.3%	1.3%	3.0%	4.6%
Excess				0.1%	0.2%	0.6%	0.2%	0.7%	0.6%	0.5%	0.4%
Return Seeking Fixed Income	\$4.7	4.8%	5.0	-1.4%	3.6%	5.1%	0.7%				
Bloomberg U.S. Aggregate				-3.1%	2.0%	1.3%	-2.4%				
Excess				1.7%	1.6%	3.9%	3.1%				
Treasury Protection	\$9.4	9.7%	10.0	-6.2%	-0.0%	-2.8%	-7.0%	-2.7%			
Bloomberg Treasury 5+ Year				-6.2%	-0.0%	-3.0%	-7.1%	-2.7%			
Excess				-0.0%	0.0%	0.1%	0.1%	0.0%			
Laddered Bond + Cash	\$4.7	4.8%	5.0	1.1%	2.7%	5.4%	3.9%	2.4%	1.8%	1.9%	3.0%
ICE BofA US 3-Month Treasury Bill				1.2%	2.6%	5.3%	3.9%	2.5%	1.8%	1.7%	2.5%
Excess				-0.1%	0.2%	0.2%	0.0%	-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

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>25 Year</u>	<u>30 Year</u>
Private Markets - Invested	1.6%	3.8%	7.5%	6.9%	12.8%	11.3%	13.2%	12.6%	13.4%
Private Markets -Uninvested(1)	1.0%	2.1%	5.0%	-2.9%					
Private Equity	2.3%	4.8%	9.5%	6.9%	15.4%	15.2%	15.5%	13.9%	15.4%
Private Credit	1.4%	3.0%	7.8%	9.7%	11.2%	11.5%	12.5%	12.1%	
Resources	-2.3%	-0.3%	0.9%	8.0%	6.1%	0.2%	11.3%	12.8%	12.7%
Real Estate	-0.2%	0.7%	-2.6%	2.7%	7.9%	9.3%	8.4%	8.9%	9.4%

### 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



## Quarterly Report

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# Asset Class & Manager Performance

## December 31, 2024

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

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Domestic Equity</b>										
<b>ACTIVE DOMESTIC EQUITY AGGREGATE (1)</b>	<b>\$3,248,525,885</b>	<b>9.6%</b>	<b>2.1%</b>	<b>9.6%</b>	<b>18.2%</b>	<b>4.0%</b>	<b>11.2%</b>	<b>10.4%</b>	<b>8.6%</b>	<b>06/1996</b>
Active Domestic Equity Benchmark			1.4	9.4	17.0	4.1	10.2	10.1	9.1	06/1996
Excess			0.7	0.2	1.2	-0.1	1.0	0.4	-0.5	
<b>SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>4,390,223,142</b>	<b>13.0</b>	<b>2.2</b>	<b>8.2</b>	<b>25.4</b>	<b>9.1</b>	<b>15.2</b>	<b>13.2</b>	<b>9.7</b>	<b>06/1996</b>
Semi Passive Domestic Equity Benchmark			2.7	9.0	24.5	8.4	14.3	12.9	9.6	06/1996
Excess			-0.6	-0.8	0.9	0.7	0.9	0.3	0.1	
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (3)</b>	<b>26,181,602,199</b>	<b>77.4</b>	<b>2.7</b>	<b>9.0</b>	<b>24.4</b>	<b>8.4</b>	<b>14.2</b>	<b>12.8</b>	<b>9.8</b>	<b>06/1996</b>
Passive Domestic Equity Benchmark			2.7	9.0	24.4	8.4	14.2	12.8	9.9	06/1996
Excess			-0.0	-0.0	-0.0	-0.0	0.0	-0.0	-0.1	
TRANSITION AGGREGATE DOMESTIC EQUITY (4)	713	0.0								
<b>TOTAL DOMESTIC EQUITY (5)</b>	<b>33,820,351,940</b>	<b>100.0</b>	<b>2.6</b>	<b>8.9</b>	<b>23.9</b>	<b>8.0</b>	<b>14.0</b>	<b>12.5</b>	<b>11.0</b>	<b>01/1984</b>
Domestic Equity Benchmark			2.6	9.0	23.8	8.0	13.8	12.5	11.1	01/1984
Excess			-0.0	-0.1	0.1	-0.0	0.2	-0.0	-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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Total Domestic Equity</b>					
<b>ACTIVE DOMESTIC EQUITY AGGREGATE (1)</b>	<b>18.2%</b>	<b>20.9%</b>	<b>-21.3%</b>	<b>18.5%</b>	<b>27.3%</b>
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
<b>SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>25.4</b>	<b>27.5</b>	<b>-18.7</b>	<b>28.8</b>	<b>21.0</b>
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
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (3)</b>	<b>24.4</b>	<b>26.5</b>	<b>-19.2</b>	<b>26.5</b>	<b>20.8</b>
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)					
<b>TOTAL DOMESTIC EQUITY (5)</b>	<b>23.9</b>	<b>26.0</b>	<b>-19.4</b>	<b>25.8</b>	<b>21.7</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Large Cap Growth</b>										
<b>SANDS</b>	<b>\$253,869,751</b>	<b>0.8%</b>	<b>8.9%</b>	<b>8.1%</b>	<b>24.7%</b>	<b>-1.3%</b>	<b>11.6%</b>	<b>12.3%</b>	<b>11.5%</b>	<b>01/2005</b>
Russell 1000 Growth			7.1	10.5	33.4	10.5	19.0	16.8	12.6	01/2005
Excess			1.9	-2.4	-8.7	-11.8	-7.4	-4.4	-1.0	
<b>WINSLOW</b>	<b>281,313,557</b>	<b>0.8</b>	<b>5.4</b>	<b>7.9</b>	<b>31.8</b>	<b>9.3</b>	<b>17.6</b>	<b>15.9</b>	<b>12.8</b>	<b>01/2005</b>
Russell 1000 Growth			7.1	10.5	33.4	10.5	19.0	16.8	12.6	01/2005
Excess			-1.7	-2.6	-1.6	-1.1	-1.4	-0.9	0.2	
<b>RUSSELL 1000 GROWTH AGGREGATE (1)</b>	<b>535,183,308</b>	<b>1.6</b>	<b>7.0</b>	<b>8.0</b>	<b>28.2</b>	<b>3.6</b>	<b>17.9</b>	<b>16.5</b>	<b>12.1</b>	<b>11/2003</b>
Russell 1000 Growth			7.1	10.5	33.4	10.5	19.0	16.8	12.4	11/2003
Excess			-0.0	-2.5	-5.1	-6.8	-1.1	-0.3	-0.3	

(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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Large Cap Growth</b>					
<b>SANDS</b>	<b>24.7%</b>	<b>52.0%</b>	<b>-49.3%</b>	<b>5.2%</b>	<b>71.0%</b>
Russell 1000 Growth	33.4	42.7	-29.1	27.6	38.5
Excess	-8.7	9.3	-20.2	-22.4	32.5
<b>WINSLOW</b>	<b>31.8</b>	<b>43.7</b>	<b>-31.0</b>	<b>24.8</b>	<b>37.6</b>
Russell 1000 Growth	33.4	42.7	-29.1	27.6	38.5
Excess	-1.6	1.0	-1.8	-2.8	-0.9
<b>RUSSELL 1000 GROWTH AGGREGATE (1)</b>	<b>28.2</b>	<b>47.7</b>	<b>-41.3</b>	<b>12.8</b>	<b>81.3</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Semi-Passive Large Cap</b>										
<b>BLACKROCK</b>	<b>\$2,193,363,740</b>	<b>6.5%</b>	<b>2.3%</b>	<b>8.4%</b>	<b>26.1%</b>	<b>8.9%</b>	<b>14.9%</b>	<b>13.5%</b>	<b>11.0%</b>	<b>01/1995</b>
Semi Passive Domestic Equity Benchmark			2.7	9.0	24.5	8.4	14.3	12.9	10.5	01/1995
Excess			-0.4	-0.6	1.6	0.5	0.6	0.6	0.4	
<b>J.P. MORGAN</b>	<b>2,196,859,402</b>	<b>6.5</b>	<b>2.0</b>	<b>8.0</b>	<b>24.8</b>	<b>9.4</b>	<b>15.5</b>	<b>13.4</b>	<b>11.0</b>	<b>01/1995</b>
Semi Passive Domestic Equity Benchmark			2.7	9.0	24.5	8.4	14.3	12.9	10.5	01/1995
Excess			-0.7	-1.0	0.3	1.0	1.2	0.5	0.4	
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>	<b>4,390,223,142</b>	<b>13.0</b>	<b>2.2</b>	<b>8.2</b>	<b>25.4</b>	<b>9.1</b>	<b>15.2</b>	<b>13.2</b>	<b>9.7</b>	<b>06/1996</b>
Semi Passive Domestic Equity Benchmark			2.7	9.0	24.5	8.4	14.3	12.9	9.6	06/1996
Excess			-0.6	-0.8	0.9	0.7	0.9	0.3	0.1	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Semi-Passive Large Cap</b>					
<b>BLACKROCK</b>	<b>26.1%</b>	<b>26.9%</b>	<b>-19.2%</b>	<b>28.3%</b>	<b>20.7%</b>
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
<b>J.P. MORGAN</b>					
<b>J.P. MORGAN</b>	<b>24.8</b>	<b>28.1</b>	<b>-18.1</b>	<b>29.3</b>	<b>21.2</b>
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
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>					
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>	<b>25.4</b>	<b>27.5</b>	<b>-18.7</b>	<b>28.8</b>	<b>21.0</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Large Cap Value</b>										
<b>BARROW HANLEY</b>	<b>\$420,883,364</b>	<b>1.2%</b>	<b>-0.5%</b>	<b>9.0%</b>	<b>18.2%</b>	<b>10.2%</b>	<b>11.8%</b>	<b>10.2%</b>	<b>9.3%</b>	<b>04/2004</b>
Russell 1000 Value			-2.0	7.3	14.4	5.6	8.7	8.5	8.2	04/2004
Excess			1.5	1.7	3.8	4.6	3.1	1.7	1.0	
<b>LSV</b>	<b>378,894,908</b>	<b>1.1</b>	<b>-1.1</b>	<b>6.9</b>	<b>15.2</b>	<b>6.1</b>	<b>8.8</b>	<b>8.8</b>	<b>9.1</b>	<b>04/2004</b>
Russell 1000 Value			-2.0	7.3	14.4	5.6	8.7	8.5	8.2	04/2004
Excess			0.8	-0.3	0.9	0.5	0.2	0.3	0.8	
<b>RUSSELL 1000 VALUE AGGREGATE</b>	<b>799,778,273</b>	<b>2.4</b>	<b>-0.8</b>	<b>8.0</b>	<b>16.8</b>	<b>8.2</b>	<b>10.6</b>	<b>9.7</b>	<b>9.3</b>	<b>10/2003</b>
Russell 1000 Value			-2.0	7.3	14.4	5.6	8.7	8.5	8.9	10/2003
Excess			1.2	0.8	2.4	2.5	1.9	1.2	0.4	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.





	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Large Cap Value</b>					
<b>BARROW HANLEY</b>	<b>18.2%</b>	<b>12.0%</b>	<b>1.1%</b>	<b>27.7%</b>	<b>2.4%</b>
Russell 1000 Value	14.4	11.5	-7.5	25.2	2.8
Excess	3.8	0.5	8.6	2.5	-0.4
<b>LSV</b>					
<b>LSV</b>	<b>15.2</b>	<b>10.5</b>	<b>-6.3</b>	<b>29.7</b>	<b>-1.3</b>
Russell 1000 Value	14.4	11.5	-7.5	25.2	2.8
Excess	0.9	-0.9	1.3	4.5	-4.1
<b>RUSSELL 1000 VALUE AGGREGATE</b>					
<b>RUSSELL 1000 VALUE AGGREGATE</b>	<b>16.8</b>	<b>11.3</b>	<b>-2.6</b>	<b>28.8</b>	<b>1.6</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Small Cap Growth</b>										
<b>ARROWMARK</b>	<b>\$198,842,511</b>	<b>0.6%</b>	<b>2.0%</b>	<b>7.7%</b>	<b>9.0%</b>	<b>0.1%</b>	<b>5.3%</b>		<b>9.9%</b>	<b>11/2016</b>
Russell 2000 Growth			1.7	10.3	15.2	0.2	6.9		10.1	11/2016
Excess			0.3	-2.5	-6.1	-0.1	-1.5		-0.2	
<b>HOOD RIVER</b>	<b>215,601,000</b>	<b>0.6</b>	<b>3.4</b>	<b>14.8</b>	<b>35.1</b>	<b>6.0</b>	<b>19.0</b>		<b>17.1</b>	<b>11/2016</b>
Russell 2000 Growth			1.7	10.3	15.2	0.2	6.9		10.1	11/2016
Excess			1.7	4.5	20.0	5.8	12.2		7.1	
<b>RICE HALL JAMES</b>	<b>208,838,150</b>	<b>0.6</b>	<b>2.7</b>	<b>12.5</b>	<b>16.6</b>	<b>0.3</b>	<b>7.6</b>		<b>10.6</b>	<b>11/2016</b>
Russell 2000 Growth			1.7	10.3	15.2	0.2	6.9		10.1	11/2016
Excess			1.0	2.2	1.4	0.1	0.7		0.5	
<b>WELLINGTON</b>	<b>213,822,310</b>	<b>0.6</b>	<b>-1.0</b>	<b>6.4</b>	<b>12.9</b>	<b>-1.5</b>	<b>5.8</b>		<b>9.9</b>	<b>11/2016</b>
Russell 2000 Growth			1.7	10.3	15.2	0.2	6.9		10.1	11/2016
Excess			-2.7	-3.8	-2.3	-1.7	-1.0		-0.2	
<b>RUSSELL 2000 GROWTH AGGREGATE</b>	<b>837,103,971</b>	<b>2.5</b>	<b>1.8</b>	<b>10.4</b>	<b>18.3</b>	<b>1.2</b>	<b>9.5</b>	<b>9.0%</b>	<b>8.1</b>	<b>11/2003</b>
Russell 2000 Growth			1.7	10.3	15.2	0.2	6.9	8.1	8.7	11/2003
Excess			0.1	0.1	3.2	1.0	2.7	1.0	-0.6	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Small Cap Growth</b>					
<b>ARROWMARK</b>	<b>9.0%</b>	<b>19.9%</b>	<b>-23.3%</b>	<b>6.1%</b>	<b>21.9%</b>
Russell 2000 Growth	15.2	18.7	-26.4	2.8	34.6
Excess	-6.1	1.3	3.1	3.2	-12.8
<b>HOOD RIVER</b>	<b>35.1</b>	<b>21.9</b>	<b>-27.7</b>	<b>24.2</b>	<b>61.7</b>
Russell 2000 Growth	15.2	18.7	-26.4	2.8	34.6
Excess	20.0	3.3	-1.4	21.4	27.0
<b>RICE HALL JAMES</b>	<b>16.6</b>	<b>14.3</b>	<b>-24.4</b>	<b>15.6</b>	<b>23.8</b>
Russell 2000 Growth	15.2	18.7	-26.4	2.8	34.6
Excess	1.4	-4.3	2.0	12.8	-10.8
<b>WELLINGTON</b>	<b>12.9</b>	<b>18.5</b>	<b>-28.5</b>	<b>4.3</b>	<b>33.1</b>
Russell 2000 Growth	15.2	18.7	-26.4	2.8	34.6
Excess	-2.3	-0.1	-2.1	1.4	-1.5
<b>RUSSELL 2000 GROWTH AGGREGATE</b>	<b>18.3</b>	<b>18.7</b>	<b>-26.3</b>	<b>12.4</b>	<b>35.4</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Small Cap Value</b>										
<b>GOLDMAN SACHS</b>	<b>\$195,808,820</b>	<b>0.6%</b>	<b>-0.2%</b>	<b>8.7%</b>	<b>8.5%</b>	<b>1.3%</b>	<b>6.2%</b>	<b>6.7%</b>	<b>8.6%</b>	<b>01/2004</b>
Russell 2000 Value			-1.1	9.0	8.1	1.9	7.3	7.1	7.7	01/2004
Excess			0.9	-0.3	0.5	-0.7	-1.1	-0.4	0.9	
<b>HOTCHKIS AND WILEY</b>	<b>205,599,306</b>	<b>0.6</b>	<b>-0.1</b>	<b>5.3</b>	<b>5.4</b>	<b>8.9</b>	<b>12.0</b>	<b>7.9</b>	<b>8.9</b>	<b>01/2004</b>
Russell 2000 Value			-1.1	9.0	8.1	1.9	7.3	7.1	7.7	01/2004
Excess			0.9	-3.7	-2.6	7.0	4.7	0.7	1.2	
<b>MARTINGALE</b>	<b>189,474,146</b>	<b>0.6</b>	<b>-1.4</b>	<b>8.5</b>	<b>9.0</b>	<b>6.6</b>	<b>10.3</b>	<b>8.6</b>	<b>8.3</b>	<b>01/2004</b>
Russell 2000 Value			-1.1	9.0	8.1	1.9	7.3	7.1	7.7	01/2004
Excess			-0.3	-0.5	1.0	4.6	3.0	1.5	0.6	
<b>PEREGRINE</b>	<b>220,974,387</b>	<b>0.7</b>	<b>1.9</b>	<b>13.0</b>	<b>14.5</b>	<b>3.1</b>	<b>8.6</b>	<b>7.5</b>	<b>9.5</b>	<b>07/2000</b>
Russell 2000 Value			-1.1	9.0	8.1	1.9	7.3	7.1	8.9	07/2000
Excess			3.0	4.0	6.5	1.1	1.3	0.3	0.6	
<b>RUSSELL 2000 VALUE AGGREGATE</b>	<b>811,856,658</b>	<b>2.4</b>	<b>0.1</b>	<b>8.9</b>	<b>9.4</b>	<b>4.2</b>	<b>8.7</b>	<b>7.4</b>	<b>8.9</b>	<b>10/2003</b>
Russell 2000 Value			-1.1	9.0	8.1	1.9	7.3	7.1	8.4	10/2003
Excess			1.2	-0.1	1.3	2.3	1.4	0.3	0.5	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Small Cap Value</b>					
<b>GOLDMAN SACHS</b>	<b>8.5%</b>	<b>11.9%</b>	<b>-14.4%</b>	<b>27.0%</b>	<b>2.4%</b>
Russell 2000 Value	8.1	14.6	-14.5	28.3	4.6
Excess	0.5	-2.8	0.1	-1.3	-2.3
<b>HOTCHKIS AND WILEY</b>	<b>5.4</b>	<b>18.8</b>	<b>3.1</b>	<b>36.5</b>	<b>-0.2</b>
Russell 2000 Value	8.1	14.6	-14.5	28.3	4.6
Excess	-2.6	4.2	17.6	8.2	-4.8
<b>MARTINGALE</b>	<b>9.0</b>	<b>20.7</b>	<b>-8.0</b>	<b>41.3</b>	<b>-4.6</b>
Russell 2000 Value	8.1	14.6	-14.5	28.3	4.6
Excess	1.0	6.1	6.4	13.0	-9.2
<b>PEREGRINE</b>	<b>14.5</b>	<b>9.2</b>	<b>-12.5</b>	<b>28.6</b>	<b>7.3</b>
Russell 2000 Value	8.1	14.6	-14.5	28.3	4.6
Excess	6.5	-5.4	2.0	0.3	2.7
<b>RUSSELL 2000 VALUE AGGREGATE</b>	<b>9.4</b>	<b>14.2</b>	<b>-9.4</b>	<b>31.8</b>	<b>1.5</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active All Cap</b>										
<b>ZEVENBERGEN (1)</b>	<b>\$264,603,675</b>	<b>0.8%</b>	<b>9.7%</b>	<b>17.7%</b>	<b>35.0%</b>	<b>-0.1%</b>	<b>15.2%</b>	<b>15.3%</b>	<b>11.9%</b>	<b>04/1994</b>
Zevenbergen Custom Benchmark			6.8	10.5	32.5	9.9	19.5	17.0		04/1994
Excess			2.9	7.2	2.5	-10.1	-4.2	-1.7		
<b>ACTIVE RUSSELL 3000 GROWTH (2)</b>										
<b>ACTIVE RUSSELL 3000 GROWTH (2)</b>	<b>264,603,675</b>	<b>0.8</b>	<b>9.7</b>	<b>17.7</b>	<b>35.0</b>	<b>-0.1</b>			<b>-2.6</b>	<b>01/2021</b>
Russell 3000 Growth TR			6.8	10.5	32.5	9.9			13.7	01/2021
Excess			2.9	7.2	2.5	-10.1			-16.3	

(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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active All Cap</b>					
<b>ZEVENBERGEN (1)</b>	<b>35.0%</b>	<b>66.6%</b>	<b>-55.7%</b>	<b>-9.7%</b>	<b>126.2%</b>
Zevenbergen Custom Benchmark	32.5	41.2	-29.0	32.3	38.5
Excess	2.5	25.4	-26.8	-42.0	87.7
<b>ACTIVE RUSSELL 3000 GROWTH (2)</b>					
<b>ACTIVE RUSSELL 3000 GROWTH (2)</b>	<b>35.0</b>	<b>66.6</b>	<b>-55.7</b>	<b>-9.7</b>	
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Passive Domestic Equity</b>										
<b>BLACKROCK RUSSELL 1000</b>	<b>\$25,083,445,537</b>	<b>74.2%</b>	<b>2.7%</b>	<b>9.0%</b>	<b>24.5%</b>	<b>8.4%</b>	<b>14.3%</b>		<b>15.0%</b>	<b>11/2016</b>
RUSSELL 1000 (DAILY)			2.7	9.0	24.5	8.4	14.3		15.1	11/2016
Excess			-0.0	-0.0	-0.0	-0.0	-0.0		-0.0	
<b>BLACKROCK RUSSELL 2000</b>	<b>74,606,873</b>	<b>0.2</b>	<b>0.4</b>	<b>9.6</b>	<b>11.6</b>	<b>1.4</b>	<b>7.9</b>		<b>8.4</b>	<b>11/2018</b>
RUSSELL 2000 (DAILY)			0.3	9.6	11.5	1.2	7.4		8.0	11/2018
Excess			0.0	0.0	0.1	0.2	0.5		0.4	
<b>BLACKROCK RUSSELL 3000 (1)</b>	<b>1,023,549,789</b>	<b>3.0</b>	<b>2.6</b>	<b>9.0</b>	<b>23.8</b>	<b>8.1</b>	<b>14.1</b>	<b>12.6%</b>	<b>10.3</b>	<b>07/1995</b>
Passive Manager Benchmark			2.6	9.0	23.8	8.0	13.9	12.5	10.2	07/1995
Excess			0.0	0.0	0.0	0.1	0.2	0.1	0.1	
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>26,181,602,199</b>	<b>77.4</b>	<b>2.7</b>	<b>9.0</b>	<b>24.4</b>	<b>8.4</b>	<b>14.2</b>	<b>12.8</b>	<b>9.8</b>	<b>06/1996</b>
Passive Domestic Equity Benchmark			2.7	9.0	24.4	8.4	14.2	12.8	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.





