
INVESTMENT ADVISORY COUNCIL

OF THE MINNESOTA STATE BOARD OF INVESTMENT

**INVESTMENT ADVISORY COUNCIL
MEETING
November 19, 2024**



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

November 19, 2024

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AGENDA
INVESTMENT ADVISORY COUNCIL MEETING

Tuesday, November 19, 2024
12:00 p.m.
Retirement Systems Building
Room 106 – Main Floor
60 Empire Drive, St. Paul, MN

TAB

1. Call to Order

2. Approval of Minutes of August 12, 2024	Motion Needed
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3. Report from the Executive Director (J. Schurtz/A. Christensen)

A. Quarterly Performance Summary	A
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B. Administrative Report	B
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4. Asset Allocation Study Update (J. Schurtz/E. Sonderegger)	C
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5. Public Markets Investment Program Report (A. Krech/E. Pechacek)	D Motion Needed
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6. Private Markets Investment Program Report (J. Stacy/C. Boll)	E Motion Needed
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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
August 12, 2024
IAC Meeting Minutes

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Minutes Investment Advisory Council Meeting August 12, 2024

The Investment Advisory Council (IAC) met at 12:00 p.m. on Monday, August 12, 2024, in Room 106 of Retirement Systems Building, 60 Empire Drive, St. Paul, MN 55103.

MEMBERS PRESENT: Doug Anderson, Kim Faust, Erin Campbell, Peggy Ingison, Amy Jensen, Erin Leonard, Gary Martin, Dan McConnell, Ify Onyiah, Nancy Orr, Dennis Santos, Jay Stoffel, Sunil Swami, Jen Wilson, and Shawn Wischmeier.

MEMBERS ABSENT: Denise Anderson, and Carol Peterfeso.

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

OTHERS ATTENDING Katie Comstock and Dan Gordon, Aon Investments; Stephanie Sorg, Nahom Kebede and Gordon Latter, Meketa Investment Group; Jake Smith, Governor's Office; Dana Mitchell and Jeff Lin, Attorney General's Office; Ramona Advani, State Auditor's Office; Justin Erickson, Secretary of State's Office; and Jennifer Hassemer, Minnesota Management and Budget.

Call to Order

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

Approval of IAC Minutes

The minutes of the May 15, 2024, meeting were approved.

Performance Summary

Executive Director Jill 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 June 30, 2024:

AUM: The SBI was responsible for \$146 billion in assets, of which the Combined Funds represented \$93.7 billion.

Performance: The Combined Funds returned 1.7% for the quarter and 12.3% for the fiscal year ending June 30, 2024. The Combined Funds exceeded its long-term objectives by outperforming its Composite Index for the ten-year time-period and provided a real rate of return above inflation over a 20-year time-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 25th percentile for the quarter and the 17th percentile for the year.

Executive Director's Administrative Report

Ms. Schurtz referred members to Tab B of the meeting materials and stated that the SBI was ahead of budget due to the timing of new hires and a shift of a portion of renovation and moving expenses to the Fiscal Year 25 budget.

Organizational Updates

Deputy Executive Director Andy Christensen announced organizational updates, which included a new information technology staff member and two new hires in the Financial Services group. He also introduced the summer interns, who are a mix of undergrad and grad students from around the Twin Cities. Mr. Christensen gave an update on the office remodeling project, which is expected to be completed within the next few months.

Asset Allocation Study

Ms. Schurtz introduced Deputy Chief Investment Officer Erol Sonderegger who presented an update on the asset allocation (AA) study currently underway. As a part of the AA update, Katie Comstock, a partner at AON Investment and general investment consultant to the State Board of Investment, presented a benchmarking overview, and Managing Director, Private Markets and Active Equities Andrew Krech discussed the SBI's approach to active v. passive management and net performance.

Private Markets Investment Program Report

Ms. Schurtz referred members to Tab D of the meeting materials for the Private Markets Investment Program Report. Cassie Boll, Jon Stacy, and members of the Private Markets team presented four private market recommendations: BlackRock LTFC II; Summit Partners Growth Equity Fund XII; Thoma Bravo Fund XVI; and Thomas H. Lee Equity Fund X.

A motion was made that the IAC endorse Staff's recommendation to invest in the four private market 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 12:58 p.m.

Respectfully submitted,



Jill E. Schurtz
Executive Director and
Chief Investment Officer

TAB A

Quarterly Performance Summary

September 30, 2024

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Quarterly Report

Performance Summary

September 30, 2024



Description of SBI Investment Programs

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.

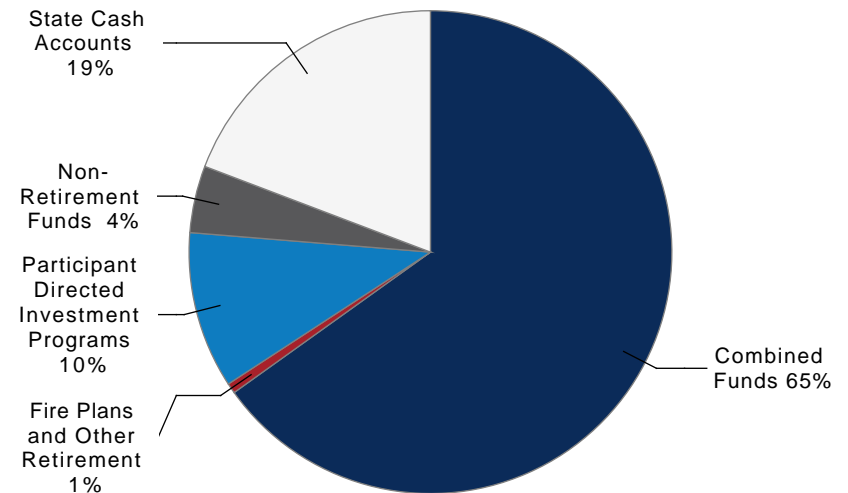
State Cash

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>
Combined Funds	\$97,619
Fire Plans + Other Retirement Plans	\$1,025
Participant Directed Investment Program	\$15,730
State Deferred Compensation Plan	\$10,696
Health Care Savings Plan	\$2,181
Unclassified Employees Retirement Plan	\$424
Hennepin County Supplemental Retirement Plan	\$186
PERA Defined Contribution Plan	\$106
Minnesota College Savings Plan	\$2,085
Minnesota Achieving a Better Life Experience Plan	\$51
Non-Retirement Funds	\$6,728
Assigned Risk Plan	\$277
Permanent School Fund	\$2,240
Environmental Trust Fund	\$1,973
Closed Landfill Investment Fund	\$157
Miscellaneous Trust Funds	\$1,035
Other Postemployment Benefits Accounts	\$1,046
State Cash	\$28,813
Invested Treasurer's Cash	\$27,633
Other State Cash Accounts	\$1,180
Total SBI AUM	\$149,915



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

<u>Comparison to Objective</u>		
Match or Exceed Composite Index (10 yr.)		<u>10 Year</u>
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.	Combined Funds	8.8%
	<i>Combined Funds - Composite Index</i>	<i>8.6</i>
	Excess	0.2
Provide Real Return (20 yr.)		<u>20 Year</u>
Provide returns that are 3-5 percentage points greater than inflation over the latest 20 year period.	Combined Funds	8.6%
	<i>CPI-U</i>	<i>2.6</i>
	Excess	6.0

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



Combined Funds Summary

Combined Funds Change in Market Value (\$Millions)

	One Quarter
COMBINED FUNDS	
Beginning Market Value	\$93,679
Net Contributions	-674
Investment Return	4,614
Ending Market Value	97,619

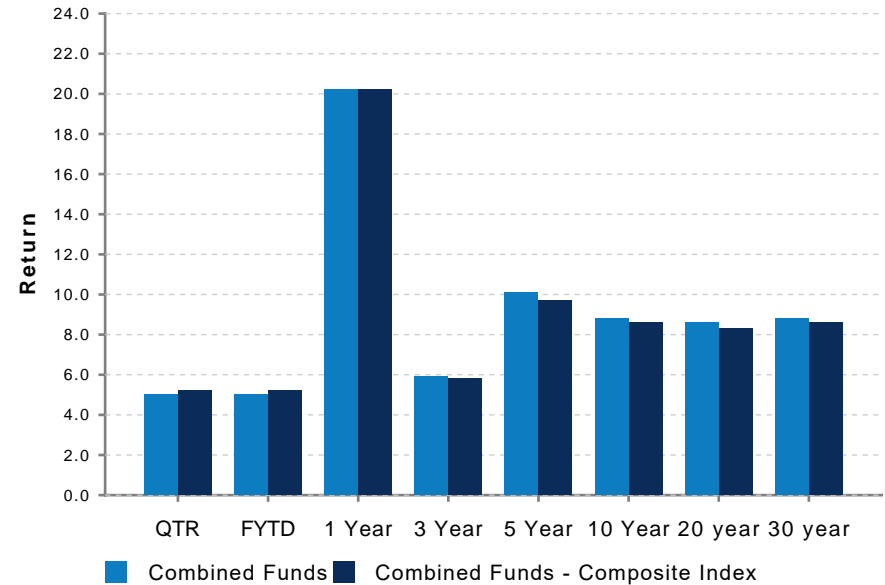
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

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.

	QTR	FYTD	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr	30 Yr
Combined Funds	5.0%	5.0%	20.2%	5.9%	10.1%	8.8%	8.6%	8.8%
Combined Funds-Composite Index	5.2%	5.2%	20.2%	5.8%	9.7%	8.6%	8.3%	8.6%
Excess	-0.2%	-0.2%	-0.0%	0.1%	0.4%	0.2%	0.2%	0.2%

Asset Growth

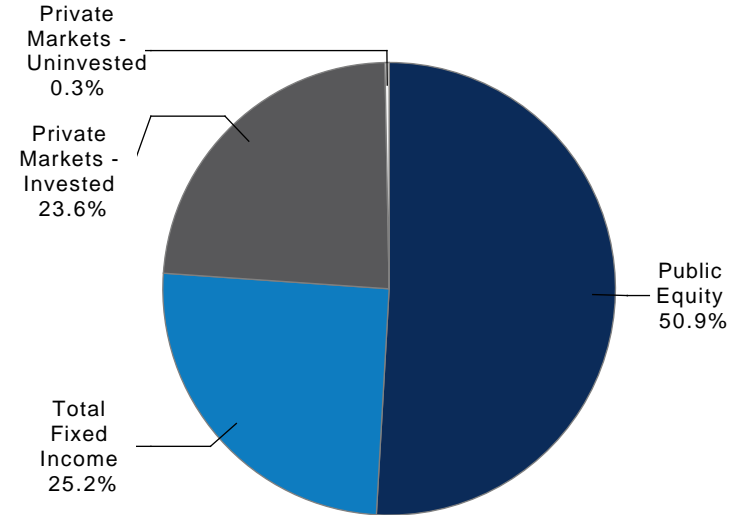


Combined Funds Summary

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.

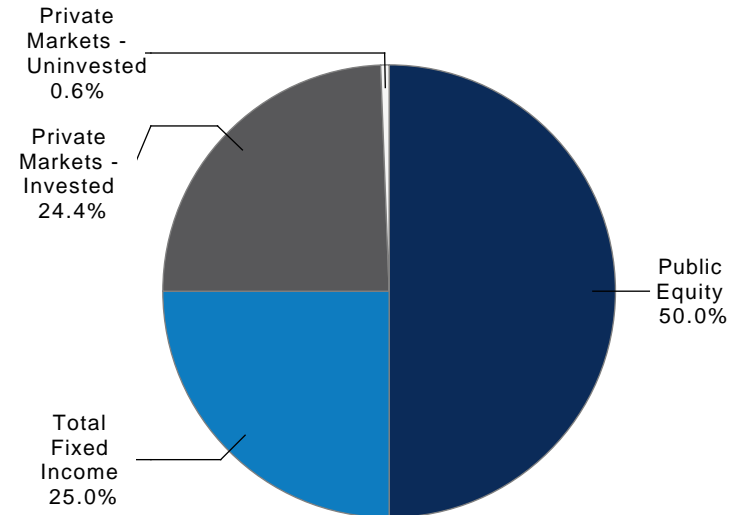
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$49,649	50.9%	50.0%
Total Fixed Income	24,630	25.2	25.0
Private Markets - Total	23,340	23.9	25.0
Private Markets - Invested	23,067	23.6	
Private Markets - Uninvested	273	0.3	
TOTAL	97,619	100.0	



Composite Index Comparison

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

	<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	24.4	Private Markets
Private Markets - Uninvested	0.6	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	\$49.6	50.9%	50.0%	6.2%	6.2%	31.5%	8.4%	13.0%	10.6%	9.4%	9.5
Public Equity Benchmark				6.8	6.8	31.9	8.3	12.7	10.5	9.3	9.2
Excess				-0.6	-0.6	-0.4	0.1	0.3	0.1	0.1	0.3
Domestic Equity	32.8	33.6	33.5	6.2	6.2	35.5	10.2	15.4	12.8	10.5	10.4
Domestic Equity Benchmark				6.2	6.2	35.2	10.3	15.2	12.8	10.6	10.5
Excess				-0.0	-0.0	0.3	-0.1	0.2	-0.0	-0.1	-0.1
International Equity	15.8	16.2	16.5	6.4	6.4	23.8	5.1	8.5	5.9	6.6	6.1
International Equity Benchmark				8.1	8.1	25.4	4.1	7.5	5.2	6.1	5.4
Excess				-1.7	-1.7	-1.6	1.0	0.9	0.7	0.5	0.7
Global Equity	1.1	1.1	0.0	5.6	5.6	28.0	1.5				
MSCI AC World Index (net)				6.6	6.6	31.8	8.1				
Excess				-1.0	-1.0	-3.7	-6.6				

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	\$24.6	25.2%	25.0%	5.1%	5.1%	11.9%	-1.2%	0.8%	2.5%	3.7%	5.1%
Total Fixed Income Benchmark				5.0%	5.0%	10.9%	-1.7%	0.2%	2.0%	3.3%	4.7%
Excess				0.1%	0.1%	1.0%	0.5%	0.6%	0.5%	0.4%	0.4%
Core/Core Plus	\$5.4	5.6%	5.0	5.3%	5.3%	12.8%	-1.2%	1.0%	2.4%	3.7%	5.1%
Core Bonds Benchmark				5.2%	5.2%	11.6%	-1.4%	0.3%	1.8%	3.2%	4.7%
Excess				0.1%	0.1%	1.3%	0.2%	0.7%	0.6%	0.5%	0.4%
Return Seeking Fixed Income	\$4.8	5.0%	5.0	5.0%	5.0%	14.0%	1.2%				
Bloomberg U.S. Aggregate				5.2%	5.2%	11.6%	-1.4%				
Excess				-0.2%	-0.2%	2.5%	2.6%				
Treasury Protection	\$9.4	9.7%	10.0	6.6%	6.6%	13.0%	-4.7%	-1.9%			
Bloomberg Treasury 5+ Year				6.5%	6.5%	12.8%	-4.7%	-1.9%			
Excess				0.0%	0.0%	0.2%	0.0%	0.0%			
Laddered Bond + Cash	\$4.9	5.0%	5.0	1.6%	1.6%	5.7%	3.5%	2.3%	1.7%	1.8%	3.1%
ICE BofA US 3-Month Treasury Bill				1.4%	1.4%	5.5%	3.5%	2.3%	1.6%	1.6%	2.5%
Excess				0.2%	0.2%	0.3%	0.0%	-0.0%	0.1%	0.2%	0.6%

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	2.2%	2.2%	7.8%	8.5%	13.0%	11.2%	13.5%	12.6%	13.6%
Private Markets -Uninvested(1)	1.1%	1.1%	5.3%	0.3%					
Private Equity	2.5%	2.5%	9.2%	8.1%	15.8%	15.1%	15.5%	13.8%	15.6%
Private Credit	1.5%	1.5%	8.4%	11.7%	11.6%	12.2%	12.5%	12.2%	
Resources	2.0%	2.0%	8.0%	11.1%	5.7%	0.3%	12.5%	13.0%	12.9%
Real Estate	0.9%	0.9%	-4.6%	5.9%	8.5%	9.7%	8.7%	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>09/30/2024</u> <u>(\$ millions)</u>	<u>09/30/2024</u> <u>Weights</u>	<u>Category Range</u>	
<u>Growth - Appreciation</u>				
Public Equity	\$ 49,671.39	50.9%		
Private Equity	\$ 16,705.43	17.1%		
Non-Core Real Assets	\$ 3,703.78	3.8%		
	\$ 70,080.61	71.8%	<i>50%</i>	<i>75%</i>
<u>Growth - Income-oriented</u>				
Core Fixed Income	\$ 5,447.76	5.6%		
Private Credit	\$ 2,071.70	2.1%		
Return-Seeking Fixed Income	\$ 4,842.71	5.0%		
	\$ 12,362.17	12.7%	<i>15%</i>	<i>30%</i>
<u>Real Assets</u>				
Core Real Estate		0.0%		
Real Assets	\$ 521.46	0.5%		
	\$ 521.46	0.5%	<i>0%</i>	<i>10%</i>
<u>Inflation Protection</u>				
TIPS		0.0%		
Commodities		0.0%		
		0.0%	<i>0%</i>	<i>10%</i>
<u>Protection</u>				
U.S. Treasuries	\$ 9,444.37	9.7%		
	\$ 9,444.37	9.7%	<i>5%</i>	<i>20%</i>
<u>Liquidity</u>				
Cash	\$ 5,210.86	5.3%		
	\$ 5,210.86	5.3%	<i>0%</i>	<i>5%</i>
<u>Opportunity</u>				
Opportunity		0.0%		
		0.0%	<i>0%</i>	<i>10%</i>
Total	\$ 97,619.47	100%		
<u>Illiquid Asset Exposure</u>	\$ 23,002.37	23.6%	<i>0%</i>	<i>30%</i>



Volatility Equivalent Benchmark Comparison

	As of September 30, 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>25-year</i>	<i>30-year</i>
SBI Combined Funds Return	20.2%	5.9%	10.1%	8.8%	9.8%	8.6%	7.4%	8.8%
Volatility Equivalent Benchmark Return			6.3%	6.1%	6.7%	6.4%	5.7%	6.8%
Value Added			3.7%	2.7%	3.1%	2.2%	1.7%	2.0%
Standard Deviation: Benchmark = Combined Funds			10.7%	9.1%	8.9%	9.4%	9.6%	9.6%
Benchmark Stock Weight			50%	54%	56%	56%	58%	60%
Benchmark Bond Weight			50%	46%	44%	44%	42%	40%

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

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Combined Funds Summary

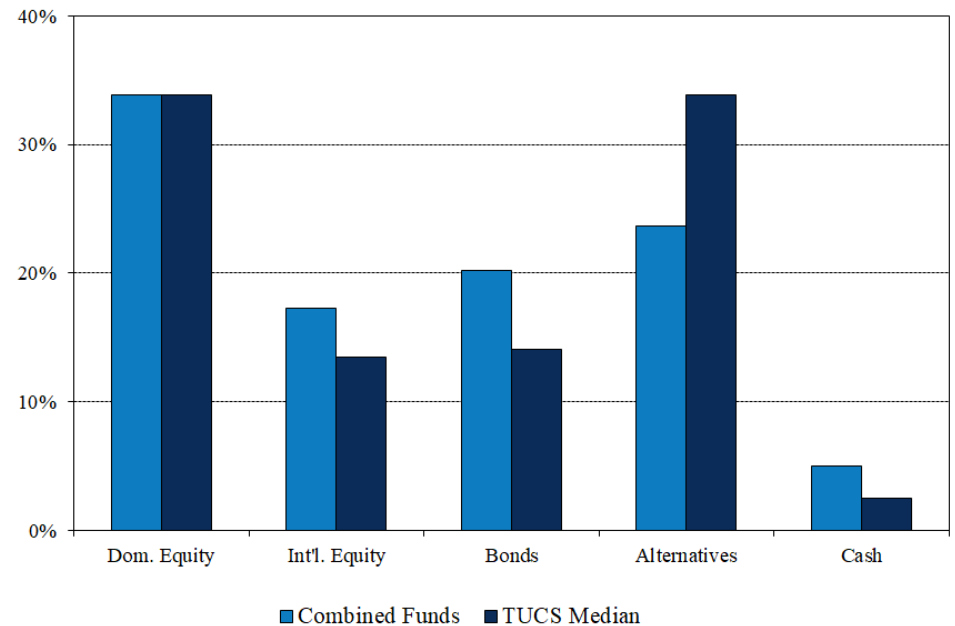
Asset Mix Compared to Other Pension Funds

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	49,649	50.9
Total Fixed Income	24,630	25.2
Private Markets - Invested	23,067	23.6
Private Markets - Uninvested	273	0.3
TOTAL	97,619	100.0



	<u>Domestic Equity</u>	<u>International Equity</u>	<u>Bonds</u>	<u>Alternatives</u>	<u>Cash</u>
Combined Funds	33.9%	17.3%	20.2%	23.6%	5.0%
Median in TUCS	33.9%	13.5%	14.1%	33.9%	2.5%



Combined Funds Summary

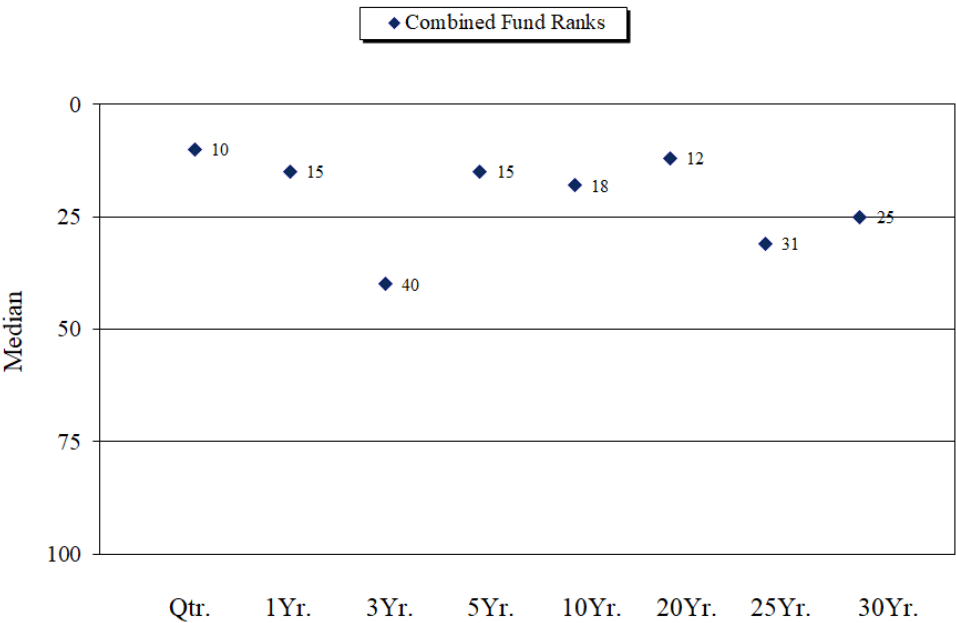
Performance Compared to Other Pension Funds

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.

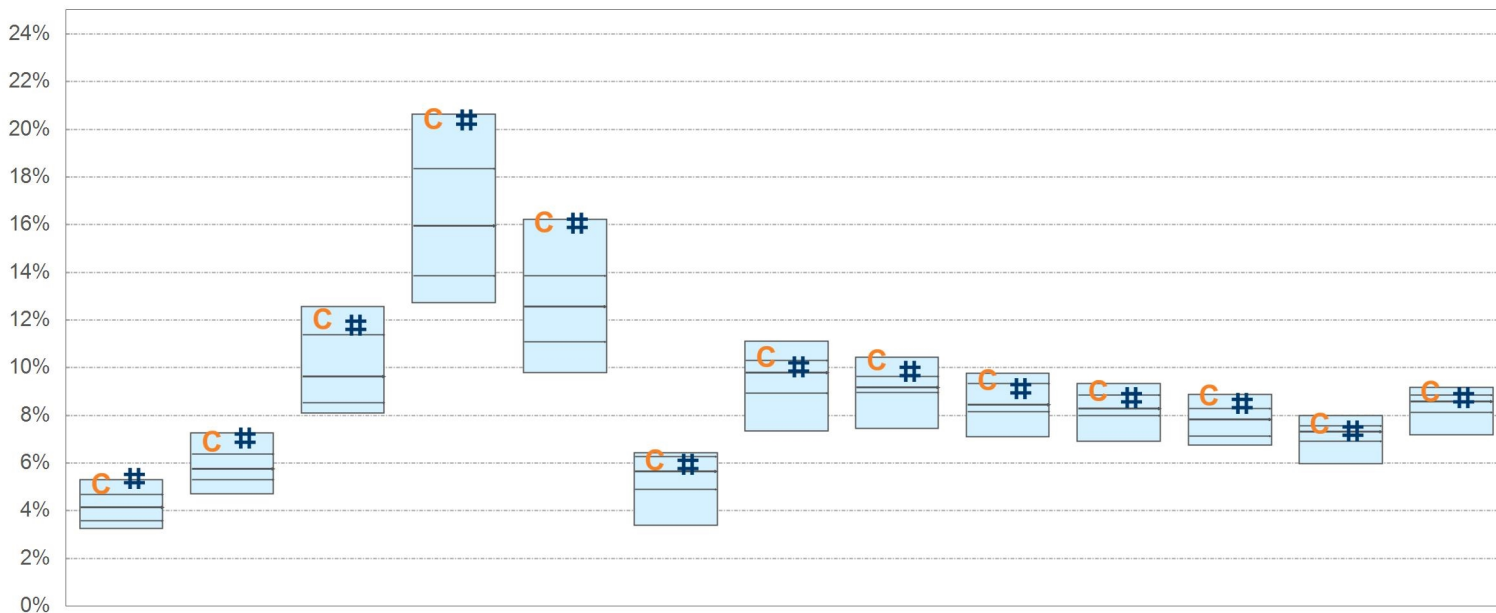


Periods Ended 09/30/2024								
	Qtr	1 Yr	3 Yrs	5 Yrs	10 Yrs	20 Yrs	25 Yrs	30 Yrs
Combined Funds	10th	15th	40th	15th	18th	12th	31st	25th
Percentile Rank in TUCS								

Minnesota State Board of Investments Performance Comparison

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

Cumulative Periods Ending : September 30, 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	5.31	7.26	12.58	20.64	16.24	6.42	11.11	10.45	9.77	9.34	8.89	7.99	9.18
25th	4.68	6.38	11.37	18.36	13.85	6.28	10.32	9.64	9.35	8.86	8.28	7.56	8.86
50th	4.15	5.75	9.64	15.97	12.58	5.66	9.79	9.18	8.46	8.30	7.83	7.31	8.59
75th	3.58	5.29	8.52	13.87	11.10	4.90	8.94	8.97	8.16	7.98	7.12	6.92	8.13
95th	3.26	4.72	8.09	12.73	9.79	3.38	7.35	7.45	7.11	6.91	6.76	5.98	7.19

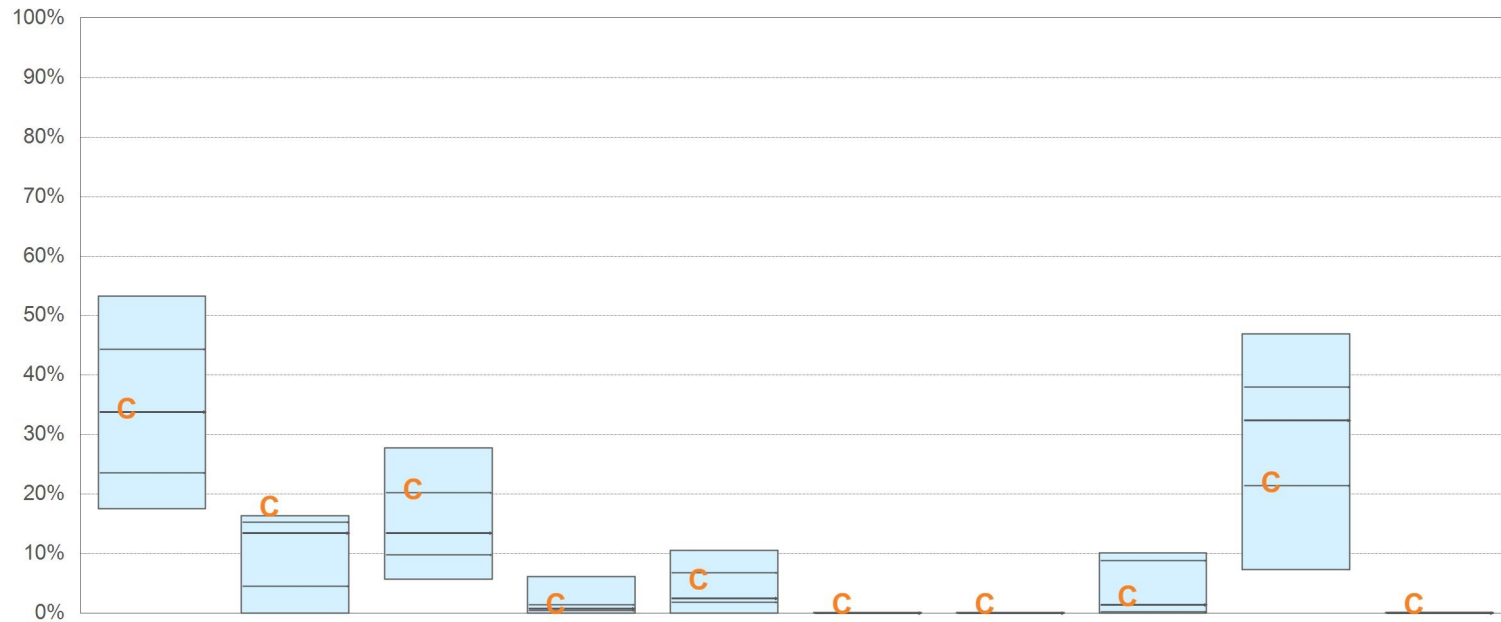
No. Of Obs	21	21	21	21	21	21	21	21	20	20	17	16	16
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C Combined Funds	4.97 (10)	6.76 (15)	11.89 (15)	20.30 (15)	15.96 (15)	5.98 (40)	10.30 (30)	10.17 (15)	9.35 (25)	8.89 (18)	8.69 (12)	7.51 (31)	8.86 (25)
# SBI Combined Funds Ind	5.19 (5)	6.89 (5)	11.62 (20)	20.24 (15)	15.91 (15)	5.78 (45)	9.88 (45)	9.68 (20)	8.96 (25)	8.58 (25)	8.34 (18)	7.18 (56)	8.59 (50)

Minnesota State Board of Investments

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

Quarter Ending September 30, 2024



Percentile Rankings	US Equity	Non-US Equity	US Fixed	Non-US Fixed	Cash	Convertible	GIC GAC	Real Estate	Alternative Investments	Other
5th	53.32	16.37	27.78	6.18	10.60	0.06	0.13	10.09	46.96	0.10
25th	44.30	15.31	20.22	1.35	6.81	0.00	0.00	8.81	38.04	0.09
50th	33.85	13.50	13.41	0.70	2.48	0.00	0.00	1.44	32.45	0.00
75th	23.58	4.49	9.79	0.47	1.82	0.00	0.00	0.20	21.41	0.00
95th	17.56	0.00	5.74	0.00	0.04	0.00	0.00	0.00	7.37	0.00
C Combined Funds	33.85 (50)	17.29 (1)	20.22 (25)	0.00 (100)	5.02 (35)	0.00 (100)	0.00 (100)	2.21 (43)	21.42 (75)	0.00 (100)

TAB B

Executive Director's Administrative Report

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DATE: November 12, 2024

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 September 30, 2024, is included as **Attachment A**.