	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Total Passive Domestic Equity</b>					
<b>BLACKROCK RUSSELL 1000</b>	<b>24.5%</b>	<b>26.6%</b>	<b>-19.2%</b>	<b>26.5%</b>	<b>20.9%</b>
RUSSELL 1000 (DAILY)	24.5	26.5	-19.1	26.5	21.0
Excess	-0.0	0.0	-0.0	0.1	-0.0
<b>BLACKROCK RUSSELL 2000</b>	<b>11.6</b>	<b>16.7</b>	<b>-19.9</b>	<b>16.0</b>	<b>20.8</b>
RUSSELL 2000 (DAILY)	11.5	16.9	-20.4	14.8	20.0
Excess	0.1	-0.3	0.6	1.2	0.8
<b>BLACKROCK RUSSELL 3000 (1)</b>	<b>23.8</b>	<b>26.0</b>	<b>-19.2</b>	<b>26.2</b>	<b>21.2</b>
Passive Manager Benchmark	23.8	26.0	-19.2	25.7	20.9
Excess	0.0	0.1	0.0	0.5	0.3
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>24.4</b>	<b>26.5</b>	<b>-19.2</b>	<b>26.5</b>	<b>20.8</b>
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

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total International Equity</b>										
<b>DEVELOPED MARKETS (1)</b>	<b>\$10,823,160,517</b>	<b>71.3%</b>	<b>-4.5%</b>	<b>1.3%</b>	<b>8.4%</b>	<b>4.5%</b>	<b>7.1%</b>	<b>6.5%</b>	<b>5.7%</b>	<b>01/1997</b>
BENCHMARK DM			-7.4%	-0.2%	4.7%	1.9%	5.1%	5.3%	2.7%	01/1997
Excess			2.9%	1.6%	3.7%	2.6%	2.0%	1.3%	3.0%	
<b>EMERGING MARKETS (2)</b>	<b>\$3,515,843,425</b>	<b>23.2%</b>	<b>-8.1%</b>	<b>-2.0%</b>	<b>6.2%</b>	<b>-2.6%</b>	<b>1.4%</b>	<b>3.5%</b>	<b>5.2%</b>	<b>11/1996</b>
BENCHMARK EM			-8.0%	0.0%	7.5%	-1.9%	1.7%	3.6%	5.5%	11/1996
Excess			-0.1%	-2.0%	-1.3%	-0.7%	-0.3%	-0.2%	-0.3%	
<b>ACWI EX-US AGGREGATE</b>	<b>\$421,882,046</b>	<b>2.8%</b>	<b>-4.9%</b>	<b>1.5%</b>	<b>6.8%</b>	<b>3.3%</b>			<b>5.6%</b>	<b>01/2021</b>
MSCI AC WORLD ex US (NET) - DAILY			-7.6%	-0.1%	5.5%	0.8%			2.5%	01/2021
Excess			2.7%	1.7%	1.3%	2.4%			3.0%	
<b>CHINA ONLY AGGREGATE</b>	<b>\$103,604,581</b>	<b>0.7%</b>	<b>-4.7%</b>	<b>19.7%</b>	<b>6.9%</b>	<b>-10.1%</b>			<b>-8.3%</b>	<b>01/2021</b>
MSCI China A			-6.7%	13.3%	11.7%	-10.5%			-7.3%	01/2021
Excess			2.0%	6.4%	-4.8%	0.4%			-1.1%	
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)	\$325,655,894	2.1%								06/2017
<b>TOTAL INTERNATIONAL EQUITY (4)</b>	<b>\$15,183,705,986</b>	<b>100.0%</b>	<b>-5.4%</b>	<b>0.6%</b>	<b>7.8%</b>	<b>2.4%</b>	<b>5.4%</b>	<b>5.7%</b>	<b>6.4%</b>	<b>10/1992</b>
International Equity Benchmark			-7.6%	-0.1%	5.5%	0.8%	4.1%	4.8%	5.8%	10/1992
Excess			2.2%	0.8%	2.2%	1.6%	1.4%	0.9%	0.6%	

(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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Total International Equity</b>					
<b>DEVELOPED MARKETS (1)</b>	<b>8.4%</b>	<b>17.8%</b>	<b>-10.7%</b>	<b>13.5%</b>	<b>8.9%</b>
BENCHMARK DM	4.7	17.9	-14.3	12.6	7.6
Excess	3.7	-0.1	3.6	0.9	1.3
<b>EMERGING MARKETS (2)</b>	<b>6.2</b>	<b>10.2</b>	<b>-21.1</b>	<b>-1.5</b>	<b>17.9</b>
BENCHMARK EM	7.5	9.8	-20.1	-2.5	18.3
Excess	-1.3	0.4	-1.0	1.1	-0.4
<b>ACWI EX-US AGGREGATE</b>	<b>6.8</b>	<b>17.9</b>	<b>-12.6</b>	<b>12.8</b>	
MSCI AC WORLD ex US (NET) - DAILY	5.5	15.6	-16.0	7.8	
Excess	1.3	2.3	3.4	4.9	
<b>CHINA ONLY AGGREGATE</b>	<b>6.9</b>	<b>-10.0</b>	<b>-24.5</b>	<b>-2.9</b>	
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)					
<b>TOTAL INTERNATIONAL EQUITY (4)</b>	<b>7.8</b>	<b>15.6</b>	<b>-13.7</b>	<b>8.9</b>	<b>11.4</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Developed Markets</b>										
<b>ACADIAN</b>	<b>\$612,675,639</b>	<b>4.0%</b>	<b>-2.9%</b>	<b>4.0%</b>	<b>13.1%</b>	<b>3.6%</b>	<b>7.1%</b>	<b>8.2%</b>	<b>6.7%</b>	<b>07/2005</b>
BENCHMARK DM			-7.4	-0.2	4.7	1.9	5.1	5.3	5.1	07/2005
Excess			4.5	4.3	8.4	1.7	2.0	3.0	1.6	
<b>COLUMBIA</b>	<b>514,880,012</b>	<b>3.4</b>	<b>-7.9</b>	<b>-2.2</b>	<b>5.6</b>	<b>2.8</b>	<b>7.4</b>	<b>7.6</b>	<b>4.2</b>	<b>03/2000</b>
BENCHMARK DM			-7.4	-0.2	4.7	1.9	5.1	5.3	3.9	03/2000
Excess			-0.4	-2.0	0.9	0.9	2.3	2.4	0.3	
<b>FIDELITY</b>	<b>501,306,300</b>	<b>3.3</b>	<b>-8.3</b>	<b>-0.8</b>	<b>4.7</b>	<b>0.6</b>	<b>5.9</b>	<b>6.3</b>	<b>6.5</b>	<b>07/2005</b>
BENCHMARK DM			-7.4	-0.2	4.7	1.9	5.1	5.3	5.1	07/2005
Excess			-0.9	-0.5	-0.0	-1.3	0.8	1.0	1.3	
<b>JP MORGAN</b>	<b>364,629,484</b>	<b>2.4</b>	<b>-8.7</b>	<b>-2.6</b>	<b>1.7</b>	<b>-1.2</b>	<b>4.5</b>	<b>5.4</b>	<b>5.2</b>	<b>07/2005</b>
BENCHMARK DM			-7.4	-0.2	4.7	1.9	5.1	5.3	5.1	07/2005
Excess			-1.3	-2.4	-3.0	-3.1	-0.6	0.1	0.1	
<b>MARATHON</b>	<b>435,606,050</b>	<b>2.9</b>	<b>-7.0</b>	<b>1.1</b>	<b>6.6</b>	<b>3.5</b>	<b>6.1</b>	<b>6.5</b>	<b>7.8</b>	<b>11/1993</b>
BENCHMARK DM			-7.4	-0.2	4.7	1.9	5.1	5.3	5.2	11/1993
Excess			0.5	1.3	1.9	1.6	1.0	1.2	2.6	



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Developed Markets</b>					
<b>ACADIAN</b>	<b>13.1%</b>	<b>12.4%</b>	<b>-12.5%</b>	<b>13.6%</b>	<b>11.7%</b>
BENCHMARK DM	4.7	17.9	-14.3	12.6	7.6
Excess	8.4	-5.5	1.8	0.9	4.2
<b>COLUMBIA</b>	<b>5.6</b>	<b>21.1</b>	<b>-15.0</b>	<b>14.2</b>	<b>15.0</b>
BENCHMARK DM	4.7	17.9	-14.3	12.6	7.6
Excess	0.9	3.2	-0.7	1.6	7.4
<b>FIDELITY</b>	<b>4.7</b>	<b>18.0</b>	<b>-17.4</b>	<b>13.0</b>	<b>15.4</b>
BENCHMARK DM	4.7	17.9	-14.3	12.6	7.6
Excess	-0.0	0.1	-3.2	0.4	7.8
<b>JP MORGAN</b>	<b>1.7</b>	<b>17.1</b>	<b>-19.0</b>	<b>13.3</b>	<b>14.2</b>
BENCHMARK DM	4.7	17.9	-14.3	12.6	7.6
Excess	-3.0	-0.9	-4.7	0.7	6.6
<b>MARATHON</b>	<b>6.6</b>	<b>18.2</b>	<b>-12.1</b>	<b>12.8</b>	<b>7.6</b>
BENCHMARK DM	4.7	17.9	-14.3	12.6	7.6
Excess	1.9	0.3	2.2	0.2	0.1



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>1 Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Developed Markets</b>										
<b>Active Developed Markets Aggregate (1)</b>	<b>\$2,429,097,485</b>	<b>16.0%</b>	<b>-6.7%</b>	<b>0.1%</b>	<b>6.8%</b>	<b>2.1%</b>	<b>6.1%</b>	<b>6.2%</b>	<b>5.7%</b>	<b>06/1996</b>
BENCHMARK DM			-7.4%	-0.2%	4.7%	1.9%	5.1%	5.3%	2.6%	06/1996
Excess			0.7%	0.4%	2.1%	0.2%	1.0%	1.0%	3.0%	
<b>SSgA DEVELOPED MARKETS PASSIVE</b>	<b>\$8,155,131,167</b>	<b>53.7%</b>	<b>-7.5%</b>	<b>-0.3%</b>	<b>5.0%</b>	<b>2.3%</b>	<b>5.6%</b>	<b>5.7%</b>		
BENCHMARK DM			-7.4%	-0.2%	4.7%	1.9%	5.1%	5.3%		
Excess			-0.1%	-0.0%	0.3%	0.4%	0.5%	0.4%		
<b>RECORD CURRENCY (2)</b>	<b>\$235,328,652</b>	<b>1.5%</b>	<b>2.9%</b>	<b>1.1%</b>	<b>3.0%</b>	<b>2.2%</b>				<b>10/2020</b>
<b>DEVELOPED MARKETS TOTAL (3)</b>	<b>\$10,823,160,517</b>		<b>-4.5%</b>	<b>1.3%</b>	<b>8.4%</b>	<b>4.5%</b>	<b>7.1%</b>	<b>6.5%</b>	<b>5.7%</b>	<b>01/1997</b>
BENCHMARK DM			-7.4%	-0.2%	4.7%	1.9%	5.1%	5.3%	2.7%	01/1997
Excess			2.9%	1.6%	3.7%	2.6%	2.0%	1.3%	3.0%	

(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 value includes residual cash from terminated managers.

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.





	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Total Developed Markets</b>					
<b>Active Developed Markets Aggregate</b>	<b>6.8%</b>	<b>17.6%</b>	<b>-15.2%</b>	<b>12.5%</b>	<b>12.2%</b>
BENCHMARK DM	4.7%	17.9%	-14.3%	12.6%	7.6%
Excess	2.1%	-0.4%	-0.9%	-0.1%	4.6%
<b>SSgA DEVELOPED MARKETS PASSIVE</b>	<b>5.0%</b>	<b>18.5%</b>	<b>-13.8%</b>	<b>13.0%</b>	<b>8.2%</b>
BENCHMARK DM	4.7%	17.9%	-14.3%	12.6%	7.6%
Excess	0.3%	0.5%	0.5%	0.4%	0.6%
<b>DEVELOPED MARKETS TOTAL</b>	<b>8.4%</b>	<b>17.8%</b>	<b>-10.7%</b>	<b>13.5%</b>	<b>8.9%</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Emerging Markets</b>										
<b>MARTIN CURRIE</b>	<b>\$532,787,518</b>	<b>3.5%</b>	<b>-8.2%</b>	<b>-1.4%</b>	<b>3.8%</b>	<b>-6.6%</b>	<b>-0.1%</b>		<b>4.3%</b>	<b>04/2017</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7		4.0	04/2017
Excess			-0.2	-1.4	-3.7	-4.6	-1.8		0.3	
<b>MACQUARIE</b>	<b>505,175,503</b>	<b>3.3</b>	<b>-8.5</b>	<b>-8.4</b>	<b>7.2</b>	<b>-3.0</b>	<b>2.1</b>		<b>5.0</b>	<b>04/2017</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7		4.0	04/2017
Excess			-0.5	-8.4	-0.3	-1.0	0.4		1.0	
<b>MORGAN STANLEY</b>	<b>609,143,923</b>	<b>4.0</b>	<b>-6.9</b>	<b>-2.1</b>	<b>8.0</b>	<b>-3.0</b>	<b>1.8</b>	<b>3.8%</b>	<b>7.8</b>	<b>01/2001</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7	3.6	7.6	01/2001
Excess			1.1	-2.1	0.5	-1.1	0.1	0.2	0.2	
<b>PZENA</b>	<b>617,079,278</b>	<b>4.1</b>	<b>-10.4</b>	<b>0.1</b>	<b>5.8</b>	<b>5.4</b>	<b>6.6</b>		<b>6.4</b>	<b>04/2017</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7		4.0	04/2017
Excess			-2.4	0.1	-1.7	7.4	4.9		2.4	



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Emerging Markets</b>					
<b>MARTIN CURRIE</b>	<b>3.8%</b>	<b>5.8%</b>	<b>-25.7%</b>	<b>-3.5%</b>	<b>26.5%</b>
BENCHMARK EM	7.5	9.8	-20.1	-2.5	18.3
Excess	-3.7	-4.1	-5.6	-1.0	8.2
<b>MACQUARIE</b>	<b>7.2</b>	<b>16.0</b>	<b>-26.5</b>	<b>-2.2</b>	<b>24.2</b>
BENCHMARK EM	7.5	9.8	-20.1	-2.5	18.3
Excess	-0.3	6.1	-6.4	0.3	5.9
<b>MORGAN STANLEY</b>	<b>8.0</b>	<b>10.8</b>	<b>-23.8</b>	<b>3.5</b>	<b>15.7</b>
BENCHMARK EM	7.5	9.8	-20.1	-2.5	18.3
Excess	0.5	1.0	-3.7	6.0	-2.6
<b>PZENA</b>	<b>5.8</b>	<b>19.7</b>	<b>-7.4</b>	<b>9.3</b>	<b>7.7</b>
BENCHMARK EM	7.5	9.8	-20.1	-2.5	18.3
Excess	-1.7	9.9	12.7	11.8	-10.6



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Emerging Markets</b>										
<b>ACTIVE EMERGING MARKETS AGGREGATE (1)</b>	<b>\$2,264,186,221</b>	<b>14.9%</b>	<b>-8.6%</b>	<b>-2.8%</b>	<b>5.9%</b>	<b>-2.7%</b>	<b>1.4%</b>	<b>3.3%</b>	<b>3.5%</b>	<b>01/2012</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7	3.6	3.7	01/2012
Excess			-0.5	-2.9	-1.6	-0.8	-0.3	-0.3	-0.2	
<b>SSGA EMERGING MARKETS PASSIVE</b>	<b>1,248,819,939</b>	<b>8.2</b>	<b>-7.6</b>	<b>-0.2</b>	<b>6.7</b>	<b>-2.4</b>	<b>1.3</b>	<b>3.5</b>	<b>3.6</b>	<b>01/2012</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7	3.6	3.7	01/2012
Excess			0.4	-0.3	-0.8	-0.5	-0.4	-0.2	-0.1	
<b>EMERGING MARKETS TOTAL (1)</b>	<b>3,515,843,425</b>	<b>23.2</b>	<b>-8.1</b>	<b>-2.0</b>	<b>6.2</b>	<b>-2.6</b>	<b>1.4</b>	<b>3.5</b>	<b>5.2</b>	<b>11/1996</b>
BENCHMARK EM			-8.0	0.0	7.5	-1.9	1.7	3.6	5.5	11/1996
Excess			-0.1	-2.0	-1.3	-0.7	-0.3	-0.2	-0.3	

(1) All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Total Emerging Markets</b>					
<b>ACTIVE EMERGING MARKETS AGGREGATE (1)</b>	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
<b>SSGA EMERGING MARKETS PASSIVE</b>	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
<b>EMERGING MARKETS TOTAL</b>	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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active ACWI ex-US</b>										
EARNEST PARTNERS ACWI EX US	\$421,882,046	2.8%	-4.9%	1.5%	6.8%	3.3%			5.6%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			-7.6%	-0.1%	5.5%	0.8%			2.5%	01/2021
Excess			2.7%	1.7%	1.3%	2.4%			3.0%	
<b>TOTAL ACWI EX-US AGGREGATE</b>										
	\$421,882,046	2.8%	-4.9%	1.5%	6.8%	3.3%			5.6%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			-7.6%	-0.1%	5.5%	0.8%			2.5%	01/2021
Excess			2.7%	1.7%	1.3%	2.4%			3.0%	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active ACWI ex-US</b>					
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	
<b>TOTAL ACWI EX-US AGGREGATE</b>	<b>6.8</b>	<b>17.9</b>	<b>-12.6</b>	<b>12.8</b>	
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>China Only Managers</b>										
<b>EARNEST PARTNERS CHINA</b>	<b>\$103,604,581</b>	<b>0.7%</b>	<b>-4.7%</b>	<b>19.7%</b>	<b>6.9%</b>	<b>-10.1%</b>			<b>-8.3%</b>	<b>01/2021</b>
MSCI China A			-6.7	13.3	11.7	-10.5			-7.3	01/2021
Excess			2.0	6.4	-4.8	0.4			-1.1	
<b>CHINA ONLY AGGREGATE</b>	<b>103,604,581</b>	<b>0.7</b>	<b>-4.7</b>	<b>19.7</b>	<b>6.9</b>	<b>-10.1</b>			<b>-8.3</b>	<b>01/2021</b>
MSCI China A			-6.7	13.3	11.7	-10.5			-7.3	01/2021
Excess			2.0	6.4	-4.8	0.4			-1.1	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.





	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>China Only Managers</b>					
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	
<b>CHINA ONLY AGGREGATE</b>					
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Emerging Markets Transition Portfolio</b>										
NISA EMERGING MARKETS (1)	\$317,705,583	2.1%	-8.2%	-1.1%					-1.1%	07/2024
BENCHMARK EM			-8.0	0.0					0.0	07/2024
Excess			-0.2	-1.1					-1.1	
NISA EMERGING MARKETS (1)	317,705,583	2.1	-8.2	-1.1					-1.1	07/2024
BENCHMARK EM			-8.0	0.0					0.0	07/2024
Excess			-0.2	-1.1					-1.1	

(1) Reflects assets transitioned from an active Emerging Markets manager terminated during 3Q24. This portfolio is equitized by NISA via an overlay strategy designed to track the performance of the MSCI Emerging Markets Index.



2024 Calendar Return

2023 Calendar Return

2022 Calendar Return

2021 Calendar Return

2020 Calendar Return

**Emerging Markets Transition Portfolio**

**NISA EMERGING MARKETS**

BENCHMARK EM

Excess

**NISA EMERGING MARKETS**

BENCHMARK EM

Excess

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# Global Equity

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Global Equity Managers</b>										
<b>ARIEL INVESTMENTS</b>	<b>\$403,723,922</b>	<b>38.0%</b>	<b>-3.6%</b>	<b>3.4%</b>	<b>7.6%</b>	<b>5.1%</b>			<b>6.8%</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			-1.0	5.6	17.5	5.4			8.6	01/2021
Excess			-2.6	-2.2	-9.9	-0.4			-1.8	
<b>BAILLIE GIFFORD</b>	<b>284,391,594</b>	<b>26.8</b>	<b>5.1</b>	<b>10.7</b>	<b>26.1</b>	<b>-2.6</b>			<b>-1.2</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			-1.0	5.6	17.5	5.4			8.6	01/2021
Excess			6.1	5.2	8.6	-8.0			-9.8	
<b>MARTIN CURRIE INVESTMENTS - GLOBAL EQ</b>	<b>373,856,311</b>	<b>35.2</b>	<b>-7.2</b>	<b>-3.4</b>	<b>5.3</b>	<b>-4.4</b>			<b>-0.3</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			-1.0	5.6	17.5	5.4			8.6	01/2021
Excess			-6.2	-9.0	-12.2	-9.8			-8.9	
<b>GLOBAL EQUITY</b>	<b>1,061,971,827</b>	<b>100.0</b>	<b>-2.7</b>	<b>2.7</b>	<b>11.1</b>	<b>-0.5</b>			<b>1.9</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			-1.0	5.6	17.5	5.4			8.6	01/2021
Excess			-1.8	-2.9	-6.4	-6.0			-6.6	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Global Equity Managers</b>					
<b>ARIEL INVESTMENTS</b>	<b>7.6%</b>	<b>14.1%</b>	<b>-5.6%</b>	<b>12.1%</b>	
MSCI AC WORLD NET USD DAILY	17.5	22.2	-18.4	18.5	
Excess	-9.9	-8.1	12.8	-6.5	
<b>BAILLIE GIFFORD</b>	<b>26.1</b>	<b>38.0</b>	<b>-46.9</b>	<b>3.1</b>	
MSCI AC WORLD NET USD DAILY	17.5	22.2	-18.4	18.5	
Excess	8.6	15.8	-28.5	-15.5	
<b>MARTIN CURRIE INVESTMENTS - GLOBAL EQ</b>	<b>5.3</b>	<b>23.8</b>	<b>-32.9</b>	<b>12.8</b>	
MSCI AC WORLD NET USD DAILY	17.5	22.2	-18.4	18.5	
Excess	-12.2	1.6	-14.5	-5.8	
<b>GLOBAL EQUITY</b>	<b>11.1</b>	<b>22.6</b>	<b>-27.7</b>	<b>9.6</b>	
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.

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# Core/Core Plus Bonds

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Bonds</b>										
<b>CORE (1)</b>	<b>\$2,446,562,096</b>	<b>44.3%</b>	<b>-3.2%</b>	<b>2.2%</b>	<b>2.1%</b>	<b>-1.3%</b>			<b>-0.8%</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4			-1.8	11/2020
Excess			-0.1	0.2	0.8	1.1			1.1	
<b>CORE PLUS (1)</b>	<b>3,072,774,869</b>	<b>55.7</b>	<b>-2.9</b>	<b>2.2</b>	<b>1.7</b>	<b>-2.7</b>			<b>-1.7</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4			-1.8	11/2020
Excess			0.2	0.2	0.5	-0.3			0.2	
TRANSITION AGGREGATE CORE BONDS (2)	21,343	0.0								
<b>TOTAL CORE/CORE PLUS BONDS (3)</b>	<b>5,519,358,308</b>	<b>100.0</b>	<b>-3.0</b>	<b>2.2</b>	<b>1.9</b>	<b>-2.2</b>	<b>0.3%</b>	<b>1.9%</b>	<b>6.6</b>	<b>07/1984</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4	-0.3	1.3	6.2	07/1984
Excess			0.1	0.2	0.6	0.2	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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Bonds</b>					
<b>CORE (1)</b>	<b>2.1%</b>	<b>7.3%</b>	<b>-12.3%</b>	<b>-1.0%</b>	
Bloomberg U.S. Aggregate	1.3	5.5	-13.0	-1.5	
Excess	0.8	1.7	0.7	0.5	
<b>CORE PLUS (1)</b>	<b>1.7</b>	<b>6.8</b>	<b>-15.2</b>	<b>-1.1</b>	
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)					
<b>TOTAL CORE/CORE PLUS BONDS (3)</b>	<b>1.9</b>	<b>7.0</b>	<b>-14.1</b>	<b>-1.1</b>	<b>9.7%</b>
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Core</b>										
<b>DODGE &amp; COX</b>	<b>\$1,247,174,903</b>	<b>22.6%</b>	<b>-3.3%</b>	<b>2.2%</b>	<b>2.4%</b>	<b>-0.7%</b>	<b>1.2%</b>	<b>2.5%</b>	<b>5.0%</b>	<b>02/2000</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4	-0.3	1.3	4.0	02/2000
Excess			-0.2	0.3	1.1	1.7	1.6	1.1	1.1	
<b>BLACKROCK</b>										
<b>BLACKROCK</b>	<b>1,199,387,193</b>	<b>21.7</b>	<b>-3.0</b>	<b>2.1</b>	<b>1.7</b>	<b>-2.1</b>	<b>0.0</b>	<b>1.6</b>	<b>4.3</b>	<b>04/1996</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4	-0.3	1.3	4.2	04/1996
Excess			0.1	0.1	0.5	0.3	0.4	0.3	0.1	
<b>CORE</b>										
<b>CORE</b>	<b>2,446,562,096</b>	<b>44.3</b>	<b>-3.2</b>	<b>2.2</b>	<b>2.1</b>	<b>-1.3</b>			<b>-0.8</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4			-1.8	11/2020
Excess			-0.1	0.2	0.8	1.1			1.1	

(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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Active Core</b>					
<b>DODGE &amp; COX</b>	<b>2.4%</b>	<b>8.0%</b>	<b>-11.3%</b>	<b>-0.7%</b>	<b>9.4%</b>
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
<b>BLACKROCK</b>	<b>1.7</b>	<b>6.4</b>	<b>-13.4</b>	<b>-1.3</b>	<b>8.3</b>
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
<b>CORE</b>	<b>2.1</b>	<b>7.3</b>	<b>-12.3</b>	<b>-1.0</b>	
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Core Plus Bonds</b>										
<b>GOLDMAN SACHS</b>	<b>\$1,534,498,294</b>	<b>27.8%</b>	<b>-3.0%</b>	<b>2.1%</b>	<b>1.9%</b>	<b>-2.3%</b>	<b>0.1%</b>	<b>1.7%</b>	<b>4.7%</b>	<b>07/1993</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4	-0.3	1.3	4.3	07/1993
Excess			0.1	0.2	0.7	0.1	0.4	0.4	0.3	
<b>NEUBERGER</b>	<b>1,515,945,397</b>	<b>27.5</b>	<b>-2.7</b>	<b>2.4</b>	<b>2.7</b>	<b>-1.9</b>	<b>0.6</b>	<b>1.9</b>	<b>5.6</b>	<b>07/1988</b>
Bloomberg U.S. Aggregate			- 3.1	2.0	1.3	-2.4	-0.3	1.3	5.3	07/1988
Excess			0.4	0.4	1.5	0.5	1.0	0.5	0.3	
<b>CORE PLUS (1)</b>	<b>3,072,774,869</b>	<b>55.7</b>	<b>-2.9</b>	<b>2.2</b>	<b>1.7</b>	<b>-2.7</b>			<b>-1.7</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			-3.1	2.0	1.3	-2.4			-1.8	11/2020
Excess			0.2	0.2	0.5	-0.3			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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Core Plus Bonds</b>					
<b>GOLDMAN SACHS</b>	<b>1.9%</b>	<b>6.3%</b>	<b>-13.9%</b>	<b>-1.5%</b>	<b>9.0%</b>
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
<b>NEUBERGER</b>	<b>2.7</b>	<b>6.7</b>	<b>-13.8</b>	<b>-0.6</b>	<b>9.9</b>
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
<b>CORE PLUS</b>	<b>1.7</b>	<b>6.8</b>	<b>-15.2</b>	<b>-1.1</b>	
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

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Return Seeking Bonds Managers</b>										
<b>COLUMBIA CREDIT PLUS</b>	<b>\$964,660,634</b>	<b>20.7%</b>	<b>-3.0%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>-1.8%</b>			<b>-0.8%</b>	<b>12/2020</b>
Credit Plus Benchmark			-2.4	3.0	3.2	-1.1			-0.8	12/2020
Excess			-0.6	-0.5	-0.8	-0.7			-0.0	
<b>PIMCO CREDIT PLUS</b>	<b>999,774,938</b>	<b>21.4</b>	<b>-2.4</b>	<b>3.0</b>	<b>3.7</b>	<b>-0.9</b>			<b>-0.3</b>	<b>12/2020</b>
Credit Plus Benchmark			-2.4	3.0	3.2	-1.1			-0.8	12/2020
Excess			0.0	0.0	0.5	0.2			0.5	
<b>CREDIT PLUS</b>	<b>1,964,435,572</b>	<b>42.1</b>	<b>-2.7</b>	<b>2.7</b>	<b>3.1</b>	<b>-1.4</b>			<b>-0.6</b>	<b>12/2020</b>
Credit Plus Benchmark			-2.4	3.0	3.2	-1.1			-0.8	12/2020
Excess			-0.3	-0.2	-0.2	-0.3			0.2	
<b>BLACKROCK OPPORTUNISTIC</b>	<b>518,264,608</b>	<b>11.1</b>	<b>-0.8</b>	<b>3.0</b>	<b>4.4</b>	<b>2.1</b>			<b>1.8</b>	<b>12/2020</b>
ICE BofA US 3-Month Treasury Bill			1.2	2.6	5.3	3.9			2.9	12/2020
Excess			-2.0	0.4	-0.9	-1.8			-1.1	
<b>ASHMORE EMERGING MARKETS</b>	<b>333,751,914</b>	<b>7.1</b>	<b>-4.9</b>	<b>2.9</b>	<b>1.4</b>	<b>-2.3</b>			<b>-4.3</b>	<b>01/2021</b>
JPM JEMB Sovereign-only 50-50			-4.5	2.7	2.0	-0.9			-2.0	01/2021
Excess			-0.4	0.2	-0.6	-1.4			-2.3	
<b>TCW SECURITIZED CREDIT</b>	<b>498,239,352</b>	<b>10.7</b>	<b>0.9</b>	<b>4.3</b>	<b>7.9</b>	<b>3.3</b>			<b>3.1</b>	<b>07/2021</b>
ICE BofA US 3-Month Treasury Bill			1.2	2.6	5.3	3.9			3.3	07/2021
Excess			-0.3	1.7	2.7	-0.6			-0.2	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Return Seeking Bonds Managers</b>					
<b>COLUMBIA CREDIT PLUS</b>	<b>2.4%</b>	<b>9.0%</b>	<b>-15.3%</b>	<b>1.1%</b>	
Credit Plus Benchmark	3.2	8.6	-13.7	0.0	
Excess	-0.8	0.5	-1.6	1.1	
<b>PIMCO CREDIT PLUS</b>	<b>3.7</b>	<b>8.4</b>	<b>-13.6</b>	<b>0.8</b>	
Credit Plus Benchmark	3.2	8.6	-13.7	0.0	
Excess	0.5	-0.1	0.1	0.7	
<b>CREDIT PLUS</b>	<b>3.1</b>	<b>8.7</b>	<b>-14.5</b>	<b>0.9</b>	
Credit Plus Benchmark	3.2	8.6	-13.7	0.0	
Excess	-0.2	0.2	-0.7	0.9	
<b>BLACKROCK OPPORTUNISTIC</b>	<b>4.4</b>	<b>7.7</b>	<b>-5.4</b>	<b>0.3</b>	
ICE BofA US 3-Month Treasury Bill	5.3	5.0	1.5	0.0	
Excess	-0.9	2.7	-6.8	0.2	
<b>ASHMORE EMERGING MARKETS</b>	<b>1.4</b>	<b>10.9</b>	<b>-17.2</b>	<b>-10.1</b>	
JPM JEMB Sovereign-only 50-50	2.0	11.9	-14.8	-5.3	
Excess	-0.6	-1.0	-2.4	-4.8	
<b>TCW SECURITIZED CREDIT</b>	<b>7.9</b>	<b>7.1</b>	<b>-4.6</b>		
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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Return Seeking Bonds Managers</b>										
<b>PAYDEN RYGEL</b>	<b>\$315,099,767</b>	<b>6.7%</b>	<b>0.5%</b>	<b>4.6%</b>	<b>7.7%</b>	<b>2.8%</b>			<b>2.8%</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			0.0	4.2	7.5	2.8			2.8	01/2021
Excess			0.4	0.4	0.2	0.0			-0.0	
<b>PGIM</b>	<b>363,761,369</b>	<b>7.8</b>	<b>-0.1</b>	<b>4.3</b>	<b>7.6</b>	<b>2.3</b>			<b>2.5</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			0.0	4.2	7.5	2.8			2.8	01/2021
Excess			-0.2	0.1	0.1	-0.5			-0.3	
<b>MULTI-ASSET CREDIT</b>	<b>678,861,136</b>	<b>14.5</b>	<b>0.1</b>	<b>4.5</b>	<b>7.7</b>	<b>2.5</b>			<b>2.6</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			0.0	4.2	7.5	2.8			2.8	01/2021
Excess			0.1	0.2	0.2	-0.3			-0.1	
<b>KKR</b>	<b>340,434,972</b>	<b>7.3</b>	<b>0.4</b>	<b>5.1</b>	<b>8.8</b>	<b>3.3</b>			<b>3.7</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			0.1	5.4	8.0	2.9			3.5	01/2021
Excess			0.3	-0.3	0.8	0.4			0.2	
<b>OAKTREE</b>	<b>335,500,601</b>	<b>7.2</b>	<b>0.2</b>	<b>5.3</b>	<b>8.4</b>	<b>3.3</b>			<b>3.6</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			0.1	5.4	8.0	2.9			3.5	01/2021
Excess			0.0	-0.1	0.3	0.4			0.1	
<b>HIGH YIELD</b>	<b>675,935,573</b>	<b>14.5</b>	<b>0.3</b>	<b>5.2</b>	<b>8.6</b>	<b>3.3</b>			<b>3.6</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			0.1	5.4	8.0	2.9			3.5	01/2021
Excess			0.1	-0.2	0.6	0.4			0.1	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Return Seeking Bonds Managers</b>					
<b>PAYDEN RYGEL</b>	<b>7.7%</b>	<b>11.7%</b>	<b>-9.6%</b>	<b>2.6%</b>	
Multi-Asset Credit Benchmark	7.5	12.3	-10.0	2.7	
Excess	0.2	-0.6	0.4	-0.1	
<b>PGIM</b>	<b>7.6</b>	<b>12.3</b>	<b>-11.5</b>	<b>3.2</b>	
Multi-Asset Credit Benchmark	7.5	12.3	-10.0	2.7	
Excess	0.1	-0.0	-1.5	0.5	
<b>MULTI-ASSET CREDIT</b>	<b>7.7</b>	<b>12.0</b>	<b>-10.6</b>	<b>2.9</b>	
Multi-Asset Credit Benchmark	7.5	12.3	-10.0	2.7	
Excess	0.2	-0.3	-0.6	0.2	
<b>KKR</b>	<b>8.8</b>	<b>13.9</b>	<b>-11.0</b>	<b>4.7</b>	
ICE BofA US Cash Pay HY Constrained	8.0	13.4	-11.1	5.3	
Excess	0.8	0.5	0.1	-0.6	
<b>OAKTREE</b>	<b>8.4</b>	<b>12.4</b>	<b>-9.5</b>	<b>4.5</b>	
ICE BofA US Cash Pay HY Constrained	8.0	13.4	-11.1	5.3	
Excess	0.3	-1.0	1.6	-0.8	
<b>HIGH YIELD</b>	<b>8.6</b>	<b>13.2</b>	<b>-10.3</b>	<b>4.6</b>	
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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Return Seeking Bonds</b>										
<b>CREDIT PLUS</b>	<b>\$1,964,435,572</b>	<b>42.1%</b>	<b>-2.7%</b>	<b>2.7%</b>	<b>3.1%</b>	<b>-1.4%</b>			<b>-0.6%</b>	<b>12/2020</b>
Credit Plus Benchmark			-2.4	3.0	3.2	-1.1			-0.8	12/2020
Excess			-0.3	-0.2	-0.2	-0.3			0.2	
<b>OPPORTUNISTIC FI</b>	<b>518,264,608</b>	<b>11.1</b>	<b>-0.8</b>	<b>3.0</b>	<b>4.4</b>	<b>2.1</b>			<b>1.8</b>	<b>12/2020</b>
ICE BofA US 3-Month Treasury Bill			1.2	2.6	5.3	3.9			2.9	12/2020
Excess			-2.0	0.4	-0.9	-1.8			-1.1	
<b>EMERGING MARKET DEBT</b>	<b>333,751,914</b>	<b>7.1</b>	<b>-4.9</b>	<b>2.9</b>	<b>1.4</b>	<b>-2.3</b>			<b>-4.3</b>	<b>01/2021</b>
JPM JEMB Sovereign-only 50-50			-4.5	2.7	2.0	-0.9			-2.0	01/2021
Excess			-0.4	0.2	-0.6	-1.4			-2.3	
<b>SECURITIZED CREDIT</b>	<b>498,239,352</b>	<b>10.7</b>	<b>0.9</b>	<b>4.3</b>	<b>7.9</b>	<b>3.3</b>			<b>3.0</b>	<b>06/2021</b>
ICE BofA US 3-Month Treasury Bill			1.2	2.6	5.3	3.9			3.3	06/2021
Excess			-0.3	1.7	2.7	-0.6			-0.3	
<b>MULTI-ASSET CREDIT</b>	<b>678,861,136</b>	<b>14.5</b>	<b>0.1</b>	<b>4.5</b>	<b>7.7</b>	<b>2.5</b>			<b>2.6</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			0.0	4.2	7.5	2.8			2.8	01/2021
Excess			0.1	0.2	0.2	-0.3			-0.1	
<b>HIGH YIELD</b>	<b>675,935,573</b>	<b>14.5</b>	<b>0.3</b>	<b>5.2</b>	<b>8.6</b>	<b>3.3</b>			<b>3.6</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			0.1	5.4	8.0	2.9			3.5	01/2021
Excess			0.1	-0.2	0.6	0.4			0.1	
<b>RETURN SEEKING BONDS</b>	<b>4,669,495,580</b>	<b>100.0</b>	<b>-1.4</b>	<b>3.6</b>	<b>5.1</b>	<b>0.8</b>			<b>1.0</b>	<b>12/2020</b>
Return Seeking Fixed Income Benchmark			-1.0	3.4	5.0	1.2			1.2	12/2020
Excess			-0.4	0.1	0.1	-0.4			-0.2	



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Return Seeking Bonds</b>					
<b>CREDIT PLUS</b>	<b>3.1%</b>	<b>8.7%</b>	<b>-14.5%</b>	<b>0.9%</b>	
Credit Plus Benchmark	3.2	8.6	-13.7	0.0	
Excess	-0.2	0.2	-0.7	0.9	
<b>OPPORTUNISTIC FI</b>	<b>4.4</b>	<b>7.7</b>	<b>-5.4</b>	<b>0.3</b>	
ICE BofA US 3-Month Treasury Bill	5.3	5.0	1.5	0.0	
Excess	-0.9	2.7	-6.8	0.2	
<b>EMERGING MARKET DEBT</b>	<b>1.4</b>	<b>10.9</b>	<b>-17.2</b>	<b>-10.1</b>	
JPM JEMB Sovereign-only 50-50	2.0	11.9	-14.8	-5.3	
Excess	-0.6	-1.0	-2.4	-4.8	
<b>SECURITIZED CREDIT</b>	<b>7.9</b>	<b>7.1</b>	<b>-4.6</b>		
ICE BofA US 3-Month Treasury Bill	5.3	5.0	1.5		
Excess	2.7	2.1	-6.1		
<b>MULTI-ASSET CREDIT</b>	<b>7.7</b>	<b>12.0</b>	<b>-10.6</b>	<b>2.9</b>	
Multi-Asset Credit Benchmark	7.5	12.3	-10.0	2.7	
Excess	0.2	-0.3	-0.6	0.2	
<b>HIGH YIELD</b>	<b>8.6</b>	<b>13.2</b>	<b>-10.3</b>	<b>4.6</b>	
ICE BofA US Cash Pay HY Constrained	8.0	13.4	-11.1	5.3	
Excess	0.6	-0.2	0.8	-0.7	
<b>RETURN SEEKING BONDS</b>	<b>5.1</b>	<b>9.8</b>	<b>-11.3</b>	<b>0.9</b>	
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

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Treasuries Managers</b>										
<b>BLACKROCK</b>	<b>\$3,042,607,211</b>	<b>32.4%</b>	<b>-6.2%</b>	<b>-0.1%</b>	<b>-3.0%</b>	<b>-7.1%</b>	<b>-2.8%</b>		<b>-0.3%</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			-6.2	-0.0	-3.0	-7.1	-2.7		-0.2	02/2018
Excess			-0.0	-0.1	-0.0	0.0	-0.1		-0.1	
<b>GOLDMAN SACHS</b>	<b>3,007,933,856</b>	<b>32.0</b>	<b>-6.2</b>	<b>0.0</b>	<b>-2.8</b>	<b>-6.9</b>	<b>-2.7</b>		<b>-0.2</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			-6.2	-0.0	-3.0	-7.1	-2.7		-0.2	02/2018
Excess			-0.0	0.0	0.2	0.2	0.1		0.0	
<b>NEUBERGER</b>	<b>3,353,964,025</b>	<b>35.7</b>	<b>-6.1</b>	<b>0.1</b>	<b>-2.7</b>	<b>-7.0</b>	<b>-2.6</b>		<b>-0.2</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			-6.2	-0.0	-3.0	-7.1	-2.7		-0.2	02/2018
Excess			0.1	0.1	0.2	0.1	0.1		0.1	
<b>TOTAL TREASURIES</b>	<b>9,404,505,092</b>	<b>100.0</b>	<b>-6.2</b>	<b>-0.0</b>	<b>-2.8</b>	<b>-7.0</b>	<b>-2.7</b>		<b>-0.2</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			-6.2	-0.0	-3.0	-7.1	-2.7		-0.2	02/2018
Excess			-0.0	0.0	0.1	0.1	0.0		0.0	

Note: All aggregates include the performance of terminated managers. Inception refers to the date of retention by the SBI.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Treasuries Managers</b>					
<b>BLACKROCK</b>	<b>-3.0%</b>	<b>4.1%</b>	<b>-20.6%</b>	<b>-4.0%</b>	<b>12.5%</b>
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
<b>GOLDMAN SACHS</b>	<b>-2.8</b>	<b>4.4</b>	<b>-20.6</b>	<b>-3.9</b>	<b>12.7</b>
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
<b>NEUBERGER</b>	<b>-2.7</b>	<b>4.1</b>	<b>-20.5</b>	<b>-3.4</b>	<b>12.8</b>
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
<b>TOTAL TREASURIES</b>	<b>-2.8</b>	<b>4.2</b>	<b>-20.6</b>	<b>-3.7</b>	<b>12.7</b>
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

## December 31, 2024



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Laddered Bond and Cash Managers</b>									
<b>Neuberger Berman Ladder Bond</b>	<b>\$1,697,469,774</b>	<b>36.4%</b>	<b>1.1%</b>	<b>5.4%</b>	<b>3.8%</b>			<b>2.7%</b>	<b>11/2020</b>
ICE BofA US 3-Month Treasury Bill			1.2	5.3	3.9			2.8	11/2020
Excess			-0.1	0.2	-0.1			-0.1	
<b>Goldman Sachs Ladder Bond</b>	<b>1,698,794,039</b>	<b>36.5</b>	<b>1.1</b>	<b>5.4</b>	<b>3.8</b>			<b>2.8</b>	<b>11/2020</b>
ICE BofA US 3-Month Treasury Bill			1.2	5.3	3.9			2.8	11/2020
Excess			-0.1	0.2	-0.1			-0.0	
<b>Treasury Ladder Aggregate</b>	<b>3,396,263,813</b>	<b>72.9</b>	<b>1.1</b>	<b>5.4</b>	<b>3.8</b>			<b>2.7</b>	<b>11/2020</b>
ICE BofA US 3-Month Treasury Bill			1.2	5.3	3.9			2.8	11/2020
Excess			-0.1	0.2	-0.1			-0.1	
<b>Combined Funds STIF</b>	<b>1,201,374,073</b>	<b>25.8</b>	<b>1.2</b>	<b>5.4</b>	<b>4.1</b>	<b>2.6%</b>	<b>1.9%</b>	<b>1.8</b>	<b>01/2004</b>
iMoneyNet Money Fund Average-All Taxable			1.1	4.9	3.7	2.3	1.5	1.4	01/2004
Excess			0.1	0.5	0.5	0.3	0.3	0.4	
<b>TEACHERS RETIREMENT CD REPO</b>	<b>61,428,560</b>	<b>1.3</b>	<b>1.3</b>	<b>5.5</b>	<b>4.0</b>	<b>2.6</b>	<b>2.0</b>	<b>1.6</b>	<b>02/2012</b>
ICE BofA US 3-Month Treasury Bill			1.2	5.3	3.9	2.5	1.8	1.4	02/2012
Excess			0.1	0.2	0.2	0.2	0.2	0.2	
<b>Laddered Bond + Cash</b>	<b>4,659,319,673</b>	<b>100.0</b>	<b>1.1</b>	<b>5.4</b>	<b>3.9</b>	<b>2.4</b>	<b>1.8</b>	<b>4.2</b>	<b>12/1977</b>
ICE BofA US 3-Month Treasury Bill			1.2	5.3	3.9	2.5	1.8	4.4	12/1977
Excess			-0.1	0.2	0.0	-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.