2. FY24 Audit Report

The Legislative Auditor is working on the financial audit of SBI operations for FY24. We will inform you of the results upon completion of the audit.

3. FY24 Annual Report

A copy of the SBI's annual report for FY24 will be available to the Board Members/Designees and IAC Members upon completion of the FY24 audit. We will notify you when available.

4. Meeting Dates for Calendar 2025

IAC

Tuesday, February 25, 2025
Tuesday, May 13, 2025
Wednesday, August 13, 2025
Wednesday, November 19, 2025

SBI

Wednesday, March 5, 2025
Thursday, May 22, 2025
Wednesday, August 20, 2025
Wednesday, December 3, 2025

5. 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.

In order to facilitate an efficient and orderly liquidation, in April 2022 the SBI consolidated the relevant holdings across accounts under the management of one “liquidation manager”. Staff receives monthly reports from the SBI’s custodian bank concerning SBI holdings of companies on the restricted list, as well as periodic reports from the liquidation manager regarding market conditions and progress towards liquidation of the remaining holdings.

In the third calendar quarter of 2024, seven Russian holdings were sold. As of September 30, 2024, eight holdings and Russian currency 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 September 24, 2024, staff sent a letter to each applicable external manager containing the most recent restricted list.

6. 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 from Institutional Shareholder Services, Inc. (ISS) regarding companies with operations in Iran. 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 (as defined in 11A.244), 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 September 24, 2024, staff sent a letter to each applicable external manager containing the most recent restricted list.

7. 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 Institutional Shareholder Services, Inc. (ISS) to identify companies that meet the criteria set forth in the resolution.

The resolution required the removal of the initially identified companies 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 September 30, 2024, the SBI portfolio held no thermal coal-connected assets.

On September 24, 2024, staff sent a letter to each applicable external manager containing the most recent restricted list.

8. 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 SEPTEMBER 30, 2024

ITEM	FISCAL YEAR 2025 BUDGET	FISCAL YEAR 2025 9/30/2024
PERSONNEL SERVICES		
FULL TIME EMPLOYEES	\$ 12,500,000	\$ 2,677,460
PART TIME EMPLOYEES	50,000	24,633
MISCELLANEOUS PAYROLL	200,000	-
SUBTOTAL	\$ 12,750,000	\$ 2,702,093
STATE OPERATIONS		
RENTS & LEASES	\$ 435,000	\$ 30,403
REPAIRS/ALTERATIONS/MAINTENANCE	2,066,000	986,624
PRINTING & BINDING	1,500	81
PROFESSIONAL/TECHNICAL SERVICES/IT PROF	510,000	36,520
COMPUTER SYSTEMS SERVICES	557,011	43,050
COMMUNICATIONS	25,000	1,271
TRAVEL, IN-STATE	3,000	49
TRAVEL, OUT-STATE	236,500	47,900
SUPPLIES	50,000	16,514
EQUIPMENT	372,452	35,499
EMPLOYEE DEVELOPMENT	392,400	28,006
OTHER OPERATING COSTS	210,000	54,012
INDIRECT COSTS	427,537	2,396
SUBTOTAL	\$ 5,286,400	\$ 1,282,325
TOTAL ADMINISTRATIVE BUDGET	\$ 18,036,400	\$ 3,984,419

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TAB C

Asset Allocation Study Update

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DATE: November 12, 2024

TO: Members, Investment Advisory Council

FROM: SBI Staff

SUBJECT: Update on Asset Allocation Study

Staff will provide an update on the Asset Allocation Study currently underway at the Investment Advisory Council meeting on November 19, 2024.

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TAB D

Public Markets Investment Program Report

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DATE: November 12, 2024

TO: Members, Investment Advisory Council

FROM: SBI Staff

SUBJECT: Emerging Markets Equity Manager Search and Recommendation

Executive Summary

As the result of two manager terminations during calendar year 2024, the SBI's Emerging Markets (EM) Equity portfolio is currently overallocated to passive management, and the four remaining EM managers are fully allocated. Staff determined that adding a new manager to the EM portfolio would support the goal of maintaining the portfolio's active management allocation.

SBI staff conducted an in-depth search for emerging markets managers using a detailed and rigorous process. Specifically, staff endeavored to identify the best manager from a group of high-quality and highly differentiated managers. Working from an initial list of over thirty managers, staff interviewed 11 managers and conducted detailed investment due diligence on six finalist firms.

As a result of the search process and numerous internal meetings with the senior investment team, Staff is recommending that the SBI retain **Fidelity Institutional Asset Management** to implement its **Concentrated Emerging Markets strategy**.

Background

SBI Staff terminated two managers within the Active Emerging Markets portfolio during calendar year 2024. The decisions were arrived at separately. The assets from the first termination were distributed across the remaining active and passive EM managers in April. The assets from the second manager were received in cash during the third quarter and are being managed by NISA in a transition equity overlay account benchmarked to the MSCI EM Index.

As of 9/30/24, the EM portfolio consisted of four active managers (\$2.48B, 61% of EM portfolio), one passive manager (\$1.24B, 31% of EM portfolio) and one transition manager (\$0.35B, 8% of EM portfolio). Prior to the recent terminations, the active manager component of the portfolio was approximately 75% of the total EM portfolio.

Staff believes that emerging markets is an asset class which offers significant opportunities for active management to add value and that the SBI's EM portfolio should emphasize active management strategies. Staff targets an allocation to actively managed strategies of between 75-80%. Consequently, SBI staff initiated a search of emerging markets managers to supplement the current manager lineup.

Emerging Markets Manager Search Process

The Emerging Markets manager search process was conducted with a number of objectives, including:

1. Staff sought to identify a group of high quality, highly differentiated managers who vary in terms of organization type and size, team structure, investment process, and sources of return.
2. Product assets of \$2 billion or greater;
3. Stable, highly qualified investment staff; and
4. Focus on strong long-term relative strategy performance.

Staff screened managers from a range of sources, including Staff's internal research pipeline, recommendations from consultants, input from peer institutions, and a review of eVestment universe data to arrive at a list of 31 potential emerging markets equity managers. Staff conducted a high-level review of all screened managers to determine which managers would make it onto the "long list" for detailed due diligence. The team's goal was to develop a slate of managers that were diverse in terms of style, process, firm size, team structure, and risk level. The team also prioritized managers with strong performance, good referrals, and existing partnerships with the SBI. Staff arrived at a long list of 11 managers.

Staff conducted meetings with each manager, reviewed information from eVestment, Aon, and Meketa to develop a detailed research opinion of each manager. Based on this research and working with the senior investment team, Staff prioritized six managers for full investment due diligence. The six selected managers varied in terms of investment methodology, organization type, team structure, style exposures and active risk level.

Staff performed in-depth due diligence including the evaluation of a detailed questionnaire and written follow-ups sent to each manager. Staff conducted reference checks and conferred with research teams at Aon and Meketa for their most up-to-date research on the six managers. Finally, all six managers visited SBI's offices for half-day visits. The visits were split between a two-hour presentation to the senior investment team and a two-hour research session with the Active Equities Team to answer any remaining investment due diligence questions.

After meeting with all six candidates, SBI staff convened numerous times to discuss the managers' relative strengths, portfolio fit and other considerations. Staff also met again with both consultants to discuss specific findings uncovered in the investment diligence process.

Key Considerations in Manager Selection: Fidelity Concentrated Emerging Markets

Staff identified several characteristics of the Fidelity Concentrated Emerging Markets strategy that led to its recommendation for inclusion in the portfolio:

Strong Organization and SBI Experience with Manager. SBI staff has long held a favorable view of the Fidelity platform and organization including both its extensive global analyst corps and other resources like its geopolitical experts. The SBI has been invested with Fidelity for over 25 years. The PDIP Deferred Compensation Plan has been invested in the Fidelity Diversified

International strategy since 1999 and the International Equity Segment has been invested in Fidelity's International Growth product since 2005. Throughout this long relationship, Fidelity has consistently earned the confidence of SBI's investment staff.

Dynamic, Flexible Style. Fidelity is decidedly non-ideological in its approach to investing. They are committed to the idea that no one belief, approach, or process will work well for all companies in all sectors and countries across all market environments. Instead of setting out rigid investment beliefs and seeking out investments that meet those criteria, they aim to outwork the rest of the market by covering more stocks in greater detail than other managers. The approach is also differentiated from SBI's existing set of EM managers.

Highly Experienced Portfolio Manager. PM Sam Polyak has been in the investment industry since 1998 and has deep emerging market experience as an analyst, director of research, and portfolio manager. Mr. Polyak is a member of the international PM team that manages SBI's existing Fidelity International Growth product, which has delivered strong performance. Mr. Polyak is an acknowledged thought leader at the firm.

Balanced Factor Exposure. Fidelity's Concentrated Emerging Markets portfolio is carefully constructed to consistently offer a core holding independent of most investment style tilts. This risk management discipline allows Fidelity to offer a highly idiosyncratic risk profile with a low correlation to the SBI's existing EM managers. Consequently, Staff believes the product will be highly diversifying and reduce total EM portfolio tracking error while outperforming the benchmark over complete market cycles.

Competitive Fee. Fidelity has proposed a highly competitive fee schedule.

Additional information on Fidelity Institutional Asset Management and the Concentrated Emerging Markets strategy is included in **Attachment A beginning on Page 5.**

RECOMMENDATION:

Staff is recommending the retention of Fidelity Institutional Asset Management to implement its Concentrated Emerging Markets strategy and requests the IAC's endorsement of this recommendation for the Board's approval, and that the Board authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate fees and execute a contract with the firm.

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ATTACHMENT A

PUBLIC EQUITY MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Strategy:</i>	FIAM Concentrated Emerging Markets
<i>Type of Strategy:</i>	Public Equity – Emerging Markets - Core
<i>Product Assets:</i>	\$13.7 billion
<i>Fund Manager:</i>	Fidelity Institutional Asset Management
<i>Manager Contact:</i>	Art Greenwood 900 Salem Street, OT2N1 Smithfield, RI 02917

II. Organization and Staff

Fidelity Institutional Investment Management (the “Firm”, “FIAM”, or “Fidelity”) is a global multi-asset class investment manager focused on institutional investors. The FIAM group of companies is wholly owned by FMR LLC, the parent company of Fidelity Investments, which was founded in 1946. FIAM currently manages \$436.0 billion, and parent company FMR manages \$4.4 trillion. FIAM’s 200 equity research professionals operate as an integrated team across sectors, strategies, and geographies. FIAM maintains offices in Boston, London, Hong Kong, and Tokyo.

FMR is led by CEO Abigail P. Johnson. FMR is a privately owned company, and the Johnson family is defined as the controlling group under the Investment Company Act of 1940. The series A shares are entitled to 51% of voting rights and are held by FMR employees. The series B shares are entitled to the other 49% of voting rights and are held predominantly by members of the Abigail P. Johnson family.

The Concentrated Emerging Markets strategy is managed by Lead Portfolio Manager (PM) Sam Polyak (Boston), and Assistant PM (APM) Stephen Lieu (Hong Kong). Mr. Polyak also serves as manager for the Fidelity Advisor Emerging Markets Fund and VIP Emerging Markets Portfolio. Prior to joining Fidelity in June 2010, Mr. Polyak was a Principal and Co-Portfolio Manager at Ninth Wave Capital Management from 2007 to 2009, where he was a founding partner of the long-only and long-short Emerging Markets Equity fund. Previously, he worked as head of emerging markets (EM) research at Oppenheimer Funds from 2005 to 2007, and as a co-portfolio manager, head of EM research, and analyst at Pioneer Investments from 1998 to

2005. He has been in the financial industry since 1998. Mr. Polyak earned his Bachelor of Arts degree in finance from the University of Massachusetts Amherst and his Master of Business Administration degree in finance from New York University Leonard N. Stern School of Business. He is also a CFA® Charterholder.

Mr. Polyak works very closely with his team of 20 analysts, 17 of whom were hired during his tenure at Fidelity. Mr. Polyak prefers to be directly involved in the training and development of analysts from the start of their careers, which he cites as key to building trust within their relationships. Mr. Polyak identifies the ability to be involved from the beginning of the hiring process as the most important resource for him on the Fidelity platform. Mr. Polyak believes the time invested in new hires and interns will be repaid over time as they develop into analysts who become the primary performance drivers of the portfolio.

As a firm, Fidelity believes diversity and inclusion (D&I) are foundational to success. Fidelity has identified five D&I commitments that it executes through its talent recruitment and development processes:

1. *Diversity*. Ensure Fidelity's workforce reflects the diversity of its customers and communities it serves.
2. *Inclusion*. Foster an environment where every associate believes they belong and can thrive.
3. *Opportunity*. Create new value for customers and communities.
4. *Transparency*. Be open about the Firm's diversity and inclusion progress and opportunities for improvement.
5. *Accountability*. Be clear about roles and accountability for all associates.

CEO Abigail Johnson embraces these priorities and expands upon their importance in Fidelity's most recent Diversity & Inclusion report.

III. Investment Strategy

Fidelity believes that stock prices follow earnings, which are often mispriced by investors, particularly when strong management and quality businesses are combined with secular demand drivers within emerging markets. The Concentrated Emerging Markets strategy attempts to minimize active factor exposures through risk management.

The strategy PMs work with the research team and other Fidelity portfolio managers to source bottom-up ideas for the portfolio. Face-to-face company meetings, regional trips, and visits to competitors, suppliers, and customers are all helpful in sourcing new ideas. These trips not only satisfy due diligence requirements but act as potential springboards for identifying thematic trends within industries. The PMs cite quarterly fund reviews as another valuable source of new ideas, particularly for thematic and sector ideas. These reviews bring together a heterogeneous group of PMs across the Fidelity platform to exchange ideas. The strategy also leverages Fidelity's corporate debt team, geopolitical analysis, and corporate governance teams to aid in idea generation and portfolio positioning.

Fidelity boasts one of the world's largest fundamental research teams. Analysts are stratified by both region and sector, with sector teams working together to cover global companies. Fidelity does not promote a single research process; rather they encourage analysts to approach each company in the manner that makes sense for its specific circumstances. As a result, the analysts vary greatly in how they approach research and exhibit different strengths as individual contributors.

While analysts have a good deal of freedom in their research and modeling processes, their work is standardized into a Research Note including rating and price target that is updated every 90 days. Analysts must also maintain up-to-date financial models, though these models will vary greatly by analyst, industry, and company. All research is stored in Equity Workspace, Fidelity's research, portfolio management, risk management, and trading platform. More than 1,900 non-US companies are covered.

The FIAM Concentrated Emerging Markets PM team takes a hands-on approach to stock analysis ahead of portfolio construction. In particular, the PMs meet with company management teams and create their own financial models for all stocks before investing in them. The concentrated nature of the portfolio allows them to be heavily involved in the development of the models alongside the analysts, often walking through them line by line in conjunction with the analysts, adjusting inputs to establish new P/E, upside/downside and price target figures.

The PMs target stocks with structural growth underpinnings, run by proven management teams with clear vision. Businesses with underappreciated operating leverage or temporarily depressed but viable businesses suffering from negative but reversible trends are also considered. Pure valuation is considered irrelevant. Rather, the team approaches valuation from a longer-term view, focusing on where the company will be in a few years and what potential catalysts are in place to achieve that valuation.

The team seeks to build a concentrated portfolio of 50 or fewer stocks. Active weights are typically within 100-500bps of the index, driven by a combination of the portfolio managers' conviction level vs. upside/downside, risk/reward, and liquidity.

The PMs look to exit positions under the following conditions: 1) a breakdown in structural thesis; or 2) the upside/downside becomes less attractive. Positions are reassessed when a price target is hit or risk/reward dynamic shifts. These opportunities are used to refresh the model and reevaluate upside/downside analysis.

Corporate governance is a critical consideration in the selection process. All portfolio companies must meet the corporate governance criteria. Businesses with a history of disregarding or short-changing investor interests are excluded from consideration. Fidelity's in-house corporate governance team is a key part of this process, identifying companies with governance or accounting risks. This consideration is especially important within emerging markets.

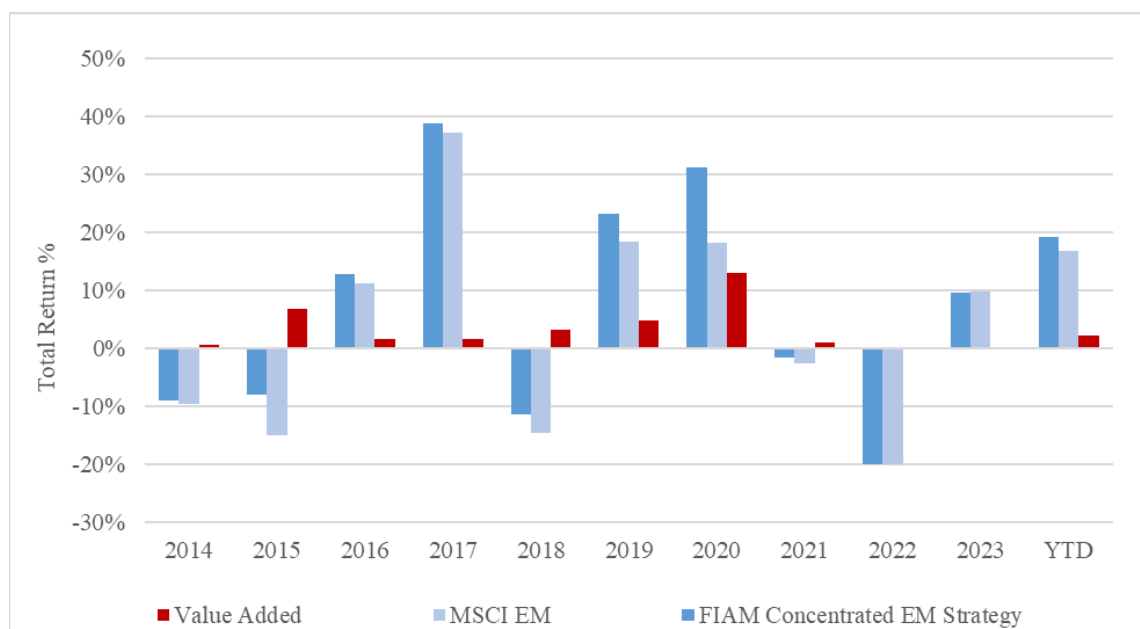
IV. Investment Performance

Historical net-of-fees performance for the Strategy composite as of June 30, 2024, is shown below:

ANNUALIZED RETURNS

As of June 30, 2024	1 Year	3 Year	5 Year	7 Year	Since Inception (8/1/2014)
Portfolio Return	13.7%	-4.5%	6.0%	6.6%	6.0%
Benchmark Return	12.5%	-5.1%	3.1%	3.5%	2.6%
Excess Return	1.2%	0.6%	2.9%	3.1%	3.3%
Tracking Error	4.5%	6.0%	5.3%	5.0%	5.1%
Information Ratio	0.26	0.09	0.54	0.62	0.65

CALENDAR YEAR RETURNS



Performance data provided by eVestment and Fidelity. Net-of-fees performance is calculated by deducting the maximum standard management fee that could have been charged to any client employing this strategy during the time periods shown, and applicable performance fees (if any), exclusive of minimum fee arrangements.

Past returns may not be indicative of future results.

TAB E

Private Markets Investment Program Report

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DATE: November 12, 2024

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	Blackstone Energy Transition Partners IV	up to \$50 million
Private Credit	HPS	HPS Strategic Investment Partners VI	up to \$200 million
Private Equity	IK Investment Partners	IK Small Cap IV Fund	up to \$125 million
Private Equity	KKR	KKR North America Fund XIV	up to \$400 million
Private Equity	Nordic Capital	Nordic Capital Evolution Fund II	up to \$125 million

New Managers:

Real Assets	EQT	EQT Infrastructure VI	up to \$125 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 September 30, 2024

Combined Funds Market Value \$97,619,467,565

	% of Combined Funds	Current Level	Target Level ¹	Difference
Market Value (MV)	23.6%	\$23,066,782,096	\$24,404,866,891	\$1,338,084,796
Policy Target	25%			
Statutory Limit	35%			
MV +Unfunded	35.2%	\$34,356,950,550	\$48,809,733,783	\$14,452,783,233
Policy Limit	50.0%			

Asset Class	% of Combined Funds	Market Value	Unfunded Commitment	Total
Private Equity	17.1%	\$16,705,428,801	\$7,773,912,593	\$24,479,341,394
Private Credit	2.1%	\$2,071,697,282	\$1,219,561,789	\$3,291,259,071
Real Assets	2.1%	\$2,063,703,310	\$642,378,207	\$2,706,081,517
Real Estate	2.2%	\$2,161,544,834	\$1,654,315,866	\$3,815,860,700
Other ²		\$64,407,869		\$64,407,869
Total		\$23,066,782,096	\$11,290,168,454	\$34,356,950,550

Cash Flows September 30, 2024

Calendar Year	Capital Calls	Distributions	Net Invested
2024	\$1,942,343,374	(\$2,692,726,526)	(\$750,383,152)
2023	\$2,744,167,005	(\$2,162,823,326)	\$581,343,680
2022	\$3,945,092,895	(\$3,140,446,870)	\$804,646,025
2021	\$4,556,450,698	(\$3,672,823,834)	\$883,626,864
2020	\$2,786,134,001	(\$2,318,825,278)	\$467,308,723
2019	\$2,543,614,503	(\$2,080,037,860)	\$463,576,642
2018	\$1,992,000,341	(\$2,049,733,815)	(\$57,733,474)
2017	\$2,021,595,780	(\$2,383,863,711)	(\$362,267,931)

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

² Represents in-kind stock distributions from the liquidating portfolio managed by T.Rowe Price and cash accruals.

B. Consideration of New Investment Commitments

ACTION ITEMS:

1) Additional commitment to Blackstone Energy Transition Partners IV (“BETP IV” or “Fund”).

In the first calendar quarter of 2024, the SBI Board approved staff’s recommendation, endorsed by the IAC, for the SBI to commit up to \$150 million to Blackstone Energy Transition Partners IV. At that time, staff viewed the Fund as an attractive opportunity to invest in a broad, opportunistic strategy targeting opportunities across the full range of energy transition and climate solutions landscape and implemented by an experienced energy transition investment team. Since that time, continued market research, investment diligence, and industry trends in this continuously evolving space have reinforced staff’s conviction that investing behind the opportunity set with an experienced partner offers a compelling opportunity. Accordingly, staff believes that an additional commitment to BETP IV is warranted.

Blackstone intends to make control and control-oriented investments in the energy transition and climate solutions sectors on a global basis. The Fund’s focus is expected to primarily be on sourcing investments that are primary or secondary beneficiaries of significant energy transition trends, including renewable energy penetration, electrification, energy efficiency, and decarbonization. In addition to pursuing an opportunistic strategy that seeks compelling opportunities across the full range of energy transition and climate solutions landscape, the Fund expects to make investments across a range of company lifecycle stages and structures. Blackstone believes the resulting diversification can enhance returns, reduce risk, and allow the team to fully capitalize on their deal flow.

More information on Blackstone Energy Transition Partners IV is included as **Attachment A beginning on page 9.**

RECOMMENDATION:

Staff is recommending an additional commitment of up to \$50 million to Blackstone Energy Transition Partners IV, such that SBI’s total commitment will be up to \$200 in aggregate, and requests the IAC’s endorsement of this recommendation for the Board’s approval. It is understood that 1) SBI’s aggregate commitment will not exceed 20% of the Fund 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 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 or a reduction or termination of the commitment.

2) Investment with an existing Private Credit manager, HPS, in HPS Strategic Investment Partners VI (“Fund”).

HPS is raising HPS Strategic Investment Partners VI to generate current income as well as long-term capital appreciation through junior capital investments primarily into high-yielding fixed and floating rate debt and debt-like instruments, with the expectation that it will be the sole or lead investor in each investment. HPS believes there is an attractive opportunity to provide privately placed junior capital solutions to large companies that require this type of funding as an alternative to traditional financing sources (e.g., banks and other participants in the publicly traded syndicated credit markets). The Fund generally intends to pursue investments where the members of the investment team possess a deep knowledge of the sector and the company, focusing on companies that demonstrate or are expected to develop (i) sustainable advantages and meaningful barriers to entry, (ii) strong market share, (iii) substantial EBITDA margins and free cash flow and (iv) proven, experienced management teams. The Fund intends to leverage HPS’s global credit platform and relationships to continue to source attractive investments directly from private and public companies and private equity-backed businesses.

In addition to reviewing the attractiveness of the HPS Strategic Investment Partners VI 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 HPS Strategic Investment Partners VI is included as **Attachment B beginning on page 13.**

RECOMMENDATION:

Staff is recommending a commitment of up to \$200 million to HPS Strategic Investment Partners VI 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 HPS Strategic Investment Partners VI 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 HPS 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 HPS or a reduction or termination of the commitment.

3) Investment with an existing Private Equity manager, IK Investment Partners, (“IK”), in IK Small Cap IV Fund (“Fund”).

IK Small Cap IV Fund will continue the IK Small Cap fund series, which focuses on investments in companies smaller than those targeted by IK’s flagship fund series. The Fund will make primarily control buyouts of small cap companies with strong growth potential across selected markets in Northern Europe. The Fund will be divided into two pools of capital targeting companies of different sizes: (1) 70% will be allocated to the Small Cap pool, targeting between €40 million and €100 million initial equity investments in approximately 10-15 companies with an enterprise value typically between €80 million and €200 million, and (2) 30% will be allocated to the Development Capital pool, targeting between €10 million and €40 million initial equity investments in 10-15 companies with an enterprise value below €80 million. IK believes that its focus on this segment of the market will allow it to exploit inefficiencies that are less prevalent at the larger end of the market while also avoiding competition from larger pan-European or global funds. The Fund’s strategy aims to transform strong local businesses into international leaders through add-on acquisitions and operational improvement.

In addition to reviewing the attractiveness of the IK Small Cap IV 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 IK Small Cap IV Fund is included as **Attachment C beginning on page 17.**

RECOMMENDATION:

Staff is recommending a commitment of up to \$125 million to IK Small Cap IV Fund, 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 IK Small Cap IV Fund 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 IK 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 IK or a reduction or termination of the commitment.

4) Investment with an existing Private Equity manager, KKR, in KKR North America Fund XIV (“Fund”).

KKR North America Fund XIV will seek to engage primarily in leveraged buyouts, build-ups, and growth equity investments, primarily in the United States and Canada. The Fund’s investment strategy is first defined by a focus on seven sectors (consumer, health care, financial services, industrials, media, tech-enabled services, and software), wherein KKR pursues long-term themes while endeavoring to retain the flexibility to adapt when periods of dislocation arise. The Fund further leverages the full suite of KKR resource capabilities, including dedicated operating executives at KKR Capstone and dedicated professionals within the domains of macro-economic analysis, global asset allocation, public affairs, and capital markets. KKR believes that this breadth and depth of resources allows its investment teams to make better decisions, and to focus substantially all of their time on investing, and KKR views these resources as a key differentiation for the Fund’s strategy. KKR Capstone, for example, is responsible for significant value creation at portfolio companies, working to identify key operational value creation opportunities and working with company management to support major transformational changes once operational priorities are set.

In addition to reviewing the attractiveness of the KKR North America Fund XIV 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 KKR North America Fund XIV is included as **Attachment D beginning on page 21.**

RECOMMENDATION:

Staff is recommending a commitment of up to \$400 million to KKR North America Fund XIV 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 KKR North America Fund XIV 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 KKR 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 KKR or a reduction or termination of the commitment.

5) Investment with an existing Private Equity manager, Nordic Capital, (“Nordic”), in Nordic Capital Evolution Fund II (“Fund”).

Nordic Capital Evolution Fund II seeks to target growth buyouts of growing leaders across the Northern European mid-market. The strategy is an extension of the Firm’s flagship private equity funds, but it is applied to smaller businesses: the strategy will typically focus on equity investments between €50 million and €200-€250 million (including limited partner co-investment made available by the Fund) in businesses with an enterprise value between €100 million and €400-€500 million. The Firm seeks to implement its strategy through an integrated sector-based approach, whereby firm-wide sector teams are responsible for developing intimate knowledge about the trends and growth drivers in their sectors, tracking investment companies over the long term, and working across the Firm’s local advisory offices to unlock targets. Nordic believes this collaborative approach provides a key competitive advantage, supporting high-conviction sourcing, conversion, value creation, and exit. During ownership, Nordic will typically implement commercial and operational initiatives to accelerate organic growth, or the business may be scaled through market consolidation or international expansion and strategic M&A.

In addition to reviewing the attractiveness of the Nordic Capital Evolution Fund II 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 Nordic Capital Evolution Fund II is included as **Attachment E beginning on page 25.**

RECOMMENDATION:

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

6) Investment with a new Real Assets manager, EQT, in EQT Infrastructure VI (“Fund”).