	<u>2024 Calendar Return</u>	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>
<b>Laddered Bond and Cash Managers</b>					
<b>Neuberger Berman Ladder Bond</b>	<b>5.4%</b>	<b>5.2%</b>	<b>0.8%</b>	<b>0.0%</b>	
ICE BofA US 3-Month Treasury Bill	5.3	5.0	1.5	0.0	
Excess	0.2	0.2	-0.6	-0.0	
<b>Goldman Sachs Ladder Bond</b>	<b>5.4</b>	<b>5.2</b>	<b>0.9</b>	<b>0.1</b>	
ICE BofA US 3-Month Treasury Bill	5.3	5.0	1.5	0.0	
Excess	0.2	0.2	-0.5	0.0	
<b>Treasury Ladder Aggregate</b>	<b>5.4</b>	<b>5.2</b>	<b>0.9</b>	<b>0.0</b>	
ICE BofA US 3-Month Treasury Bill	5.3	5.0	1.5	0.0	
Excess	0.2	0.2	-0.6	-0.0	
<b>Combined Funds STIF</b>	<b>5.4</b>	<b>5.3</b>	<b>1.7</b>	<b>0.1</b>	<b>0.5%</b>
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
<b>TEACHERS RETIREMENT CD REPO</b>	<b>5.5</b>	<b>5.2</b>	<b>1.5</b>	<b>0.1</b>	<b>1.0</b>
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
<b>Laddered Bond + Cash</b>	<b>5.4</b>	<b>5.2</b>	<b>1.1</b>	<b>0.0</b>	<b>0.6</b>
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

## December 31, 2024



### Combined Funds Asset Class Performance Summary

#### Private Markets

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>25 Year</u>	<u>30 Year</u>
Private Markets - Invested	1.6%	3.8%	7.5%	6.9%	12.8%	11.3%	13.2%	12.6%	13.4%
Private Markets -Uninvested(1)	1.0%	2.1%	5.0%	-2.9%					
Private Equity	2.3%	4.8%	9.5%	6.9%	15.4%	15.2%	15.5%	13.9%	15.4%
Private Credit	1.4%	3.0%	7.8%	9.7%	11.2%	11.5%	12.5%	12.1%	
Resources	-2.3%	-0.3%	0.9%	8.0%	6.1%	0.2%	11.3%	12.8%	12.7%
Real Estate	-0.2%	0.7%	-2.6%	2.7%	7.9%	9.3%	8.4%	8.9%	9.4%

#### 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

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2024**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
<b>Private Equity</b>	<b>27,242,047,706</b>	<b>21,210,877,552</b>	<b>17,398,717,659</b>	<b>8,498,515,721</b>	<b>16,735,116,634</b>	<b>1.61</b>	<b>13.9</b>	
Adams Street Partners, LLC	465,355,000	337,438,684	174,366,492	128,725,675	295,517,438	1.39	12.0	
Adams Street Global Secondary Fund 5 LP	100,000,000	77,114,692	84,117,479	22,885,308	21,460,189	1.37	6.2	2012
Adams Street Global Secondary Fund 6	100,000,000	80,400,008	76,525,751	19,599,992	52,824,633	1.61	17.9	2017
Adams Street Global Secondary Fund 7	265,355,000	179,923,984	13,723,262	86,240,375	221,232,616	1.31	27.1	2021
Advent International Group	505,000,000	426,949,702	402,913,360	81,134,252	342,022,183	1.74	15.3	
Advent International GPE VI-A, L.P.	50,000,000	52,993,313	103,400,194	0	4,017,498	2.03	16.4	2008
Advent International GPE VII, L.P.	90,000,000	86,490,641	146,622,935	3,600,000	9,966,586	1.81	13.2	2012
Advent International GPE VIII-B	100,000,000	100,000,000	122,352,104	0	87,156,838	2.10	16.3	2016
Advent International GPE IX	115,000,000	109,824,875	30,538,127	5,175,125	146,468,951	1.61	15.7	2019
Advent International GPE X	150,000,000	77,640,873	0	72,359,127	94,412,311	1.22	17.2	2022
Affinity Ventures	5,000,000	5,000,000	2,103,362	0	180	0.42	-17.3	
Affinity Ventures V, L.P.	5,000,000	5,000,000	2,103,362	0	180	0.42	-17.3	2008
Apax Partners	600,000,000	565,123,966	591,872,340	134,559,630	309,826,209	1.60	14.3	
APAX VIII - USD	200,000,000	240,451,261	364,650,169	7,966,190	18,179,221	1.59	12.9	2013
Apax IX USD L.P.	150,000,000	159,676,990	201,672,267	16,039,251	107,424,663	1.94	18.5	2016
Apax X USD L.P.	150,000,000	147,066,617	25,549,904	28,483,287	165,565,216	1.30	11.2	2019
Apax XI	100,000,000	17,929,099	0	82,070,901	18,657,110	1.04	13.5	2022
Arsenal Capital Partners	175,000,000	120,424,264	14,968,606	65,315,127	117,945,421	1.10	3.3	
Arsenal Capital Partners V, L.P.	75,000,000	74,597,189	13,880,609	10,073,268	83,542,130	1.31	7.1	2019
Arsenal Capital Partners VI LP	100,000,000	45,827,075	1,087,997	55,241,859	34,403,291	0.77	-15.2	2021
Asia Alternatives	649,000,000	250,129,503	32,085,478	418,784,751	249,451,348	1.13	4.9	
Asia Alternatives Capital Partners V	99,000,000	109,723,715	30,071,694	8,959,113	110,820,915	1.28	7.4	2017
MN Asia Investors	550,000,000	140,405,788	2,013,784	409,825,638	138,630,433	1.00	0.1	2020
Banc Fund	187,460,477	187,466,811	103,957,129	0	156,279,174	1.39	5.6	
Banc Fund IX, L.P.	107,205,932	107,205,932	93,541,931	0	66,951,772	1.50	5.9	2014
Banc Fund X, L.P.	80,254,545	80,260,879	10,415,197	0	89,327,402	1.24	4.8	2018
BlackRock	950,000,000	954,617,522	491,202,825	0	1,577,712,275	2.17	26.8	
BlackRock Long Term Capital, SCSP	950,000,000	954,617,522	491,202,825	0	1,577,712,275	2.17	26.8	2019
Blackstone Group L.P.	1,735,000,000	989,534,311	788,173,568	869,185,825	642,790,224	1.45	13.9	
Blackstone Capital Partners Asia II	270,000,000	81,420,967	3,287,307	190,248,025	114,869,641	1.45	28.0	2021
Blackstone Capital Partners IV, L.P.	70,000,000	84,481,419	201,562,974	1,765,384	57,991	2.39	37.0	2002
Blackstone Capital Partners V L.P.	140,000,000	152,431,082	246,495,819	7,027,560	575,990	1.62	8.0	2006
Blackstone Capital Partners VI, L.P.	100,000,000	107,015,142	170,974,952	10,975,597	23,435,603	1.82	12.2	2008
Blackstone Capital Partners VII	130,000,000	142,626,597	119,493,142	7,599,396	109,545,955	1.61	11.9	2015
Blackstone Capital Partners VIII LP	150,000,000	126,708,670	18,684,497	45,705,555	138,167,131	1.24	9.8	2019
Blackstone Capital Partners IX	150,000,000	0	0	150,000,000	0		0.0	2022
Blackstone Energy Transition Partners IV L.P.	200,000,000	0	0	200,000,000	0		0.0	2024
Blackstone Growth	250,000,000	229,297,522	26,840,606	45,341,210	191,763,459	0.95	-1.8	2020
Blackstone Growth Equity II	150,000,000	0	0	150,000,000	0		0.0	2022
Blackstone Supplemental Account - M	125,000,000	65,552,913	834,272	60,523,099	64,374,454	0.99	-0.2	2021

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2024**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Blackstone Strategic Partners	790,500,000	641,227,937	766,526,279	200,422,146	220,722,561	1.54	13.9	
Strategic Partners IV VC, L.P.	40,500,000	42,347,763	64,041,553	1,062,451	2,317	1.51	9.0	2008
Strategic Partners IV-B	100,000,000	99,561,993	155,345,398	3,136,364	0	1.56	12.1	2008
Strategic Partners V, LP	100,000,000	87,507,539	141,266,488	1,683,957	0	1.61	18.2	2011
Strategic Partners VI, L.P.	150,000,000	104,946,433	141,383,014	21,968,820	16,948,507	1.51	13.5	2014
Strategic Partners VII, L.P.	150,000,000	125,525,462	156,454,911	42,386,277	49,716,464	1.64	16.0	2016
Strategic Partners VIII	150,000,000	128,939,862	102,051,365	76,722,803	96,748,017	1.54	22.6	2018
Strategic Partners IX	100,000,000	52,398,883	5,983,549	53,461,473	57,307,257	1.21	15.7	2022
Blue Owl Capital	775,000,000	550,827,627	489,340,601	565,521,999	497,793,197	1.79	27.6	
Blue Owl GP Stakes III	175,000,000	224,729,201	252,504,086	107,819,992	177,616,321	1.91	24.9	2015
Blue Owl GP Stakes IV	250,000,000	218,004,897	195,614,159	177,261,200	228,324,354	1.94	36.5	2018
Blue Owl GP Stakes V	200,000,000	108,093,530	41,222,356	130,440,807	91,852,521	1.23	15.2	2020
Blue Owl GP Stakes VI	150,000,000	0	0	150,000,000	0		0.0	2024
Bridgepoint	360,089,438	207,714,064	57,522,769	160,876,454	247,096,995	1.47	14.4	
Bridgepoint Development Capital V, L.P.	103,550,005	0	0	103,550,005	0		0.0	2024
Bridgepoint Europe VI L.P.	155,325,007	161,699,396	55,225,810	6,423,944	205,929,224	1.62	15.1	2018
Bridgepoint Europe VII	101,214,426	46,014,667	2,296,960	50,902,506	41,167,772	0.94	-12.6	2022
Brookfield Asset Management Inc.	500,000,000	459,279,781	274,743,559	104,866,322	513,643,357	1.72	25.9	
Brookfield Capital Partners Fund IV	100,000,000	116,823,344	225,933,731	5,327,416	49,032,366	2.35	41.5	2015
Brookfield Capital Partners V L.P.	250,000,000	268,375,210	45,896,719	20,982,425	371,371,193	1.55	14.6	2018
Brookfield Capital Partners Fund VI	150,000,000	74,081,227	2,913,109	78,556,481	93,239,798	1.30	20.8	2022
Canyon Partners	125,000,000	146,475,843	90,844,239	0	107,007,006	1.35	11.9	
Canyon Distressed Opportunity Fund III	125,000,000	146,475,843	90,844,239	0	107,007,006	1.35	11.9	2020
Cardinal Partners	10,000,000	10,000,000	39,196,082	0	118,629	3.93	10.6	
DSV Partners IV	10,000,000	10,000,000	39,196,082	0	118,629	3.93	10.6	1985
Carlyle Group	400,000,000	387,068,984	125,499,051	89,605,815	340,303,968	1.20	6.8	
Carlyle Strategic Partners IV, L.P.	100,000,000	138,365,866	73,785,052	13,788,973	81,843,730	1.12	5.0	2016
Carlyle Partners VII, L.P.	150,000,000	160,517,692	43,886,117	6,263,341	167,155,313	1.31	7.5	2017
Carlyle Partners VIII	150,000,000	88,185,426	7,827,882	69,553,501	91,304,925	1.12	8.6	2021
CarVal Investors	600,000,000	532,109,760	521,474,881	38,974,135	210,204,245	1.38	8.1	
CVI Credit Value Fund A II	150,000,000	142,500,000	201,979,290	7,500,000	1,958,221	1.43	8.3	2012
CVI Credit Value Fund A III	150,000,000	142,500,000	184,943,795	7,500,000	11,764,911	1.38	8.4	2015
CVI Credit Value Fund IV	150,000,000	104,609,760	89,082,694	16,474,135	74,164,974	1.56	7.8	2017
CVI Credit Value Fund V	150,000,000	142,500,000	45,469,102	7,500,000	122,316,138	1.18	7.6	2020
Clearlake Capital	100,000,000	66,620,260	268,947	33,538,053	74,784,046	1.13	6.2	
Clearlake Capital Partners VII	100,000,000	66,620,260	268,947	33,538,053	74,784,046	1.13	6.2	2022
Court Square	589,419,132	518,367,208	723,405,580	131,594,683	280,751,095	1.94	15.1	
Court Square Capital Partners II, L.P.	164,419,132	170,270,247	298,783,330	5,656,060	161,847	1.76	12.3	2006
Court Square Capital Partners III, L.P.	175,000,000	191,254,639	376,743,475	4,990,272	100,430,707	2.49	20.9	2012
Court Square Capital Partners IV, L.P.	150,000,000	156,842,322	47,878,775	20,948,351	180,158,541	1.45	15.9	2018
Court Square Capital Partners V, L.P.	100,000,000	0	0	100,000,000	0		0.0	2024
CVC Capital Partners	440,087,520	466,592,735	700,011,230	97,975,472	208,291,148	1.95	16.2	
CVC Capital Partners VI	232,987,511	295,784,333	404,322,876	9,551,265	189,283,971	2.01	15.7	2013
CVC Capital Partners IX	103,550,005	16,924,305	130,127	86,945,265	15,663,572		0.0	2023
CVC European Equity Partners V, L.P.	103,550,005	153,884,098	295,558,227	1,478,941	3,343,606	1.94	16.7	2008

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Dawson Partners	400,000,000	362,045,965	222,314,575	113,901,507	205,605,385	1.18	12.1	
Dawson Portfolio Finance 3	100,000,000	106,289,217	97,714,577	11,406,570	39,126,011	1.29	12.7	2019
Dawson Portfolio Finance 4	100,000,000	106,876,105	68,214,293	17,621,074	59,372,257	1.19	10.8	2020
Dawson Portfolio Finance 5	100,000,000	77,085,859	37,782,083	47,395,319	48,749,965	1.12	10.1	2021
Dawson Portfolio Finance 6	100,000,000	71,794,784	18,603,622	37,478,544	58,357,152	1.07	20.3	2024
Goldman, Sachs & Co.	449,800,000	394,314,779	371,408,406	156,368,245	204,723,247	1.46	10.0	
GS Capital Partners VI, L.P.	100,000,000	110,368,097	143,690,972	2,551,356	1,299,058	1.31	7.1	2007
GS China-US Cooperation Fund	99,800,000	44,121,012	523,330	56,087,600	56,816,407	1.30	7.6	2018
GS Vintage VII	100,000,000	90,815,206	93,034,122	61,736,567	57,206,382	1.65	14.1	2016
West Street Capital Partners VII, L.P.	150,000,000	149,010,464	134,159,982	35,992,722	89,401,400	1.50	13.4	2016
Goldner Hawn Johnson & Morrison	150,510,266	90,931,394	106,698,463	60,210,839	71,590,089	1.96	21.4	
GHJM TrailHead Fund	20,000,000	17,572,130	55,980,283	2,894,486	455,716	3.21	19.6	2012
Goldner Hawn Fund VII, L.P.	57,755,138	48,781,366	50,716,280	9,139,123	41,134,763	1.88	26.7	2018
Goldner Hawn VIII	72,755,128	24,577,898	1,900	48,177,230	29,999,610	1.22	27.7	2023
Green Equity Investors	325,000,000	350,826,989	305,393,092	22,296,013	342,786,777	1.85	13.1	
Green Equity Investors VI, L.P.	200,000,000	232,647,779	294,043,217	4,125,348	191,068,011	2.09	13.4	2012
Green Equity Investors VIII	125,000,000	118,179,210	11,349,875	18,170,665	151,718,766	1.38	10.8	2020
GTCR	110,000,000	108,893,534	266,749,865	10,416,556	84,311,660	3.22	31.4	
GTCR XI	110,000,000	108,893,534	266,749,865	10,416,556	84,311,660	3.22	31.4	2013
HarbourVest	17,777,970	17,601,972	23,816,729	609,629	2,970,009	1.52	11.0	
Dover Street VII Cayman Fund L.P.	2,198,112	2,074,270	1,856,658	132,416	3,340	0.90	-4.5	2014
Harbourvest Intl PE Partners VI-Cayman	3,882,249	4,040,737	6,457,024	181,213	1,143,894	1.88	13.8	2014
HarbourVest Partners VIII Cayman Buyout	4,506,711	4,395,883	6,153,757	156,000	31,371	1.41	12.9	2014
HarbourVest Partners VIII-Cayman Venture	7,190,898	7,091,082	9,349,290	140,000	1,791,403	1.57	10.7	2014
Hellman & Friedman	575,000,000	453,185,509	215,197,368	161,675,658	502,152,741	1.58	17.8	
Hellman & Friedman Capital Partners VII, L.P.	50,000,000	49,914,704	161,459,211	2,183,886	4,473,543	3.32	24.8	2009
Hellman & Friedman Investors IX, L.P.	175,000,000	183,771,702	22,589,746	8,851,803	263,265,795	1.56	12.7	2018
Hellman & Friedman Capital Partners X	250,000,000	219,499,103	31,148,411	50,639,969	234,413,403	1.21	8.8	2021
Hellman & Friedman Capital Partners XI	100,000,000	0	0	100,000,000	0	0.0	0.0	2023
IK Investment Partners	642,010,030	507,751,145	601,852,181	211,001,093	230,681,013	1.64	14.0	
IK Fund VII	155,325,007	179,393,652	322,286,061	7,853,514	10,761,476	1.86	14.0	2013
IK Fund VIII	155,325,007	179,587,595	279,566,119	7,949,511	55,549,190	1.87	17.5	2016
IK Fund IX	139,792,507	148,769,898	0	3,630,558	164,370,347	1.10	3.8	2019
IK Fund X	93,195,004	0	0	93,195,004	0	0.0	0.0	2022
IK Small Cap Fund IV	98,372,505	0	0	98,372,505	0	0.0	0.0	2024
Kohlberg, Kravis, Roberts & Co.	1,997,000,000	1,220,219,309	713,880,567	864,157,939	1,125,798,864	1.51	16.0	
KKR Americas Fund XII L.P.	150,000,000	150,059,239	136,184,652	16,144,992	173,021,372	2.06	19.5	2016
KKR Ascendant Strategy	150,000,000	51,061,872	0	102,795,698	43,152,662	0.0	0.0	2023
KKR Asian Fund III	100,000,000	98,391,669	80,068,973	14,041,003	116,998,538	2.00	20.7	2017
KKR Asian Fund IV	150,000,000	87,128,509	12,347,158	77,369,493	102,397,727	1.32	13.2	2020
KKR Core Investments Partnership	97,000,000	105,458,685	14,060,958	24,319	131,260,104	1.38	12.0	2021
KKR Core Investments Fund II	100,000,000	25,562,311	0	74,557,689	28,397,664	1.11	11.2	2022
KKR Europe V	100,000,000	96,460,640	38,694,908	11,022,251	92,685,356	1.36	10.3	2018
KKR European Fund VI (USD) SCSp	100,000,000	43,107,169	0	60,146,803	30,508,898	0.71	-34.8	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	145,302,348	1,776,097	6,749,068	166,247,981	1.16	8.4	2021
KKR North America Fund XIII	300,000,000	212,519,297	5,656,079	101,306,623	241,128,563	1.16	9.7	2021
KKR North America Fund XIV	400,000,000	0	0	400,000,000	0	0.0	0.0	2024

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Lexington Partners	1,645,000,000	1,243,987,632	903,037,140	490,040,015	1,007,801,509	1.54	12.8	
Lexington Capital Partners VI-B, L.P.	100,000,000	98,374,022	145,958,371	1,634,703	560,404	1.49	7.9	2005
Lexington Capital Partners VII, L.P.	200,000,000	173,297,773	278,562,426	30,670,593	8,221,022	1.65	14.2	2009
Lexington Capital Partners VIII, L.P.	150,000,000	139,692,891	159,347,349	29,357,333	72,735,852	1.66	14.6	2014
Lexington Capital Partners IX, L.P.	150,000,000	134,081,724	51,635,015	31,503,130	147,976,557	1.49	16.8	2018
Lexington Capital Partners X	100,000,000	47,558,168	3,021,753	55,315,532	54,318,133	1.21	21.8	2021
Lexington Co-Investment Partners IV	200,000,000	220,681,275	189,588,350	3,122,921	212,258,624	1.82	15.5	2017
Lexington Co-Investment Partners V	300,000,000	307,090,984	31,185,685	15,197,840	376,460,808	1.33	14.6	2020
Lexington Co-Investment Partners V Overage	45,000,000	39,312,900	2,246,373	7,135,858	48,927,374	1.30	11.9	2021
Lexington Co-Investment Partners VI	300,000,000	0	0	300,000,000	0		0.0	2023
Lexington Middle Market Investors IV	100,000,000	83,897,895	41,491,818	16,102,105	86,342,735	1.52	15.2	2016
Madison Dearborn Capital Partners LLC	200,000,000	204,606,648	104,991,747	34,941,607	181,129,501	1.40	10.1	
Madison Dearborn Capital Partners VII, L.P.	100,000,000	101,842,966	70,424,161	15,842,064	89,674,325	1.57	9.9	2015
Madison Dearborn Capital Partners VIII-A, L.P.	100,000,000	102,763,682	34,567,586	19,099,543	91,455,176	1.23	10.6	2019
Marathon	400,000,000	245,183,481	100,457,296	168,388,494	205,388,484	1.25	10.8	
Marathon Distressed Credit Fund	200,000,000	161,906,171	92,605,183	44,000,000	125,070,011	1.34	10.8	2020
Marathon Distressed Credit Fund II	200,000,000	83,277,310	7,852,113	124,388,494	80,318,474	1.06	10.5	2023
Merced Capital	178,737,500	184,266,287	204,316,065	0	24,489,702	1.24	4.0	
Merced Partners IV	125,000,000	124,968,390	133,261,827	0	7,524,134	1.13	2.4	2013
Merced Partners V	53,737,500	59,297,897	71,054,238	0	16,965,568	1.48	7.0	2017
MHR Institutional Partners	75,000,000	83,960,009	27,667,451	10,798,019	93,142,220	1.44	7.9	
MHR Institutional Partners IV LP	75,000,000	83,960,009	27,667,451	10,798,019	93,142,220	1.44	7.9	2014
Nordic Capital	650,029,452	583,504,001	384,095,760	248,407,194	474,640,278	1.47	12.5	
Nordic Evolution Fund II	98,372,505	0	0	98,372,505	0		0.0	2024
Nordic Capital Fund VIII	155,325,007	229,362,004	296,912,142	10,934,876	51,016,329	1.52	11.7	2013
Nordic Capital IX Beta, L.P.	155,325,007	186,930,398	87,130,766	66,308,622	219,430,601	1.64	14.7	2017
Nordic Capital Fund X	139,792,507	123,293,455	0	22,108,387	162,030,555	1.31	12.3	2020
Nordic Capital Fund XI	101,214,426	43,918,144	52,852	50,682,804	42,162,793	0.96	-6.2	2022
Oak Hill Capital Management, Inc.	250,000,000	249,979,642	296,457,609	9,540,696	149,463,737	1.78	26.8	
Oak Hill Capital Partners IV Onshore LP	150,000,000	154,428,704	277,234,047	4,466,045	28,740,943	1.98	32.0	2016
Oak Hill Capital Partners V	100,000,000	95,550,938	19,223,562	5,074,651	120,722,794	1.46	13.5	2018
Oaktree Capital Management, LLC	400,000,000	266,518,900	103,337,543	186,514,589	235,851,579	1.27	7.6	
Oaktree Special Situations Fund, L.P.	100,000,000	103,950,393	33,479,144	7,741,294	64,473,335	0.94	-1.1	2014
Oaktree Special Situations Fund II, L.P.	100,000,000	99,261,123	69,858,399	42,579,241	99,684,544	1.71	29.2	2018
Oaktree Special Situations Fund III	200,000,000	63,307,384	0	136,194,054	71,693,701	1.13	13.8	2022
Paine & Partners, LLC	325,000,000	269,431,330	106,433,594	86,160,507	265,576,647	1.38	10.9	
Paine Schwartz Food Chain Fund IV	75,000,000	72,168,253	35,991,937	11,690,368	61,029,006	1.34	6.0	2014
Paine Schwartz Food Chain Fund V, L.P.	150,000,000	139,056,463	63,276,531	25,370,434	148,735,195	1.52	17.8	2018
Paine Schwartz Food Chain VI	100,000,000	58,206,614	7,165,126	49,099,705	55,812,447	1.08	7.2	2023
Permal PE	5,337,098	4,406,696	4,794,251	1,090,000	249,549	1.14	4.4	
Glouster Private Equity Opportunities IV	5,337,098	4,406,696	4,794,251	1,090,000	249,549	1.14	4.4	2014
Permira	574,702,527	532,293,865	555,230,235	141,784,656	438,549,037	1.87	17.0	
Permira V, L.P.	155,325,007	185,595,965	406,052,888	4,350,808	91,856,981	2.68	20.3	2013
Permira VI, L.P.	124,260,006	131,033,790	131,147,300	25,141,523	124,116,473	1.95	15.0	2016
Permira VII L.P.1	139,792,507	150,545,721	16,548,990	17,946,640	158,422,266	1.16	4.7	2019
Permira VIII	155,325,007	65,118,388	1,481,057	94,345,686	64,153,316	1.01	0.7	2022