EQT Infrastructure VI aims to continue its strategy of investing through control or co-control positions in a diversified portfolio of infrastructure related assets in target sectors of digital, energy and environmental, transport and logistics, and social infrastructure. EQT will assess the relative attractiveness of target companies within its sectors based on whether the target companies: (i) provide essential services to society, (ii) have long-term, stable or growing underlying demand, (iii) demonstrate recurring revenues leading to predictable cash flows, (iv) have an asset based, long-term contracted or otherwise well protected business model and (v) showcase clear value creation potential through operational efficiency, growth and strategic repositioning. EQT employs a “locals-with-locals” approach, focusing on sectors where they have developed considerable expertise, in close collaboration with an experienced global network of over 600 Industrial Advisors. Following the acquisition of a target company, EQT leverages an institutionalized value creation playbook and active ownership model that will utilize the broader EQT platform to drive value creation and mitigate risks.

In addition to reviewing the attractiveness of the EQT Infrastructure VI 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 EQT Infrastructure VI is included as **Attachment F beginning on page 29.**

RECOMMENDATION:

Staff is recommending a commitment of up to \$125 million to EQT Infrastructure VI, 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 EQT Infrastructure VI 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 EQT 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 EQT or a reduction or termination of the commitment.

ATTACHMENT A

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Fund:</i>	Blackstone Energy Transition Partners IV, L.P.
<i>Type of Fund:</i>	Energy Infrastructure
<i>Target Fund Size:</i>	\$5.0 billion
<i>Fund Manager:</i>	The Blackstone Group L.P.
<i>Manager Contact:</i>	Kelly Stephens 345 Park Avenue New York, NY 10154

II. Organization and Staff

The Blackstone Group (together with its affiliates “Blackstone” or the “Firm”) is sponsoring Blackstone Energy Transition Partners IV L.P. (“BETP IV” or the “Fund”), a private investment fund that will seek to make control and control-oriented private equity investments in the energy transition and climate solutions sectors on a global basis. The Fund’s focus is expected to be on sourcing investments that are primary or secondary beneficiaries of the energy transition mega trends of renewable energy penetration, electrification, energy efficiency and decarbonization, among others.

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, opportunistic, growth, infrastructure, insurance solutions and life sciences. As of June 30, 2024, Blackstone had 258 Senior Managing Directors, and approximately 4,700 employees across 28 offices globally, and the Firm’s total assets under management was approximately \$1,076 billion.

All investment and disposition decisions of BETP IV are expected be made by an Investment Committee comprised of senior members of the Firm and the Private Equity Group and include Stephen A. Schwartzman, Jon Gray, David Foley, Dr. Jean Rogers, Joe Baratta, Prakash Melwani, Bilal Khan, JP Munfa, and select Senior Managing Directors.

Blackstone’s commitment to DEI is reflected at all levels of the organization. The Firm aims to drive value by supporting their 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 (“SEO”), Toigo Foundation, Year Up, Girls Who Invest, Ladders for Leaders, Cristo Rey Brooklyn, 30 Percent Coalition, Declare, and Level 20.

III. Investment Strategy

As with its predecessor funds, BETP IV is expected to continue a long-standing strategy of originating proprietary investment opportunities via proactive, thematic investing; creatively structuring transactions to mitigate risk while preserving upside; and partnering with experienced management teams to build, develop and acquire a portfolio of high-quality companies. The Firm's investment strategy is intended to be opportunistic, broad, and flexible, allowing the Fund to seek compelling opportunities across the full range of energy transition and climate solutions landscape.

Blackstone Energy Transition Partners believe that several core strengths have allowed the Firm to differentiate itself and consistently execute its private equity energy investment strategy over more than 25 years:

- **Thematic Sourcing:** Blackstone has a history of identifying industry trends and investing ahead of growth. The team will proactively undertake expansive sector mapping to identify companies well positioned to grow share in their respective end markets.
- **Flexible Scale and Scope:** The mandate is driven by the team's significant prior experience in greenfield project development, late-stage venture and growth opportunities, structured securities, corporate joint-ventures, as well as mature leveraged buyouts. Through partnership with Blackstone's generalist private equity funds, the team can also underwrite billion dollar-plus equity commitments, enabling the pursuit of very large-scale investments where the potential buyer universe tends to be more limited.
- **Experienced Energy Transition Investment Team:** The investment team's deep sector expertise informs their rigorous and disciplined approach to new deal origination, diligence, and underwriting. The team has a long track record of investing through economic and commodity cycles and maintaining a high bar for new investments and focusing on business quality and competitive positioning through diligence, while also maintaining strict value discipline.
- **Operational and ESG Focus:** The investment team will integrate the Firm's Portfolio Operations and ESG resources at the early stages of new deal evaluations, with the objective of incorporating key recommendations in their underwriting process. Upon closing a new control investment, the Portfolio Operations and ESG teams will continue to work alongside the deal teams and management to implement operating initiatives identified during diligence which may include plans to reduce energy usage and emissions.
- **Private Equity Group Domain Expertise and Network:** The team expects to benefit from the resources and insights across the Private Equity Group's sector expertise in software, services, and industrials. Blackstone's longstanding Private Equity team and network will provide complementary capabilities and work in close

partnership with the energy transition team on certain investment opportunities where their expertise may provide a competitive advantage.

BETP intends to primarily focus on the following subsectors that are primary and secondary beneficiaries of energy transition mega trends of renewable energy penetration, electrification, energy efficiency and decarbonization with the exclusion of oil and gas exploration and production:

- Clean power generation (development of battery storage capacity, solar and battery equipment, and services)
- Electric transmission (development of transmission in load-constrained areas, services, and equipment for the transmission value chain)
- Energy technology, services, and efficiency (digitalization, data analytics, software for grid & batteries, equipment and services solutions and consulting and engineering)
- Critical energy infrastructure (more efficient power generation, repurposing midstream assets, green hydrogen, and carbon capture)
- Decarbonized transport & natural resources (low carbon, renewable fuels, fleet charging stations, essential materials supply chain for renewables and batteries, recycling and water-related services and equipment).

BETP anticipates that Fund IV will make between 10 - 15 investments, with an average equity commitment per transaction of \$300 million to \$500 million, consistent with prior energy funds.

BETP expects Fund IV to make investments across a range of company lifecycle stages and structures, including greenfield development opportunities, growth equity, buy & build, minority and/or structured equity positions in both private and publicly traded companies, joint ventures and corporate carveouts, as well as leveraged buyouts. The team's ability to not just buy existing, large-scale companies, but also to start with a smaller platform and deploy additional capital to build or acquire additional assets at relatively lower set up valuation multiples, gives them the flexibility to build world scale companies and potentially realize a premium upon exit when the public markets are offering significant premiums for size or a pure business model. The resulting diversification of investments can enhance returns, reduce risk, and allow the team to fully capitalize on their deal flow.

A key component of BETP's strategy is to seek to mitigate the risks inherent in the energy sector, especially during the transition, while preserving upside potential. Risk mitigation strategies will include limited use of financial leverage, maintaining valuation discipline, preserving control and optionality related to exits, utilizing resources and expertise of Blackstone's Portfolio Operations group, leveraging the expertise of Blackstone's Capital Markets group, and incorporating ESG assessments throughout the investment process.

Blackstone takes a comprehensive approach to ESG by integrating it in the management of their portfolios and assets. Each business vertical at the Firm has a dedicated Head of ESG 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 June 30, 2024 is shown below:

Fund	Vintage Year	Total Commitments	SBI Investment	Net IRR*	Net MOIC*	Net DPI*
BEP I	2011	\$2.4 billion	--	11.4%	1.6x	1.5x
BEP II	2015	\$4.9 billion	--	8.4%	1.5x	0.8x
BEP III	2020	\$4.3 billion	--	30.0%	1.6x	0.3x

* Previous Fund investments may be relatively immature and, therefore, returns may not be indicative of future results. Net Internal Rate of Return (IRR) and Multiple of Invested Capital (MOIC) provided by Blackstone Energy Transition Partners.

V. Investment Period and Term

The Investment Period is expected to last for a period of six years from the commencement date of the Fund. The term of the fund is expected to be eleven years, subject to two one-year extensions if approved by the Advisory Committee.

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

ATTACHMENT B

PRIVATE CREDIT MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Fund:</i>	HPS Strategic Investment Partners VI, L.P.
<i>Type of Fund:</i>	Private Credit
<i>Target Fund Size:</i>	\$10 billion
<i>Fund Manager:</i>	HPS Strategic Investment Management, LLC
<i>Manager Contact:</i>	Adam Jordan 40 W 57th St 33rd Floor New York, NY 10019

II. Organization and Staff

HPS Investment Partners, LLC (“HPS” or the “Firm”) has established HPS Strategic Investment Partners VI (“SIP VI” or the “Fund”) to invest in high-yielding fixed and floating-rate debt and debt-like investments. HPS is a leading global, credit-focused alternative investment firm that manages various strategies across the capital structure, including privately negotiated senior debt; privately negotiated junior capital solutions in debt, preferred and equity formats; liquid credit including syndicated leveraged loans, collateralized loan obligations and high yield bonds; asset-based finance and real estate.

HPS was established in 2007 as a unit of Highbridge Capital Management, a subsidiary of J.P. Morgan Asset Management. In 2016, senior executives of HPS acquired HPS and its subsidiaries from J.P. Morgan Asset Management. In June 2018, affiliates of Dyal Capital Partners made and continue to hold a passive minority investment in HPS. In February 2022, an affiliate of The Guardian Life Insurance Company of America made and continues to hold a passive minority investment in HPS, which was subsequently increased in August 2024. HPS is controlled and managed by its governing partners Scott Kapnick, Scot French, Michael Patterson, Purnima Puri, Faith Rosenfeld, Paul Knollmeyer, and Kathy Choi.

The Firm is headquartered in New York and has 13 additional offices globally. As of September 2024, the SIP investment team is headed by Scot French and is comprised of over 100 investment professionals (including shared resources) with significant experience sourcing, executing, managing, and monetizing investments across asset classes (junior credit, private equity, distressed, senior secured and liquid credit). The SIP team also benefits from the global presence and scale of the HPS credit platform, which includes over 200 investment professionals managing approximately \$148 billion of assets under management and over 750 total employees.

HPS is committed to fostering, cultivating, and maintaining a diverse, equitable, and inclusive workplace. HPS partners with several organizations that support this shared vision as they believe diversity strengthens communities and helps internally provide HPS with a more

diverse set of potential employees. Currently, HPS partners with Sponsors for Educational Opportunity (“SEO”), Opportunity Network (“OppNet”), Out for Undergrad (“O4U”), Harlem Lacrosse, and 51 Vets. HPS is also a founding signatory to the Institutional Limited Partners Association’s (“ILPA”) Diversity in Action Initiative, joined other investors and investment firms in founding the Equity Alliance, and, in collaboration with The Kapnick Foundation, established the HPS Center for Financial Excellence at Howard University.

III. *Investment Strategy*

SIP VI will seek to generate current income as well as long-term capital appreciation through junior capital investments primarily into high-yielding fixed and floating rate debt and debt-like instruments. The Fund’s junior capital investments may include subordinated or structurally subordinated debt (such as second lien, unsecured debt, and holdco or holdco-like securities), mezzanine securities, preferred equity, convertible securities and equity-related securities (such as options or warrants) which may accompany a debt investment, as well as, in select situations, common equity investments. Among these junior capital investments, the debt and debt-like instruments typically represent the portion of the issuer’s capital structure between senior secured debt and common equity. They generally rank senior to common equity but are subordinated to any senior secured indebtedness and are typically used by companies as growth capital to fund acquisitions, refinance existing indebtedness or recapitalize their balance sheets. HPS believes its junior capital solutions offer investors the combination of a high contractual coupon and current income, and significant downside protection through highly negotiated credit documentation with customized covenants. In certain situations, the Fund may also invest in opportunistic investments, including senior debt, unitranche securities, and structured debt tranches.

HPS believes there is an attractive opportunity to provide privately placed junior capital solutions to large companies that require this type of funding as an alternative to traditional financing sources (e.g., banks and other participants in the publicly traded syndicated credit markets). Global regulatory actions stemming from the 2008 financial crisis have significantly increased capital requirements and costs for banks to underwrite and syndicate non-investment grade credit commitments. HPS believes its junior capital solutions allow issuers to: (a) avoid the uncertainty and increasing costs of obtaining syndicated financing commitments, (b) negotiate customized structures and terms, (c) work collaboratively with a single long-term financing provider, (d) act quickly if an opportunity requires financing in a short period of time, (e) limit burdensome public reporting/maintain confidentiality of financial information and (f) minimize management team distraction and time associated with a syndicated financing.

HPS believes that the diversified sourcing, scale, flexibility of capital and experience of the investment team allow it to offer creative capital solutions to companies while providing investors with attractive returns and significant downside protection. The diversity and breadth of its sourcing platform combined with a favorable demand environment for non-investment grade capital has allowed HPS to remain highly selective on investment opportunities and have limited dependence on any single industry or deal source. The Funds intend to leverage HPS’s global credit platform and relationships to continue to source attractive investments directly from private and public companies as well as private equity-backed businesses.

HPS generally intends to pursue investments where the members of the Strategic Investment Partners Team possess deep knowledge of the sector and the company, generally focusing on companies that demonstrate, or are expected to develop: (i) sustainable advantages and meaningful barriers to entry, (ii) strong market share, (iii) substantial EBITDA margins and free cash flow and (iv) proven, experienced management teams. HPS expects to be the sole or lead investor in most of the Funds' investments and will consider a variety of transactions including acquisitions, refinancings, recapitalizations and leveraged buyouts.

The Funds have global investment capabilities but intend to focus on large-cap companies in North America and Europe, with 60-80% of the portfolio anticipated to be in North America. Consistent with prior funds, the Funds will seek to mitigate currency exposure through hedging or currency swaps. A large portion of the return is anticipated to be generated by the debt and debt-like securities, including ongoing interest income in cash or PIK, original issue discounts and prepayment premiums, with additional potential return from common equity investments and equity kickers.

HPS's Strategic Investment Partners Team believes that a responsible approach to investing that incorporates environmental, social and governance ("ESG") risk management is important to achieving its objective of delivering attractive risk adjusted returns to investors. Therefore, the Strategic Investment Partners Team seeks to integrate ESG considerations into the due diligence process through the use of publicly available information, filings and/or third party databases where available. As a proposed investment progresses along the investment process, the Strategic Investment Partners Team seeks to collect information from the target issuer's management team or sponsor (if practicable), public information and third party data sources to analyze the applicable findings. Following the investment in the applicable issuer, where the Strategic Investment Partners Team has sufficient information rights, the Strategic Investment Partners Team endeavors to monitor ESG-related risks with respect to such issuer on an ongoing basis.

IV. Investment Performance

Previous fund performance as of June 30, 2024:

Fund	Vintage Year	Total Commitments	SBI Investment	Net IRR*	Net MOIC*	Net DPI*
Mezzanine Partners I	2008	\$2.1 billion	-	6%	1.3x	1.25
Mezzanine Partners II	2012	\$4.4 billion	-	13%	1.6x	1.51
Mezzanine Partners III	2016	\$6.6 billion	-	11%	1.6x	0.91
HPS Mezzanine Partners 2019	2019	\$8.4 billion	\$100 million	11%	1.3x	0.45
HPS Strategic Investment Partners V	2021	\$11.1 billion	\$100 million	18%	1.2x	0.15

* Past performance is not necessarily indicative, or a guarantee, of future results. Returns information provided by HPS Strategic Investment Management, LLC (net returns shown are as of 30 June 2024).

V. *Investment Period and Term*

The investment period will be four years from the first closing date. The term of the Fund will be ten years from the first closing date, which may be extended for one year at the discretion of the General Partner and, thereafter, for two additional one-year periods with LPAC approval.

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

ATTACHMENT C

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Fund:</i>	IK Small Cap IV Fund
<i>Type of Fund:</i>	Private Equity
<i>Target Fund Size:</i>	€1,500,000,000
<i>Fund Manager:</i>	IK Partners
<i>Manager Contact:</i>	Alice Langley 80 Strand London, WC2R 0DT, United Kingdom

II. Organization and Staff

IK Investment Partners (“IK” or “Firm”) was founded in 1989 by Bjorn Saven. The Firm makes private equity investments in four separate Fund series that vary in target company enterprise value (“EV”) size and ownership control: Mid Cap Funds (majority control; EVs > €200 million and < €1 billion), Partnership Funds (minority control; EVs > €200 million), Small Cap Funds (primarily majority control; EV < €200 million), and Development Capital (primarily majority control; EV < €80 million).

The IK investment team is comprised of over 100 investment professionals, of which 27 are dedicated to the Firm’s Small Cap strategy and 19 are dedicated to the Firm’s Development Capital Strategy. The IK Small Cap investment team is led by Kristian Kemppinen and the IK Development Capital strategy is led by Pierre Gallix. Both strategies are supported by IK’s CEO Christopher Masek, who is the Chairman of the Small Cap and Development Capital Investment Committees. Across its platform, IK has 32 Partners, eight are dedicated to the Small Cap Strategy and three are dedicated to the Development Capital Strategy. IK’s investment teams operate out of local offices in Amsterdam, Copenhagen, Hamburg, Munich, London, Paris and Stockholm, while investor relations, administrative, and back-office functions are based in some of those locations and Luxembourg.

As part of its initiative to build a multi-asset class third-party asset management platform, Wendel Group agreed in 2023 to acquire 100% of IK Investment Partners, with an initial 51% stake purchased in April 2024, and the remaining 49% to be acquired through subsequent transactions between 2029 and 2032. In addition to receiving dividends proportional to its ownership stake, Wendel Group will also receive 20% of future carried interest generated by each IK fund. However, IK will maintain its independence, control the Investment and Executive Committees, and continue to operate under its existing brand.

IK strives to create an environment that embraces and fosters diversity and inclusion (“D&I”). IK believes that its commitment to D&I aligns with its “People-First” value objective. D&I is an important part of its practices and policies on recruitment, compensation and benefits, professional development and training as well as promotions and the ongoing development of a work environment built on the premise of fairness.

III. Investment Strategy

IK is raising IK Small Cap IV Fund (“IK Small Cap IV” or “Fund”) to primarily make control buyouts of small cap companies with strong growth potential across selected markets in Northern Europe. With each of its investments, IK’s goal is to double the earnings by transforming local businesses into regional leaders through a combination of strategic add-on acquisitions and operational improvement. IK Small Cap IV is expected to continue the IK Small Cap fund series that began in 2015, focusing on investments in companies smaller than those targeted by the flagship fund series. IK believes that its strategy is differentiated across several dimensions:

Lower Middle-Market Focus: The Fund will be divided into two pools of capital: approximately 70% in the Small Cap pool and no more than 30% in the Development Capital pool. The Small Cap pool will make between €40 million and €100 million initial equity investments in approximately 10-15 companies with an enterprise value typically between €80 million and €200 million. By comparison, the Development Capital pool will make between €10 million and €40 million initial equity investments in 10-15 companies with an enterprise value below €80 million. IK believes that by focusing on this segment of the lower middle-market it can exploit inefficiencies that are less prevalent at the larger end of the market, as well as avoid competition from larger pan-European or Global funds.

Geographic Focus: IK Small Cap IV is expected to focus on making investments in Northern Europe, primarily Benelux (Belgium, the Netherlands and Luxembourg), DACH (Germany, Austria and Switzerland), France, the Nordics, the UK and Ireland. These are collectively known as IK’s “Core Markets,” and represent what the Firm believes are among the most attractive European markets for private equity investment. IK has been an active investor across Europe for over 30 years.

Sector Focus: Over its 30+ year history, IK has transitioned from a generalist approach to become a firm broadly focused on the industrials, consumer, business services, and healthcare sectors. IK’s investment portfolio construction is primarily based on the Firm’s thematic sector approach, which seeks to establish a diversified portfolio both resistant to adverse economic cycles and aiming to achieve superior growth. The Firm has identified four fundamental investment themes which guide its investment criteria: Digitalization, an increased emphasis on Health & Safety, an increasing tailoring of access to consumers through Market Disruption, and an acceleration in the revolution surrounding supply chain and production known as Industry 4.0.

ESG: IK believes that strong ESG practices correlate positively with enhanced financial performance within portfolio companies as well as enrich society more broadly. By working

with management teams, it helps portfolio companies recognize and manage the opportunities and risks associated with ESG factors. During the sourcing and diligence phase, deal teams perform ESG due diligence, typically alongside external ESG specialists, and include a summary of their findings in their IC memo. Depending on the materiality of the ESG risks identified, IK may choose to pursue an investment opportunity and embed risk management or ESG enhancement actions in the post-acquisition Full Potential Plan. During the ownership phase, each portfolio company forms an Audit & ESG Committee, which reports to the Board of Directors. This committee is charged with ensuring that the company has a robust ESG plan and is responsible for monitoring the implementation of that plan on an annual basis.

Value Creation: A centerpiece of IK’s investment strategy is aiming to double the earnings of its portfolio companies by transforming strong local businesses into international leaders through add-on acquisitions and operational improvement. In the 22 investments made across IK Small Cap Fund III and IK Development Capital I, a total of 28 add-ons have been completed to platform investments, with the expectation that several more will be made during the holding period. IK believes that its international footprint has given the Firm the ability to identify investment opportunities outside a company’s local market that enhance growth by providing the company access to new markets, products, technology, and services. To add value to its portfolio companies, IK also engages in a systematic program of operational improvement that includes both a 100 Day Plan as well as Mid-term Plans. This value creation program is called the “The IK Way”, which was established to institutionalize the Firm’s portfolio management processes developed over the past 35 years and to ensure that IK’s professionals continue to replicate the model which seeks to maximize growth and operational improvement. The IK Way includes initiatives to improve top-line growth and cost efficiencies as well as balance sheet optimization and management augmentation.

Exit: As with sourcing and value creation, IK has a common structure and process for realizing a successful exit. Exit planning is an important part of the due diligence process, and likely exit options are a part of every investment proposal. On the third anniversary of an investment, a rigorous exit review takes place at the Partner group level at the time of the Annual Review. This review includes a “Hold / Sell” analysis, consideration of exit paths, and evaluation of the incremental return to the Fund and the portfolio company management from holding the investment further. These planned, structured, and transparent reviews are then performed annually as a key aspect of the Firm’s ongoing active ownership strategy and help to ensure optimization of returns for investors.

IV. Investment Performance

Previous fund performance as of June 30, 2024 for IK Small Cap and Development Capital Funds is shown below:

Fund	Inception Date	Total Commitments (mm)	SBI Investment	Net IRR*	Net MOIC*	Net DPI*
IK SC I Fund	2015	€276	--	24%	2.0x	1.9x
IK SC II Fund	2018	€550	--	32%	2.3x	1.7x
IK SC III Fund	2021	€1,174	--	9%	1.2x	0.0x

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

V. Investment Period and Term

The Investment Period is expected to last for a period of five years. The Fund is expected to have a term of ten years, with the possibility of three one-year extensions: one one-year extension at the sole discretion of the General Partner, and two additional one-year extensions subject to approval from the Advisory Committee.

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

ATTACHMENT D

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Fund:</i>	KKR North America Fund XIV
<i>Type of Fund:</i>	Private Equity
<i>Target Fund Size:</i>	\$20 Billion
<i>Fund Manager:</i>	KKR
<i>Manager Contact:</i>	Ari Barkan 30 Hudson Yards Suite 7500 New York, NY, 10001

II. Organization and Staff

Kohlberg Kravis Roberts & Co. (“KKR” or the “Firm”), one of the world’s oldest and most experienced private equity firms, is headquartered in New York, NY and has over twenty-five office locations globally. Founded in 1976 by Jerome Kohlberg, Henry R. Kravis and George R. Roberts, KKR seeks to provide its investors with long-term capital appreciation through multiple business platforms, including private equity, credit, infrastructure and real estate.

Since 1976, KKR has raised 13 “flagship” funds focused on North American private equity, which have invested over \$75 billion of equity in over 230 private equity investments (as of September 2024). The firm has taken publicly listed companies private, acquired divisional assets through corporate divestiture transactions, partnered with family-owned businesses and strategic buyers, structured meaningful minority investments, and acquired and grown businesses through organic and inorganic strategies.

The KKR North American private equity team, led by co-heads Pete Stavros and Nate Taylor, comprises 90 dedicated investment professionals, including 12 Partners and four Managing Directors (as of September 2024). The team operates across seven distinct industry verticals: consumer, health care, financial services, industrials, media, tech-enabled services, and software. The team is further supported by additional resources, including approximately 40 North America-dedicated Capstone operating executives, 40 executives as part of KKR Capital Markets, and approximately 40 North America-focused Senior and Industry advisors.

KKR strives to be a diverse, inclusive organization. KKR is a signatory to ILPA’s “Diversity in Action” initiative which aims to advance diversity, equality and inclusion. KKR formed its Inclusion & Diversity Council in 2014 to help realize its strategic priority of creating a more inclusive workplace. In 2022, KKR implemented Phase 1 of its DEI Accountability

Framework, which is designed to drive greater ownership across the firm by linking DEI outcomes across each business with how KKR evaluates, recognizes, and rewards its leaders.

III. Investment Strategy

KKR is establishing KKR North America Fund XIV (“Fund”) to engage primarily in leveraged buyouts, build-ups, and growth equity investments, primarily in the United States and Canada. The Fund will seek to make approximately 20-25 investments in upper-middle market transactions. The majority of investments will be in the \$1 billion to \$4 billion transaction value range.

The broad parameters of KKR’s private equity investment strategy in North America are first defined by industry sectors of focus. The Firm believes seven sector teams (consumer, healthcare, financial services, industrials, media, tech-enabled services and software) provide broad and deep coverage of some of the most attractive areas of the U.S. economy and private equity deal flow. Within these sectors, KKR pursues long-term themes but endeavors to retain the flexibility to adapt when periods of dislocation arise.

KKR anticipates that the Fund’s investments via industry verticals will primarily take the following forms:

- Investments in high-quality companies with significant potential for operational improvements and global growth, both organically and through accretive mergers & acquisitions;
- Investments in complex conglomerate divestitures, where corporates sell businesses that are outside their core competencies and where there are opportunities to more efficiently manage those businesses;
- Leading companies with defensible market conditions that have been impacted by market dislocations;
- Companies with attractive growth potential, where KKR can partner with strong leadership;
- Take-private transactions; and
- Opportunistic public toehold investments in high-quality businesses that KKR would like to own.

Leveraging the support of the full suite of KKR resource capabilities is of particular importance to the strategy. These resources include: approximately 40 North American dedicated operating executives at Capstone, as well as dedicated professionals in the areas of macro-economic analysis, global asset allocation, public affairs, and capital markets. The Firm believes that this breadth and depth of resources allows its investment teams to make better decisions, and focus substantially all their time on investing. KKR views this as a key point of differentiation in an increasingly complex investing environment.

KKR Capstone is responsible for significant value creation at portfolio companies. While the Firm does not formally require companies to engage Capstone, in many cases they find that Capstone can be an additive resource to management teams. In the predecessor fund,

KKR Americas Fund XIII, Capstone has been involved in approximately 90% of investments to date. Capstone's involvement typically begins during the diligence process, working with industry teams to identify operational value creation opportunities. Post-investment, Capstone works to support boards and management teams to develop 100-day value creation plans. Once the operational priorities are set, the Capstone Team works in partnership with company management to support major transformational changes within portfolio companies. Examples of specific areas of focus for deal teams, KKR Capstone, and other dedicated external partners include:

- Long-term revenue growth;
- Upgrading and strengthening of business processes and operating metrics;
- Portfolio management through M&A;
- Support carve-out transactions;
- Cost and efficiency improvements, including turnarounds;
- Technology improvements; and
- Cross portfolio programs.

As part of the due diligence process, cross-functional internal subject matter experts review prospective investments to identify material Environmental, Social or Governance ("ESG") risks. Recommendations about potential risks and opportunities are made to the Investment Committee as potential investments move through the process. ESG considerations discovered in the diligence phase can affect investment decisions; however, a decision to invest or not is rarely due exclusively to ESG issues. ESG-related concerns are often intertwined with other business issues that make the business more, or less, attractive for investment. Understanding ESG challenges and opportunities of individual investments helps KKR determine whether to invest in a company and, more importantly, the best strategy for working with a company in the future.

IV. Investment Performance

Performance of prior KKR North America Private Equity Funds as of June 30, 2024 is shown below:

Fund	Vintage Year	Total Commitments	SBI Investment	Net IRR*	Net MOIC*	Net DPI*
1976 Fund	1976	\$31 Million	--	35.5%	9.3x	9.3x
1980 Fund	1980	\$357 Million	--	25.8%	4.4x	4.4x
1982 Fund	1982	\$328 Million	--	39.2%	3.3x	3.3x
1984 Fund	1984	\$1 Billion	\$25 Million	28.9%	4.8x	4.8x
1986 Fund	1986	\$672 Million	\$18.4 Million	28.9%	10.2x	10.2x
1987 Fund	1987	\$6.2 Billion	\$145 Million	8.9%	2.0x	2.0x
1993 Fund	1993	\$1.9 Billion	\$150 Million	16.8%	1.8x	1.8x
1996 Fund	1996	\$6.0 Billion	\$200 Million	13.3%	1.8x	1.8x
Millennium Fund	2002	\$6.0 Billion	\$200 Million	16.1%	2.0x	2.0x
2006 Fund	2006	\$17.3 Billion	\$200 Million	9.3%	1.8x	1.8x
North America Fund XI	2012	\$8.7 Billion	--	19.1%	2.2x	1.9x
Americas Fund XII (USD)	2017	\$13.5 Billion	\$150 Million	20.0%	2.0x	0.8x
North America Fund XIII*	2021	\$18.5 Billion	\$300 Million	9.0%	1.1x	0.0x

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

V. Investment Period and Term

The investment period for the Fund will run 6 years from the first investment. The term of the Fund will be 11 years from the first investment, subject to two one-year extensions with Limited Partner consent.

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 E

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Fund:</i>	Nordic Capital Evolution Fund II
<i>Type of Fund:</i>	Private Equity
<i>Target Fund Size:</i>	€1.4 billion
<i>Fund Manager:</i>	Nordic Capital (Nordic Capital Evo II GP SCSp, acting through its general partner, Nordic Capital Evo II SARL)
<i>Manager Contact:</i>	Martin Krist Head of Fund Operations, Nordic Capital Luxembourg 37A, Avenue John F. Kennedy, L-1855 Luxembourg Pär Norberg Head of Investor Relations, Nordic Capital Advisors Mäster Samuelsgatan 21, SE-11144 Stockholm, Sweden

II. Organization and Staff

Nordic Capital (“Nordic Capital” or “Firm”) is raising Nordic Capital Evolution Fund II (“Evolution Fund II” or the “Fund”) to apply the Firm’s subsector-oriented growth buyout strategy to the Northern European middle market. The Fund will benefit from leveraging the broader Nordic Capital platform, including the decades of experience Nordic Capital has employed towards refining its approach within its target sectors of healthcare, technology and payments, financial services, and services and industrial technology.