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Public Pension Capital Management	285,000,000	233,634,709	230,882,559	84,313,729	220,400,445	1.93	23.4	
Public Pension Capital, LLC	285,000,000	233,634,709	230,882,559	84,313,729	220,400,445	1.93	23.4	2014
Silver Lake Partners	335,000,000	352,018,153	477,495,488	29,968,159	303,420,738	2.22	18.5	
Silver Lake Partners III, L.P.	100,000,000	94,852,653	216,867,954	9,528,468	20,163,943	2.50	18.7	2007
Silver Lake Partners IV	100,000,000	118,370,608	176,485,734	2,881,307	142,094,898	2.69	21.1	2012
Silver Lake Partners V, L.P.	135,000,000	138,794,892	84,141,800	17,558,384	141,161,897	1.62	12.7	2017
Siris Capital Group	67,875,000	0	0	67,875,000	0		0.0	
Siris V	67,875,000	0	0	67,875,000	0		0.0	2022
Split Rock	110,000,000	107,055,906	130,490,654	2,944,094	23,468,344	1.44	4.9	
Split Rock Partners LP	50,000,000	47,890,906	58,794,192	2,109,094	3,096,470	1.29	3.1	2005
Split Rock Partners II, LP	60,000,000	59,165,000	71,696,462	835,000	20,371,875	1.56	7.0	2008
Stellex Capital Management	200,000,000	26,346,456	0	173,653,544	26,346,456	1.00	0.0	
Stellex Capital Partners III	200,000,000	26,346,456	0	173,653,544	26,346,456	1.00	0.0	2024
Summit Partners	850,000,000	485,420,024	471,961,054	510,963,169	400,514,569	1.80	23.3	
Summit Partners Growth Equity Fund IX	100,000,000	135,804,771	169,164,026	32,610,000	117,065,642	2.11	25.5	2015
Summit Partners Growth Equity Fund VIII	100,000,000	116,727,192	262,116,353	13,270,529	17,505,854	2.40	25.6	2011
Summit Partners Growth Equity Fund X-A	150,000,000	143,046,635	39,662,106	53,905,497	168,122,994	1.45	13.5	2019
Summit Partners Growth Equity Fund XI	250,000,000	89,841,426	1,018,569	161,177,143	97,820,079	1.10	6.7	2021
Summit Partners Growth Equity XII	250,000,000	0	0	250,000,000	0		0.0	2024
TA Associates	80,000,000	0	0	80,000,000	0		0.0	
TA XV	80,000,000	0	0	80,000,000	0		0.0	2023
Thoma Bravo LLC	675,000,000	559,042,475	407,025,314	222,850,376	538,728,971	1.69	21.2	
Thoma Cressey Fund VII, L.P.	50,000,000	50,000,000	107,057,940	0	335,161	2.15	23.6	2000
Thoma Bravo Fund XII, L.P.	75,000,000	81,836,011	93,817,210	18,452,144	87,052,715	2.21	15.9	2016
Thoma Bravo Fund XIII, L.P.	150,000,000	186,271,950	171,849,917	10,986,671	186,727,869	1.93	23.5	2018
Thoma Bravo Fund XIV	150,000,000	160,903,846	34,280,691	23,376,808	163,305,014	1.23	7.2	2020
Thoma Bravo Fund XV LP	100,000,000	80,030,668	19,556	20,034,753	101,308,211	1.27	13.3	2021
Thoma Bravo Fund XVI	150,000,000	0	0	150,000,000	0		0.0	2024
Thomas H. Lee Partners	550,000,000	338,810,297	301,774,973	241,345,542	228,778,548	1.57	20.1	
Thomas H. Lee Equity Fund VII, LP.	100,000,000	99,998,423	137,891,993	10,163,734	38,018,801	1.76	18.7	2015
Thomas H. Lee Equity Fund VIII, L.P.	150,000,000	151,472,318	163,882,980	18,521,364	100,330,292	1.74	27.8	2018
Thomas H. Lee Equity Fund IX	150,000,000	87,339,556	0	62,660,444	90,429,455	1.04	1.9	2021
Thomas H. Lee Equity Fund X	150,000,000	0	0	150,000,000	0		0.0	2024
TPG Capital	800,000,000	592,881,603	269,186,229	271,678,580	571,025,401	1.42	16.7	
TPG Growth V	150,000,000	147,983,255	21,861,089	20,966,321	179,620,968	1.36	14.5	2021
TPG Growth VI, L.P.	150,000,000	34,090,176	2,541,033	118,179,320	33,892,314	1.07	33.6	2023
TPG Partners VII, L.P.	100,000,000	101,731,819	171,751,386	10,597,281	32,208,552	2.00	19.2	2015
TPG Partners VIII	150,000,000	150,605,380	49,018,942	17,908,275	172,366,574	1.47	16.2	2018
TPG Partners IX, L.P.	100,000,000	56,144,668	3,371,101	47,186,622	55,883,631	1.06	8.5	2022
TPG Tech Adjacencies II, L.P.	150,000,000	102,326,305	20,642,678	56,840,761	97,053,362	1.15	9.6	2021
Vance Street Capital Partners	85,000,000	20,387,835	0	64,612,165	20,387,835	1.00	0.0	
Vance Street Capital IV, L.P.	85,000,000	20,387,835	0	64,612,165	20,387,835	1.00	0.0	2024
Varde Fund	538,647,435	526,615,999	574,049,963	24,725,817	178,893,365	1.43	7.3	
Varde Fund X, LP	150,000,000	150,000,000	253,835,692	0	5,061,155	1.73	9.9	2010
Varde Fund XI, LP	200,000,000	200,000,000	235,827,198	0	26,396,355	1.31	4.3	2013
Varde Fund XIII, L.P.	150,000,000	144,000,000	80,154,231	6,000,000	114,419,489	1.35	9.0	2018
Varde Fund XIV	38,647,435	32,615,999	4,232,842	18,725,817	33,016,367	1.14	9.2	2022

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Vestar Capital Partners	250,000,000	267,098,433	260,992,961	6,186,630	172,842,731	1.62	19.0	
Vestar Capital Partners VI, LP	100,000,000	109,951,730	200,172,563	357,259	41,697,705	2.20	23.8	2011
Vestar Capital Partners VII, L.P.	150,000,000	157,146,703	60,820,398	5,829,371	131,145,026	1.22	7.7	2017
Vista Equity Partners	200,000,000	160,425,694	13,386,714	51,834,086	219,660,412	1.45	10.2	
Vista Equity Partners Perennial	200,000,000	160,425,694	13,386,714	51,834,086	219,660,412	1.45	10.2	2020
Warburg Pincus	1,316,000,000	1,149,132,171	1,110,147,107	174,805,000	790,853,021	1.65	11.1	
Warburg Pincus China, L.P.	45,000,000	46,935,000	19,627,200	0	40,378,809	1.28	5.1	2016
Warburg Pincus China-Southeast Asia II	50,000,000	29,000,000	5,702,500	21,000,000	25,163,163	1.06	2.4	2019
Warburg Pincus Financial Sector	90,000,000	90,464,287	74,410,883	3,555,000	104,065,378	1.97	17.5	2017
Warburg Pincus Global Growth, L.P.	250,000,000	238,011,381	87,485,253	14,500,000	291,812,112	1.59	13.4	2018
Warburg Pincus Global Growth 14, L.P.	300,000,000	163,379,051	9,627,000	135,750,000	180,466,792	1.16	12.3	2022
Warburg Pincus Private Equity IX, L.P.	100,000,000	100,000,000	172,072,950	0	111,840	1.72	9.6	2005
Warburg Pincus Private Equity X, LP	150,000,000	150,000,000	267,384,491	0	2,928,178	1.80	9.5	2007
Warburg Pincus Private Equity XI, LP	200,000,000	200,342,452	302,859,821	0	50,577,924	1.76	11.7	2012
Warburg Pincus Private Equity XII, LP	131,000,000	131,000,000	170,977,008	0	95,348,826	2.03	15.7	2015
Wayzata Investment Partners	150,000,000	68,415,000	70,644,565	0	3,482,394	1.08	1.5	
Wayzata Opportunities Fund III	150,000,000	68,415,000	70,644,565	0	3,482,394	1.08	1.5	2012
Wellspring Capital Partners	125,000,000	153,842,297	118,800,648	10,722,723	109,305,397	1.48	13.7	
Wellspring Capital Partners VI, L.P.	125,000,000	153,842,297	118,800,648	10,722,723	109,305,397	1.48	13.7	2016
Welsh, Carson, Anderson & Stowe	650,000,000	551,101,841	601,326,475	113,670,859	340,281,836	1.71	16.4	
Welsh, Carson, Anderson & Stowe XI, L.P.	100,000,000	100,000,000	166,120,752	0	187,146	1.66	11.5	2008
Welsh, Carson, Anderson & Stowe XII, L.P.	150,000,000	150,000,000	298,053,196	0	70,833,769	2.46	24.4	2014
Welsh, Carson, Anderson & Stowe XIII, L.P.	250,000,000	246,650,576	137,152,527	18,122,124	221,760,742	1.46	16.8	2018
Welsh, Carson, Anderson & Stowe XIV	150,000,000	54,451,265	0	95,548,735	47,500,180	0.87	-9.9	2022
Wind Point Partners	200,000,000	149,350,249	58,232,564	72,639,544	166,787,652	1.51	17.5	
Wind Point Partners IX	100,000,000	101,367,328	50,022,235	20,622,465	109,528,095	1.57	17.0	2019
Wind Point Partners X	100,000,000	47,982,921	8,210,329	52,017,079	57,259,556	1.36	19.8	2022
Windjammer Capital Investors	441,708,861	272,420,360	293,714,076	194,343,109	180,775,790	1.74	11.8	
Windjammer Capital Fund VI	175,000,000	19,301,873	0	155,698,127	15,854,674	0.82	-32.0	2023
Windjammer Mezzanine & Equity Fund II	66,708,861	55,215,684	86,029,064	10,139,363	151,229	1.56	9.0	2000
Windjammer Senior Equity Fund V, L.P.	100,000,000	102,925,238	40,701,267	7,574,542	97,762,116	1.35	12.4	2017
Windjammer Senior Equity Fund IV, L.P.	100,000,000	94,977,565	166,983,745	20,931,077	67,007,771	2.46	16.6	2012



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<b>Private Credit</b>	<b>4,262,161,565</b>	<b>3,655,545,840</b>	<b>2,828,648,265</b>	<b>1,198,073,965</b>	<b>2,045,321,831</b>	<b>1.33</b>	<b>10.1</b>	
Audax Group	350,000,000	261,218,138	250,315,134	122,668,256	78,235,237	1.26	10.1	
Audax Mezzanine Fund III, L.P.	100,000,000	105,485,676	133,977,984	0	5,476,179	1.32	9.7	2010
Audax Mezzanine Fund IV-A, L.P.	100,000,000	97,196,254	93,681,542	19,281,540	25,857,951	1.23	10.1	2015
Audax Mezzanine Fund V	150,000,000	58,536,208	22,655,609	103,386,716	46,901,107	1.19	14.2	2020
Avenue Capital Partners	200,000,000	200,977,328	277,456,446	0	77,681,422	1.77	9.9	
Avenue Energy Opportunities Fund, L.P.	100,000,000	100,977,328	119,101,528	0	37,621,445	1.55	6.6	2014
Avenue Energy Opportunities Fund II	100,000,000	100,000,000	158,354,918	0	40,059,977	1.98	14.6	2017
BlackRock	97,500,000	94,266,552	38,697,495	3,233,448	93,780,419	1.41	8.5	
BlackRock Middle Market Senior Fund	97,500,000	94,266,552	38,697,495	3,233,448	93,780,419	1.41	8.5	2018
Brookfield Asset Management Inc.	200,000,000	127,441,934	60,615,450	117,997,708	78,270,101	1.09	7.7	
Brookfield Real Estate Finance Fund VI	200,000,000	127,441,934	60,615,450	117,997,708	78,270,101	1.09	7.7	2021
Castlelake L.P.	100,000,000	9,521,433	143,150	90,478,567	9,680,688	1.03	17.5	
Castlelake Aviation V Stable Yield	100,000,000	9,521,433	143,150	90,478,567	9,680,688	1.03	17.5	2023
Energy Capital Partners	28,087,500	40,777,219	25,329,744	7,969,279	20,940,864	1.13	6.9	
Energy Capital Credit Solutions II-A	28,087,500	40,777,219	25,329,744	7,969,279	20,940,864	1.13	6.9	2018
Gold Hill	25,852,584	25,852,584	49,503,233	0	196	1.91	14.1	
Gold Hill 2008	25,852,584	25,852,584	49,503,233	0	196	1.91	14.1	2008
HPS Investment Partners	200,000,000	166,182,022	67,715,940	66,632,483	146,115,254	1.29	11.5	
HPS Mezzanine Partners 2019, L.P.	100,000,000	105,982,758	58,905,099	18,168,004	83,422,569	1.34	10.8	2019
HPS Strategic Investment Partners V	100,000,000	60,199,264	8,810,841	48,464,479	62,692,685	1.19	14.7	2022
Kohlberg, Kravis, Roberts & Co.	274,000,000	383,646,997	391,177,098	80,601,499	71,343,579	1.21	9.5	
KKR Lending Partners II L.P.	75,000,000	87,059,946	85,209,374	8,802,924	5,167,789	1.04	1.8	2015
KKR Lending Partners III L.P.	199,000,000	296,587,051	305,967,724	71,798,575	66,175,790	1.25	13.0	2017
LBC Credit Partners	200,000,000	208,605,251	207,950,590	56,748,114	56,366,773	1.27	11.1	
LBC Credit Partners IV, L.P.	100,000,000	120,030,049	140,240,147	12,850,249	5,430,804	1.21	8.9	2016
LBC Credit Partners V, L.P.	100,000,000	88,575,202	67,710,443	43,897,865	50,935,970	1.34	15.3	2019
Marathon	200,000,000	158,022,008	45,045,143	48,000,000	175,866,706	1.40	11.9	
Marathon Secured Private Strategies Fund II	100,000,000	96,022,008	44,862,445	10,000,000	109,458,630	1.61	12.6	2019
Marathon Secured Private Strategies Fund III	100,000,000	62,000,000	182,698	38,000,000	66,408,076	1.07	6.2	2022
Merit Capital Partners	275,000,000	226,767,037	222,058,314	48,166,164	135,604,847	1.58	12.3	
Merit Mezzanine Fund V, LP	75,000,000	72,306,122	114,022,067	2,693,878	12,267,679	1.75	10.4	2009
Merit Mezzanine Fund VI	100,000,000	92,629,096	106,854,428	7,304,104	56,049,435	1.76	16.6	2016
Merit Mezzanine Fund VII	100,000,000	61,831,818	1,181,818	38,168,182	67,287,734	1.11	8.7	2020
Oaktree Capital Management, LLC	650,000,000	538,469,859	172,034,572	125,100,000	527,108,136	1.30	9.5	
Oaktree Opportunities Fund X, L.P.	50,000,000	46,500,060	46,604,660	8,500,000	23,836,407	1.51	8.8	2015
Oaktree Opportunities Fund Xb, L.P.	100,000,000	75,005,568	25,258,482	25,000,000	96,688,807	1.63	11.7	2015
Oaktree Real Estate Debt III	200,000,000	161,940,899	37,001,840	46,600,000	143,582,279	1.12	6.2	2020
Oaktree Opportunities Fund XI	300,000,000	255,023,332	63,169,590	45,000,000	263,000,643	1.28	10.0	2020
Permira	47,151,481	7,989,899	196,043	39,506,024	7,645,457	0.98	-1.9	
Permira Strategic Opportunities I	47,151,481	7,989,899	196,043	39,506,024	7,645,457	0.98	-1.9	2024
PIMCO BRAVO	5,000,000	4,501,479	5,714,432	0	274,272	1.33	5.9	
PIMCO Bravo Fund OnShore Feeder II	5,000,000	4,501,479	5,714,432	0	274,272	1.33	5.9	2014

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Prudential Global Investment Mgmt	600,000,000	584,098,549	618,799,589	79,737,652	191,354,077	1.39	10.2	
Prudential Capital Partners II, L.P.	100,000,000	97,930,132	145,671,152	10,940,748	420,893	1.49	9.0	2005
Prudential Capital Partners III, L.P.	100,000,000	102,887,805	175,321,440	13,562,553	1,848,602	1.72	14.1	2009
Prudential Capital Partners IV	100,000,000	115,243,315	155,789,327	1,917,595	6,377,718	1.41	9.2	2012
Prudential Capital Partners V, L.P.	150,000,000	161,360,517	123,928,990	5,260,364	69,374,490	1.20	5.7	2016
PGIM Capital Partners VI, L.P.	150,000,000	106,676,780	18,088,680	48,056,392	113,332,373	1.23	15.8	2020
Summit Partners	95,000,000	100,222,879	138,347,246	11,318,717	935,023	1.39	9.0	
Summit Subordinated Debt Fund III, L.P.	45,000,000	44,088,494	62,804,226	2,250,000	559,638	1.44	8.6	2004
Summit Subordinated Debt Fund IV, L.P.	50,000,000	56,134,385	75,543,020	9,068,717	375,384	1.35	9.7	2008
TCW	189,570,000	174,519,135	170,125,778	62,214,056	54,325,827	1.29	8.1	
TCW Direct Lending LLC	89,570,000	83,599,652	91,467,430	14,899,409	14,151,132	1.26	7.3	2014
TCW Direct Lending VII	100,000,000	90,919,484	78,658,349	47,314,647	40,174,695	1.31	9.2	2018
Torchlight Investors	150,000,000	60,000,000	13,714,286	103,714,286	46,697,240	1.01	1.0	
Torchlight Debt Fund VIII	150,000,000	60,000,000	13,714,286	103,714,286	46,697,240	1.01	1.0	2023
TSSP	375,000,000	282,465,539	73,708,583	133,987,711	273,095,712	1.23	9.5	
TSSP Opportunities Partners IV (A), L.P.	50,000,000	40,386,311	21,733,341	6,334,467	33,394,815	1.37	9.3	2018
Sixth Street Opportunities Partners V	75,000,000	58,101,142	712,372	17,602,031	62,735,526	1.09	6.4	2021
Sixth Street TAO Partners (B), L.P.	50,000,000	60,649,546	26,220,699	18,976,259	52,044,075	1.29	8.7	2018
Sixth Street TAO Partners (D), L.P.	100,000,000	78,738,617	21,063,087	31,688,236	82,780,891	1.32	11.9	2018
Sixth Street TAO Partners (B) Vintage 2023	100,000,000	44,589,923	3,979,084	59,386,718	42,140,406	1.03	6.9	2023

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<b>Real Assets</b>	<b>4,347,571,518</b>	<b>4,035,361,415</b>	<b>3,132,114,773</b>	<b>674,252,083</b>	<b>2,023,107,027</b>	<b>1.28</b>	<b>5.4</b>	
BlackRock	198,500,000	201,953,952	109,884,265	14,124,527	117,954,321	1.13	4.4	
BlackRock Global Renewable Power Infrastructure III	100,000,000	87,777,426	2,865,259	14,016,598	85,019,697	1.00	0.1	2019
BlackRock Global Renewable Power Fund II	98,500,000	114,176,526	107,019,005	107,929	32,934,624	1.23	5.9	2017
EIG Global Energy Partners	450,000,000	473,254,572	401,007,878	75,356,663	96,789,632	1.05	1.2	
EIG Energy Fund XIV	100,000,000	113,459,470	95,309,310	2,761,129	3,408,197	0.87	-5.0	2007
EIG Energy Fund XV	150,000,000	161,570,371	159,449,534	22,871,323	9,054,636	1.04	1.0	2010
EIG Energy Fund XVI	200,000,000	198,224,731	146,249,034	49,724,211	84,326,798	1.16	3.3	2013
Encap Energy	300,000,000	323,440,801	390,609,146	7,759,695	110,480,597	1.55	8.9	
EnCap Energy Capital Fund VIII, L.P.	100,000,000	103,407,978	72,110,715	0	36,195,309	1.05	0.8	2010
Encap Energy Fund IX	100,000,000	113,725,245	150,892,881	3,890,055	22,335,469	1.52	10.8	2012
EnCap Energy Capital Fund X, L.P.	100,000,000	106,307,577	167,605,549	3,869,640	51,949,818	2.07	16.4	2015
Energy & Minerals Group	680,000,000	718,765,754	441,328,238	23,811,344	528,238,751	1.35	5.7	
NGP Midstream & Resources, L.P.	100,000,000	103,590,296	179,705,647	17,857	2,138,757	1.76	13.1	2007
The Energy & Minerals Group Fund II, L.P.	100,000,000	109,712,894	112,052,043	170,365	98,441,191	1.92	10.8	2011
The Energy & Minerals Group Fund III, L.P.	200,000,000	210,808,542	42,493,520	39,583	99,739,292	0.67	-4.9	2014
The Energy & Minerals Group Fund IV, LP	150,000,000	172,946,413	101,546,675	6,877,815	154,753,613	1.48	7.9	2015
The Energy & Minerals Group Fund V	112,500,000	102,918,428	3,658,916	12,613,927	146,459,029	1.46	9.0	2019
The Energy & Minerals Group Fund V Accordion, LP	17,500,000	18,789,181	1,871,437	4,091,797	26,706,868	1.52	10.1	2019
Energy Capital Partners	500,000,000	494,160,463	386,692,190	118,268,323	358,846,312	1.51	13.1	
Energy Capital Partners III, L.P.	200,000,000	239,038,835	314,765,322	30,959,867	71,609,635	1.62	12.2	2013
Energy Capital Partners IV-A, LP	150,000,000	167,336,063	66,918,862	19,853,424	192,072,944	1.55	15.7	2017
Energy Capital Partners V	150,000,000	87,785,565	5,008,006	67,455,032	95,163,734	1.14	13.2	2023
Energvest Management Partners	100,000,000	100,158,252	112,074,242	4,766,310	41,829,559	1.54	8.9	
EnergVest Energy Institutional Fund XIV-A, L.P.	100,000,000	100,158,252	112,074,242	4,766,310	41,829,559	1.54	8.9	2015
EQT	100,000,000	0	0	100,000,000	0		0.0	
EQT Infrastructure VI	100,000,000	0	0	100,000,000	0		0.0	2024
First Reserve	350,000,000	404,666,410	220,155,680	11,058,656	82,231,622	0.75	-6.2	
First Reserve Fund XII, L.P.	150,000,000	165,617,044	85,669,271	0	88,152	0.52	-18.0	2008
First Reserve Fund XIII, L.P.	200,000,000	239,049,366	134,486,409	11,058,656	82,143,470	0.91	-2.5	2013
Kohlberg, Kravis, Roberts & Co.	449,850,000	229,329,925	82,203,396	240,672,301	221,494,987	1.32	11.0	
KKR Global Infrastructure Investors III	149,850,000	144,655,200	79,562,026	20,035,542	127,056,223	1.43	11.5	2018
KKR Global Infrastructure Investors IV	100,000,000	84,674,725	2,641,370	20,636,759	94,438,764	1.15	8.8	2021
KKR Global Infrastructure Investors V	200,000,000	0	0	200,000,000	0		0.0	2024
Merit Energy Partners	519,721,518	443,664,748	244,722,422	35,579,631	285,538,173	1.20	2.9	
Merit Energy Partners F-II, L.P.	100,000,000	59,522,861	37,062,814	0	0	0.62	-7.0	2006
Merit Energy Partners H	100,000,000	100,000,000	33,120,541	0	31,739,793	0.65	-5.5	2011
Merit Energy Partners I, L.P.	169,721,518	169,721,518	130,639,060	0	127,226,883	1.52	7.1	2014
Merit Energy Partners K, L.P.	150,000,000	114,420,369	43,900,007	35,579,631	126,571,497	1.49	18.5	2019
NGP	599,500,000	611,613,533	706,247,317	29,334,633	158,948,075	1.41	9.1	
Natural Gas Partners IX, LP	150,000,000	174,025,590	249,449,497	605,481	17,548	1.43	12.0	2007
NGP Natural Resources X, L.P.	150,000,000	149,753,786	136,269,256	246,214	13,319,335	1.00	0.0	2011
NGP Natural Resources XI, L.P.	150,000,000	157,922,049	193,262,652	4,736,941	59,562,412	1.60	10.0	2014
NGP Natural Resources XII, L.P.	149,500,000	129,912,108	127,265,912	23,745,997	86,048,779	1.64	14.6	2017
Sheridan	100,000,000	34,353,005	37,190,000	13,520,000	20,755,000	1.69	11.1	
Sheridan Production Partners III-B, L.P.	100,000,000	34,353,005	37,190,000	13,520,000	20,755,000	1.69	11.1	2014

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2024**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
<b>Real Estate</b>	<b>4,598,147,868</b>	<b>3,511,502,990</b>	<b>2,196,764,566</b>	<b>1,470,344,573</b>	<b>2,227,085,081</b>	<b>1.26</b>	<b>7.5</b>	
Angelo, Gordon & Co.	750,000,000	526,535,647	336,248,190	274,565,385	336,871,887	1.28	7.9	
AG Asia Realty Fund III, L.P.	50,000,000	47,587,261	47,125,000	6,196,250	15,796,785	1.32	9.0	2016
AG Asia Realty Fund IV, L.P.	100,000,000	88,737,105	68,750,000	27,047,500	50,214,573	1.34	11.2	2018
AG Asia Realty Fund V	100,000,000	29,393,361	0	69,250,000	30,723,770	1.05	7.1	2023
AG Europe Realty Fund II, L.P.	75,000,000	68,456,549	36,735,759	12,768,750	56,691,248	1.36	6.9	2018
AG Europe Realty Fund III	75,000,000	56,328,427	3,750,000	19,312,500	66,809,519	1.25	8.7	2020
AG Europe Realty Fund IV	100,000,000	7,464,615	0	92,535,385	7,464,616	1.00	0.0	2024
AG Realty Fund IX	100,000,000	92,141,126	93,250,000	11,650,000	22,329,758	1.25	5.1	2014
AG Realty Fund X, L.P.	150,000,000	136,427,203	86,637,431	35,805,000	86,841,617	1.27	9.6	2018
Blackstone	1,224,500,000	1,011,614,707	945,741,626	399,723,303	599,847,407	1.53	12.0	
Blackstone Real Estate Partners Asia II	74,500,000	73,077,861	21,749,726	12,885,561	64,143,715	1.18	4.5	2017
Blackstone Real Estate Partners Asia III	100,000,000	21,466,268	86,242	82,064,496	16,994,435	0.80	-11.9	2021
Blackstone Real Estate Partners Europe Fund VII	100,000,000	17,949,437	0	83,563,063	18,901,163	1.05	17.8	2023
Blackstone Real Estate Partners IX, L.P.	300,000,000	328,676,474	115,908,594	46,496,375	327,967,291	1.35	12.0	2018
Blackstone Real Estate Partners V	100,000,000	104,217,981	209,143,624	417,405	117,945	2.01	10.8	2006
Blackstone Real Estate Partners VI, L.P.	100,000,000	109,582,860	220,281,063	736,180	51,482	2.01	13.1	2007
Blackstone Real Estate Partners VII, LP	100,000,000	115,640,494	184,501,702	7,609,607	12,997,325	1.71	14.3	2011
Blackstone Real Estate Partners X	200,000,000	60,994,476	4,062,476	148,577,711	58,621,052	1.03	4.2	2022
Blackstone Real Estate VIII.TE.1 L.P.	150,000,000	180,008,855	190,008,199	17,372,905	100,052,997	1.61	13.3	2015
Blackstone Strategic Partners	50,000,000	51,524,432	51,080,326	891,250	0	0.99	-0.1	
Strategic Partners IV RE, L.P.	50,000,000	51,524,432	51,080,326	891,250	0	0.99	-0.1	2008
Brookfield Asset Management Inc.	400,000,000	216,119,506	22,127,021	205,940,708	213,576,160	1.09	5.6	
Brookfield Strategic Real Estate Partners IV	300,000,000	216,119,506	22,127,021	105,940,708	213,576,160	1.09	5.6	2021
Brookfield Strategic Real Estate Partners V	100,000,000	0	0	100,000,000	0	0.0	0.0	2023
Carlyle Group	450,000,000	267,850,688	135,261,159	265,048,611	194,420,848	1.23	15.5	
Carlyle Realty Partners IX	300,000,000	136,121,671	4,970,347	168,848,676	132,370,131	1.01	0.9	2021
Carlyle Realty Partners VIII, L.P.	150,000,000	131,729,017	130,290,812	96,199,935	62,050,717	1.46	20.6	2017
Kohlberg, Kravis, Roberts & Co.	125,000,000	121,789,031	18,837,300	24,908,474	102,436,270	1.00	-0.2	
KKR Real Estate Partners Americas III	125,000,000	121,789,031	18,837,300	24,908,474	102,436,270	1.00	-0.2	2021
Landmark Partners	249,500,000	146,174,494	71,634,192	125,540,116	103,539,780	1.20	9.2	
Landmark Real Estate Partners IX	100,000,000	24,359,968	0	75,640,032	22,386,275	0.92	-24.6	2021
Landmark Real Estate Partners VIII, L.P.	149,500,000	121,814,526	71,634,192	49,900,085	81,153,506	1.25	9.9	2016
Lubert Adler	174,147,868	162,338,042	100,552,018	17,694,886	104,952,916	1.27	10.8	
Lubert-Adler Real Estate Fund VII-B, L.P.	74,147,868	67,585,213	90,575,207	7,414,787	13,295,532	1.54	14.6	2017
Lubert-Adler Recovery and Enhancement Capital Fund	100,000,000	94,752,829	9,976,811	10,280,099	91,657,384	1.07	3.7	2021
Oaktree Capital Management, LLC	200,000,000	180,475,519	38,155,052	54,000,000	158,544,639	1.09	6.0	
Oaktree Real Estate Opportunities Fund VIII	200,000,000	180,475,519	38,155,052	54,000,000	158,544,639	1.09	6.0	2020
Rockpoint	200,000,000	195,682,355	73,040,544	27,603,294	125,056,769	1.01	0.4	
Rockpoint Real Estate Fund V, L.P.	100,000,000	104,089,595	58,755,434	14,217,829	33,468,994	0.89	-3.2	2014
Rockpoint Real Estate Fund VI, L.P.	100,000,000	91,592,760	14,285,110	13,385,465	91,587,775	1.16	5.4	2019
Rockwood	200,000,000	189,748,216	61,784,022	14,432,487	105,822,640	0.88	-4.0	
Rockwood Capital RE Partners X, L.P.	100,000,000	99,845,593	57,507,174	1,838,936	34,433,916	0.92	-2.2	2015
Rockwood Capital RE Partners XI	100,000,000	89,902,623	4,276,848	12,593,551	71,388,725	0.84	-6.4	2019

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2024**  
**Private Markets Investments**



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	3,011,707	0.78	-3.9	
Silverpeak Legacy Pension Partners III, L.P.	150,000,000	71,081,341	17,402,663	0	2,588,344	0.28	-12.0	2008
Silverpeak Legacy Pension Partners II, L.P.	75,000,000	73,069,012	92,033,940	7,496,058	423,363	1.27	4.2	2005
TA Associates Realty	350,000,000	297,500,000	232,866,513	52,500,000	179,004,058	1.38	11.0	
Realty Associates Fund XI	100,000,000	100,000,000	160,175,911	0	105,872	1.60	10.8	2015
Realty Associates Fund XII	100,000,000	100,000,000	60,247,082	0	82,943,209	1.43	10.8	2018
Realty Associates Fund XIII	150,000,000	97,500,000	12,443,520	52,500,000	95,954,977	1.11	16.6	2023
<b>Fund Total</b>	<b>40,449,928,657</b>	<b>32,413,287,797</b>	<b>25,556,245,263</b>	<b>11,841,186,343</b>	<b>23,030,630,572</b>	<b>1.50</b>	<b>11.70</b>	
					<i>Difference**</i>		57,032,195	
<b>Private Markets Total with Difference</b>							<b>23,087,662,768</b>	

Private Markets Portfolio Status	Managers	Funds
Private Equity	60	198
Private Credit	20	42
Real Assets	12	33
Real Estate	13	37
<b>Total</b>	<b>105</b>	<b>310</b>

**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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Quarterly Report

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# Participant Directed Investment Program

## December 31, 2024



## Quarterly Report

# Participant Directed Investment Program

The Participant Directed Investment Program (PDIP) provides investment vehicles for a variety of retirement or other tax-advantaged savings plans. The objective of the Plan is to be competitive in the marketplace by providing quality investment options with low fees to its participants. Investment goals among the PDIP's many participants are varied.

- The Supplemental Investment Fund (SIF) is an investment platform that provides participants with the option to invest in many of the same pools as the Combined Funds in addition to a Stable Value Account and a Money Market Fund. The Volunteer Firefighter Account is an option in the SIF for local firefighter entities that join the Statewide Voluntary Firefighter Plan administered by PERA. The investment vehicles are structured much like a family of mutual funds where participating entities buy or sell units in each fund. Participants may allocate their investments among one or more funds that are appropriate for their needs and are within statutory requirements and rules established by the participating organizations.
- Investors in participant-directed plans can choose from a variety of investment options including mutual funds, commingled investment trusts (CIT), a separately managed account, and a self-directed brokerage window (available to participants in the Minnesota Deferred Compensation Plan). The SBI has no direct management responsibilities for mutual funds offered in the self-directed brokerage window. Participants may allocate their investments among one or more accounts appropriate for their needs within the statutory requirements and rules established by the participating organizations.
- The SBI is responsible for the investment options provided in the two State Sponsored Savings Plans established under provisions of the Internal Revenue Code 529, the Minnesota College Savings Plan and Minnesota Achieving a Better Life Experience Plan (ABLE). The Minnesota College Savings Plan is an educational savings plan designed to help families save for qualified nationwide college costs. The SBI is responsible for the investments 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. to provide administrative, marketing, communication, recordkeeping and investment management services. The ABLE Plan is a savings plan designed to help individuals save for qualified disability expenses without losing eligibility for certain assistance programs. The plan is administered by the Department of Human Services (DHS). The SBI and DHS have jointly contracted with Ascensus to provide recordkeeping, administrative, and investment management services for the plan.

The investment returns shown in this report are calculated using a time-weighted rate of return formula. Performance reflects the deduction of investment management fees. Performance greater than one year is annualized. Past performance does not guarantee future results.





## Supplemental Investment Fund Summary

The Minnesota Supplemental Investment Fund (SIF) is a multi-purpose investment platform that offers a range of investment options to state and local public employees. This investment platform provides some or all of the investment options to the Public Employees Retirement Association (PERA) Defined Contribution Plan, local pension plans and the Statewide Volunteer Firefighter plan.

A wide diversity of investment goals exists among the Fund's participants. In order to meet those needs, the Fund has been structured much like a "family of mutual funds." Participants may allocate their investments among one or more accounts that are appropriate for their needs, within the statutory requirements and rules established by the participating organizations. Participation in the Fund is accomplished through the purchase or sale of shares in each account. All returns are net of investment management fees.

### Investment Option Descriptions

- Balanced Fund - a balanced portfolio utilizing both common stocks and bonds
- U.S. Equity Actively Managed Fund - an actively managed, U.S. common stock portfolio.
- U.S. Equity Index Fund - a passively managed, common stock portfolio designed to broadly track the performance of the U.S. stock market.
- Broad International Equity Fund - a portfolio of non-U.S. stocks that incorporates both active and passive management.
- Bond Fund - an actively managed, bond portfolio.
- Money Market Fund - a portfolio utilizing short-term, liquid debt securities.
- Stable Value Account - a portfolio of stable value instruments, including security backed contracts and insurance company and bank investment contracts.
- Volunteer Firefighter Account - a balanced portfolio only used by the Statewide Volunteer Firefighter Plan.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Option Since</u>
BALANCED FUND	\$123,649,623	0.5%	14.8%	4.3%	8.9%	8.5%	01/1980
U.S. EQUITY ACTIVELY MANAGED FUND	102,374,265	2.4	24.3	7.7	14.5	12.9	07/1986
U.S. EQUITY INDEX FUND	420,108,139	2.6	23.8	8.1	14.1	12.6	07/1986
BROAD INTERNATIONAL EQUITY FUND	149,718,414	-5.4	7.8	2.4	5.5	5.7	09/1994
BOND FUND	111,891,891	-3.0	1.9	-2.2	0.3	1.9	07/1986
MONEY MARKET FUND	895,584,584	1.2	5.5	4.3	2.7	2.0	07/1986
STABLE VALUE ACCOUNT	1,494,846,135	0.9	3.3	2.8	2.5	2.4	11/1994
VOLUNTEER FIREFIGHTER ACCOUNT	253,249,283	-1.2	10.4	2.4	6.2	6.4	01/2010

Note:

The Market Values for the Money Market Fund, the Stable Value Fund, and the Total Supplemental Investment Fund also include assets held through other plans.



## Supplemental Investment Fund Performance

### Balanced Fund

The primary investment objective of the Balanced Fund is to gain exposure to publicly traded U.S. equities, bond and cash in a diversified investment portfolio. The Fund seeks to maximize long-term real rates of return, while limiting short-run portfolio return volatility. The Balanced Fund is invested in a balanced portfolio of common stocks and bonds. Common stocks provide the potential for significant capital appreciation, while bonds act as a deflation hedge and provide portfolio diversification. The benchmark is a blend of 60% Russell 3000/35% Bloomberg U.S. Aggregate/5% 3 Month T-Bills.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BALANCED FUND</b>	<b>\$123,649,623</b>	<b>0.5%</b>	<b>14.8%</b>	<b>4.3%</b>	<b>8.9%</b>	<b>8.5%</b>
SIF BALANCED FUND BENCHMARK		0.6%	14.6%	4.3%	8.5%	8.2%
Excess		-0.0%	0.2%	-0.0%	0.4%	0.3%

### U.S. Equity Actively Managed Fund

The U.S. Equity Actively Managed Fund's investment objective is to generate above-average returns from capital appreciation on common stocks. The U.S. Stock Actively Managed Fund is invested primarily in the common stocks of U.S. companies. The managers in the account also hold varying levels of cash.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>U.S. EQUITY ACTIVELY MANAGED FUND</b>	<b>102,374,265</b>	<b>2.4</b>	<b>24.3</b>	<b>7.7</b>	<b>14.5</b>	<b>12.9</b>
Russell 3000		2.6	23.8	8.0	13.9	12.5
Excess		-0.2	0.5	-0.3	0.7	0.3



## Supplemental Investment Fund Performance

### U.S. Equity Index Fund

The investment objective of the U.S. Equity Index Fund is to generate returns that track those of the U.S. stock market as a whole. The Fund is designed to track the performance of the Russell 3000 Index, a broad-based equity market indicator. The Fund is invested 100% in common stock.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>U.S. EQUITY INDEX FUND</b>	<b>\$420,108,139</b>	<b>2.6%</b>	<b>23.8%</b>	<b>8.1%</b>	<b>14.1%</b>	<b>12.6%</b>
Russell 3000		2.6%	23.8%	8.0%	13.9%	12.5%
Excess		0.0%	0.0%	0.1%	0.2%	0.1%

### Broad International Equity Fund

The investment objective of the Broad International Equity Fund is to earn a high rate of return by investing in the stock of companies outside the U.S. Portions of the Fund are passively managed and semi-passively managed. These portions of the Fund are designed to track and modestly outperform, respectively, the return of developed markets included in the MSCI World ex USA Index. A portion of the Fund is "actively managed" by several international managers and emerging markets specialists who buy and sell stocks in an attempt to maximize market value. The International Equity Benchmark is currently the MSCI ACWI ex USA (net).

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BROAD INTERNATIONAL EQUITY FUND</b>	<b>149,718,414</b>	<b>-5.4</b>	<b>7.8</b>	<b>2.4</b>	<b>5.5</b>	<b>5.7</b>
International Equity Benchmark		-7.6	5.5	0.8	4.1	4.8
Excess		2.2	2.2	1.6	1.4	0.9



## Supplemental Investment Fund Performance

### Bond Fund

The investment objective of the Bond Fund is to exceed the return of the broad domestic bond market by investing in fixed income securities. The Bond Fund invests primarily in high-quality, government and corporate bonds that have intermediate to long-term maturities, usually 3 to 20 years. The Bond Fund benchmark is the Bloomberg U.S. Aggregate.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BOND FUND</b>	<b>\$111,891,891</b>	<b>-3.0%</b>	<b>1.9%</b>	<b>-2.2%</b>	<b>0.3%</b>	<b>1.9%</b>
Bloomberg U.S. Aggregate		-3.1%	1.3%	-2.4%	-0.3%	1.3%
Excess		0.1%	0.6%	0.2%	0.7%	0.6%

### Money Market Fund

The investment objective of the Money Market Fund is to protect principal by investing in short-term, liquid U.S. Government securities. The Fund is invested entirely in high-quality, short-term U.S. Treasury and Agency securities. The average maturity of the portfolios is less than 90 days. Please note that the Market Value for the Money Market Fund reflects assets held through the Deferred Compensation Plan as well.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>MONEY MARKET FUND</b>	<b>895,584,584</b>	<b>1.2</b>	<b>5.5</b>	<b>4.3</b>	<b>2.7</b>	<b>2.0</b>
ICE BofA US 3-Month Treasury Bill		1.2	5.3	3.9	2.5	1.8
Excess		0.1	0.3	0.4	0.2	0.2



## Supplemental Investment Fund Performance

### Stable Value Account

The investment objectives of the Stable Value Account are to protect investors from loss of their original investment and to provide competitive interest rates using somewhat longer-term investments than typically found in a money market fund. The Fund is invested in a well-diversified portfolio of high-quality fixed income securities with strong credit ratings. The Fund also invests in contracts issued by highly rated insurance companies and banks which are structured to provide principal protection for the Fund's diversified bond portfolios, regardless of daily market changes. The Stable Value Account Benchmark is the 3-year Constant Maturity Treasury Bill +45 basis points. Please note that the Market Value for the Stable Value Account reflects assets held through the Deferred Compensation Plan as well.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>STABLE VALUE ACCOUNT</b>	<b>\$1,494,846,135</b>	<b>0.9%</b>	<b>3.3%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>2.4%</b>
Fixed Interest Blended Benchmark		1.1%	4.7%	4.3%	2.9%	2.5%
Excess		-0.3%	-1.4%	-1.6%	-0.4%	-0.1%

### Volunteer Firefighter Account

The Volunteer Firefighter Account is different than other SIF program options. It is available only to the local entities that participate in the Statewide Volunteer Firefighter Plan (administered by PERA) and have all of their assets invested in the Volunteer Firefighter Account. There are other volunteer firefighter plans that are not eligible to be consolidated that may invest their assets through other SIF program options. The investment objective of the Volunteer Firefighter Account is to maximize long-term returns while limiting short-term portfolio return volatility. The account is invested in a balanced portfolio of domestic equity, international equity, fixed income and cash. The benchmark for this account is 35% Russell 3000, 15% MSCI ACWI ex USA (net), 45% Bloomberg U.S. Aggregate, 5% 3 Month T-Bills.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>VOLUNTEER FIREFIGHTER ACCOUNT</b>	<b>253,249,283</b>	<b>-1.2</b>	<b>10.4</b>	<b>2.4</b>	<b>6.2</b>	<b>6.4</b>
SIF Volunteer Firefighter Account		-1.5	9.7	2.2	5.6	6.0
Excess		0.3	0.7	0.2	0.6	0.4



Participant-directed plans that use this investment line-up include the Minnesota Deferred Compensation Plan (MNDCP), Unclassified Retirement Plan, Health Care Savings Plan, and the Hennepin County Retirement Plan. The MNDCP is a tax-sheltered retirement savings plan that is supplemental to public employees' primary retirement plans. (In most cases, the primary plans are defined benefit plans administered by TRA, PERA, or MSRS.) Investment options include mutual funds, commingled investment trusts (CIT), and a separately managed account.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Option Since</u>
VANGUARD TOTAL STOCK MARKET INDEX FUND	\$1,096,816,982	2.6%	23.8%	7.9%	13.9%		07/2019
VANGUARD INSTITUTIONAL INDEX	2,330,420,422	2.4	25.0	8.9	14.5	13.1%	07/1999
VANGUARD DIVIDEND GROWTH FUND	1,020,839,611	-4.7	9.0	3.9	9.4		10/2016
VANGUARD MID-CAP INDEX FUND	844,121,970	0.4	15.2	2.8	9.9	9.6	01/2004
T.ROWE PRICE SMALL CAP STOCKS FUND	929,763,337	1.5	11.7	0.2	8.0	9.8	04/2000
FIDELITY DIVERSIFIED INTERNATIONAL TRUST	349,689,994	-7.2	6.8	-1.2	5.5	6.2	07/1999
VANGUARD TOTAL INTERNATIONAL STOCK INDEX FUND	410,145,930	-7.4	5.2	0.7	4.3	5.1	07/2011
VANGUARD BALANCED INDEX FUND	1,556,505,448	0.4	14.6	3.9	8.3	8.2	12/2003
DODGE & COX CORE BOND ACCOUNT	300,466,993	-3.3	2.3	-0.6	1.3	2.5	07/1999
VANGUARD TOTAL BOND MARKET INDEX FUND	338,987,478	-3.0	1.3	-2.4	-0.3	1.3	12/2003
2025 MN TARGET DATE RETIREMENT FUND	206,492,995	-1.7	7.2	1.3	4.9	5.4	07/2011
2030 MN TARGET DATE RETIREMENT FUND	264,634,483	-1.9	8.6	1.5	5.9	6.4	07/2011
2035 MN TARGET DATE RETIREMENT FUND	241,343,601	-2.3	10.0	1.9	6.7	7.0	07/2011
2040 MN TARGET DATE RETIREMENT FUND	203,622,916	-2.5	10.7	2.1	7.2	7.4	07/2011
2045 MN TARGET DATE RETIREMENT FUND	200,598,185	-2.5	11.4	2.3	7.6	7.8	07/2011
2050 MN TARGET DATE RETIREMENT FUND	178,962,223	-2.4	12.0	2.6	8.0	8.1	07/2011
2055 MN TARGET DATE RETIREMENT FUND	126,086,754	-2.3	12.6	2.9	8.4	8.3	07/2011
2060 MN TARGET DATE RETIREMENT FUND	93,042,518	-2.3	12.8	2.9	8.4	8.3	07/2011
2065 MN TARGET DATE RETIREMENT FUND	25,740,533	-2.3	12.8	2.9			04/2020
INCOME ACCOUNT	206,609,628	-1.7	6.9	1.5	4.4	4.4	07/2011
Charles Schwab SDB	95,457,109						
Charles Schwab SDB Roth	5,658,130						



**LARGE CAP EQUITY**

**Vanguard Total Stock Market Institutional Index Fund (passive)**

A passive domestic stock portfolio of large and small companies that tracks the CRSP US Total Market Index.

**Vanguard Index Institutional Index Fund (passive)**

A passive domestic stock portfolio that tracks the S&P 500.

**Vanguard Dividend Growth Fund (active) (1)**

A fund of large cap stocks which is expected to outperform the S&P U.S. Dividend Growers Index, over time.

**MID CAP EQUITY**

**Vanguard Mid-Cap Index Fund (passive) (2)**

A fund that passively invests in companies with medium market capitalizations that tracks the CRSP US Mid-Cap Index.

**SMALL CAP EQUITY**

**T Rowe Price Small Cap Stocks Fund (active)**

A fund that invests primarily in companies with small market capitalizations and is expected to outperform the Russell 2000 Index.

**INTERNATIONAL EQUITY**

**Fidelity Diversified International Trust (active)**

A fund that invests primarily in stocks of companies located outside of the United States and is expected to outperform the MSCI index of Europe, Australasia and the Far East (EAFE), over time.