The Firm was one of the first private equity firms in the Nordic region and is supported by strong local presence and long-standing industry relationships in Northern Europe. Across its eleven flagship private equity funds and Nordic Capital Evolution Fund I, Nordic Capital has invested over €27 billion in approximately 150 portfolio companies as of June 30, 2024. The Firm has ten offices, including seven investment advisory offices in Stockholm, Copenhagen, Oslo, Helsinki, Frankfurt, London and New York.

The Firm employs over 230 professionals, including 88 investment professionals and dedicated professionals supporting Ownership Excellence, Capital Markets, ESG, Investor Relations, Legal, Controlling & Valuation and Fund Operations. The investment advisory organization of Nordic Capital is led by Managing Partner Kristoffer Melinder, who has been with Nordic Capital since 1998. Kristoffer became co-Managing Partner in 2010 and sole Managing Partner in 2016. During his leadership, Nordic Capital has made significant refinements to its operating model including sharpening its sector-based focus and developing dedicated operational capabilities, which the Firm refers to as Ownership Excellence resources. In

September 2019, Nordic Capital sold a passive, minority stake of the Firm to a U.S.-based family office.

Diversity and inclusion are important objectives for Nordic Capital, including a continued focus on gender diversity in recruiting investment professionals. Nordic Capital sponsors Level 20, an organization devoted to advancing female participation in the private equity industry, and the Firm has also launched the Woman Accelerate Program to promote women to board positions. Most recently, the Firm established a diversity taskforce in 2023 to institutionalize the Firm's efforts to advance diversity and inclusion initiatives.

III. Investment Strategy

Evolution Fund II will typically target growth buyouts of growing leaders across the Northern European mid-market. The strategy is an extension of the Firm's flagship private equity funds approach, applied to smaller businesses. The strategy will typically focus on equity investments between €50 million and €200-€250 million (including limited partner co-investment made available by the Fund) in businesses with an enterprise value between €100 million and €400-€500 million. The Fund will target what the Firm believes are robust, difficult to replicate businesses operating within non-cyclical and resilient sectors where there is potential to accelerate growth through its structured value creation approach.

The Firm seeks to implement its strategy through a sector-based approach which is core to its investment philosophy and informs the way companies are targeted, deals are sourced, and value is created. The approach is consistent across the Firm's two strategies, the flagship funds and the Evolution funds. The Firm's sector teams are responsible for developing extensive knowledge about the trends and growth drivers in their sectors, tracking investment companies over the long term, and working across the Firm's local advisory offices to unlock targets. The Evolution Fund investment advisory professionals are fully integrated into the Firm's sector teams that have long been established within the Firm's flagship funds, allowing the Evolution team members to both contribute to and benefit from sourcing opportunities, levers for driving value through ownership, and practices for identifying exit routes. Collaboration between the Evolution team members and the broader sector teams at Nordic Capital has enabled the collective broadening of market coverage, collaborative researching of investment themes, and common pooling of extensive networks and expertise. Nordic Capital believes this collaborative approach provides a key competitive advantage to both the Evolution funds and the broader Firm, supporting high-conviction sourcing, conversion, value creation, and exit.

Nordic Capital targets subsectors where it believes there are long-term secular growth tailwinds, and within these seeks to identify businesses with leading services offerings, who are typically gaining market share at entry as a result. Consistent with this, the Firm has refined its specialist investment model over time to focus on sectors it believes are characterized by limited cyclicalities, strong downside protections, controllable risks, and that are well-positioned to benefit from long-term secular trends.

During ownership, Nordic Capital seeks to be a catalyst for transformative growth, creating sustainable leaders through an intensive, hands-on value creation approach. The mid-market

businesses that Evolution targets often require a phase of professionalization to unlock growth potential, and they often have been capital constrained or lacking M&A vision, presenting clear untapped value from inorganic growth. In growing the business, Nordic Capital will typically implement commercial and operational initiatives to accelerate organic growth, or the business may be scaled through market consolidation or international expansion and strategic M&A. Ultimately, when successfully implemented, this value creation strategy delivers strategic value with a long runway, attractive to a range of strategic and financial buyers.

To implement these commercial and operational initiatives, Evolution Fund II leverages decades of Nordic Capital value creation experience and a value creation framework, tried and tested across the Firm's 150 investments. The Evolution Team leverages the Firm's 'three-bladed propeller' seeking to drive growth through:

1. Sector playbooks crafted through decades of mid-market experience;
2. External value creation initiatives implemented by Nordic Capital experts and advisors, seeking to leverage the power of the broader Nordic Capital platform and coordinated by a dedicated Ownership Excellence professional for the Evolution strategy; and
3. Embedded operating management, the quality of which Nordic Capital believes Evolution portfolio companies would not be able to secure without the Firm's platform.

Nordic Capital has high conviction that it is capable of selecting the appropriate levers for its portfolio companies' circumstances, and the application of these levers is informed by decades of prior experience executing similar initiatives.

Nordic Capital believes that attention to Environmental, Social and Governance (ESG) matters is a prerequisite for long-term value creation. In support of this view, the Firm developed a Responsible Investment Policy in 2014 to delineate the Firm's approach to responsible investment. Nordic Capital later became a signatory of the UNPRI (United Nations Principles for Responsible Investment) in 2019, and it recently developed ESG KPI reporting in 2023.

Nordic Capital incorporates ESG issues into the investment analysis and decision-making processes. The Firm has implemented standardized procedures during the investment process to aid in the assessment of ESG factors, including a responsible investment checklist, ESG data request list, and supporting sector specific due diligence questionnaires that are designed to address sustainability factors and potential risks in the pre-investment phase. Nordic Capital requires a mandatory assessment of sustainability risks and opportunities in all final investment recommendation material that is presented to the board of directors of the Nordic Capital entity acting as portfolio manager for the applicable fund. During ownership, Nordic Capital actively engages with its portfolio companies to promote ESG integration by building internal competencies, sharing best practices, and implementing both regular monitoring and mandatory reporting to ensure ongoing adherence to and progress in sustainability. Nordic Capital's portfolio companies are required to annually report on their sustainability performance to Nordic Capital.

IV. Investment Performance

Previous fund performance as of June 30, 2024 for Nordic Capital Flagship Funds and Evolution Fund I and the SBI's investments with such funds, where applicable, is shown below:

Fund	Vintage Year	Total Commitments	SBI Investment	Net IRR*	Net MOIC*	Net DPI*
Fund I	1990	€55 million	-	69.3%	4.0x	4.0x
Fund II	1993	€110 million	-	85.1%	4.6x	4.6x
Fund III	1998	€350 million	-	30.5%	3.3x	3.3x
Fund IV	2000	€760 million		24.1%	2.2x	2.2x
Fund V	2003	€1.5 billion	-	20.0%	2.7x	2.7x
Fund VI	2006	€1.9 billion	-	8.6%	1.7x	1.7x
Fund VII	2008	€4.3 billion	-	8.2%	1.6x	1.6x
Fund VIII	2013	€3.6 billion	€150 million	13.6%	1.6x	1.4x
Fund IX	2018	€4.3 billion	€150 million	18.1%	1.7x	0.5x
Fund X	2020	€6.1 billion	€135 million	18.1%	1.3x	0.0x
Fund XI	2022	€9 billion	€90 million	N/A	0.9x	0.0x
Evolution I	2021	€1.23 billion	-	26.9%	1.2x	0.0x

* Past performance is not necessarily indicative, or a guarantee, of future results. Returns information provided by Nordic Capital (net returns shown are actual as of 30 June 2024).

V. Investment Period and Term

The investment period is expected to be six years. The Fund is expected to have a term of ten years, with the possibility of three one-year extensions: two one-year extensions subject to approval from the Advisory Committee, and one additional one-year extension subject to the approval of limited partners holding more than 50% of Fund commitments.

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

ATTACHMENT F

REAL ASSETS MANAGER SUMMARY PROFILE

I. Background Data

<i>Name of Fund:</i>	EQT Infrastructure VI
<i>Type of Fund:</i>	Real Assets - Infrastructure
<i>Target Fund Size:</i>	€20 Billion
<i>Fund Manager:</i>	EQT Fund Management S.à r.l.
<i>Manager Contact:</i>	Craig White 1114 Avenue of the Americas 45th Floor New York, NY 10036

II. Organization and Staff

EQT Fund Management (the “Firm”) is raising EQT Infrastructure VI, L.P. (the “Fund” or “Fund VI”), to continue EQT’s history of making control-oriented investments in strong performing infrastructure companies that it believes provide essential services to society, with potential for significant value creation. The Fund will continue to focus on investing in its core regions of North America and Europe and will explore opportunities in the APAC region.

As an organization, EQT is a purpose-driven global investment organization focused on active ownership strategies that grow, de-risk and reposition businesses. Founded in 1994 by a Swedish industrial holding company (Investor AB) and other investors, EQT seeks to provide investors with attractive returns by developing strong and sustainable companies through multiple investment strategies including private equity, real estate and infrastructure. In 2019, EQT went public and was listed on Nasdaq Stockholm. The Firm is owned to approximately 56% by employees and partners, 18% by Investor AB, Wallenberg Investments and the EQT Foundation and the remainder is publicly owned. Across its six flagship infrastructure funds, EQT has invested over €34 billion in 59 portfolio companies. The 130 investment professionals’ team is supported by a broad Industrial Advisory Network, spread across 13 offices across the Americas, Europe and Asia.

EQT is committed to advancing Diversity, Equity, and Inclusion (DE&I) as a critical component of its business strategy. The firm has made significant strides in gender equality within its investment advisory teams; particularly through the Women’s International Network (EQT WIN). The purpose of EQT WIN is to attract and retain female talent while fostering an inclusive workplace. As a result, the representation of women in investment advisory roles has more than doubled over the past three years. Additionally, EQT is actively working to enhance diversity across various dimensions, including ethnicity, socioeconomic background, and sexual orientation by setting tailored DE&I goals, joining networks like Out Investors, and implementing Conscious Inclusion training for all employees. The establishment of a Diversity

Council in the U.S. further underscores EQT's dedication to improving the hiring and retention of diverse candidates and promoting awareness of DE&I issues within the organization.

III. Investment Strategy

EQT Infrastructure VI aims to continue its strategy of investing in a diversified portfolio of infrastructure related assets where the Fund will either hold control or co-control positions to drive value creation. The Fund will target equity investments ranging between €200 million to €1 billion, with an anticipated holding period of 4 to 6 years. The team employs a “locals-with-locals” sourcing approach focusing on sectors where they have developed considerable expertise, in close collaboration with experienced global Industrial Advisors. Target sectors include digital, energy and environmental, transport & logistics, and social infrastructure. Within these target sectors, the team prioritizes downside protection and utilizes an institutionalized value creation playbook that focuses on de-risking, repositioning, and future-proofing businesses, as well as a prudent approach to financing.

The team follows a thematic approach across its target sectors and will tilt exposures based on the opportunity set. Targeted companies will be assessed based on several infrastructure characteristics, which include companies that (i) provide essential services to society, (ii) have long-term, stable or growing underlying demand, (iii) demonstrate recurring revenues leading to predictable cash flows, (iv) have an asset based, long-term contracted or otherwise well protected business model and (v) showcase clear value creation potential through operational efficiency, growth and strategic repositioning.

Investment sourcing and diligence is conducted in a focused, thematic and proactive manner. The team employs three key strategies i) “local-with-locals” approach, ii) thematic approach to investing driven by sector teams with deep expertise, underpinned by focused sustainability objectives, and iii) access to a global network of over 600 Industrial Advisors positions. These strategies enable the team to proactively identify investment opportunities. Their strong local networks foster solid long-term relationships with key stakeholders, allowing for efficient resource allocation. Resources are concentrated on opportunities that align with sector themes and unique insights, resulting in high deal selectivity and disciplined investment practices.

Over the years, the infrastructure team has institutionalized a value creation playbook to ensure a consistent approach to developing portfolio companies, leveraging EQT’s shared best practices. The playbook focuses on (i) strong governance, people processes and alignment of interest, (ii) supporting and advising portfolio company management in developing Full Potential Plans and de-risking investments, (iii) expertise in financing and promoting transparency, (iv) continuous monitoring and follow-up through Portfolio Performance Reviews, (v) collaborating with the EQT Digital Team to evaluate and capture digital transformation opportunities, (vi) integrating sustainability in all investments. The team will consistently apply this value creation playbook and active ownership model throughout the investment lifecycle, utilizing the broader EQT platform to drive value creation and mitigate risks.

Post-closing of an acquisition, the deal team, selected Industrial Advisors and members of the broader EQT platform participate in the value creation process, often assuming C-suite roles or Board seats. Key institutionalized levers for value creation include:

- *Cost management:* Comprehensive monitoring of cost-saving initiatives, including time lag and inflation protection in contracts, as well as margin development measures & improvement levers.
- *Indirect procurement:* Strong support from top management, along with high-quality data and systems to optimize indirect procurement.
- *Talent management:* Utilizing talent across the EQT ecosystem, including over 600 high-profile Industrial Advisors.
- *Capex efficiency:* benchmarking capabilities to compare capex metrics against plan and peers, facilitating performance assessments and adoption of best practices.
- *Crisis management:* Development of downturn scenarios addressing inflation, energy shortages, and GDP impacts, including hypothetical mitigation actions and strategies to safeguard the business during challenging environments.

EQT actively evaluates ESG-related risks and opportunities throughout its investment lifecycle, integrating sustainability into its value creation strategy. The firm has established a dedicated Sustainability Team that works closely with the infrastructure team to ensure that future-proofing portfolio companies is a core aspect of investment decisions. Key initiatives include, signing the UN-supported Principles for Responsible Investment in 2010, launching the Sustainability Blueprint in 2015 to embed sustainability into operations, appointing Sustainability Ambassadors to ensure a consistent approach across all strategies and formalizing its commitment to science-based targets in 2021 through the Science-Based Targets Initiative (SBTi), assisting portfolio companies in setting greenhouse gas emissions reduction goals. These efforts underscore EQT's dedication to sustainable investment practices.

IV. Investment Performance

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

Fund	Vintage Year	Total Commitments	SBI Investment	Net IRR*	Net MOIC*	Net DPI*
Fund I	2008	€1.2 billion	-	17.1%	1.9x	1.9x
Fund II	2013	€2.0 billion	-	17.4%	1.6x	1.6x
Fund III	2016	€4.0 billion	-	22.4%	2.1x	1.9x
Fund IV	2018	€9.2 billion	-	11.3%	1.5x	0.1x
Fund V	2020	€16.2 billion	-	13.4%	1.3x	0.0x

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

V. Investment Period and Term

The fund will have a six-year investment period and a twelve-year term, with the potential of three one-year extension periods subject to investor majority consent.

This document is a summary of more detailed information that will be provided in the Confidential Private Placement Memorandum (the "PPM") and the Limited Partnership Agreement ("LPA"). It is qualified in its entirety by the more detailed information to be provided in the PPM and the terms of the LPA.

REPORTS

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

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REPORT

Public Markets Investment Program

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DATE: November 12, 2024

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 September 30, 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:

	Page
• 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 Third Quarter 2024 (CY)

Market Summary

Global equity markets rallied in the third calendar quarter of 2024, with the MSCI All Country World (ACWI) Index of global stocks gaining 6.6% in U.S. dollar terms. International stocks led the market higher, buoyed by strong gains in emerging markets, which rose 8.7% over the quarter.

In a reversal from the prior quarter, the U.S. dollar fell sharply versus a trade-weighted basket of foreign currencies, ending the quarter down nearly 4.9%. In particular, the dollar sank over 12% versus the Japanese yen as Japanese officials raised a key policy rate during the quarter and signaled a higher desired range for long-term interest rates.

Across most markets, interest rates fell sharply during the quarter in response to weaker growth and slowing inflation in the U.S. and the Federal Reserve's (Fed) decision to cut interest rates by a larger-than-expected 50 basis points (bps) at the September FOMC meeting. Investors cheered the news and bond markets rallied strongly. The Bloomberg Global Aggregate Bond Index gained nearly 7% during the quarter, while the U.S. Aggregate Bond Index posted a healthy gain of 5.2%.

Equity markets ended the quarter higher but experienced significant intra-quarter volatility. In the U.S., the Russell 3000 Index pulled back over 9% from mid-July to August 5th as a string of weaker-than-expected economic data stoked fears over the Fed's ability to engineer an economic soft-landing.

Stocks ultimately recovered, however, as economic data released later in the quarter showed continued strong growth and the Fed's jumbo rate cut reassured markets, opening the door to a "goldilocks" scenario of a moderating but still healthy labor market, above-trend GDP growth, and tame inflation. The pace of job gains during the quarter slowed to +148,000 per month, and the JOLTs survey of unfilled jobs fell by nearly -500K to 7.4 million, down from a peak of 12.2 million in March of 2022. GDP growth in Q2 rose at a 3% annual pace from the prior quarter, while early estimates for third quarter GDP growth showed a continuation of this trend. Meanwhile, broad measures of inflation remained subdued. Headline inflation fell to 2.4% on a year-over-year basis in September, the first reading below 2.5% since 2021. Core inflation, which excludes food and energy, remained stable during the quarter at 3.3% (Core CPI year-on-year in September) following steady declines over the prior six quarters.

Within fixed income, yields fell sharply across short-to-intermediate maturity U.S. Treasuries during the quarter. While the decline in yields was initially sparked by weaker-than-expected economic data early in the quarter, the move was later reinforced by the Fed's decision to cut its key policy rate by 50 bps and to signal additional policy easing at future meetings. Credit-sensitive fixed income sectors performed well as investors interpreted the Fed's rate cut as supportive of economic growth and credit fundamentals.

Overall Combined Funds Portfolio Performance – Quarter and Last 12 Months

The overall Combined Funds portfolio returned +5.0% during the **calendar third quarter**, lagging the composite benchmark's return of +5.2%. The Combined Funds portfolio benefited from a modest overweight to equities relative to the policy target during the quarter, but this was offset by active manager underperformance across both the domestic and international equity portfolios. The portfolio's currency hedging program hurt performance during the quarter as the dollar fell sharply, reversing the prior quarter's gains. Within fixed income, the portfolio's slight underweight to the Treasury protection portfolio was a drag as longer-term bonds posted strong returns. Returns within the private markets portfolio during the quarter were muted. The private markets invested portfolio gained +2.2% during the quarter, led by the Private Equity allocation which returned +2.5% for the quarter.

For the **one-year period ended September 30, 2024**, the portfolio posted a return of +20.2%, matching the composite benchmark return for the same period. The portfolio's relative performance versus the policy benchmark benefitted from active manager outperformance, particularly within domestic and developed international equities, as well as within core/core plus and return seeking fixed income. Mark-to-market gains from the portfolio's currency hedging program hurt performance as the dollar fell 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, an underweight to the Treasury protection portfolio was a modest drag over the one-year period. The invested private markets portfolio returned +7.8% for the 12 months ended September 30, 2024, led by the Private Equity allocation which returned +9.2% for the one-year period.

Review of Public Markets Manager Performance Third Quarter 2024 (CY)

Domestic Equity

Domestic equities, as measured by the Russell 3000 Index, returned +6.2% during the quarter. Interest rate sensitive sectors such as utilities (+18.4%) and real estate (+17.0%) led the market higher as interest rates declined and investors rotated from growth sectors like technology into more cyclical sectors such as industrials and financials. The energy sector fell -3.2%, lagging the rest of the market as oil prices fell sharply during the quarter.

As a group, the collection of mega cap technology stocks known as the “Magnificent Seven,” which make up over 25% of the Russell 3000, returned just +1.7% during the quarter. Tesla, Meta, and Apple posted strong results while Amazon, Alphabet, Microsoft and NVIDIA all lost ground. Excluding the impact of the Magnificent Seven, the rest of the Russell 3000 Index gained 7.9% for the quarter.

The Combined Funds domestic equity portfolio gained 6.2% during the quarter, matching the Russell 3000 Index. Portfolio performance within each sector also tracked the index closely during the period. A positive impact from security selection effects in the health care and industrials sectors was offset by modestly negative sector allocation effects across several sectors.

Large cap stocks exhibited significant return dispersion based on style, as value stocks outpaced growth stocks (+9.4% R1000 Value vs. +3.2% R1000 Growth). Much of this dispersion was attributable to the Growth index’s over 50% weighting to the information technology sector, which lagged the broader market during the quarter. In contrast, the Value index is more heavily weighted to financials, healthcare, and industrials, all of which outperformed during the quarter.

In a reversal from the first half of 2024, small cap stocks outperformed large caps (Russell 2000 Index +9.3% vs. Russell 1000 Index +6.1%). Within small caps, value stocks outperformed growth stocks (Russell 2000 Value Index +10.2% vs. Russell 2000 Growth Index 8.4%). Within small cap value during the quarter, all sectors except energy (-8.5%) saw positive returns, with communication services (+27.0%) and real estate (+17.3%) leading the way. In small cap growth, real estate (+21.1%) and financials (+15.3%) were the best performing sectors, and as in small cap value, energy was the lone negative performer (-7.6%).

As a group, the portfolio’s large cap and all cap growth managers collectively underperformed their benchmark during the quarter. This cohort of managers is less concentrated in the largest technology-related stocks than the benchmark. While their diversified approach generally helped performance amid the broadening of performance beyond the mega caps experienced during the period, this effect was offset by weak security selection in the consumer discretionary and technology sectors as a whole.

Large cap manager Sands Capital underperformed (-0.8% Manager vs. +3.2% Benchmark) due to poor stock selection in the information technology and health care sectors. All-cap manager Zevenbergen outperformed (+7.3% Manager vs. +3.4% Benchmark). Zevenbergen’s

outperformance was driven by stock selection in health care, consumer discretionary, and communication services.

Active large cap value managers slightly trailed the Russell 1000 Value Index during the quarter (+8.9% Managers vs. 9.4% Benchmark). Quantitative, deep-value manager LSV underperformed (+8.1% Manager vs. +9.4% Benchmark) due to poor stock selection across several sectors, including information technology and industrials.

The portfolio's semi-passive large cap managers both slightly trailed their benchmark during the quarter (+5.9% Managers vs. +6.1% Benchmark).

Small cap growth managers narrowly outperformed their benchmark in aggregate during the quarter (+8.5% Managers vs. +8.4% Benchmark), driven by positive stock selection in information technology and health care. Fundamental manager Hood River delivered strong outperformance (+11.0% Manager vs. +8.4% Benchmark) stemming from security selection within industrials and healthcare. Rice Hall James benefitted from positive stock selection in the technology sector. In contrast, Arrowmark lagged this quarter (Manager +5.6% vs. Benchmark +8.4%), largely due to weak stock selection in the financials sector.

Small cap value managers underperformed their benchmark during the quarter (+8.8% Managers vs. +10.2% Benchmark). As a group, the managers were overweight several underperforming sectors, including energy, consumer discretionary and communications services. Weak issue selection within these sectors was also a drag. Fundamental manager Hotchkis and Wiley underperformed (+5.5% Manager vs. +10.2% Benchmark), hurt by an overweight to energy, and poor stock selection in consumer discretionary and materials. Goldman Sachs underperformed (+8.9% Manager vs. +10.2% Benchmark) due to poor stock selection in communication services and real estate.

The portfolio's passive domestic equity portfolios performed in-line with their respective benchmarks, posting a combined return of +6.1% during the quarter.

Developed International Equity and Currency Overlay

International developed markets equities, as measured by the MSCI World ex USA Index (net), returned +7.8% in U.S. dollar terms during the quarter. Local equity market returns were muted (+1.9%), however, a decline in the value of the U.S. dollar was a significant tailwind to the performance foreign markets for the quarter when expressed in U.S. dollar terms.

Over the quarter, 20 of 22 developed markets posted positive performance. Strong performance within the three largest index constituents, Japan, the U.K., and Canada, helped lift the index higher. Japan experienced significant market volatility during the quarter as a surprise rate hike from the Bank of Japan coincided with weaker U.S. economic data. As the Japanese yen strengthened sharply against the dollar, investors unwound so-called carry trades which rely on low-cost, yen-denominated borrowing and a stable yen to fund investments in other higher-yielding markets. The resulting selling wave put downward pressure on risk assets globally. Despite the volatility, Japanese equities finished the quarter in positive territory. U.K. equities were higher following the Labour party's general election victory in early July and growing

expectations for further rate cuts by the Bank of England, which delivered the first rate cut in four years at its August meeting.

The portfolio's active developed markets managers underperformed the MSCI World ex USA Index (net), returning +7.3% versus the benchmark's +7.8% return. The portfolio's underperformance for the quarter was largely attributable to stock selection within healthcare names, and an underweight to Canadian equities. Core manager Columbia Threadneedle underperformed (+6.1% Manager vs. +7.8% Benchmark), hurt by an overweight to semiconductor names and an underweight to financials. Fundamental manager J.P. Morgan (+6.6% Manager vs. +7.8% Benchmark) also lagged, as security selection in consumer staples detracted.

The passive developed markets portfolio returned +7.8%, which matched the performance of the MSCI World ex USA Index (net) for the quarter.

The U.S. dollar depreciated versus developed markets currencies during the quarter, leading to losses in the portfolio's currency overlay program, which detracted -1.6% relative to an unhedged international developed markets equity portfolio. Broad U.S. dollar weakness was due in part to weaker-than-expected U.S. jobs data and a larger-than-expected rate cut from the Fed. The dollar's weakness versus the Japanese yen (-12%) was exacerbated by the Bank of Japan's surprise decision to hike interest rates and signal the potential for a relaxation in the government's yield curve control policy. While the Japanese yen drove over half of the currency overlay program's losses, U.S. dollar weakness was broad-based, with the euro and Swiss franc among the biggest gainers. Over the quarter, the program's overall hedge ratio ranged from 4% to 37% and ended the quarter at 12%.

Emerging Markets Equity

Emerging markets equities, as measured by the MSCI Emerging Markets Index (net), rose 8.7% in U.S. dollar terms during the quarter. Emerging market currencies appreciated modestly against the dollar during the quarter. In local currency terms, the EM Index (net) returned +6.6%.

China, which represents just under 24% of the index, was the primary driver of index performance for the quarter. Chinese equities rose dramatically in late-September on the announcement of a large stimulus package from the Chinese government. The package, which included liquidity injections, funding for large-scale stock buybacks, and additional fiscal promises, caught most investors by surprise, which contributed to the speed and magnitude of the rally.

The portfolio's active emerging markets managers underperformed the MSCI Emerging Markets Index (net), returning +6.2% vs. the benchmark's +8.7% return. The portfolio's overweight to Korean technology names, specifically in the semiconductor space, was the biggest headwind during the quarter.

Deep value manager Pzena posted strong returns (+11.7% Manager vs. +8.7% Benchmark), benefitting from strong security selection, an underweight to Taiwan, and overweights to Thailand and China. Core manager Macquarie significantly underperformed (+0.1% Manager vs. +8.7% Benchmark) as its large overweight to semiconductor names was a major performance drag. An overweight to energy also contributed to underperformance. Quality growth manager Morgan

Stanley (+5.2% Manager vs. +8.7% Benchmark) was hurt by an underweight to China and poor security selection within financials. Quality growth manager Martin Currie (+7.5% Manager vs. +8.7% Benchmark) underperformed due to an overweight to Korean semiconductor names.

Earnest Partners' China A-share strategy outperformed the MSCI China A Index during the quarter (+25.6% Manager vs. +21.5% Benchmark). Stock selection was additive across sectors within the portfolio as Chinese markets rose sharply on the back of the stimulus announcement. Selection in financials and healthcare was particularly strong relative to the index.

The passive emerging markets portfolio underperformed the MSCI Emerging Markets Index (net) for the quarter (+8.0% Manager vs. +8.7% Benchmark). Reported performance reflects the ongoing impact of Indian tax withholding on unrealized gains within the portfolio's India allocation, which is invested in a unitized collective investment trust. Excluding this impact, the portfolio's performance was within tolerance relative to its benchmark for the quarter.

During the quarter, Staff made the decision to fully redeem from the Rock Creek Emerging Markets strategy. The portfolio was liquidated over the course of the quarter, and proceeds were placed with NISA in an equity overlay strategy benchmarked to the MSCI EM Index to maintain market exposure.

Global Equity and ACWI ex USA Equity

The MSCI All-Country World Index (ACWI) (net) gained 6.6% in the third quarter. Positive performance was widespread and only seven countries, representing less than 4% of the index, experienced declines. Asian markets such as Thailand, Hong Kong, China, and the Philippines each posted gains of more than 20% for the quarter. Sector performance for the broad global index was similar to that observed in the U.S. domestic market: strong returns in real estate, utilities and financials drove the index higher, while mega cap technology names lagged, and energy was the only sector to post an outright decline (-2.2%).

As a group, the Combined Funds' global equity managers trailed the MSCI ACWI Index (net) for the quarter (+5.6% Managers vs. +6.6% Benchmark). Collectively, these three managers are substantially underweight to the United States and overweight to international markets. While this underweight position helped modestly during the quarter, poor security selection within the United States detracted substantially from overall performance. In contrast, the managers' net overweight position in China relative to the benchmark, as well as superior security selection within that market, contributed positively to overall performance. Quality growth manager Martin Currie underperformed (+4.1% Manager vs. +6.6% Benchmark) due to overweight positions in information technology and real estate. Growth-oriented manager Baille Gifford (+5.3% Manager vs. +6.6% Benchmark) also trailed the benchmark, primarily due to security selection within the health care and consumer staples sectors.

The portfolio's ACWI ex USA manager, Earnest Partners, ended the quarter behind the benchmark (+6.7% Manager vs. +8.1% Benchmark). Underperformance came primarily from stock selection within consumer discretionary names.

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 strong return of +5.2% during the third quarter. U.S. Treasuries rallied across the yield curve, driven by softer economic data, a weakening labor market, and broad anticipation of a policy rate cut by the U.S. Federal Reserve (Fed). Though a rate cut was anticipated, the magnitude of the +50 basis points (bps) cut at the September Federal Open Market Committee (FOMC) meeting was somewhat of a surprise and interpreted by markets as a forceful statement by the Fed of its intention to stay ahead of weakening economic data. Overall, bond market performance during the quarter was positively impacted by the rally in rates and a continued benign environment for most credit-sensitive sectors. The downward move in yields followed a so-called bull steepening pattern, with yields on short and intermediate maturities falling more than longer-term yields.