**Vanguard Total International Stock Index Fund (passive) (3)**

A fund that seeks to track the investment performance of the FTSE Global All Cap ex US Index, an index designed to measure equity market performance in developed and emerging markets, excluding the United States.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>Large Cap US Equity</b>						
<b>VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX FUND</b>	<b>\$1,096,816,982</b>	<b>2.6%</b>	<b>23.8%</b>	<b>7.9%</b>	<b>13.9%</b>	<b>07/2019</b>
CRSP US Total Market Index		2.6%	23.8%	7.9%	13.8%	07/2019
Excess		-0.0%	-0.0%	0.0%	0.0%	
<b>VANGUARD INSTITUTIONAL INDEX FUND</b>	<b>\$2,330,420,422</b>	<b>2.4%</b>	<b>25.0%</b>	<b>8.9%</b>	<b>14.5%</b>	<b>07/1999</b>
S&P 500		2.4%	25.0%	8.9%	14.5%	07/1999
Excess		-0.0%	-0.0%	-0.0%	-0.0%	
<b>VANGUARD DIVIDEND GROWTH FUND</b>	<b>\$1,020,839,611</b>	<b>-4.7%</b>	<b>9.0%</b>	<b>3.9%</b>	<b>9.4%</b>	<b>10/2016</b>
VANGUARD DIVIDEND GROWTH INDEX		-0.7%	17.1%	6.6%	11.6%	10/2016
Excess		-4.0%	-8.0%	-2.7%	-2.2%	
<b>Mid Cap US Equity</b>						
<b>VANGUARD MID CAP INDEX FUND</b>	<b>\$844,121,970</b>	<b>0.4%</b>	<b>15.2%</b>	<b>2.8%</b>	<b>9.9%</b>	<b>01/2004</b>
CRSP US Mid Cap Index		0.5%	15.3%	2.8%	9.9%	01/2004
Excess		-0.0%	-0.0%	0.0%	0.0%	
<b>Small Cap US Equity</b>						
<b>T. ROWE PRICE SMALL-CAP FUND</b>	<b>\$929,763,337</b>	<b>1.5%</b>	<b>11.7%</b>	<b>0.2%</b>	<b>8.0%</b>	<b>04/2000</b>
Russell 2000		0.3%	11.5%	1.2%	7.4%	04/2000
Excess		1.2%	0.2%	-1.0%	0.6%	
<b>International Equity</b>						
<b>FIDELITY DIVERSIFIED INT'L</b>	<b>\$349,689,994</b>	<b>-7.2%</b>	<b>6.8%</b>	<b>-1.2%</b>	<b>5.5%</b>	<b>07/1999</b>
MSCI EAFE FREE (NET)		-8.1%	3.8%	1.6%	4.7%	07/1999
Excess		0.9%	3.0%	-2.9%	0.7%	
<b>VANGUARD TOTAL INT'L STOCK INDEX FUND</b>	<b>\$410,145,930</b>	<b>-7.4%</b>	<b>5.2%</b>	<b>0.7%</b>	<b>4.3%</b>	<b>07/2011</b>
FTSE Global All Cap ex US Index Net		-7.5%	5.4%	0.7%	4.2%	07/2011
Excess		0.1%	-0.2%	0.0%	0.1%	



**BALANCED**

**Vanguard Balanced Index Fund (passive) (4)**

A fund that passively invests in a mix of domestic stocks and bonds. The fund is expected to track a weighted benchmark of 60% CRSP US Total Market Index/40% Bloomberg U.S. Aggregate.

**FIXED INCOME**

**Dodge & Cox Core Bond Account (active) (6)**

A fund that invests primarily in investment grade securities in the U.S. bond market which is expected to outperform the Bloomberg U.S. Aggregate, over time.

**Vanguard Total Bond Market Index Fund (passive)**

A fund that passively invests in a broad, market weighted bond index that is expected to track the Bloomberg U.S. Aggregate.

**Money Market Fund (5)**

A fund that invests in short-term debt instruments which is expected to outperform the return on 3 Month T-Bills.

**STABLE VALUE**

**Stable Value Account (5)**

A portfolio composed of stable value instruments which are primarily investment contracts and security backed contracts. The fund is expected to outperform the return of the 3 year Constant Maturity Treasury +45 basis points, over time.

**Ending Market Value**   **Last Qtr**   **1 Year**   **3 Year**   **5 Year**   **Option Since**

**Balanced Funds**

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>VANGUARD BALANCED INDEX FUND</b>	<b>\$1,556,505,448</b>	<b>0.4%</b>	<b>14.6%</b>	<b>3.9%</b>	<b>8.3%</b>	<b>12/2003</b>
Vanguard Balanced Fund Benchmark		0.4	14.4	3.9	8.3	12/2003
Excess		0.0	0.2	-0.0	-0.0	

**Fixed Income**

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>DODGE &amp; COX CORE BOND ACCOUNT</b>	<b>300,466,993</b>	<b>-3.3</b>	<b>2.3</b>	<b>-0.6</b>	<b>1.3</b>	<b>07/1999</b>
Bloomberg U.S. Aggregate		-3.1	1.3	-2.4	-0.3	07/1999
Excess		-0.2	1.1	1.8	1.6	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>VANGUARD TOTAL BOND MARKET INDEX FUND</b>	<b>338,987,478</b>	<b>-3.0</b>	<b>1.3</b>	<b>-2.4</b>	<b>-0.3</b>	<b>12/2003</b>
Bloomberg U.S. Aggregate		-3.1	1.3	-2.4	-0.3	12/2003
Excess		0.0	0.0	0.0	0.0	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>MONEY MARKET FUND</b>	<b>895,584,584</b>	<b>1.2</b>	<b>5.5</b>	<b>4.3</b>	<b>2.7</b>	<b>07/1986</b>
ICE BofA US 3-Month Treasury Bill		1.2	5.3	3.9	2.5	07/1986
Excess		0.1	0.3	0.4	0.2	

**Stable Value**

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>STABLE VALUE ACCOUNT</b>	<b>1,494,846,135</b>	<b>0.9</b>	<b>3.3</b>	<b>2.8</b>	<b>2.5</b>	<b>11/1994</b>
Fixed Interest Blended Benchmark		1.1	4.7	4.3	2.9	11/1994
Excess		-0.3	-1.4	-1.6	-0.4	

- (1) Prior to 09/20/2021 the benchmark was the NASDAQ US Dividend Achievers Select Index.
- (2) Prior to 02/01/2013 the benchmark was the MSCI US Mid-Cap 450 Index.
- (3) Prior to 06/01/2013 the benchmark was MSCI ACWI ex USA IML.
- (4) Prior to 01/01/2013 the benchmark was 60% MSCI US Broad Market Index and 40% Bloomberg U.S. Aggregate.
- (5) Money Market and Stable Value are Supplemental Investment Fund options which are also offered to eligible plans that invest through other plans.
- (6) As of 10/30/2024, Dodge & Cox Core Bond Account transitioned from a mutual fund to a separately managed account.





**MN TARGET DATE RETIREMENT FUNDS**

Target retirement funds offer a mix of investments that are adjusted over time to reduce risk and become more conservative as the target retirement date approaches. A participant only needs to make one investment decision by investing their assets in the fund that is closest to their anticipated retirement date.

**Target Date Retirement Funds**

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Option Since</u>		<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Option Since</u>
<b>SSgA</b>													
<b>2025 MN TARGET DATE RETIREMENT FUND</b>	<b>\$206,492,995</b>	<b>-1.7%</b>	<b>7.2%</b>	<b>1.3%</b>	<b>4.9%</b>	<b>07/2011</b>	<b>2050 MN TARGET DATE RETIREMENT FUND</b>	<b>\$178,962,223</b>	<b>-2.4%</b>	<b>12.0%</b>	<b>2.6%</b>	<b>8.0%</b>	<b>07/2011</b>
2025 FUND BENCHMARK		-1.7%	7.1%	1.3%	4.8%	07/2011	2050 FUND BENCHMARK		-2.4%	12.1%	2.6%	8.0%	07/2011
Excess		0.0%	0.0%	0.0%	0.0%		Excess		-0.0%	-0.1%	0.0%	0.0%	
<b>2030 MN TARGET DATE RETIREMENT FUND</b>	<b>\$264,634,483</b>	<b>-1.9%</b>	<b>8.6%</b>	<b>1.5%</b>	<b>5.9%</b>	<b>07/2011</b>	<b>2055 MN TARGET DATE RETIREMENT FUND</b>	<b>\$126,086,754</b>	<b>-2.3%</b>	<b>12.6%</b>	<b>2.9%</b>	<b>8.4%</b>	<b>07/2011</b>
2030 FUND BENCHMARK		-1.9%	8.6%	1.4%	5.9%	07/2011	2055 FUND BENCHMARK		-2.3%	12.7%	2.9%	8.4%	07/2011
Excess		-0.0%	0.0%	0.0%	0.0%		Excess		-0.0%	-0.1%	0.0%	0.0%	
<b>2035 MN TARGET DATE RETIREMENT FUND</b>	<b>\$241,343,601</b>	<b>-2.3%</b>	<b>10.0%</b>	<b>1.9%</b>	<b>6.7%</b>	<b>07/2011</b>	<b>2060 MN TARGET DATE RETIREMENT FUND</b>	<b>\$93,042,518</b>	<b>-2.3%</b>	<b>12.8%</b>	<b>2.9%</b>	<b>8.4%</b>	<b>07/2011</b>
2035 FUND BENCHMARK		-2.3%	10.0%	1.9%	6.7%	07/2011	2060 FUND BENCHMARK		-2.2%	12.8%	2.9%	8.4%	07/2011
Excess		-0.0%	-0.0%	0.0%	0.0%		Excess		-0.0%	-0.1%	0.0%	0.0%	
<b>2040 MN TARGET DATE RETIREMENT FUND</b>	<b>\$203,622,916</b>	<b>-2.5%</b>	<b>10.7%</b>	<b>2.1%</b>	<b>7.2%</b>	<b>07/2011</b>	<b>2065 MN TARGET DATE RETIREMENT FUND</b>	<b>\$25,740,533</b>	<b>-2.3%</b>	<b>12.8%</b>	<b>2.9%</b>		<b>04/2020</b>
2040 FUND BENCHMARK		-2.5%	10.7%	2.1%	7.2%	07/2011	2065 FUND BENCHMARK		-2.2%	12.8%	2.9%		04/2020
Excess		-0.0%	-0.0%	0.0%	0.0%		Excess		-0.0%	-0.1%	0.0%		
<b>2045 MN TARGET DATE RETIREMENT FUND</b>	<b>\$200,598,185</b>	<b>-2.5%</b>	<b>11.4%</b>	<b>2.3%</b>	<b>7.6%</b>	<b>07/2011</b>	<b>INCOME ACCOUNT</b>	<b>\$206,609,628</b>	<b>-1.7%</b>	<b>6.9%</b>	<b>1.5%</b>	<b>4.4%</b>	<b>07/2011</b>
2045 FUND BENCHMARK		-2.4%	11.5%	2.3%	7.6%	07/2011	INCOME ACCOUNT BENCHMARK		-1.7%	6.9%	1.4%	4.3%	07/2011
Excess		-0.0%	-0.1%	0.0%	0.0%		Excess		-0.0%	0.0%	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



## MN College Savings Plan Options

The Minnesota College Savings Plan is an education savings plan designed to help families set aside funds for future college costs. The SBI is responsible for the investments and the Minnesota Office of Higher Education (OHE) is responsible for the overall administration of the Plan.

The SBI and OHE contract jointly with TIAA to provide administrative, marketing, communication, recordkeeping and investment management services. Please see the next page for the performance as reported by TIAA.

**ENROLLMENT-BASED MANAGED ALLOCATIONS** - The Enrollment Year Investment Option is a set of single fund options representing the date your future student needs their college savings. The asset allocation adjusts automatically to a more conservative investment objective and level of risk as the enrollment year approaches. The managed allocation changed from Age-Based to Enrollment-Based on October 28, 2019.

**RISK BASED ALLOCATIONS** - The Risk Based Allocation Option offers three separate allocation investment options - Aggressive, Moderate and Conservative, each of which has a fixed risk level that does not change as the Beneficiary ages.

### **ASSET CLASS BASED ALLOCATIONS**

**U.S. LARGE CAP EQUITY INDEX** - A passive domestic stock portfolio that tracks the S&P 500.

**INTERNATIONAL EQUITY INDEX** - A fund that passively invests in a mix of developed and emerging market equities. The fund is expected to track a weighted benchmark of 80% MSCI ACWI World ex USA and 20% MSCI Emerging Markets Free Index.

**U.S. AND INTERNATIONAL EQUITY INDEX** - A fund that invests in a mix of equities, both U.S. and international, across all capitalization ranges and real estate-related securities. The fund is expected to track a weighted benchmark of 60% Russell 3000, 24% International, 6% Emerging Markets, and 10% Real Estate Securities Fund.

**PRINCIPAL PLUS INTEREST OPTION** - A passive fund where contributions are invested in a Funding Agreement issued by TIAA-CREF Life. The funding agreement provides for a return of principal plus a guaranteed rate of interest which is made by the insurance company to the policyholder, not the account owners. The account is expected to outperform the return of the 3-month T-Bill.

**EQUITY AND INTEREST ACCUMULATION** - A fund that passively invests half of the portfolio in U.S. equities across all capitalization ranges and the other half in the same Funding Agreement issued by TIAA-CREF Life as described above. The fund is expected to track a weighted benchmark of 50% Russell 3000 and 50% 3-month T-Bill.

**100% FIXED INCOME** - A fund that passively invests in fixed income holdings that tracks the Bloomberg U.S. Aggregate and two active funds that invest in inflation-linked bonds and high yield securities. The fund is expected to track a weighted benchmark of 70% Bloomberg U.S. Aggregate, 20% inflation-linked bond, and 10% high yield.

**MONEY MARKET** - An active fund that invests in high-quality, short-term money market instruments of both domestic and foreign issuers that tracks the iMoneyNet Average All Taxable benchmark.

**SOCIAL CHOICE EQUITY ALLOCATION** – An actively managed fund that seeks to provide a favorable long-term total return that reflects the investment performance of the overall U.S. equity market while giving special consideration to companies whose activities are consistent with certain environmental, social and governance criteria.

**MINNESOTA COLLEGE SAVINGS PLAN**

Performance Statistics for the Period Ending: December 31, 2024

Total = \$2,087 Million

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
<b>2040/2041 Enrollment Option</b>	<b>\$29,858,907</b>	<b>-1.79%</b>	<b>13.22%</b>				<b>15.13%</b>	<b>5/12/2023</b>
2040-2041 Custom Benchmark		-1.59%	13.65%				15.88%	
<b>2038/2039 Enrollment Option</b>	<b>\$55,156,072</b>	<b>-1.84%</b>	<b>12.79%</b>	<b>3.53%</b>			<b>4.59%</b>	<b>6/11/2021</b>
2038-2039 Custom Benchmark		-1.62%	13.26%	3.69%			4.78%	
<b>2036/2037 Enrollment Option</b>	<b>\$114,514,405</b>	<b>-1.85%</b>	<b>12.27%</b>	<b>3.23%</b>	<b>7.96%</b>		<b>8.65%</b>	<b>10/28/2019</b>
2036-2037 Custom Benchmark		-1.66%	12.70%	3.42%	7.99%		8.67%	
<b>2034/2035 Enrollment Option</b>	<b>\$90,918,721</b>	<b>-1.89%</b>	<b>11.56%</b>	<b>2.98%</b>	<b>7.53%</b>		<b>8.21%</b>	<b>10/28/2019</b>
2034-2035 Custom Benchmark		-1.72%	11.97%	3.13%	7.56%		8.23%	
<b>2032/2033 Enrollment Option</b>	<b>\$94,355,522</b>	<b>-1.88%</b>	<b>10.41%</b>	<b>2.41%</b>	<b>6.98%</b>		<b>7.63%</b>	<b>10/28/2019</b>
2032-2033 Custom Benchmark		-1.71%	10.84%	2.60%	7.02%		7.67%	
<b>2030/2031 Enrollment Option</b>	<b>\$104,307,384</b>	<b>-1.82%</b>	<b>8.93%</b>	<b>1.75%</b>	<b>6.11%</b>		<b>6.75%</b>	<b>10/28/2019</b>
2030-2031 Custom Benchmark		-1.63%	9.53%	2.03%	6.22%		6.85%	
<b>2028/2029 Enrollment Option</b>	<b>\$125,154,521</b>	<b>-1.40%</b>	<b>7.56%</b>	<b>1.28%</b>	<b>5.17%</b>		<b>5.76%</b>	<b>10/28/2019</b>
2028-2029 Custom Benchmark		-1.30%	8.13%	1.66%	5.28%		5.87%	
<b>2026/2027 Enrollment Option</b>	<b>\$154,285,130</b>	<b>-0.86%</b>	<b>5.90%</b>	<b>0.77%</b>	<b>4.28%</b>		<b>4.78%</b>	<b>10/28/2019</b>
2026-2027 Custom Benchmark		-0.68%	6.90%	1.36%	4.52%		5.02%	
<b>2024/2025 Enrollment Option</b>	<b>\$171,123,267</b>	<b>-0.57%</b>	<b>4.88%</b>	<b>0.58%</b>	<b>3.57%</b>		<b>3.99%</b>	<b>10/28/2019</b>
2024-2025 Custom Benchmark		-0.23%	6.29%	1.59%	3.99%		4.40%	
<b>In School Option</b>	<b>\$236,328,977</b>	<b>-0.42%</b>	<b>4.45%</b>	<b>1.58%</b>	<b>2.99%</b>		<b>3.14%</b>	<b>10/28/2019</b>
In School Custom Benchmark		-0.12%	6.08%	2.61%	3.21%		3.36%	

**MINNESOTA COLLEGE SAVINGS PLAN**  
Performance Statistics for the Period Ending: December 31, 2024

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
<b>U.S. and International Equity Option</b>	<b>\$300,529,248</b>	<b>-1.59%</b>	<b>16.13%</b>	<b>4.77%</b>	<b>9.97%</b>	<b>9.66%</b>	<b>7.91%</b>	<b>10/ 1/2001</b>
BB: U.S. and International Equity Option		-1.38%	16.58%	5.02%	10.07%	9.68%	8.57%	
<b>Moderate Allocation Option</b>	<b>\$113,667,467</b>	<b>-1.81%</b>	<b>10.49%</b>	<b>2.51%</b>	<b>6.51%</b>	<b>6.69%</b>	<b>5.91%</b>	<b>8/ 2/2007</b>
BB: Moderate Allocation Option		-1.65%	10.89%	2.77%	6.60%	6.79%	6.39%	
<b>100% Fixed-Income Option</b>	<b>\$19,616,392</b>	<b>-2.17%</b>	<b>2.40%</b>	<b>-1.08%</b>	<b>0.73%</b>	<b>1.79%</b>	<b>2.83%</b>	<b>8/16/2007</b>
BB: 100% Fixed-Income Option		-2.10%	2.68%	-0.94%	0.93%	2.05%	3.34%	
<b>International Equity Index Option</b>	<b>\$11,010,278</b>	<b>-7.78%</b>	<b>5.10%</b>	<b>1.33%</b>	<b>4.44%</b>	<b>5.08%</b>	<b>4.87%</b>	<b>6/18/2013</b>
BB: International Equity Index Option		-8.08%	4.67%	1.02%	4.23%	4.97%	4.89%	
<b>Money Market Option</b>	<b>\$32,207,513</b>	<b>1.18%</b>	<b>5.16%</b>	<b>3.82%</b>	<b>2.35%</b>	<b>1.60%</b>	<b>1.08%</b>	<b>11/ 1/2007</b>
BB: Money Market Option		1.11%	4.93%	3.66%	2.24%	1.49%	1.01%	
<b>Principal Plus Interest Option</b>	<b>\$86,723,156</b>	<b>0.76%</b>	<b>2.93%</b>	<b>2.10%</b>	<b>1.91%</b>	<b>1.75%</b>	<b>2.36%</b>	<b>10/10/2001</b>
Citigroup 3-Month U.S. Treasury Bill		1.23%	5.45%	4.05%	2.54%	1.79%	1.60%	
<b>Aggressive Allocation Option</b>	<b>\$122,133,545</b>	<b>-1.70%</b>	<b>13.33%</b>	<b>3.71%</b>	<b>8.26%</b>	<b>8.19%</b>	<b>8.14%</b>	<b>8/12/2014</b>
BB: Aggressive Allocation Option		-1.51%	13.71%	3.91%	8.37%	8.26%	8.16%	
<b>Conservative Allocation Option</b>	<b>\$19,754,397</b>	<b>-1.29%</b>	<b>6.57%</b>	<b>1.63%</b>	<b>3.97%</b>	<b>4.26%</b>	<b>4.15%</b>	<b>8/18/2014</b>
BB: Conservative Allocation Option		-1.04%	7.47%	2.28%	4.30%	4.44%	4.37%	
<b>Equity and Interest Accumulation Option</b>	<b>\$11,678,373</b>	<b>1.64%</b>	<b>12.94%</b>	<b>5.22%</b>	<b>7.98%</b>	<b>7.14%</b>	<b>7.13%</b>	<b>8/18/2014</b>
BB: Equity and Interest Accumulation Option		1.99%	14.46%	6.41%	8.54%	7.38%	7.41%	
<b>U.S. Large Cap Equity Option</b>	<b>\$188,721,449</b>	<b>2.35%</b>	<b>24.79%</b>	<b>8.78%</b>	<b>14.35%</b>	<b>12.91%</b>	<b>13.16%</b>	<b>8/12/2014</b>
BB: U.S. Large Cap Equity Option		2.41%	25.02%	8.94%	14.53%	13.10%	13.28%	
<b>Large Cap Responsible Equity Option</b>	<b>\$4,022,668</b>	<b>-0.46%</b>	<b>18.12%</b>	<b>5.90%</b>			<b>7.90%</b>	<b>6/11/2021</b>
BB: Social Choice Equity Option		2.41%	24.40%	8.18%			9.87%	
<b>Matching Grant</b>	<b>\$968,788</b>	<b>0.76%</b>	<b>2.93%</b>	<b>2.10%</b>	<b>1.91%</b>	<b>1.75%</b>	<b>2.36%</b>	<b>3/22/2002</b>
Citigroup 3-Month U.S. Treasury Bill		1.23%	5.45%	4.05%	2.54%	1.79%	1.60%	

# MINNESOTABLE *plan*

A member of The National ABLE Alliance

Performance as of  
December 31, 2024

Total Market Value: \$53,407,086

Fund Name	Market Value	% of Plan	3 Months	1 Year	Annualized			Inception	Inception Date
					3 Year	5 Year	10 Year		
<b>Aggressive Option</b>	<b>\$4,562,582</b>	<b>8.54%</b>	<b>-0.94%</b>	<b>13.61%</b>	<b>2.94%</b>	<b>8.13%</b>	<b>9.02%</b>	<b>12/15/16</b>	
ABLE Aggressive Custom Benchmark			-0.91%	14.00%	3.17%	8.42%	9.41%		
<b>Variance</b>			<b>-0.03%</b>	<b>-0.39%</b>	<b>-0.23%</b>	<b>-0.29%</b>	<b>-0.39%</b>		
<b>Moderately Aggressive Option</b>	<b>\$4,866,765</b>	<b>9.11%</b>	<b>-1.07%</b>	<b>11.68%</b>	<b>2.50%</b>	<b>7.12%</b>	<b>7.92%</b>	<b>12/15/16</b>	
ABLE Moderately Aggressive Custom Benchmark			-0.97%	12.08%	2.75%	7.39%	8.30%		
<b>Variance</b>			<b>-0.10%</b>	<b>-0.40%</b>	<b>-0.25%</b>	<b>-0.27%</b>	<b>-0.38%</b>		
<b>Growth Option</b>	<b>\$6,937,147</b>	<b>12.99%</b>	<b>-1.11%</b>	<b>9.80%</b>	<b>2.01%</b>	<b>6.01%</b>	<b>6.76%</b>	<b>12/15/16</b>	
ABLE Growth Custom Benchmark			-0.89%	10.37%	2.29%	6.30%	7.14%		
<b>Variance</b>			<b>-0.22%</b>	<b>-0.57%</b>	<b>-0.28%</b>	<b>-0.29%</b>	<b>-0.38%</b>		
<b>Moderate Option</b>	<b>\$6,460,121</b>	<b>12.10%</b>	<b>-1.21%</b>	<b>8.02%</b>	<b>1.53%</b>	<b>4.89%</b>	<b>5.59%</b>	<b>12/15/16</b>	
ABLE Moderate Custom Benchmark			-0.96%	8.59%	1.80%	5.16%	5.95%		
<b>Variance</b>			<b>-0.25%</b>	<b>-0.57%</b>	<b>-0.27%</b>	<b>-0.27%</b>	<b>-0.36%</b>		
<b>Moderately Conservative Option</b>	<b>\$5,531,587</b>	<b>10.36%</b>	<b>-0.63%</b>	<b>6.79%</b>	<b>1.96%</b>	<b>4.02%</b>	<b>4.42%</b>	<b>12/15/16</b>	
ABLE Moderately Conservative Custom Benchmark			-0.39%	7.41%	2.33%	4.30%	4.76%		
<b>Variance</b>			<b>-0.24%</b>	<b>-0.62%</b>	<b>-0.37%</b>	<b>-0.28%</b>	<b>-0.34%</b>		
<b>Conservative Option</b>	<b>\$9,396,990</b>	<b>17.60%</b>	<b>0.16%</b>	<b>4.99%</b>	<b>2.36%</b>	<b>2.66%</b>	<b>2.73%</b>	<b>12/15/16</b>	
ABLE Conservative Custom Benchmark			0.38%	5.81%	2.94%	3.01%	3.07%		
<b>Variance</b>			<b>-0.22%</b>	<b>-0.82%</b>	<b>-0.58%</b>	<b>-0.35%</b>	<b>-0.34%</b>		
<b>Money Market Option</b>	<b>\$162,752</b>	<b>0.30%</b>					<b>0.20%</b>	<b>12/13/24</b>	
ABLE Savings Benchmark							0.20%		
<b>Variance</b>							<b>0.00%</b>		
<b>Checking Account Option</b>	<b>\$15,489,141</b>	<b>29.00%</b>						<b>03/30/17</b>	

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Quarterly Report

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# Non-Retirement

## December 31, 2024



## Quarterly Report

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# Non-Retirement Funds

The SBI manages funds for trusts and programs created by the Minnesota State Constitution and Legislature.

- The Minnesota Workers Compensation Assigned Risk Plan provides worker compensation insurance for companies unable to obtain coverage through private carriers.
- The Permanent School Fund is a trust established for the benefit of Minnesota public schools.
- The Environmental Trust Fund is a trust established for the protection and enhancement of Minnesota's environment. It is funded with a portion of the proceeds from the state's lottery.
- The Closed Landfill Investment Fund is a trust created by the Legislature to invest money to pay for the long-term costs of maintaining the integrity of landfills in Minnesota once they are closed.
- Other Post-Employment Benefits Accounts (OPEB) are the assets set aside by local units of government for the payment of retiree benefits trusted by the Public Employees Retirement Association.
- Miscellaneous Trust Accounts are other small funds managed by the SBI for a variety of purposes.

All equity, fixed income, and cash assets for these accounts are managed externally by investment management firms retained by the SBI.





Non-Retirement

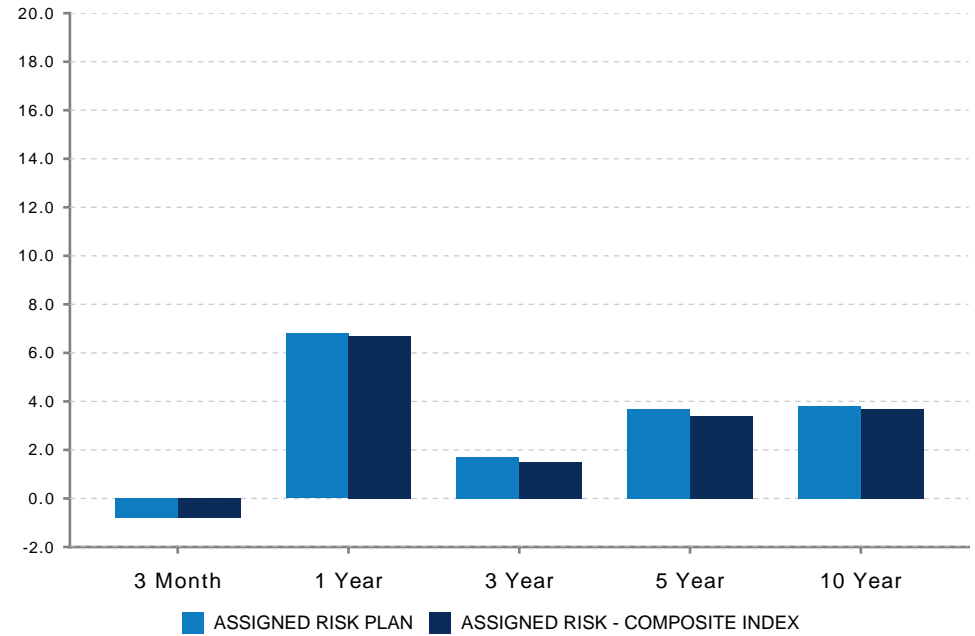
**Assigned Risk Plan**

The Assigned Risk plan has two investment objectives: to minimize the mismatch between assets and liabilities and to provide sufficient liquidity for the payment of ongoing claims and operating expenses.

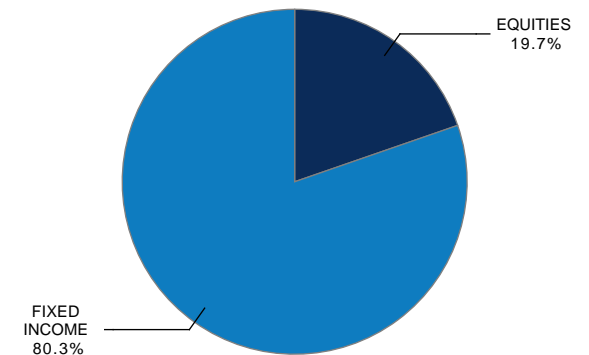
The Assigned Risk Plan is invested in a portfolio of common stocks and bonds

The equity segment is passively managed to track the performance of the S&P 500.

The fixed income benchmark is the Bloomberg U.S. Government Intermediate Index. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets of 80% fixed income and 20% equities. The actual asset mix will fluctuate and is shown in the graph below.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
ASSIGNED RISK PLAN	\$275,067,256	-0.8%	6.8%	1.7%	3.7%	3.8%
EQUITIES	\$54,226,579	2.4%	25.0%	8.9%	14.5%	12.7%
FIXED INCOME	\$220,840,677	-1.7%	2.3%	-0.4%	0.6%	1.3%
ASSIGNED RISK - COMPOSITE INDEX		-0.8%	6.7%	1.5%	3.4%	3.7%
Excess		0.0%	0.1%	0.1%	0.3%	0.1%
S&P 500		2.4%	25.0%	8.9%	14.5%	13.1%
Bloomberg U.S. Government: Intermediate		-1.7%	2.4%	-0.5%	0.5%	1.2%



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.



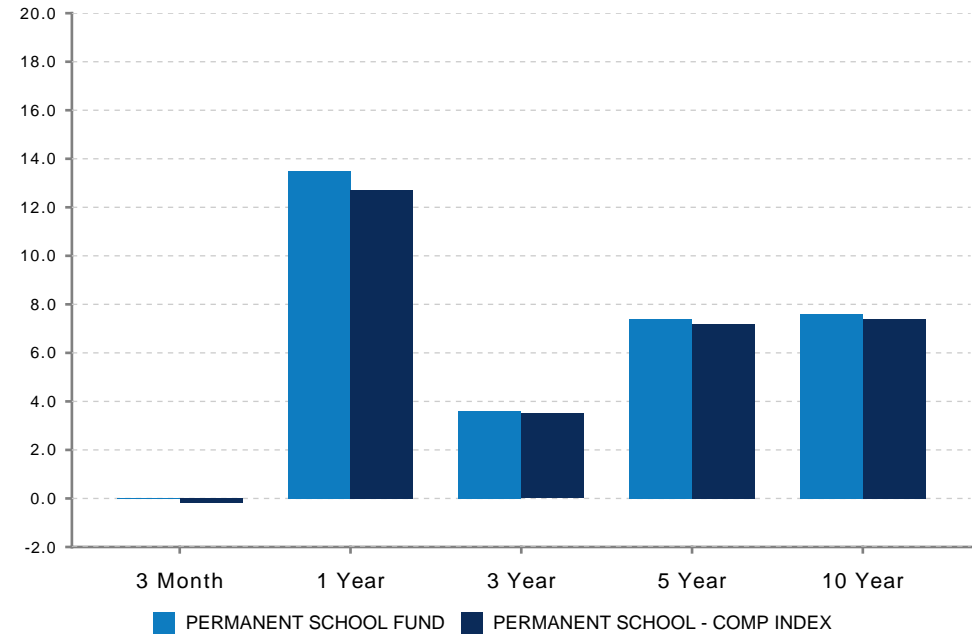
Non-Retirement

**Permanent School Fund**

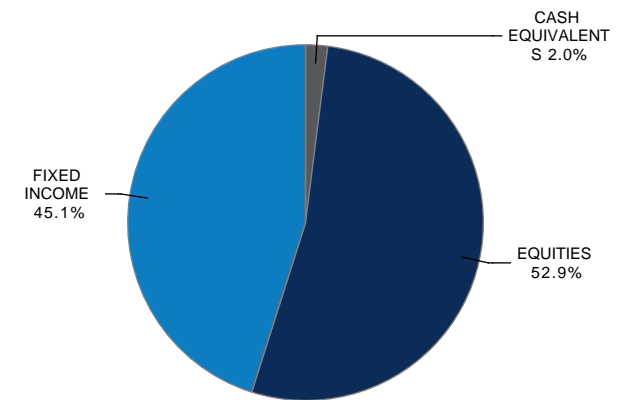
The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is transferred to the school endowment fund and distributed to Minnesota's public schools.

The Permanent School Fund is invested in a balanced portfolio of common stocks and bonds. Common stocks provide the potential for significant capital appreciation, while bonds provide portfolio diversification and a more stable stream of current income.

The stock segment is passively managed to track the performance of the S&P 500. The bond segment is actively managed to add incremental value through sector, security and yield curve decisions. The fixed income benchmark is the Bloomberg U.S. Aggregate. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets of 2% cash, 50% equity, and 48% fixed income. The actual asset mix will fluctuate and is shown in the graph below.



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
PERMANENT SCHOOL FUND	\$2,227,549,902	-0.0%	13.5%	3.6%	7.4%	7.6%
CASH EQUIVALENTS	\$44,580,324	1.2%	5.5%	4.1%	2.6%	1.9%
EQUITIES	\$1,178,078,829	2.4%	25.0%	8.9%	14.5%	13.1%
FIXED INCOME	\$1,004,890,749	-2.8%	2.1%	-2.1%	-0.0%	1.7%
PERMANENT SCHOOL - COMP INDEX		-0.2%	12.7%	3.5%	7.2%	7.4%
Excess		0.2%	0.7%	0.2%	0.2%	0.2%
S&P 500		2.4%	25.0%	8.9%	14.5%	13.1%
Bloomberg U.S. Aggregate		-3.1%	1.3%	-2.4%	-0.3%	1.3%



Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by Prudential. Prior to 12/1/2017 both segments were managed internally by SBI staff. Prior to 7/1/97 the Fund allocation was 100% fixed income.



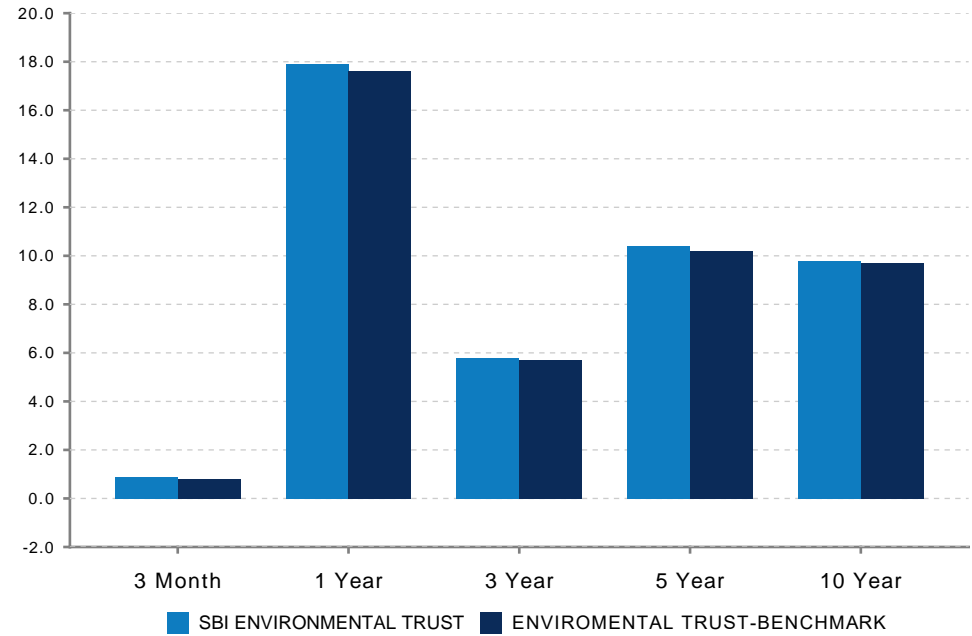
Non-Retirement

**Environmental Trust Fund**

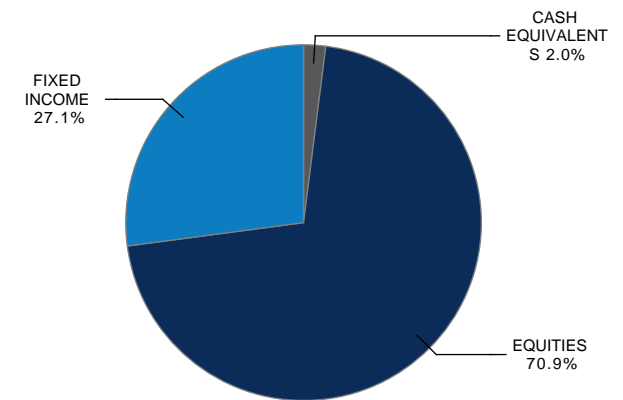
The objective of the Environmental Trust Fund is to increase the market value of the Fund over time in order to increase the annual amount made available for spending within the constraints of maintaining adequate portfolio quality and liquidity.

The Environmental Trust Fund is invested in a balanced portfolio of common stocks and bonds. Common stocks provide the potential for significant capital appreciation, while bonds act as a deflation hedge and provide portfolio diversification.

The bond segment is actively managed to add incremental value through sector, security and yield curve decisions. The stock segment is passively managed to track the performance of the S&P 500. The fixed income benchmark is the Bloomberg U.S. Aggregate. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets of 2% cash, 70% equities, and 28% fixed income. The actual asset mix will fluctuate and is shown in the graph below.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
SBI ENVIRONMENTAL TRUST	\$1,980,962,639	0.9%	17.9%	5.8%	10.4%	9.8%
CASH EQUIVALENTS	\$39,484,404	1.2%	5.5%	4.1%	2.6%	1.9%
EQUITIES	\$1,405,020,672	2.4%	25.0%	8.9%	14.5%	13.1%
FIXED INCOME	\$536,457,563	-2.8%	2.1%	-2.1%	-0.0%	1.7%
ENVIROMENTAL TRUST -BENCHMARK		0.8%	17.6%	5.7%	10.2%	9.7%
Excess		0.1%	0.3%	0.0%	0.2%	0.1%
S&P 500		2.4%	25.0%	8.9%	14.5%	13.1%
Bloomberg U.S. Aggregate		-3.1%	1.3%	-2.4%	-0.3%	1.3%



Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by Prudential. 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.

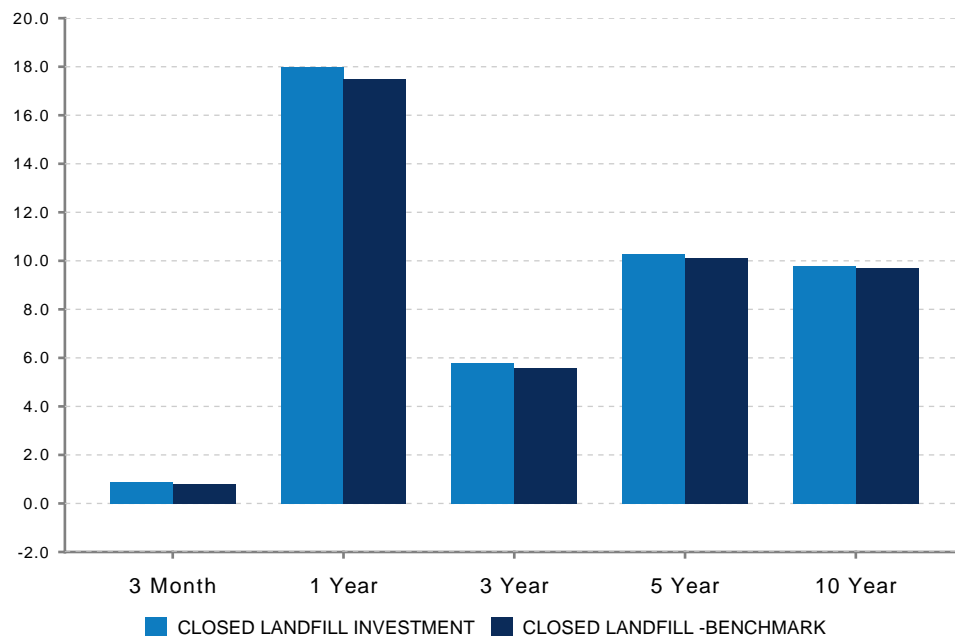


Non-Retirement

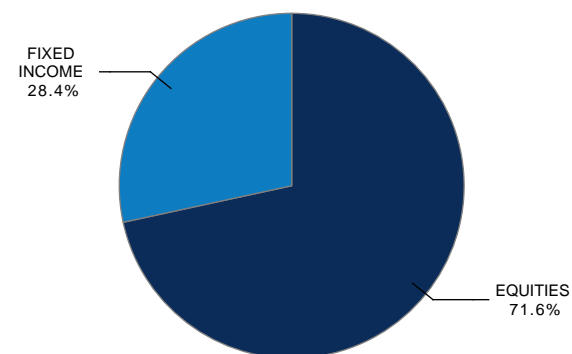
**Closed Landfill Investment Fund**

The investment objective of the Closed Landfill Investment Fund is to increase the market value of the Fund and to reduce volatility to meet future expenditures. By statute, the assets of the Fund were unavailable for expenditure until after the fiscal year 2020 to pay for long-term costs of maintaining the integrity of landfills in Minnesota once they are closed. In FY 2011, \$48 million was transferred out of the general fund leaving a balance of \$1 million in the account. Legislation was enacted in 2013 to replenish the principal and earnings back into the fund and in FY 2014 a repayment was made in the amount of \$64.2 million. In 2015, legislation was passed which repealed any further repayments.

The bond segment is actively managed to add incremental value through sector, security and yield curve decisions. The stock segment is managed to passively track the performance of the S&P 500. The fixed income benchmark is the Bloomberg U.S. Aggregate. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets of 70% equities and 30% fixed income. The actual asset mix will fluctuate and is shown in the graph below.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
CLOSED LANDFILL INVESTMENT	\$158,758,210	0.9%	18.0%	5.8%	10.3%	9.8%
EQUITIES	\$113,687,860	2.4%	25.0%	8.9%	14.5%	13.1%
FIXED INCOME	\$45,070,350	-2.8%	2.1%	-2.1%	-0.0%	1.7%
CLOSED LANDFILL -BENCHMARK		0.8%	17.5%	5.6%	10.1%	9.7%
Excess		0.1%	0.5%	0.2%	0.1%	0.1%
S&P 500		2.4%	25.0%	8.9%	14.5%	13.1%
Bloomberg U.S. Aggregate		-3.1%	1.3%	-2.4%	-0.3%	1.3%



Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by Prudential. 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.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>NON RETIREMENT EQUITY INDEX - MELLON</b>	<b>3,699,362,062</b>	<b>2.4</b>	<b>8.4</b>	<b>25.0</b>	<b>8.9</b>	<b>14.5</b>	<b>13.1</b>	<b>10.6</b>	<b>07/1993</b>
S&P 500 (DAILY)		2.4	8.4	25.0	8.9	14.5	13.1	10.6	07/1993
Excess		-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	
<b>NON RETIREMENT FIXED INCOME - PRUDENTIAL</b>	<b>1,794,164,425</b>	<b>-2.8</b>	<b>2.3</b>	<b>2.1</b>	<b>-2.1</b>	<b>-0.0</b>	<b>1.7</b>	<b>5.0</b>	<b>07/1994</b>
Bloomberg U.S. Aggregate		-3.1	2.0	1.3	-2.4	-0.3	1.3	4.5	07/1994
Excess		0.2	0.3	0.8	0.3	0.3	0.4	0.5	
<b>ASSIGNED RISK FIXED INCOME - RBC</b>	<b>220,840,675</b>	<b>-1.7</b>	<b>2.1</b>	<b>2.3</b>	<b>-0.4</b>	<b>0.6</b>	<b>1.3</b>	<b>4.2</b>	<b>07/1991</b>
RBC Custom Benchmark		-1.7	2.2	2.4	-0.5	0.5	1.2	4.3	07/1991
Excess		-0.0	-0.1	-0.1	0.0	0.1	0.1	-0.1	
MET COUNCIL OPEB BOND POOL	123,990,603	-0.8	2.6	3.6	0.6	0.9			02/2009
<b>Duluth Laddered Bond</b>	<b>107,172,670</b>	<b>-5.7</b>	<b>0.3</b>					<b>1.2</b>	<b>07/2024</b>
<b>NON RETIREMENT CASH ACCOUNT</b>	<b>725,703,940</b>	<b>1.2</b>	<b>2.6</b>	<b>5.5</b>	<b>4.1</b>	<b>2.6</b>		<b>2.5</b>	<b>12/2017</b>
ICE BofA US 3-Month Treasury Bill		1.2	2.6	5.3	3.9	2.5		2.3	12/2017
Excess		0.1	0.1	0.2	0.2	0.1		0.1	

Note:

RBC is the manager for the fixed income portion of the Assigned Risk Account. RBC changed its name from Voyager Asset Management on 1/1/2010. The current benchmark is the Bloomberg U.S. Government Intermediate Index. Prior to 7/1/11 the Voyager 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.

Prior to 12/1/17 the Non Retirement Equity Index and Non Retirement Fixed Income accounts were managed internally by SBI staff.

In addition to the Non-Retirement Funds listed on the previous pages, the Non Retirement Equity Index and the Non Retirement Fixed Income accounts also include the assets of various smaller Miscellaneous Trust Accounts and Other Post Employment Benefits.

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Quarterly Report

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# State Cash

## December 31, 2024



## 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.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
Treasurer's Cash	28,579,573,816	1.2	5.4	3.6	2.4	1.7
iMoneyNet Money Fund Average-All Taxable		1.1	4.9	3.7	2.3	1.5

### Other State Cash Accounts

Due to differing investment objectives, strategies, and time horizons, some State agencies' accounts are invested separately. 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.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
Debt Service	94,370,537	-1.2	1.2	1.6	2.0	1.9
Housing Finance	1,001,692,288	1.0	5.0			





## Addendum

### 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

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### **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

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### **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.