Corporate spreads stayed range-bound during the quarter despite falling Treasury yields and a wave of new issue supply which saw over \$200 billion of new issuance in September alone. Investment grade (IG) credit spreads ended the quarter at +89bps over duration-matched U.S. Treasuries, well below their 20-year average level of +149bps, buoyed by strong corporate fundamentals, robust equity valuations and growing confidence that the Fed will be successful in delivering a soft landing for the economy.

Within securitized sectors, U.S. agency mortgage-backed securities (MBS), as measured by the Bloomberg U.S. MBS Index, posted a return of +5.5% during the quarter. Agency MBS benefitted from the decline in yields, which increased the potential for refinancing activity, particularly among higher coupons. Away from agency MBS, attractive spreads and solid underlying collateral performance within residential mortgage credit continued to attract yield-focused investors. Commercial mortgage-backed (CMBS) sector performance was generally positive during the quarter. While there are still pockets of distress in the office sector, general market sentiment has shifted from highly bearish to a more neutral outlook on the sector, with new issue activity beginning to return.

Within the high yield credit (HY) sector, lower quality (CCC-rated) bonds outperformed higher quality (BB-rated and B-rated) bonds, particularly within the telecommunications and media sectors. New issue supply was strong, with issuance of \$40 billion in September alone – the highest level seen over the past three years – ahead of the November U.S. presidential election. Leveraged loans returned +2.1% for the quarter, underperforming most fixed income sectors, as lower rates reduced coupon income due to the floating rate nature of the asset class. Default rates among loan issuers have risen sharply over the last 12 months, to near recessionary levels, particularly among the lowest quality, most highly leveraged issuers struggling with higher interest costs.

Emerging market debt (EMD) posted positive results for the quarter, driven by strong performance across hard-currency denominated sovereign debt. The JP Morgan EMBI Global Diversified Index gained 6.2% during the quarter. Local currency EMD returns were positively impacted by favorable economic readings across a range of countries. On the negative side, Mexico was a key detractor as that market experienced continued volatility associated with the recent Morena party election victory and divisive judicial reforms.

The portfolio's core/core plus bond managers modestly outperformed the Bloomberg U.S. Aggregate Bond Index during the quarter (+5.3% Managers vs. +5.2% Benchmark). Overall, the portfolio benefitted from managers' longer-than-benchmark duration positioning as yields fell sharply during the quarter. Additionally, managers' sector allocation and security selection across the spread sectors of the market positively contributed, particularly in IG and HY credit, as well as securitized credit and agency MBS. Core plus manager Neuberger Berman underperformed due to its yield curve positioning, which was underweight shorter maturities, while core plus manager Western Asset's underperformance was driven by an overweight to Mexico local currency exposure, which suffered as the peso weakened during the quarter.

The portfolio's return-seeking bond managers returned +5.0% during the quarter, slightly underperforming the portfolio's policy benchmark (the Bloomberg U.S. Aggregate Bond Index) return of +5.2%. Overall, the return-seeking managers are benchmarked to indexes with lower 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 lag in periods of rapidly declining interest rates. Relative to a weighted composite of the managers' individual benchmarks, the return seeking managers outperformed (+5.0% Managers vs. +4.5% Benchmark). In particular, the portfolio's dedicated high yield managers benefitted from positive security selection within the lower credit quality (CCC-rated) segment of the market, while the portfolio's multi-asset credit managers benefited from an overweight to local currency emerging markets, high yield bonds, and exposure to out-of-benchmark securitized sectors.

Treasury Protection Portfolio

The Treasury Protection portfolio returned +6.6% during the quarter, slightly outperforming the Bloomberg U.S. Treasury 5+ Year Index, which returned +6.5%. Manager outperformance was driven by overweight positioning along the 5-year and 10-year parts of the yield curve, which benefitted the most from the Fed's larger-than-anticipated rate cut during the quarter. Additionally, managers' off-benchmark allocation to U.S. agency debt provided a modest yield pick-up over U.S. Treasuries.

Laddered Bonds + Cash Portfolio

The Laddered Bonds + Cash portfolio returned +1.6% during the quarter, outperforming the ICE BofA U.S. 3-Month Treasury Bill benchmark, which returned +1.4%. Portfolio performance benefitted from a longer-than-benchmark maturity position, which shielded the portfolio from the impact of lower reinvestment rates following the Fed's 50-bp rate cut during the quarter. An allocation to corporate credit and asset-backed securities also resulted in a modest yield advantage relative to cash or comparable U.S. Treasuries. During the quarter, Staff maintained the weighted-average maturity of the ladder portfolio between six and seven months.

Public Markets Managers' Organizational Updates Third Quarter 2024

Fidelity (International Equity)

Stephen Lieu was promoted to Co-Portfolio Manager in July 2024. Mr. Lieu will work directly with PM Eileen Dibb on the Asian sub-portfolio of the International Growth strategy.

Hood River (Domestic Equity)

Dylan Smoluch joined Hood River as a research associate in July 2024. Mr. Smoluch is a recent graduate of the University of Virginia and the son of PM and Co-Founder Brian Smoluch.

J.P. Morgan (Domestic Equity)

Head of U.S. Equity, Lee Spelman, is stepping down from her current role and will become Vice Chair of Global Equities. Jonathan Sherman, Global Co-Head of the U.S. Equity Investment Specialist team, will succeed Ms. Spelman as head of U.S Equity.

KKR (Fixed Income)

In September, Terry Ing, Managing Director and Co-PM of High Yield, left the firm. Richard Schoenfeld and James Newman have been named Co-PMs of High Yield and will manage the SBI's high yield portfolio alongside Jeremiah Lane, Global Co-Head of Leveraged Credit. Mr. Shoenfeld is a Director and Investment Analyst with the firm. Mr. Newman is a Managing Director and serves as Global Head of Trading and Co-PM for the U.S. and European High Yield business. Separately, Dima Mostovoy took the role of Head of U.S. Credit Research in addition to his responsibilities as Co-PM for the leveraged loan business.

LSV (Domestic Equity)

Four former executives of LSV Asset Management filed a lawsuit during the quarter related to the valuation received from the company for their equity stakes in the firm. SBI Staff have spoken with LSV's senior management about the matter and will continue to closely follow developments in the case.

Macquarie (Emerging Markets Equity)

Macquarie Investment Management agreed to pay a settlement of \$79.5 million to the SEC over charges related to security valuation and cross trading violations in its fixed income business. The EM equity strategy and team were not involved or linked to any alleged violations.

Marathon (International Equity)

Senior Investment Analyst, Yumiko Ogasawara departed the firm in July to pursue other opportunities. A replacement for Ms. Ogasawara's coverage is expected to be hired soon.

Martin Currie (Global Equity)

Aminah Ahmad joined the Martin Currie Global Long-Term Unconstrained team in July as an investment analyst. Aminah Ahmad came from BlackRock, where she spent the first five years of her career in the graduate program and as an Associate on the European Equity team.

Neuberger Berman (Fixed Income)

Brad Tank, CIO and Global Head of Fixed Income, is moving from CIO to a senior advisor role within Neuberger. Ashok Bhatia will assume full CIO responsibilities and leadership of Global Fixed Income by the end of 2024. Bill Arnold, CFO, will transition away from his role to a more limited financial oversight role in March 2025. Anne Brennan, Chief Risk Officer, will assume the role of CFO at that time and will continue to lead the risk organization.

TCW (Fixed Income)

In September 2024, Andrew Xu, Global Head of Investment Risk, departed the firm. The same month, Ross Killian joined TCW as Global Head of Investment Risk, leading the Investment Risk and Quantitative Research Group.

Western (Fixed Income)

In August 2024, Ken Leech, Co-Chief Investment Officer (CIO), received a Wells Notice from the U.S. Securities and Exchange Commission (SEC) in connection with an ongoing investigation by the SEC, Department of Justice and Commodity Futures Trading Commission (CFTC) into trade allocation practices with respect to trades made by Mr. Leech in his role as portfolio manager for certain of the firm's strategies. Mr. Leech was not a named portfolio manager for the SBI's account. Mr. Leech was placed on an immediate leave of absence, and Michael Buchanan, Co-CIO, has been elevated to CIO and now leads the Global Investment Strategy and U.S. Broad Strategy Committees. Mr. Buchanan was named Deputy CIO in March 2015 and was promoted to Co-CIO in August 2023. SBI Staff has had multiple discussions with the Western team to review the details of the matter and the firm's action plan. Staff is currently reviewing appropriate next steps and is monitoring strategy level asset flows and any developments in the internal and external investigations.

Q3 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.

Investment Manager	Asset Class
Acadian Asset Management LLC	Developed Markets Equity
Ariel Investments, LLC	Global Equity
Arrowmark	Domestic Equity
Ashmore Investment Management Limited	Fixed Income
BlackRock Financial Management, Inc.	Fixed Income
BlackRock Institutional Trust Company	Semi-Passive Equity
Columbia Threadneedle Investments	Domestic Equity
Columbia Threadneedle Investments	Fixed Income
Dodge & Cox	Fixed Income
Earnest Partners	Emerging Markets Equity
Fidelity	Developed Markets Equity
Goldman Sachs Asset Management, LP	Fixed Income
Hood River	Domestic Equity
Hotchkis & Wiley	Domestic Equity
KKR Credit Advisors (US) LLC	Fixed Income
LSV Asset Management	Domestic Equity
Macquarie Investment Management Advisers	Emerging Markets Equity
Martin Currie Inc.	Emerging Markets Equity
Martin Currie Inc.	Global Equity
Martingale	Domestic 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
Peregrine Capital Management	Domestic Equity
Pzena	Emerging Markets Equity

Investment Manager

PGIM

Record Currency LLC

Rice Hall James

Sands Capital

TCW

Western Asset Management Company

Wellington

Zevenbergen

Asset Class

Fixed Income

Currency Overlay

Domestic Equity

Domestic Equity

Fixed Income

Fixed Company

Domestic Equity

Domestic Equity

REPORT

Participant Directed Investment Program and Non-Retirement Investment Program

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DATE: November 12, 2024

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 September 30, 2024. It includes organizational updates relevant to the strategies used and a list of due diligence meetings staff conducted during the third calendar quarter of 2024.

The report includes the following sections:

	Page
• Participant Directed Investment Program Fund Commentaries	3
• Non-Retirement Fund Commentaries	6
• Manager Meetings	8

Important Notes:

All performance figures and market data presented in this report are unaudited and preliminary. Performance is presented 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

Third 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 matched the benchmark performance for the quarter with a +6.2% return.

Vanguard Institutional Index Plus

The Fund employs a full replication indexing approach designed to track the S&P 500 Index. The Fund matched the benchmark performance for the quarter with a +5.9% return. *Note: This option is only available to the Minnesota Deferred Compensation Plan (MNDCP).*

Vanguard Dividend Growth Fund

The Fund is actively managed by 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 +9.7% for the quarter, outperforming the S&P U.S. Dividend Growers Index return of +9.0%. For the quarter, the portfolio benefitted as the U.S. stock market return increased its breadth beyond a handful of technology stocks, as over half of the index constituents outperformed the index return. Strong stock selection within the healthcare sector aided returns. An overweight allocation to the real estate and consumer discretionary sectors and an underweight allocation to the energy and technology sectors also contributed to the outperformance.

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 matched the performance of the CRSP US Mid-Cap Index for the quarter with a +9.4% return.

T. Rowe Price Institutional Small-Cap Stock Fund

The Fund's investment process emphasizes fundamental research and active, bottom-up stock selection. The Fund seeks to provide long-term capital growth by investing primarily in stocks of small companies in both growth- and value-oriented market segments. The Fund matched the benchmark, the Russell 2000 Index, performance for the quarter with a +9.3% return. Stock selection in the financials, industrials, and communication services sectors added to the portfolio's relative return, while the stock selection in the consumer discretionary and staples sectors detracted.

International Equities

Fidelity Diversified International Equity Fund

The Fund actively selects international companies, primarily in foreign developed markets. The Fund focuses on companies with significant long-term earnings potential, durable business models, and attractive growth prospects. The Fund returned +5.5% for the quarter, underperforming the

MSCI EAFE Index return of +7.3%. The portfolio's growth-tilted positioning detracted as several foreign central banks lowered their policy interest rates, benefiting traditional value interest-rate sensitive sectors such as real estate and utilities, where the portfolio had a 5% cumulative underweight allocation. The overweight allocation to the technology sector was a drag as the sector underperformed the broader market, and regionally, an underweight position in the Asia Pacific ex-Japan region also detracted.

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 developed and emerging market companies. The Fund returned +8.0% for the quarter, underperforming the benchmark return of 8.4%. Fund performance reflects the impact of Indian tax withholding on unrealized gains within the portfolio's India allocation. Excluding this effect and the impact of fair value pricing, the Fund's performance was within tolerance relative to its benchmark during the quarter.

Fixed Income and Capital Preservation Options

Dodge & Cox Income Fund

The Fund invests in 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 Fund returned +5.6% for the quarter, outperforming the Bloomberg U.S. Aggregate Index return of +5.2%. Relative outperformance for the quarter was driven by an overweight allocation to and security selection in the Agency Mortgage-Backed Securities sector, an underweight allocation to the U.S. Treasury sector, and security selection within the corporate credit sector.

Vanguard Total Bond Market Index

The Fund employs an index sampling approach designed to track the performance of the Bloomberg U.S. Aggregate Index. The Fund returned +5.1% for the quarter, slightly underperforming the benchmark return of +5.2%.

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 +0.8% for the quarter compared to a +1.1% return for its benchmark, the 3-Year Constant Maturity Treasury Yield +45 basis points. In periods of rapidly rising interest rates and/or an inverted yield curve, as experienced over the last 24 months, it is not uncommon for stable value strategies to lag their respective benchmarks. During the quarter, the Federal Reserve started its rate-cutting cycle by reducing the Federal Funds target rate by 0.50%. If short-term yields trend lower and the yield curve normalizes this headwind should slowly abate. 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 matched the benchmark, the ICE BofA 3-Month U.S. T-Bill Index, performance for the quarter with a +1.4% return.

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 performance for the quarter with a +5.8% return.

Non-Retirement Fund Commentaries

Third 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. The Portfolio performance matched the benchmark for the quarter, returning +5.9%.

Non-Retirement Program Fixed Income Manager

Prudential Global Investment Management (PGIM) actively manages the Non-Retirement Fixed Income Portfolio relative to the Bloomberg U.S. Aggregate Index in a separately managed portfolio. The Fund returned +5.3% for the quarter, slightly outperforming the benchmark return of +5.2%. Relative outperformance came from an overweight position in structured products, including asset-backed securities (ABS) and commercial mortgage-backed securities (CMBS), and security selection in both the structured products and Treasury 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, focusing on security selection and sector allocation. The Portfolio's performance matched the benchmark for the quarter, returning +3.9%. For the quarter, relative performance was positively impacted by the portfolio's yield advantage relative to the index, contributing to income returns. Curve positioning in the portfolio detracted from relative performance. During the quarter, the portfolio was slightly underweight in the 1–3 year part of the curve, which saw the greatest shift downward in rates.

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 matched the benchmark performance for the quarter with a +1.4% return.

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

RBC (Assigned Risk Plan, Fixed-Income)

Mike Lee, CEO and President of RBC Global Asset Management U.S. retired on July 31, 2024. Donald Sanya was appointed CEO, and Brandon Lew was named President of RBC GAM U.S. effective August 1, 2024. Mr. Sanya will retain his role as managing director and head of RBC Global Asset Management's U.S. institutional business, and Brandon Lew will remain President, Managing Director, and Co-Head of RBC GAM Business Finance.

Vanguard Dividend Growth Portfolio (PDIP)

Wellington Management, the sole subadvisor on the fund, announced that Tim Casaletto, Portfolio Manager, will join the Dividend Growth investment team on January 1, 2025, to work on idea generation and portfolio construction. Since joining Wellington in 2014, Mr. Casaletto has been a global industry analyst, equity portfolio manager, and consistent collaborator with the team. Peter Fisher remains the lead portfolio manager of this strategy.

Manager Meetings Third Quarter 2024

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

Investment Manager	Management Style/ Asset Class	Investment Program
DFA	Active, Domestic Real Estate	MN ABLE Plan
Dodge & Cox	Active, Fixed Income	PDIP
Fidelity	Active, International Equity	PDIP
Galliard	Active, Stable Value	PDIP
Mellon	Passive, Domestic Large Cap Equity	Non-Retirement
Nuveen	Active, Money Market	MN 529 Plan
	Active, Domestic Large Cap Equity	MN 529 Plan
	Passive, Domestic Large Cap Equity	MN 529 Plan
	Passive, Domestic All Cap Equity	MN 529 Plan
	Passive, International Equity	MN 529 Plan
PGIM	Active, Fixed Income	Non-Retirement
RBC	Active, Fixed Income	Assigned Risk Plan, Non-Retirement
SSGA	Passive, Target Retirement Fund	PDIP
	Active, Money Market	PDIP Non-Retirement
T. Rowe Price	Active, Domestic Small Cap Equity	PDIP
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, Emerging Markets Equity	MN 529 Plan
	Passive, Fixed Income	PDIP
		MN 529 Plan
	Passive, Balanced Fund	PDIP
	Passive, Short-Term Inflation-Protected Securities	MN 529 Plan
	Active, Domestic Large Cap Equity (Wellington)	PDIP
	Active, High Yield Fixed Income	MN 529 Plan

REPORT

AON Market Environment Report

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Market Environment

Third Quarter 2024

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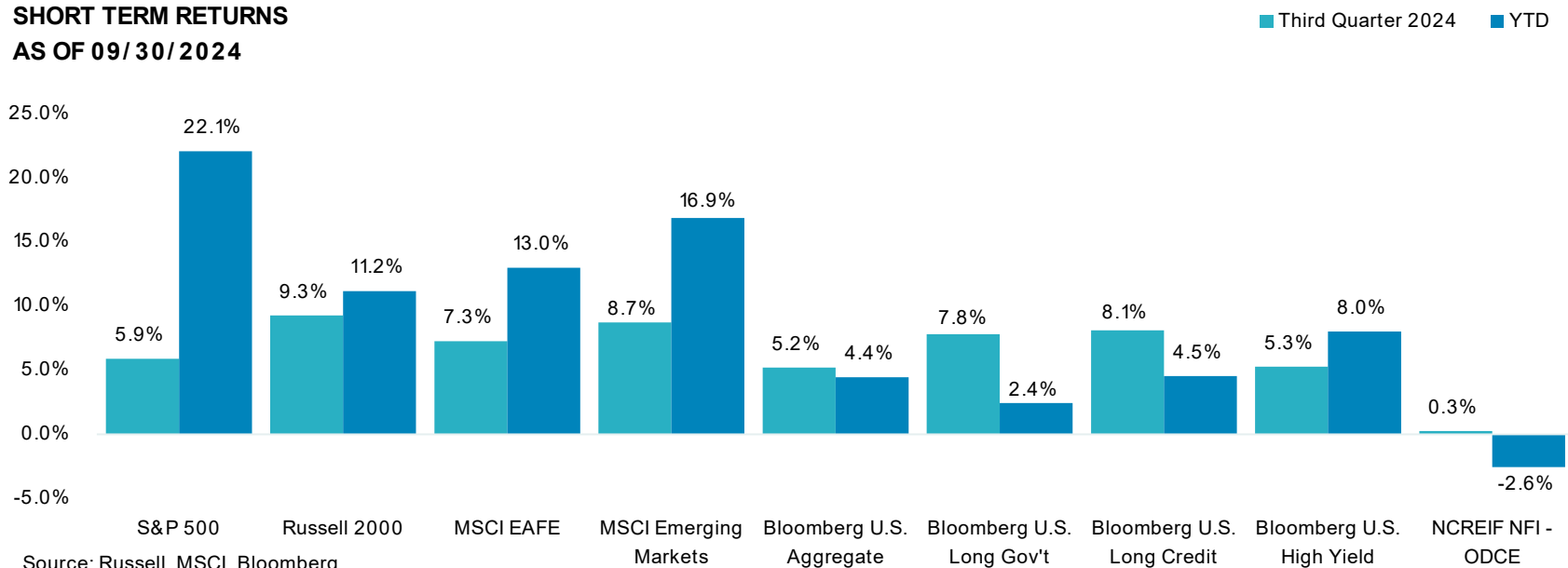
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Market Highlights

SHORT TERM RETURNS AS OF 09/30/2024



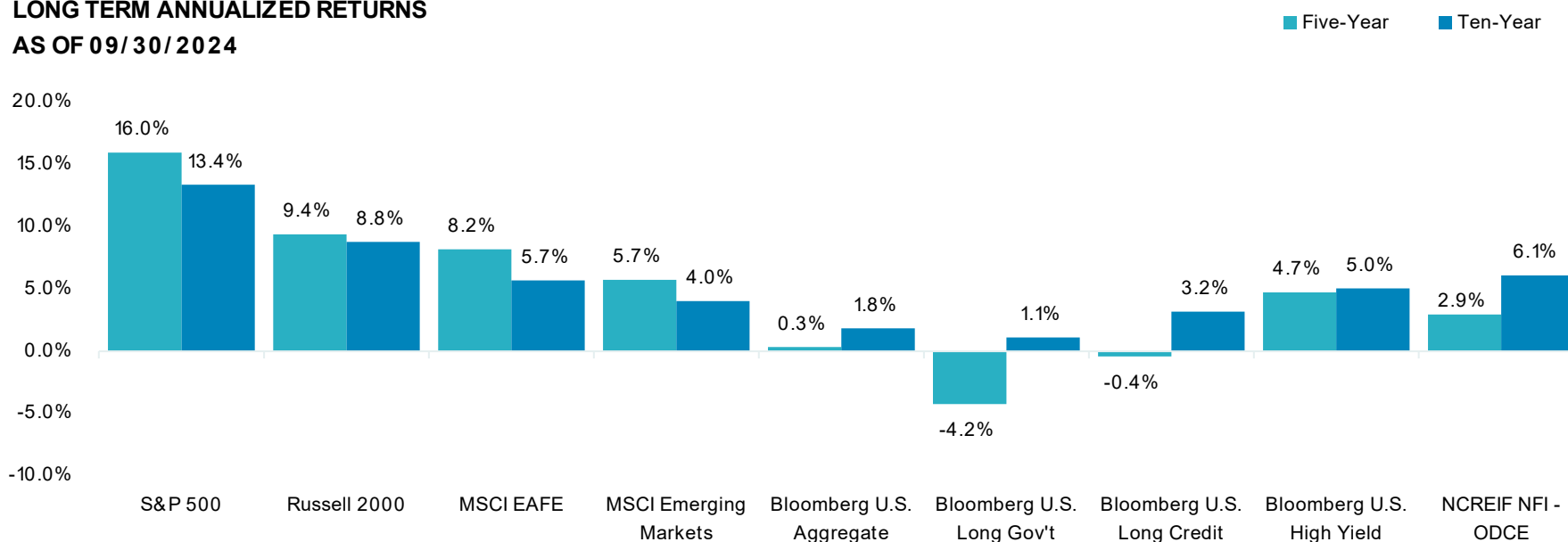
Source: Russell, MSCI, Bloomberg

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

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Market Highlights

LONG TERM ANNUALIZED RETURNS AS OF 09/30/2024



Source: Russell, MSCI, Bloomberg

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Market Highlights

Returns of the Major Capital Markets						
	Period Ending 09/30/2024					
	Third Quarter	YTD	1-Year	3-Year ¹	5-Year ¹	10-Year ¹
Equity						
MSCI All Country World IMI	6.84%	17.83%	30.96%	7.44%	11.87%	9.20%
MSCI All Country World	6.61%	18.66%	31.76%	8.09%	12.19%	9.39%
Dow Jones U.S. Total Stock Market	6.16%	20.61%	35.24%	10.12%	15.15%	12.75%
Russell 3000	6.23%	20.63%	35.19%	10.29%	15.26%	12.83%
S&P 500	5.89%	22.08%	36.35%	11.91%	15.98%	13.38%
Russell 2000	9.27%	11.17%	26.76%	1.84%	9.39%	8.78%
MSCI All Country World ex-U.S. IMI	8.18%	13.90%	25.06%	3.74%	7.66%	5.33%
MSCI All Country World ex-U.S.	8.06%	14.21%	25.35%	4.14%	7.59%	5.22%
MSCI EAFE	7.26%	12.99%	24.77%	5.48%	8.20%	5.71%
MSCI EAFE (Local Currency)	0.82%	11.97%	17.53%	7.92%	8.78%	7.39%
MSCI Emerging Markets	8.72%	16.86%	26.05%	0.40%	5.75%	4.02%
Equity Factors						
MSCI World Minimum Volatility (USD)	10.30%	15.87%	23.80%	6.74%	6.82%	8.85%
MSCI World High Dividend Yield	10.43%	15.41%	23.70%	9.38%	9.09%	7.76%
MSCI World Quality	3.86%	22.72%	38.12%	12.03%	17.07%	13.84%
MSCI World Momentum	3.06%	30.18%	46.02%	8.53%	13.74%	12.85%
MSCI World Enhanced Value	6.31%	10.87%	20.07%	8.05%	9.11%	6.60%
MSCI World Index Growth	3.51%	21.48%	37.76%	8.59%	16.18%	13.02%
MSCI USA Minimum Volatility (USD)	9.34%	18.68%	27.92%	9.32%	9.31%	11.47%
MSCI USA High Dividend Yield	9.66%	16.53%	26.22%	9.64%	9.35%	10.02%
MSCI USA Quality	4.88%	24.80%	39.81%	13.48%	18.13%	15.63%
MSCI USA Momentum	3.83%	30.53%	47.18%	7.00%	12.84%	13.74%
MSCI USA Enhanced Value	6.32%	10.09%	23.63%	5.88%	9.01%	8.32%
MSCI USA Equal Weighted	8.93%	14.74%	29.31%	6.36%	11.83%	10.54%
MSCI USA Growth	2.61%	25.38%	42.53%	11.25%	20.16%	16.55%

Returns of the Major Capital Markets						
	Period Ending 09/30/2024					
	Third Quarter	YTD	1-Year	3-Year ¹	5-Year ¹	10-Year ¹
Fixed Income						
Bloomberg Global Aggregate	6.98%	3.60%	11.99%	-3.06%	-0.83%	0.57%
Bloomberg U.S. Aggregate	5.20%	4.45%	11.57%	-1.39%	0.33%	1.84%
Bloomberg U.S. Long Gov't	7.81%	2.44%	15.43%	-8.32%	-4.25%	1.09%
Bloomberg U.S. Long Credit	8.10%	4.54%	18.86%	-4.25%	-0.41%	3.18%
Bloomberg U.S. Long Gov't/Credit	7.96%	3.54%	17.24%	-6.17%	-1.97%	2.32%
Bloomberg U.S. TIPS	4.12%	4.85%	9.79%	-0.57%	2.62%	2.54%
Bloomberg U.S. High Yield	5.28%	8.00%	15.74%	3.10%	4.72%	5.04%
Bloomberg Global Treasury ex U.S.	9.40%	2.01%	11.48%	-5.53%	-2.96%	-0.83%
JP Morgan EMBI Global (Emerging Market)	6.07%	8.02%	18.02%	-0.10%	1.19%	3.13%
Commodities						
Bloomberg Commodity Index	0.68%	5.86%	0.96%	3.66%	7.79%	0.03%
Goldman Sachs Commodity Index	-5.26%	5.23%	-6.06%	8.81%	8.03%	-2.35%
Hedge Funds						
HFR Fund-Weighted Composite ²	2.78%	8.06%	12.57%	4.00%	7.40%	5.11%
HFR Fund of Funds ²	1.08%	5.98%	9.32%	2.25%	5.26%	3.58%
Real Estate						
NAREIT U.S. Equity REITS	16.09%	15.93%	34.74%	5.07%	5.46%	7.83%
NCREIF NFI - ODCE	0.25%	-2.57%	-7.26%	-0.18%	2.94%	6.10%
FTSE Global Core Infrastructure Index	14.29%	16.20%	29.47%	6.96%	6.20%	7.25%
Private Equity						
Burgiss Private iQ Global Private Equity ³			6.43%	11.01%	15.07%	13.40%

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

¹ Periods are annualized.

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

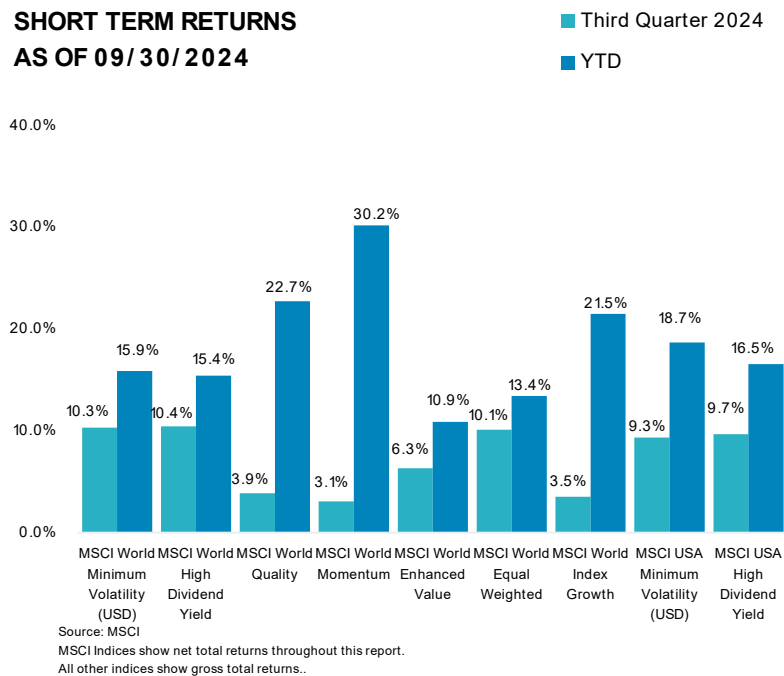
³ Burgiss Private iQ Global Private Equity data is as at December 31, 2023

Source: Russell, MSCI, Bloomberg

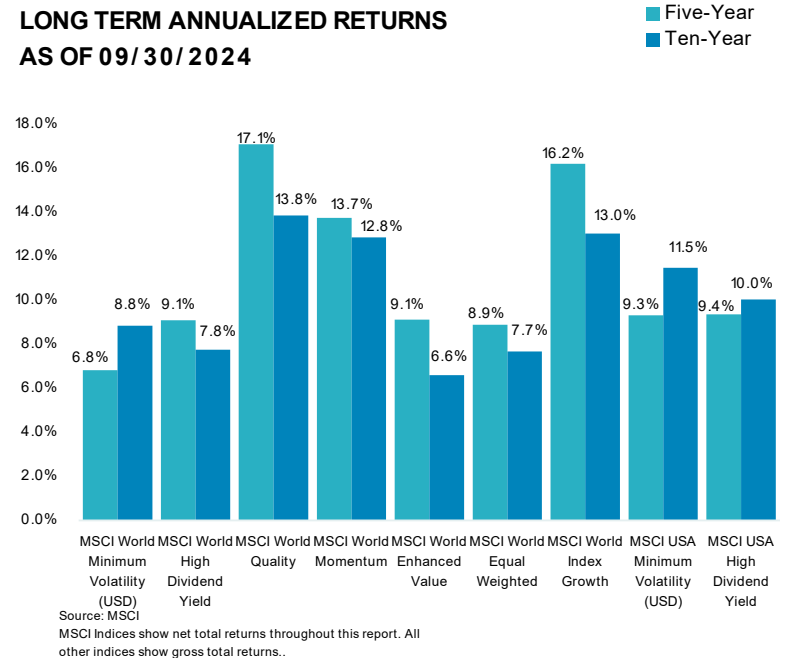
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Factor Indices

SHORT TERM RETURNS
AS OF 09/30/2024



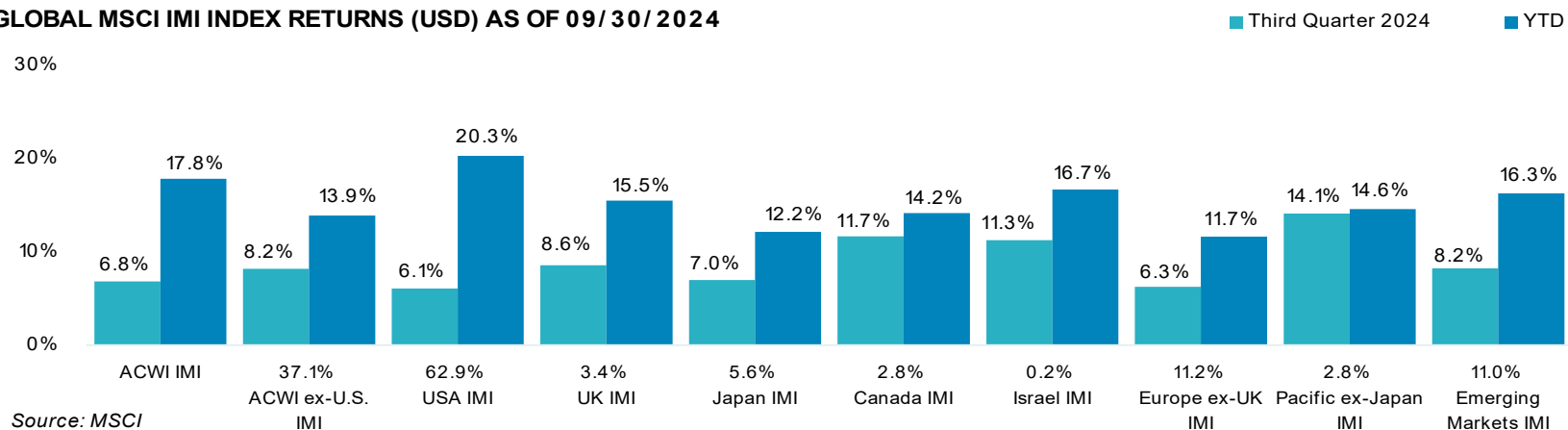
LONG TERM ANNUALIZED RETURNS
AS OF 09/30/2024



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Global Equity Markets

GLOBAL MSCI IMI INDEX RETURNS (USD) AS OF 09/30/2024



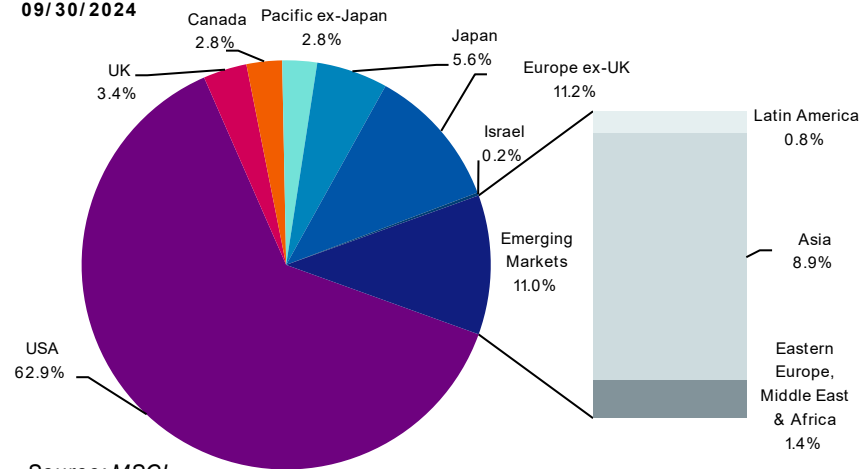
- In Q3 2024, the global equity markets rose amid volatility. The S&P 500 Index continued making new highs, despite a mixed outlook on earnings and a slightly weaker-than-expected labour market. Easing inflation, continued economic growth, and outperformance by financials and industrials pushed the S&P 500 higher. Volatility rose in Q3 with the VIX reaching 16.7, peaking at 66.73 in early August before dropping below its 20-year average of 19.1.
- Across international markets, all regions posted positive returns. Pacific ex-Japan IMI equities performed well. The MSCI Australia IMI, which makes up 67.7% of the index weight, had a return of 11.8%. Moreover, the MSCI Hong Kong IMI, accounting for 16.7% of the index weight, experienced a 22.2% increase. The MSCI Singapore IMI, with a 13.5% weight, also yielded a substantial return of 17.8% during the same period.
- USA IMI was the worst performer with a return of 6.1% over the quarter. Energy (-2.9%) and Information Technology (1.8%) were the worst-performing sectors.

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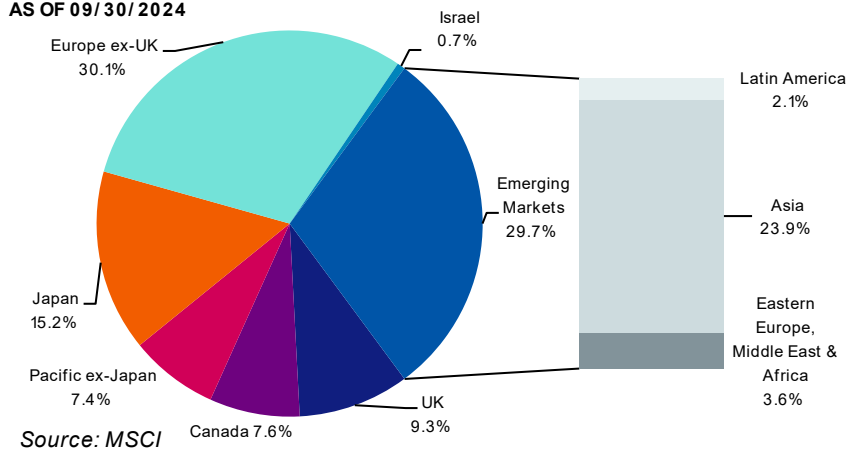
Global Equity Markets

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 09/30/2024



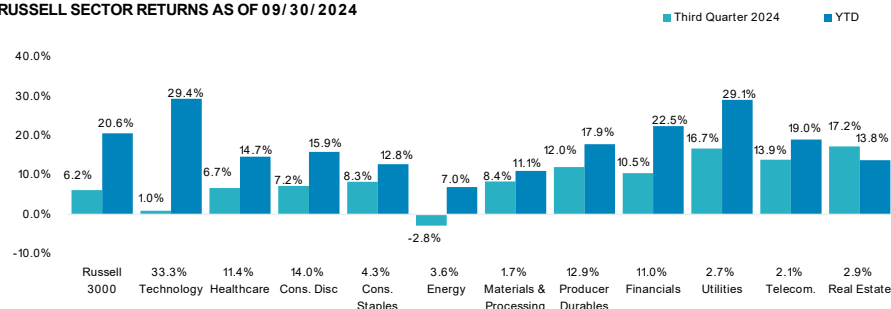
MSCI ALL COUNTRY WORLD EX-U.S. IMI INDEX GEOGRAPHIC ALLOCATION AS OF 09/30/2024



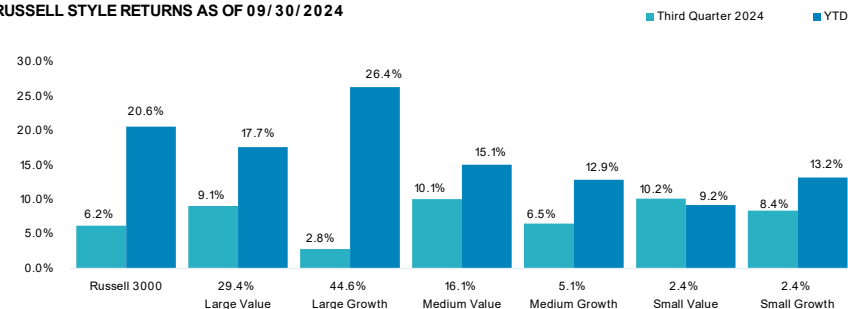
U.S. Equity Markets

- The S&P 500 Index continued making new highs and delivered 5.9% during the quarter. The Dow Jones Industrials outperformed over the quarter with a return of 8.7%.
- Election results and political developments dominated the quarter as former U.S. President Donald Trump was injured in an attempted assassination while speaking at an open-air campaign rally near Butler, Pennsylvania and the current U.S. President Joe Biden announced that he will not seek re-election and endorsed Vice President Kamala Harris as the Democratic Party presidential nominee.
- The U.S. economy grew at an annualized rate of 3.0% in the second quarter of 2024, in line with the expectations and above the previous quarter's annualized growth rate of 1.6%. The acceleration was largely boosted by strong consumer and government spending.
- The Russell 3000 Index rose 6.2% during the third quarter and 20.6% on a YTD basis. Real Estate (17.2%) and Utilities (16.7%) were the best performers while Energy (-2.8%) and Technology (1.0%) were the worst performers.
- On a style basis, value outperformed growth across market capitalizations over the quarter. Small-cap stocks outperformed Medium and Large-cap stocks in both growth and value styles over the quarter.

RUSSELL SECTOR RETURNS AS OF 09/30/2024



RUSSELL STYLE RETURNS AS OF 09/30/2024

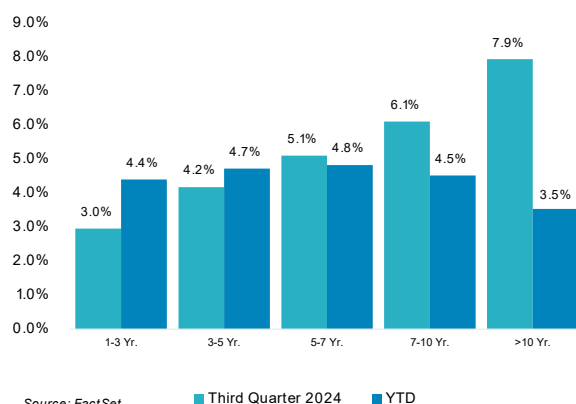


Source: Russell Indexes

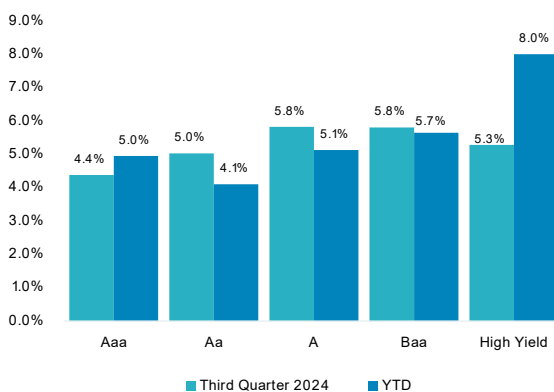
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U.S. Fixed Income Markets

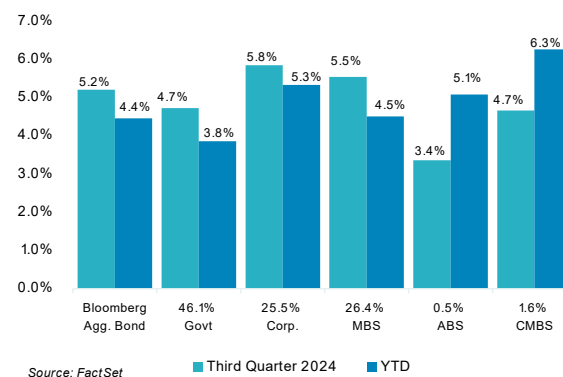
BLOOMBERG AGGREGATE RETURNS BY MATURITY AS OF 09/30/2024



BLOOMBERG AGGREGATE RETURNS BY QUALITY AND HIGH YIELD RETURNS AS OF 09/30/2024



BLOOMBERG AGGREGATE RETURNS BY SECTOR AS OF 09/30/2024

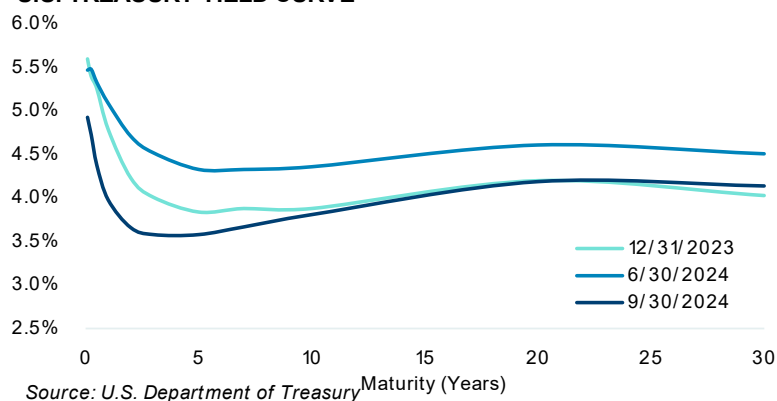


- The U.S. Fed cut its benchmark interest rate by 0.5% to a range of 4.75%–5.0%, the first rate cut in more than 4 years. The Federal Open Market Committee (FOMC) stated that “inflation is moving sustainably toward 2%, and judges that the risks to achieving its employment and inflation goals are roughly in balance.” According to the latest Fed “dot plot”, policymakers are projecting another half-point reduction by the end of 2024, a full percentage point reduction in 2025, and the rate falling below 3% in 2026.
- The Bloomberg U.S. Aggregate Bond Index was up 5.2% over the quarter and 4.4% on a YTD basis
- Across durations, all maturities finished the quarter in positive territory with longer maturities rising more.
- Within investment-grade bonds, lower-quality issues generally outperformed higher-quality issues, with Baa-rated bonds returning 5.8% during the quarter. High-yield bonds rose by 5.3%. On a YTD basis, high-yield bonds outperformed indicating an increase in risk appetite.

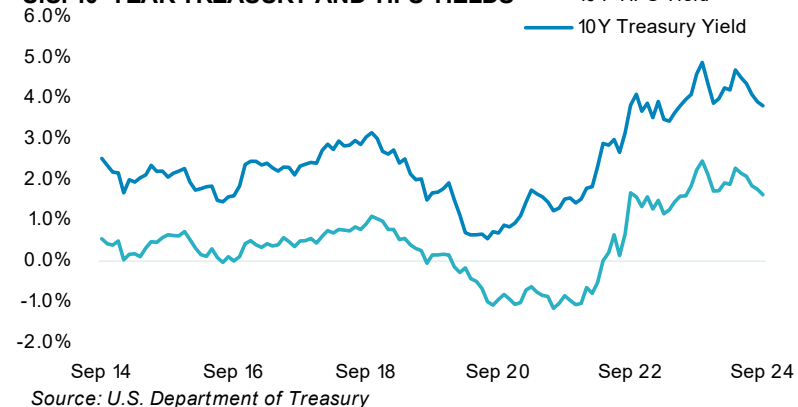
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U.S. Fixed Income Markets

U.S. TREASURY YIELD CURVE



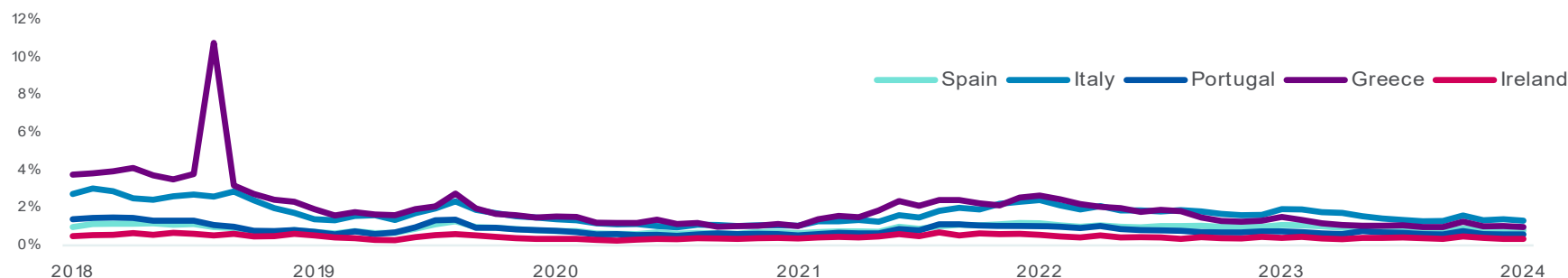
U.S. 10-YEAR TREASURY AND TIPS YIELDS



- U.S. Treasury yields fell across maturities as the yield curve shifted downwards over the quarter. The 10-year Treasury yield fell by 55bps to 3.81%, and the 30-year Treasury yield fell by 37bps to 4.14% over the quarter.
- U.S. headline consumer price inflation (CPI) slowed to 2.5% year-on-year in August. This was below economists' expectations of 2.6% and the previous month's reading of 2.9%. U.S. core inflation, which excludes energy and food prices, rose by 3.2% year-on-year in August, the same as the previous month and in line with economist expectations.
- The 10-year TIPS yield fell by 45bps over the quarter to 1.63%.

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. The European Central Bank (ECB) reduced its policy interest rate by 0.25% to 3.50% in response to lower inflation and weak eurozone growth. The bank's latest projections have revised economic growth slightly downward to 0.8% in 2024, 1.3% in 2025, and 1.5% in 2026. Headline inflation has remained in line with previous projections. According to Christine Lagarde, the ECB President, consumption has remained lower than expected, leading to a downward revision in growth projections.
- Greek and Italian government bond yields fell by 64bps and 62bps to 3.10% and 3.45%, respectively over the quarter while Portugal government bond yields fell by 54bps to 2.70%. Irish and Spain government bond yields fell by 47bps and 46bps to 2.47% and 2.92%, respectively over the quarter.
- German bund yields fell by 35bps to 2.12% over the quarter.
- Eurozone headline inflation fell sharply to its lowest levels in three years, as the CPI increased 2.2% year-on-year in August, lower than the 2.6% increase recorded in July and in line with economist expectations. Core inflation rose 2.8% year-on-year in August, lower than the 2.9% recorded in July and remained as per economist expectations.

Credit Spreads

Spread (bps)	9/30/2024	6/30/2024	12/31/2023	Quarterly Change (bps)	YTD
U.S. Aggregate	36	39	42	-3	-6
Long Gov't	0	2	2	-2	-2
Long Credit	108	115	117	-7	-9
Long Gov't/ Credit	55	60	62	-5	-7
MBS	42	48	47	-5	-5
CMBS	93	97	126	-4	-33
ABS	64	57	68	7	-4
Corporate	89	94	99	-5	-10
High Yield	295	309	323	-14	-28
Global Emerging Markets	244	258	294	-14	-50

Source: FactSet, Bloomberg

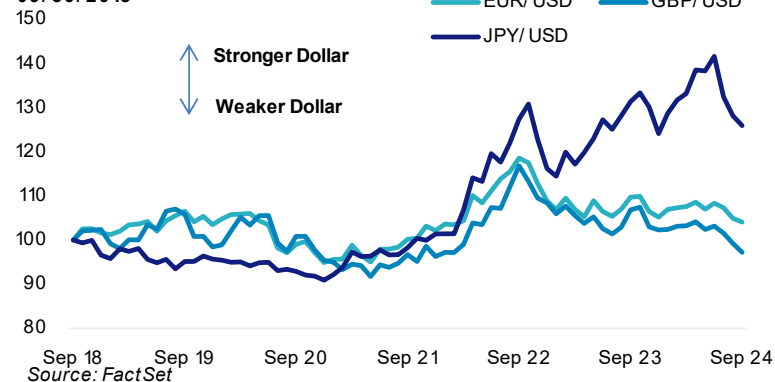
- Credit markets rose amid increasing risk tolerance sentiment, with spreads generally narrowing.
- High Yield and Global Emerging Markets spreads narrowed by 14bps each. Meanwhile, ABS spreads widened by 7bps.

Currency

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

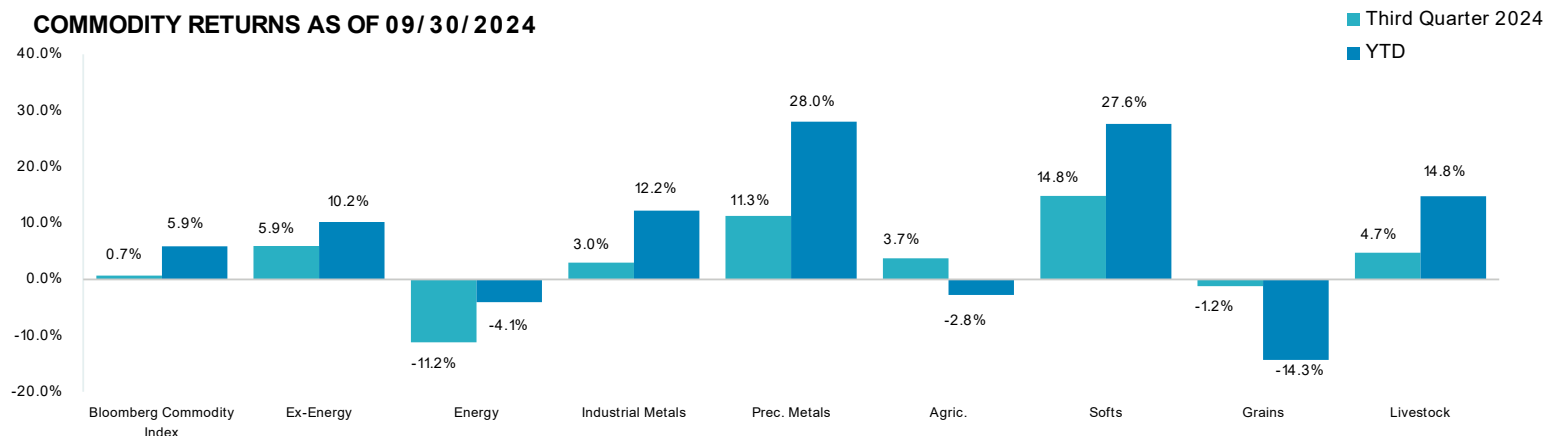


**U.S. DOLLAR RELATIVE TO EUR, GBP AND JPY REBASED TO 100 AT
09/30/2018**



- The U.S. Dollar depreciated against all major currencies over the quarter. On a trade-weighted basis, the U.S. dollar depreciated by 2.4%.
- Sterling appreciated by 5.8% against the U.S. dollar. The Bank of England (BoE) reduced its policy interest rate by 25bps to 5.0%, delivering its first cut in more than four years. The Monetary Policy Committee voted unanimously to reduce the stock of UK government bond purchases held for monetary policy purposes, and financed by the issuance of central bank reserves, by £100 billion over the next 12 months, to a total of £558 billion. Also, the BoE postponed the implementation of Basel 3.1 standards until 2026, reducing the increase in capital requirements for UK banks to less than 1% from the previously estimated 3%.
- The U.S. dollar depreciated by 4.0% against the euro and by 11.1% against the yen.

Commodities



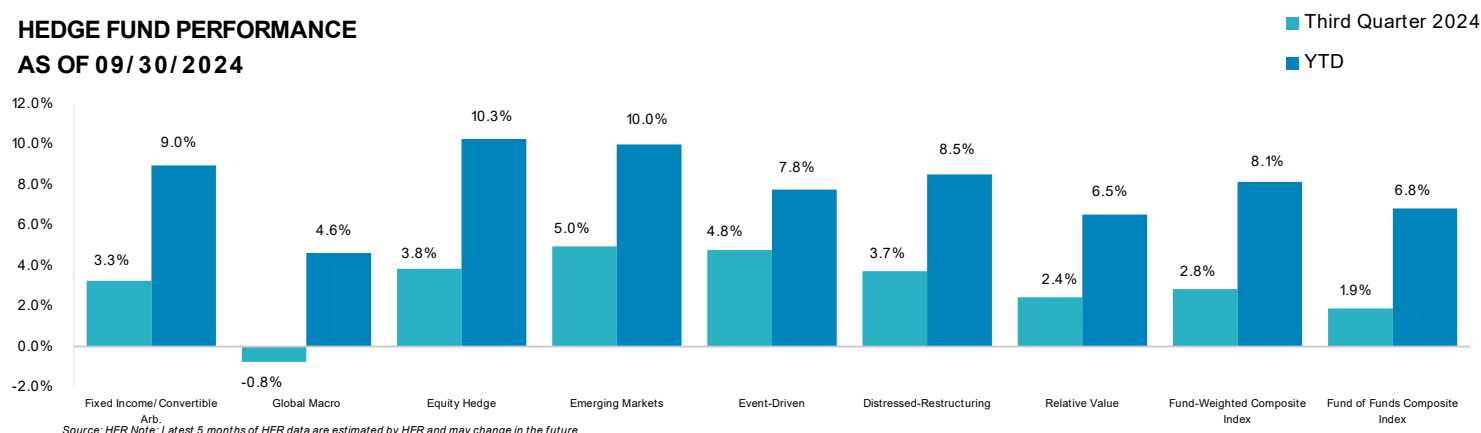
Source: Bloomberg Note: Softs and Grains are part of the wider Agriculture sector

- Commodity prices rose over the quarter (except energy) with the Bloomberg Commodity Index rising by 0.7% for the quarter.
- The Energy sector was the worst performer over the quarter at -11.2%. The price of WTI crude oil fell by 16.4% to U.S.\$68/BBL.
- The Softs subsector rose the most over the quarter at 14.8%.
- OPEC+ members agreed to postpone planned increases in oil production for at least two months. Eight members, including Saudi Arabia, Russia, and the United Arab Emirates, were set to start unwinding voluntary output cuts at the beginning of October. However, the production cuts will now stay in effect until December 1.

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Hedge Funds Market Overview

HEDGE FUND PERFORMANCE AS OF 09/30/2024



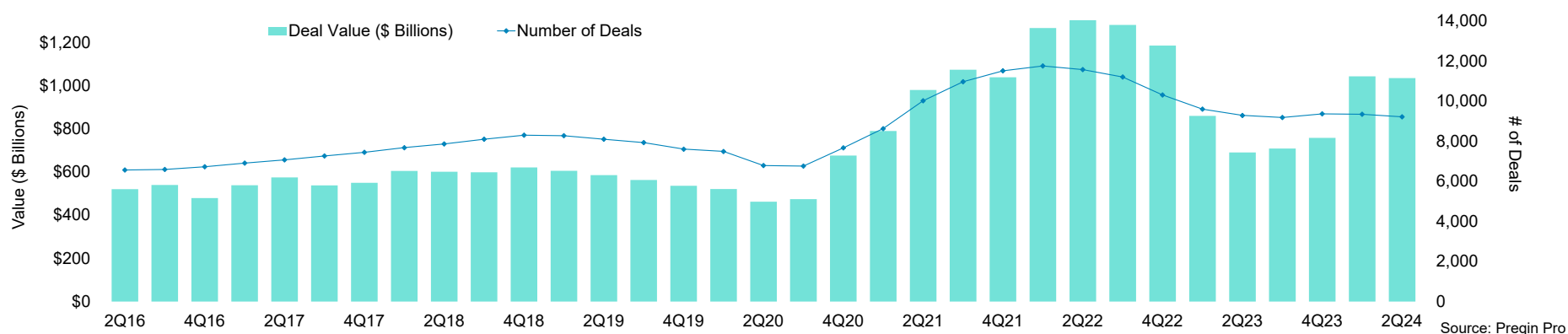
- Hedge fund performance was generally positive over the quarter.
- The HFRI Fund-Weighted Composite produced a return of 2.8% and the HFRI Fund of Funds Composite Index produced a return of 1.9% over the quarter.
- Over the quarter, Emerging Markets was the best performer with a return of 5.0%.
- Global Macro was the worst performer with a return of -0.8% 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

Second Quarter 2024

LTM Global Private Equity-Backed Buyout Deal Volume

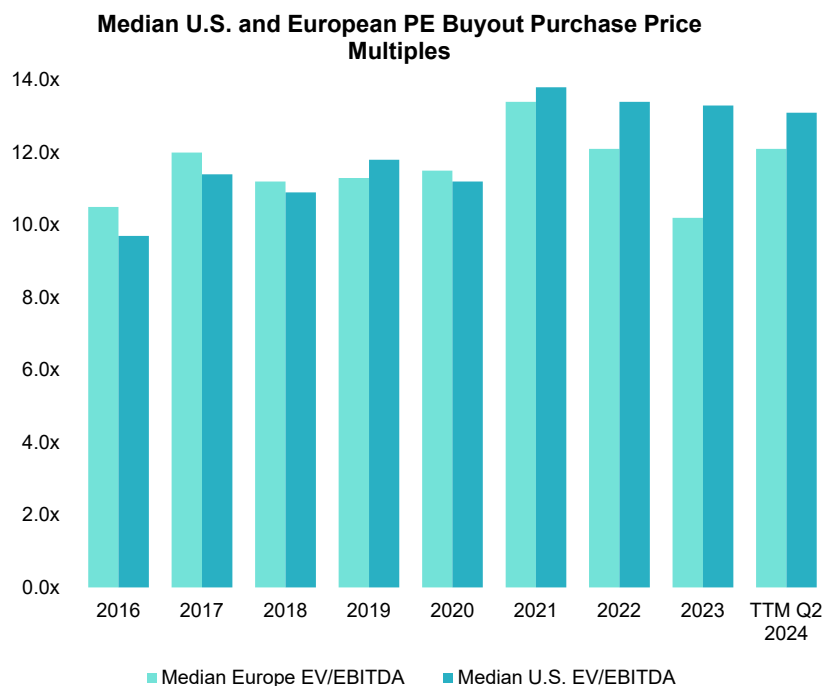


- **Fundraising:** In Q2 2024, \$222.9 billion was raised by 564 funds, which was a decrease of 11.9% on a capital basis but an increase of 0.9% by number of funds over the prior quarter. Dry powder stood at \$3.2 trillion at the end of the quarter, equal to the prior quarter, but an increase of 24.5% compared the five-year average.¹
- **Buyout:** Global private equity-backed buyout deals totaled \$184.0 billion in Q2 2024, which was a decrease on a capital basis of 57.8% compared to Q1 2024 and a decrease of 17.9% compared to the five-year quarterly average. Deal value in Q1 2024 was impacted by a large PIPE investment in Aramco by Public Investment Fund (estimated at \$163.3 billion of the quarter's total deal value), which boosted the quarter's total.¹ On a TTM basis, median U.S. private equity EV/EBITDA multiples reached 13.1x at the end of Q2 2024, slightly below the 13.3x in FY 2023 but up from the five-year average (12.7x). In Europe, on a TTM basis, median private equity EV/EBITDA multiples reached 12.1x at the end of Q2 2024, above the 10.2x multiple seen at the end of 2023 and above the five-year average of 11.7x.² Globally, buyout exit value totaled \$100.8 billion across 575 deals during the quarter, up from \$65.0 billion in value from 551 deals during the prior quarter.¹
- **Venture:** During the quarter, 3,108 U.S. venture-backed transactions totaling \$55.6 billion were completed, which was an increase of 46.9% on a capital basis, but a decrease of 10.5% by deal count over the prior quarter, which saw 3,469 deals completed totaling \$37.8 billion. This was also an increase of 2.8% on a capital basis compared to the five-year quarterly average of \$54.1 billion. Total U.S. venture-backed exit value decreased during the quarter, totaling approximately \$23.6 billion across an estimated 326 completed transactions. This compares to \$6.9 billion of value across 277 exits in Q2 2023. Q2 2024 exit value was meaningfully below the five-year quarterly average of \$69.3 billion from 352 transactions.³

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

Notes: FY=Fiscal year ended 12/31; YTD=Year to date; LTM=Last 12 months (aka trailing 12 months); PPM=Purchase Price Multiples: Total Purchase Price ÷ EBITDA.

Private Equity Overview



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

- **Mezzanine:** 5 funds closed on \$1.5 billion during the quarter. This was a decrease from the prior quarter's total of \$2.1 billion raised by 4 funds and represented a decrease of 76.5% from the five-year quarterly average of \$6.2 billion. Estimated dry powder was \$57.7 billion at the end of Q2 2024, down from \$65.5 billion at the end of the prior year.¹
- **Distressed Debt/Special Situations:** The TTM U.S. high-yield default rate was 2.34% as of June 2024, which was down slightly from March 2024's TTM rate of 2.74%.⁴ During the quarter, \$3.9 billion was raised by 11 funds, down from the \$5.6 billion raised by 13 funds during Q1 2024. Dry powder was estimated at \$146.3 billion at the end of Q2 2024, which was down 9.3% from year-end 2023. This was down from the five-year average level of \$150.1 billion.¹
- **Secondaries:** 18 funds raised \$16.7 billion during Q2 2024, up substantially from the \$5.0 billion raised by 3 funds in Q1 2024. This was an increase compared to the five-year quarterly average of \$14.1 billion.¹ The average discount rate for LP buyout and venture capital portfolios finished the quarter at 6.0% and 30.0%, respectively.⁵
- **Infrastructure:** \$18.4 billion of capital was raised by 21 funds in Q2 2024 compared to \$36.8 billion of capital raised by 33 funds in Q1 2024. The 10 largest funds in market are currently seeking a combined \$176.0 billion in capital. Infrastructure managers completed 410 deals for an aggregate deal value of \$61.0 billion in Q2 2024, compared to 520 deals totaling \$56.0 billion in Q1 2024.¹
- **Natural Resources:** During Q2 2024, 6 funds closed on \$1.3 billion compared to 5 funds closing on \$3.0 billion during the prior quarter. 162 energy and utilities deals were completed in Q2 2024 totaling \$8.4 billion, a marked decrease, on a capital basis, compared to 172 completed deals totaling \$174.9 billion in Q1 2024. Q1 2024's deal value was driven by a large PIPE investment in Aramco by Public Investment Fund.¹

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 U.S. 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 U.S. Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, U.S. dollar denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, fixed rate agency MBS, ABS and CMBS (agency and non-agency).
Bloomberg U.S. TIPS Index	The Index measures the performance of the U.S. treasury inflation linked bond market.
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 U.S. Dollar and have a minimum of \$50 Million under management or \$10 Million under management and a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.
HFRI Fund of Funds	HFR FOF Indices are comprised of funds that are constituents of the HFRI 500 Index and are designed to synthetically (S) represent the performance of Low, Mid or High volatility fund of funds.
FTSE NAREIT	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.

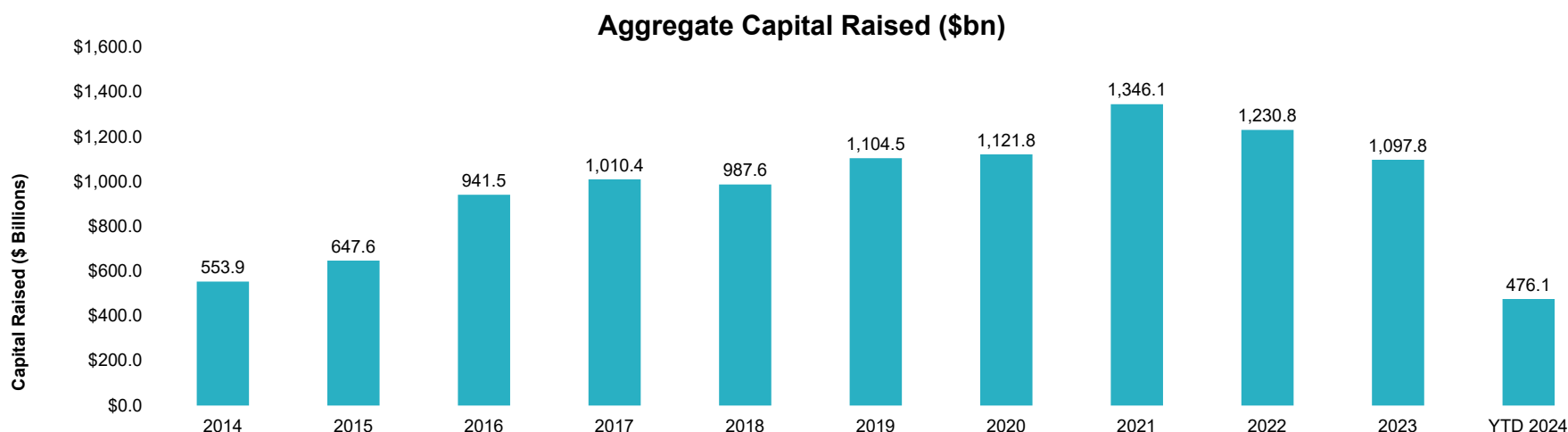
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Q2 2024 Global Private Equity Market Overview

October 2024



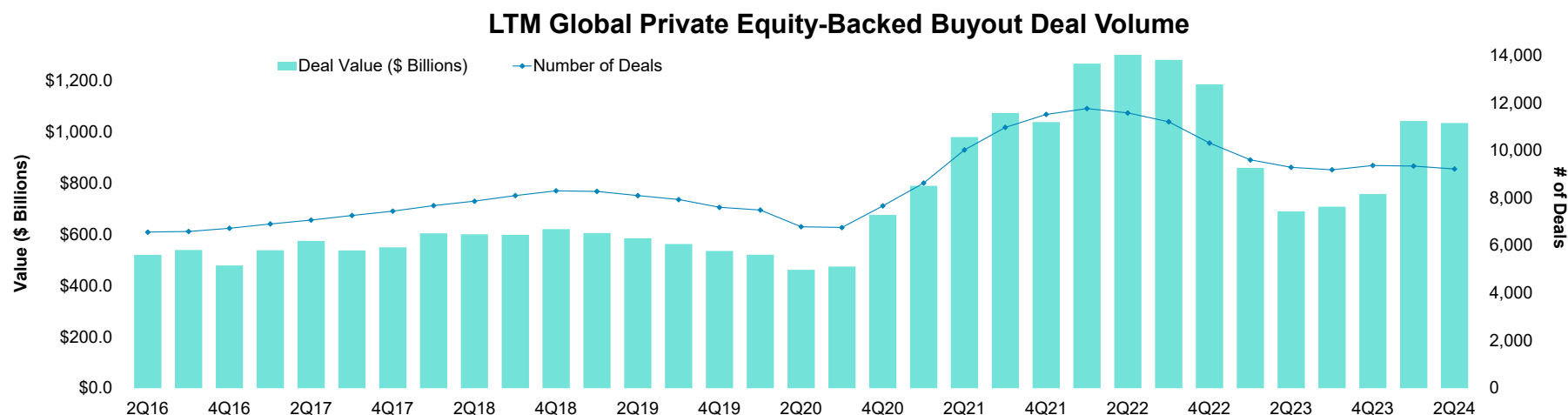
Private Equity Overview



Fundraising

- In Q2 2024, \$222.9 billion was raised by 564 funds, which was a decrease of 11.9% on a capital basis but an increase of 0.9% by number of funds over the prior quarter. Compared to Q2 2023, capital raised increased by 2.9% while the number of closed funds decreased by 29.4%.¹
 - Q2 2024 fundraising was 24.9% lower, on a capital basis, and 50.5% 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 67.8% of the quarter's total. This was up significantly from 50.0% during the prior quarter. Capital raised by European managers accounted for 20.6% of capital raised during the quarter, a decrease from 44.3% in Q1 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 24.5% compared the five-year average.¹

Private Equity Overview (cont.)

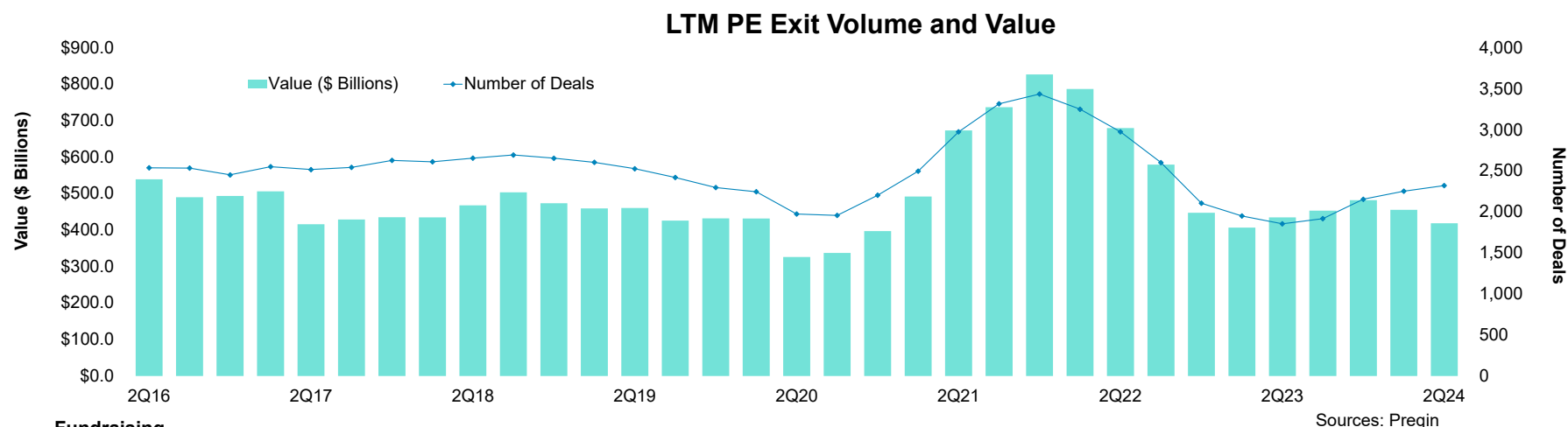


Activity

- Global private equity-backed buyout deals totaled \$184.0 billion in Q2 2024, which was a decrease on a capital basis of 57.8% compared to Q1 2024. Deal value in Q1 2024 was impacted by a large PIPE investment in Aramco by Public Investment Fund (estimated at \$163.3 billion of the quarter's total deal value), which boosted the quarter's total.¹
 - Deal value in Q2 2024 was a decrease of 17.9% compared to the five-year quarterly average.
 - Add-on deals comprised the largest amount of completed deals by type, accounting for 43.2% of the quarter's total.
- On a TTM basis, the median purchase price multiple for U.S. PE buyout transactions was 13.1x EBITDA at the end of Q2 2024, down from 2023's median level of 13.3x and down from the peak level seen in 2021 of 13.8x EBITDA.³
 - The median purchase price multiple for all U.S. PE buyout transactions completed YTD ended at 13.1x EBITDA, an increase of 0.4x (multiple of EBITDA) compared to the five-year average and 1.6x higher than the ten-year average.
- In Europe, the median purchase price multiple ended Q2 2024 at 12.1x EBITDA on a TTM basis, up from 10.2x in 2023 but down from the peak level seen in 2021 of 13.4x EBITDA. This was up compared to the five-year average of 11.7x and above the ten-year average of 11.3x EBITDA.³
- GPs were able to obtain debt financing but utilized more equity to consummate transactions.
 - For U.S. broadly syndicated loan-funded transactions, debt comprised 46.4% of completed transactions, a slight increase compared to the prior year's 45.7%.³

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Buyouts / Corporate Finance



Fundraising

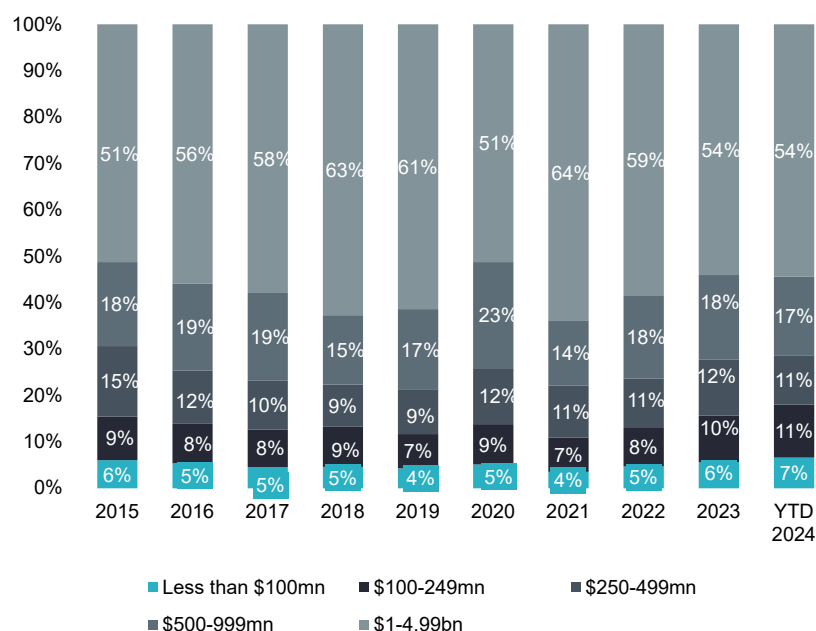
- \$142.2 billion was closed on by 174 buyout and growth funds in Q2 2024, compared to \$158.1 billion raised by 157 funds in Q1 2024. This represented an increase of 11.9% compared to capital raised in Q2 2023.¹
 - This was higher, on a capital basis, than the five-year quarterly average of \$139.3 billion raised, but meaningfully lower by the average number of funds raised (258).
 - Capital raised through Q2 2024 represented 48.1% of capital raised in FY 2023.
 - Silver Lake Partners VII was the largest fund raised during the quarter, closing on \$20.5 billion of commitments.
- Buyout and growth equity dry powder was estimated at \$1.4 trillion at the end of Q2 2024, up 0.4% compared to the year-end 2023.¹
 - An estimated 59.4% of buyout dry powder was targeted for North America, while European dry powder comprised 24.2% and Asia/Rest of World accounted for the remainder.

Activity

- Globally, buyout exit value totaled \$100.8 billion across 575 deals during the quarter, up from \$65.0 billion in value from 551 deals during the prior quarter.¹

Buyouts / Corporate Finance

Buyout Deal Value by Deal Size



Sources: Preqin

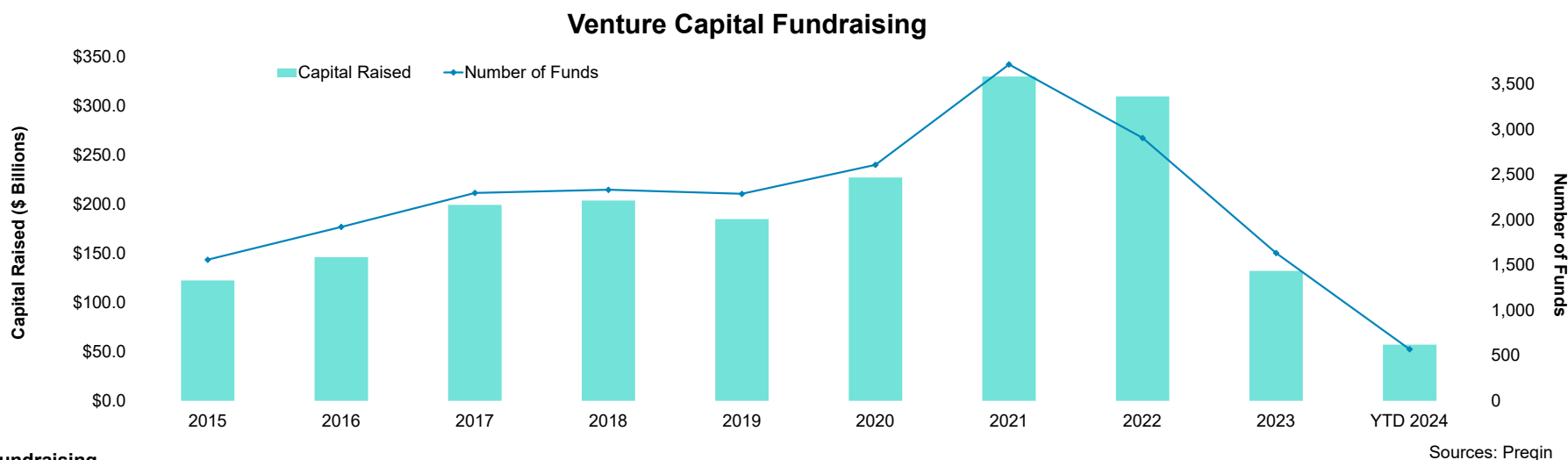
Activity

- Global private equity-backed buyout deals totaled \$184.0 billion in Q2 2024, which was a decrease on a capital basis of 57.8% compared to Q1 2024 and a decrease of 17.9% compared to the five-year quarterly average. Deal value in Q1 2024 was impacted by a large PIPE investment in Aramco by Public Investment Fund (estimated at \$163.3 billion of the quarter's total deal value), which boosted the quarter's total.¹
 - By geography, deals in North America accounted for the largest percentage of total deal value at an estimated 58.3% in Q2 2024, followed by Europe (23.3%), while information technology deals accounted for the largest percentage by industry at 35.7% of total deal value.
 - Of deals less than \$5.0 billion in size, deals valued between \$1.0 billion - \$4.9 billion accounted for an estimated 54.3% of deal value through Q2 2024 compared to 45.7% in Q1 2024. Deals valued between \$500.0 million to \$999.9 million accounted for the second largest weighting, representing 17.1% of total deal value through Q2 2024.
- On an TTM basis, the median U.S. PE buyout purchase price multiple ended Q2 2024 at 13.1x EBITDA, compared to 13.3x EBITDA in 2023.³
 - This was above the five-year average of 12.7x EBITDA but remained below the peak multiple seen in 2021 (13.8x).
- The median European PE buyout purchase price multiple ended the quarter at 12.1x EBITDA on a TTM basis compared to 10.2x EBITDA in 2023. This was above the five-year average multiple (11.7x).³
- The equity contribution for U.S. broadly-syndicated loan-funded buyout transactions stood at 53.8% YTD through the end of the quarter as transactions were less reliant on debt financing to complete the deals. This was above the five- and ten-year average levels of 50.2% and 46.6%, respectively.³

Opportunity⁴

- Mid-market managers targeting growing companies operating within fragmented markets with value-creation expertise across business cycles.
- Managers focused on value-oriented strategies and/or corporate carve-outs.

Venture Capital

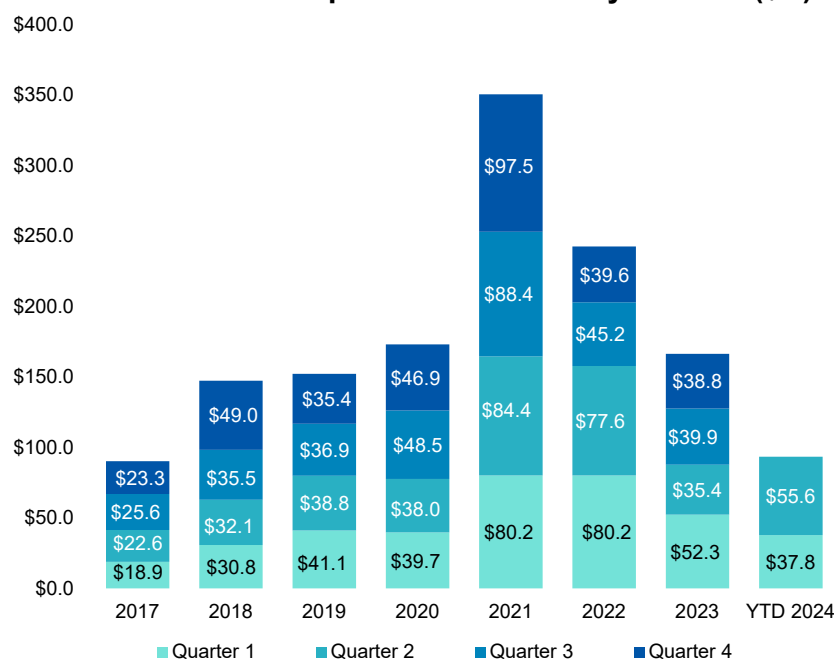


Fundraising

- \$28.4 billion of capital was raised by 271 funds in Q2 2024, lower, on both a capital raised and number of funds basis, from the prior quarter's total of \$28.7 billion raised by 299 funds. This was also lower than the \$37.0 billion of capital raised by 440 funds during Q2 2023.¹
 - Q2 2024 fundraising was 51.8% lower, on a capital basis, compared to the five-year quarterly average of \$58.9 billion.
 - Norwest Ventures Partners XVII was the largest fund raised during the quarter with total commitments of \$3.0 billion.
- At the end of Q2 2024, there were an estimated 6,726 funds in market targeting \$440.6 billion.¹
 - A fund being raised by Zhongwan Capital was the largest fund in market, targeting an estimated \$14.9 billion.
 - The majority of funds in market are seeking commitments of \$200.0 million or less.
- Dry powder was estimated at \$559.7 billion at the end of Q2 2024, up from year-end 2023's total of \$554.1 billion.¹

Venture Capital

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



Source: Pitchbook / NVCA

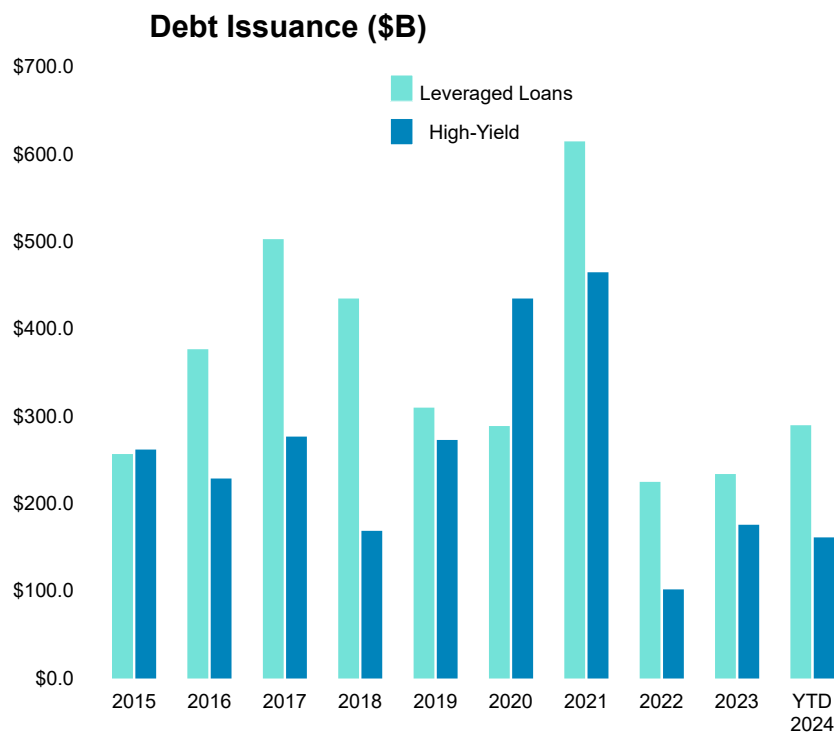
Activity

- During the quarter, 3,108 U.S. venture-backed transactions totaling \$55.6 billion were completed, which was an increase of 46.9% on a capital basis, but a decrease of 10.5% by deal count over the prior quarter, which saw 3,469 deals completed totaling \$37.8 billion. This was also an increase of 2.8% on a capital basis compared to the five-year quarterly average of \$54.1 billion.⁷
 - In Q2 2024, there were 62 U.S.-based deals involving unicorn companies, representing roughly \$26.2 billion in deal value. This was up, on a value basis, compared to the prior quarter, which saw 74 unicorn-related deals close at a deal value of \$9.9 billion. Deal value was also above the five-year quarterly average of \$18.0 billion.⁷
- Most median pre-money valuations decreased relative to the valuations seen at the end of the prior quarter, with the exception of Series Seed and Series D and later. Compared to the prior quarter, Seed valuations increased from a median pre-money valuation of \$15.0 million to \$15.8 million while Series D and later valuations increased from \$339.4 million to \$989.4 million. Series A decreased from \$49.3 million to \$41.3 million, Series B decreased from \$162.5 million to \$140.0 million, and Series C decreased from \$175.0 million to \$130.0 million.⁸
- Total U.S. venture-backed exit value decreased during the quarter, totaling approximately \$23.6 billion across an estimated 326 completed transactions. This compares to \$6.9 billion of value across 277 exits in Q2 2023. Q2 2024 exit value was meaningfully below the five-year quarterly average of \$69.3 billion from 352 transactions.⁷
 - The number of U.S. venture-backed initial public offerings decreased over the prior quarter, with 14 IPOs completed in Q2 2024 at a value of \$13.9 billion. 175 exits occurred by acquisition, marking a slight decrease over the prior quarter's 181 acquisitions, and accounted for \$9.2 billion in exit value.⁷

Opportunity⁴

- Early stage continues to be attractive, although we continue to monitor valuations
- Smaller end of growth equity
- 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 \$51.9 billion in Q2 2024, compared to \$46.9 billion in Q1 2024. The YTD total represents 81.9% of FY 2023's issuance total of \$120.7 billion.²
- High-yield debt issuance totaled \$161.6 billion through Q2 2024. YTD 2024's issuance marks a 74% increase over the same period in 2023, which saw \$92.9 billion of issuance.²
- YTD Q2 2024, leveraged loan mutual fund net flows ended at a net inflow of \$10.8 billion, compared to a net outflow of \$14.0 billion during 2023.²

Activity

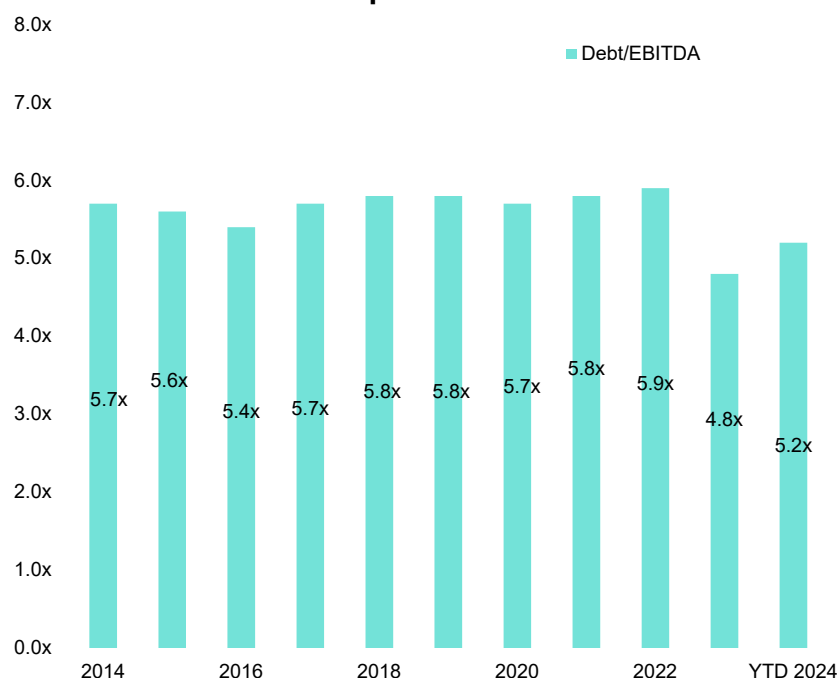
- YTD U.S. institutional leveraged loan primary volume totaled \$289.9 billion through Q2 2024, compared to \$102.5 billion through Q2 2023 (+183.0%).²
 - Loan issuance for M&A activity is expected to pick up throughout 2024 in addition to continued activity related to repricing and managing loan maturities.
- European institutional loan issuance, including repricing and extensions, totaled €134.1 billion through Q2 2024, an amount not seen since 2021.³

Opportunity ⁴

- Funds with the ability to source deals directly and the capacity to scale for large transactions (both sponsored and non-sponsored)
- Funds with an extensive track record, experience through prior credit cycles, and staff with workout experience

Leveraged Loans & Mezzanine

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



Sources: Pitchbook / LCD

Activity

- For U.S. broadly syndicated loan-funded transactions, debt comprised 46.2% of completed transactions through YTD Q2 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.³
- 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 2024.²

Mezzanine Fundraising

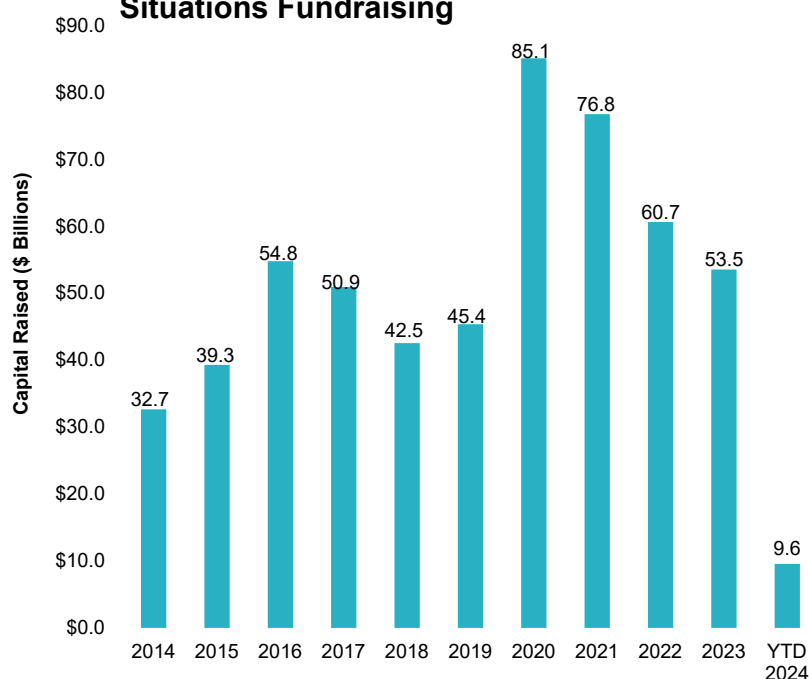
- 5 funds closed on \$1.5 billion during the quarter. This was a decrease from the prior quarter's total of \$2.1 billion raised by 4 funds and represented a decrease of 76.5% from the five-year quarterly average of \$6.2 billion.¹
- Estimated dry powder was \$57.7 billion at the end of Q2 2024, down from \$65.5 billion at the end of the prior year.¹
- An estimated 112 funds were in market targeting \$36.5 billion of commitments. Blackstone Capital Opportunities Fund V was the largest fund in market targeting commitments of \$10.0 billion.¹

Opportunity⁴

- Funds with the capacity to scale for large sponsored deals

Distressed Private Markets

Distressed Debt, Turnaround, & Special Situations Fundraising

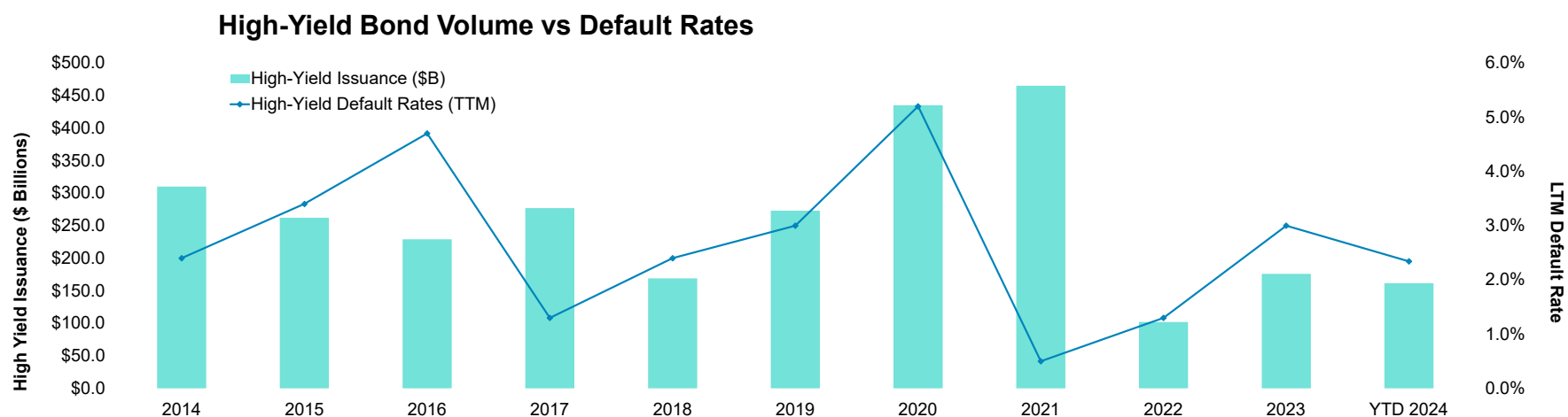


Source: Preqin

Fundraising

- During the quarter, \$3.9 billion was raised by 11 funds, down from the \$5.6 billion raised by 13 funds during Q1 2024.¹
 - Capital raised in Q2 2024 decreased compared to Q2 2023's total of \$8.6 billion and was the lowest quarterly total since Q1 2022.
 - Q2 2024's fundraising was 75.6% lower than the five-year quarterly average of \$16.0 billion.
 - The average closed fund size was \$356.0 million in Q2 2024, a decrease of 56.0% compared to the five-year quarterly average of \$809.2 million.
 - Avenue Europe Special Situations Fund V was the largest fund closed during the quarter with \$1.0 billion in commitments.
- Dry powder was estimated at \$146.3 billion at the end of Q2 2024, which was down 9.3% from year-end 2023. This was down from the five-year average level of \$150.1 billion.¹
- Roughly 246 funds were in the market at the end of Q2 2024 seeking \$129.1 billion in capital commitments.¹
 - Special situations managers were targeting the most capital, seeking \$69.3 billion in commitments, followed by distressed debt managers seeking \$58.1 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

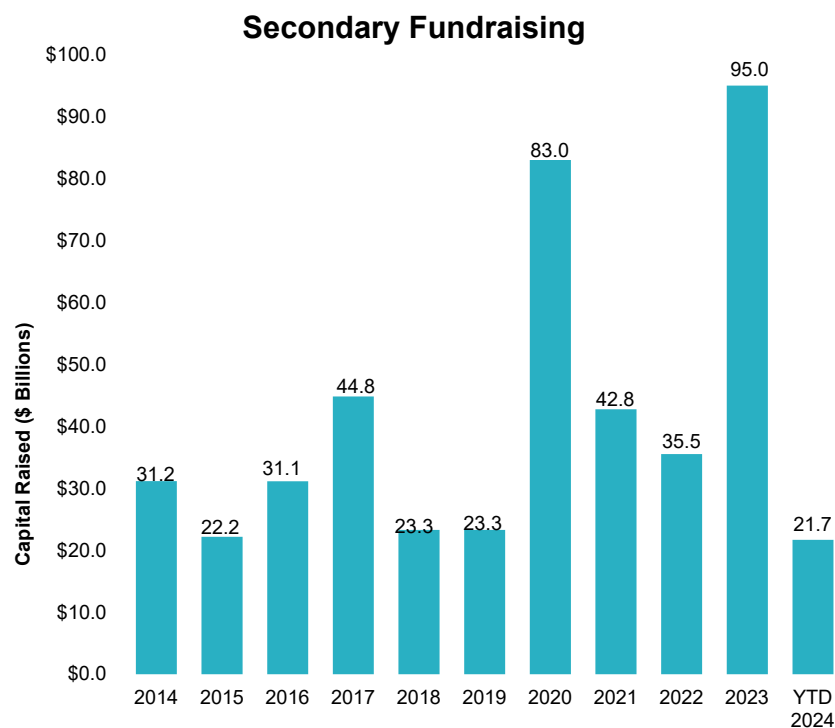
Activity

- The TTM U.S. high-yield default rate was 2.34% as of June 2024, which was down from March 2024's TTM rate of 3.04%. Fitch expected the high-yield default rate to trend higher through the rest of 2024, with forecasted default rates of 5.0% to 5.5%.⁶
- Continued market dislocations caused by macroeconomic factors may supply additional distressed opportunities in the next several months, notably if the default rate moves higher.

Opportunity⁴

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

Secondaries



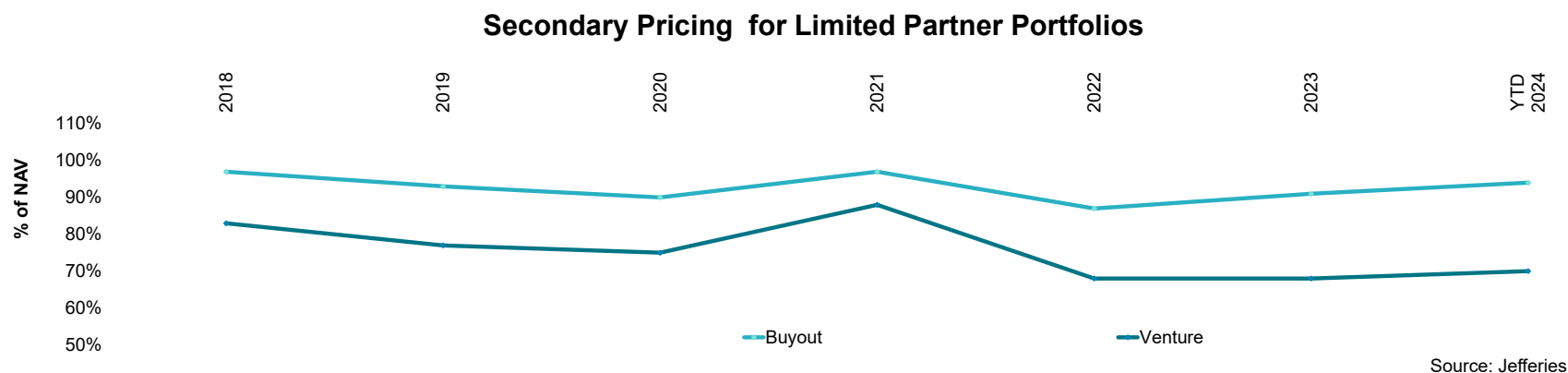
Fundraising

- 18 funds raised \$16.7 billion during Q2 2024, up substantially from the \$5.0 billion raised by 3 funds in Q1 2024. This was an increase compared to the five-year quarterly average of \$14.1 billion.¹
 - Hamilton Lane Secondary Fund VI was the largest fund closed during the quarter with total commitments of \$5.6 billion.
- At the end of Q2 2024, there were an estimated 206 secondary and direct secondary funds in market targeting roughly \$144.7 billion. The majority of secondary funds are targeting North American investments.¹
 - ASF IX is the largest fund being raised, seeking \$25.0 billion in commitments. There are currently five 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.¹⁶
- 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.¹⁴
- Jefferies noted continued demand for secondary transactions involving new vintage year exposure with well-regarded managers. Demand for transactions involving middle-market continues to be a highly sought after space.¹⁶

Secondaries



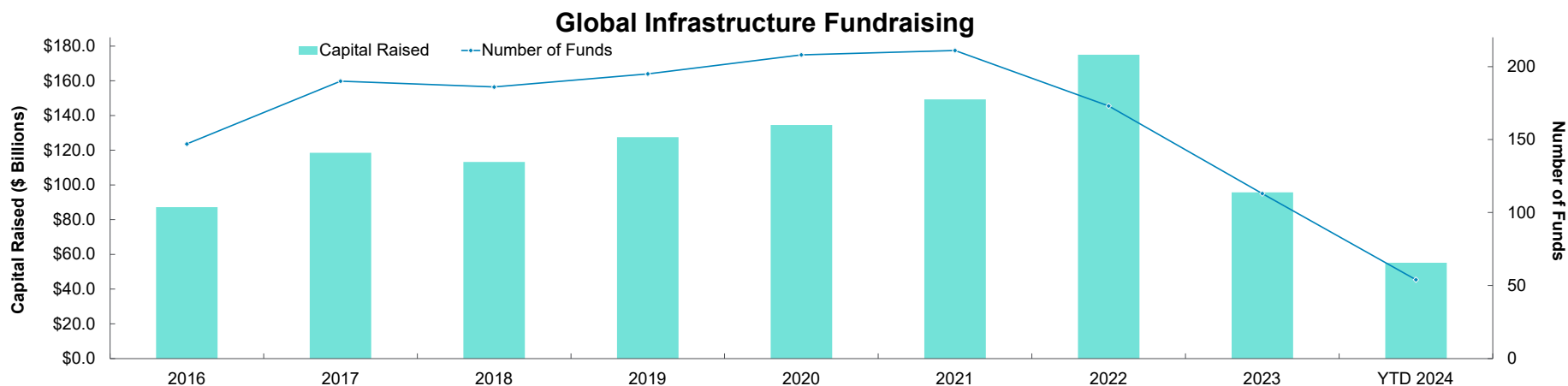
Activity

- 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 the quarter at 6.0% and 30.0%, respectively.¹⁷
 - Jefferies expects pricing to improve as demand increases and markets stabilize. This, coupled with secondary dry powder available to invest, is expected to drive strong transaction volume in 2024.¹⁷
- Payment deferrals and structured equity solutions, notably mosaic structures, continue to be prevalent in the LP portfolio market and are used as a means to improve pricing and deal returns in an increasingly competitive environment.¹⁶
- GP-led volume is expected to increase in 2024, according to Jefferies, reaching \$28.0 billion in transaction volume through Q2 2024. This marked an increase of 56.0% compared to the same period in 2023. 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.
- Campbell Lutyens suggests GP-led secondaries pricing may improve given the robust fundraising environment, causing increased competition in transactions completed in 2024.¹⁴

Opportunity⁴

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

Infrastructure

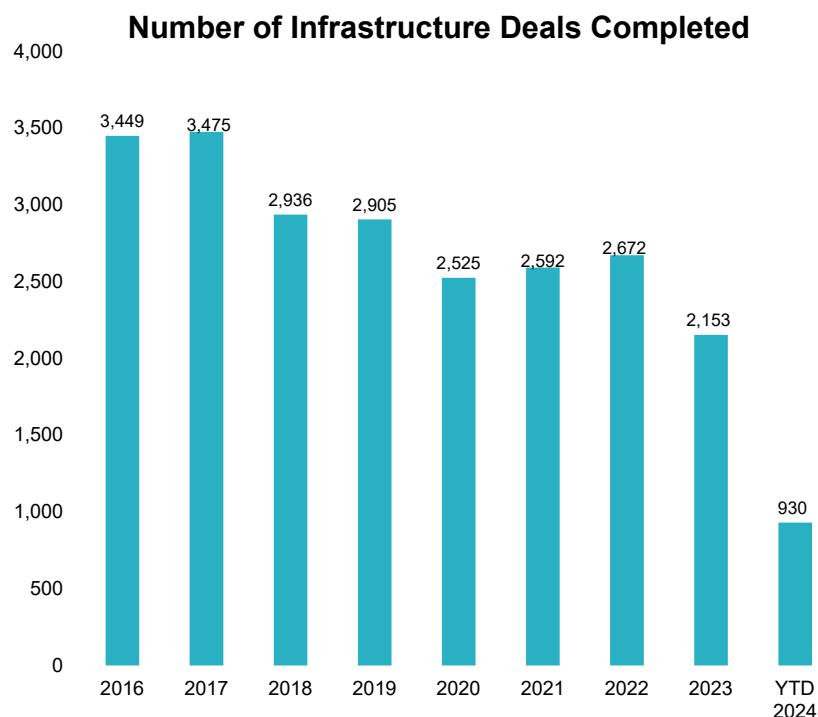


Source: Preqin

Fundraising

- \$18.4 billion of capital was raised by 21 funds in Q2 2024 compared to \$36.8 billion of capital raised by 33 funds in Q1 2024. This was a decrease of 46.6% compared to the five-year quarterly average of \$34.5 billion. By primary region focus, funds targeting North America and funds targeting Europe each accounted for 33.3% of closed funds.¹
 - European Diversified Infrastructure Fund III was the largest fund closed with \$4.4 billion of commitments.
- As of the end of Q2 2024, there were an estimated 407 funds in the market seeking roughly \$527.9 billion.¹
 - 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 \$176.0 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

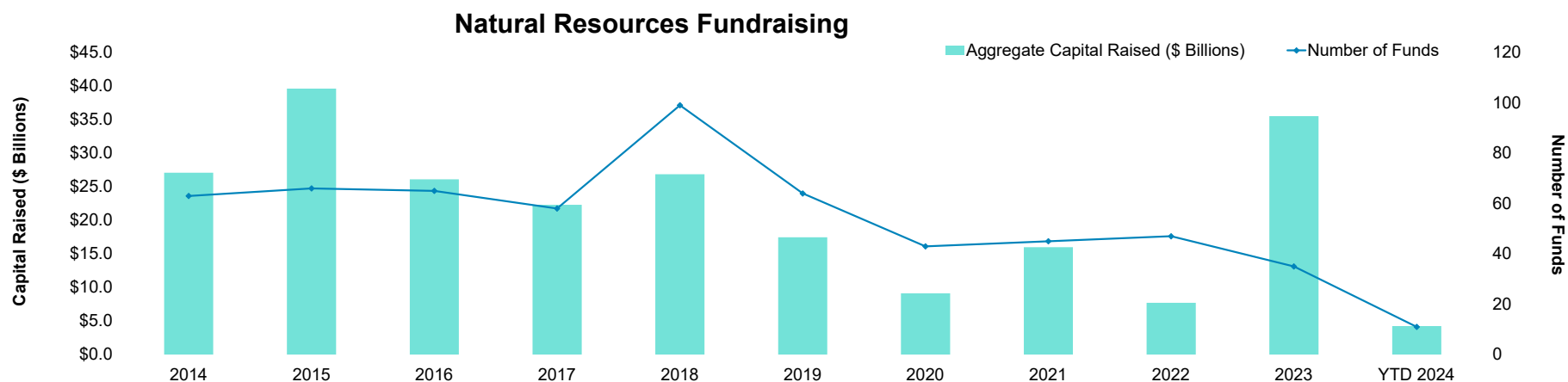
Activity

- Infrastructure managers completed 410 deals for an aggregate deal value of \$61.0 billion in Q2 2024, compared to 520 deals totaling \$56.0 billion in Q1 2024. Q2 2024's total was significantly lower than the five-year quarterly average of \$105.3 billion in deal value.¹
 - By region, Europe saw the largest number of deals, with 40.9% of deals being completed in the region, followed by North America at 29.7%. APAC amassed 11.5% of activity through the end of Q2 2024.

Opportunity ⁴

- Mid-market core+ and value-add infrastructure as well as a platform investing approach continue to offer the best relative value.
- Assess funds with pre-specified assets with caution due to possible lag in and uncertainty around valuation impact.
- Blind-pool funds may be better positioned to take advantage of the market dislocation in certain sub-sectors, however careful review of such strategies is required.
- Build-to-core greenfield strategies particularly in the social / PPP infrastructure space offer a premium for investors willing to take on construction / development risk.

Natural Resources



Source: Preqin

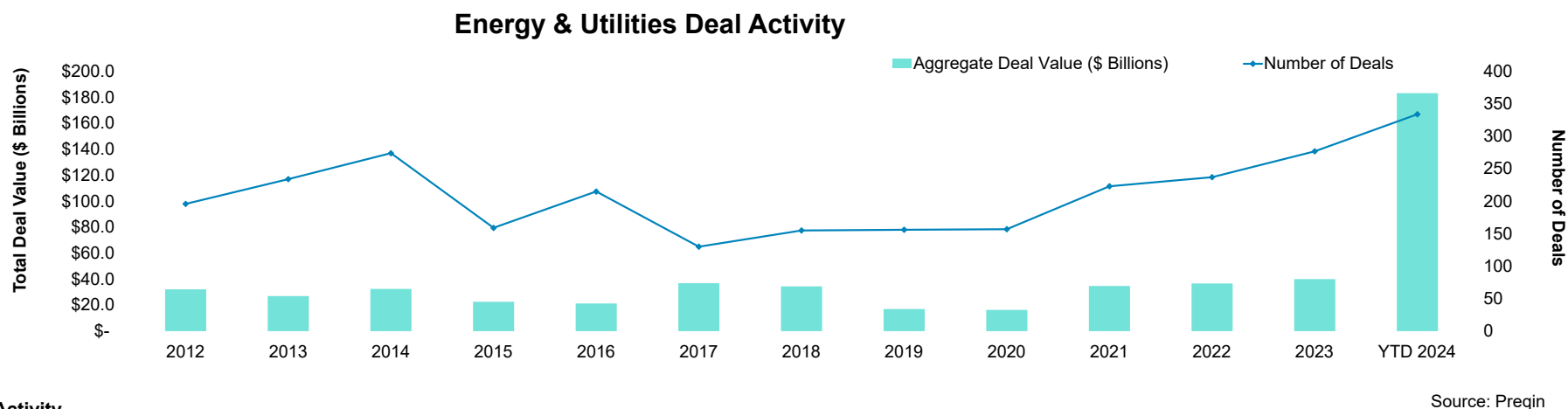
Fundraising

- During Q2 2024, 6 funds closed on \$1.3 billion compared to 5 funds closing on \$3.0 billion during the prior quarter. This was lower than the five-year quarterly average of \$4.3 billion.¹
- Dry powder stood at roughly \$35.2 billion at the end of Q2 2024, which was slightly lower than Q4 2023's level of \$35.8 billion. This was also lower than the five-year average of \$38.2 billion.¹

Activity

- Crude oil prices decreased during the quarter, while natural gas prices increased.
 - WTI crude oil prices decreased 1.9% during the quarter to \$79.77 per bbl. This was an increase of 13.6% compared to Q2 2023.¹⁰
 - Brent crude oil prices ended the quarter at \$82.25/bbl, down 3.7% compared to the prior year. This was an increase of 9.9% from Q2 2023.¹⁰
 - Natural gas prices (Henry Hub) finished Q2 2024 at \$2.53 per MMBtu, which was up 69.8% compared to the prior quarter and up 16.1% from Q2 2023.¹⁰

Natural Resources



Activity

- 162 energy and utilities deals were completed in Q2 2024 totaling \$8.4 billion, a marked decrease, on a capital basis, compared to 172 completed deals totaling \$174.9 billion in Q1 2024. Q1 2024's deal value was driven by a large PIPE investment in Aramco by Public Investment Fund.¹
- A total of 603 crude oil and natural gas rotary rigs were in operation in the U.S. at the end of the quarter. This was down by 3.2% from the prior quarter and down 16.1% over Q2 2023.¹³
 - Crude oil rigs represented 82.4% of the total rigs in operation. 310 of the 497 active oil rigs were in the Permian basin.
 - At the end of Q2 2024, 34.3% and 27.5% of natural gas rigs were operating in the Haynesville and Marcellus basins, respectively.
- The price of iron ore (Tianjin Port) ended the quarter at \$107.45 per dry metric ton, down from \$109.79 at the end of Q1 2024.¹⁰

Opportunity⁴

- 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

Q2 2024 Real Estate Market Overview

October 2024



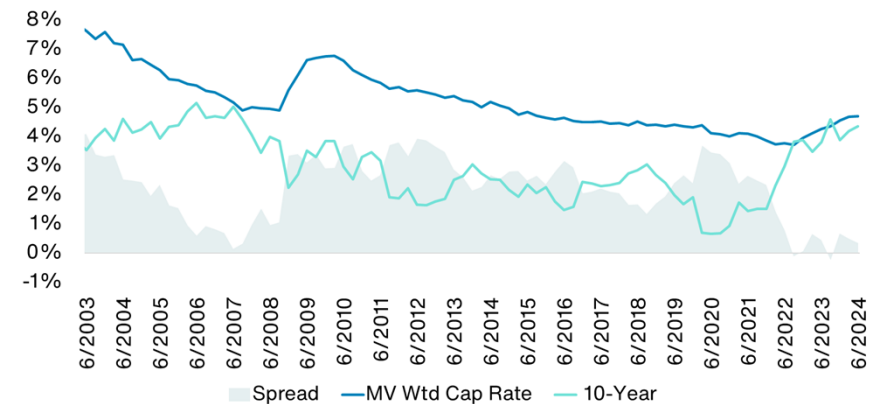
United States Real Estate Market Update

2Q 2024

General

- The economy remained fast paced in the first quarter, leading the Fed to indicate its intentions to maintain a steady pace, keeping interest rates within the 5.25%-5.00% target.
- During the second quarter, GDP increased at an annualized rate of 2.8%, up from 1.4% in the first quarter. Growth was led by increases in consumer spending, private inventory investment, and nonresidential fixed imports 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.

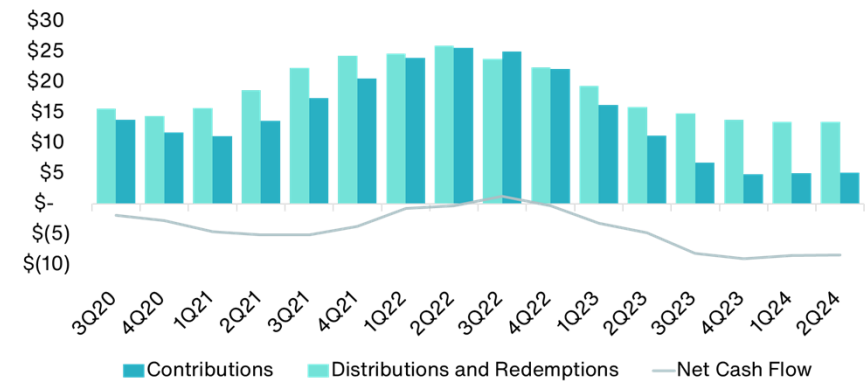
United States Real Estate Market Update

2Q 2024

Commercial Real Estate

- 10yr Treasury bond yields remained elevated, ending the quarter at 4.4%. However, recent dovish sentiment from the Fed could indicate a potential plateau, and recovery, from a multi-year high. Even so, the spread between the 10yr Treasury and current value cap rates remain relatively tight, indicating minimal risk premium for commercial real estate.
- Capital flows in and out of US stabilized commercial real estate remain negative, albeit at an 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%.

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, Preqin.

United States Property Detail

2Q 2024

Industrial

Strong NOI growth continues to support capital values despite cap rates moving out. Softening demand contributes 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. Weak rental growth at apartments was a factor for negative appreciation; 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, with life sciences and medical office exhibiting losses to a lesser extent.

Retail

Malls entered this cycle at depressed values, offering investors a value proposition which supported property values. NOI growth has also been strong at select properties. Necessity based retail (i.e., grocery and pharmacy anchored) has performed well as of late.

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

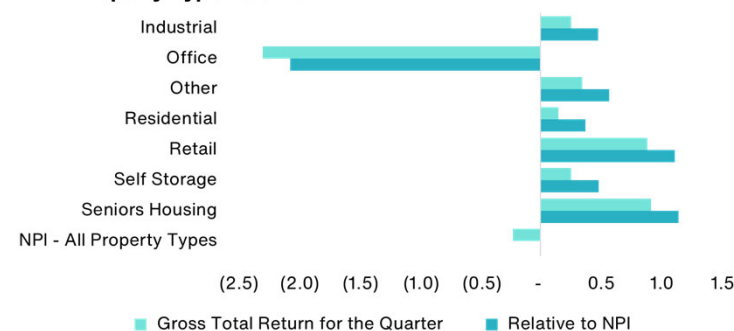
Other: roughly 1.5% of NPI and is made up of data centers, land, parking, and other

Source: NCREIF

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



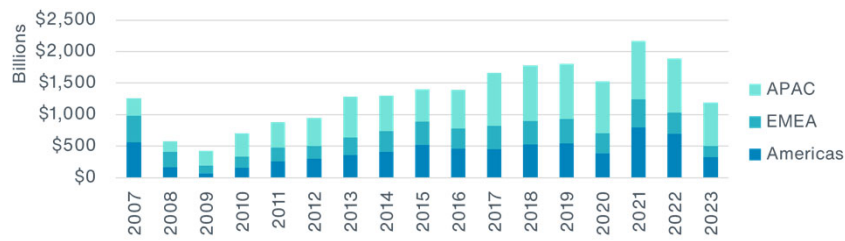
NPI - Property Type Returns



Global Real Estate Market Conditions

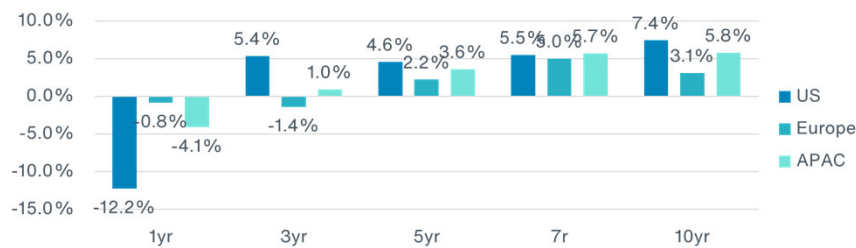
Transaction volume down but signs of pickup

Global Commercial Real Estate Transaction Volume



Real estate returns declined globally in 2023

Regional Returns Annualized (Net of Fees)



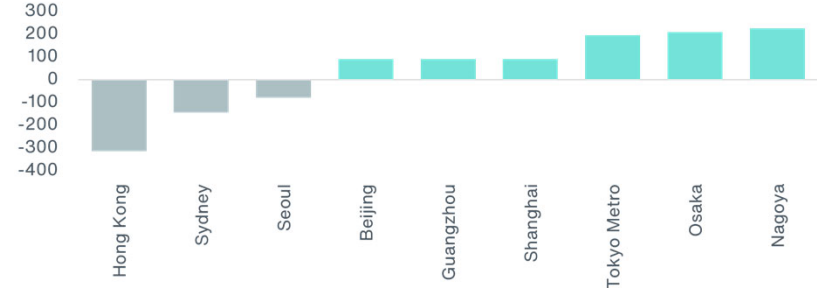
Valuations have reset considerably from '22 lows

Europe Average Cap Rate



Industrial spreads positive in Japan; negative in Australia

Spread Between APAC Logistics Yields and Lending Rates (bps)



Source: The Townsend Group, NCREIF, MSCI Real Assets, St. Louis Fed, CBRE (June 2024), DWS (June 2024), Dexis Research (June 2024). Townsend's views are as of the date of this publication and may be changed or modified at any time and without notice. Past performance is not indicative of future results. Actual results and developments may differ materially from those expressed or implied herein.

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REPORT

Meketa Capital Markets Outlook & Risk Metrics

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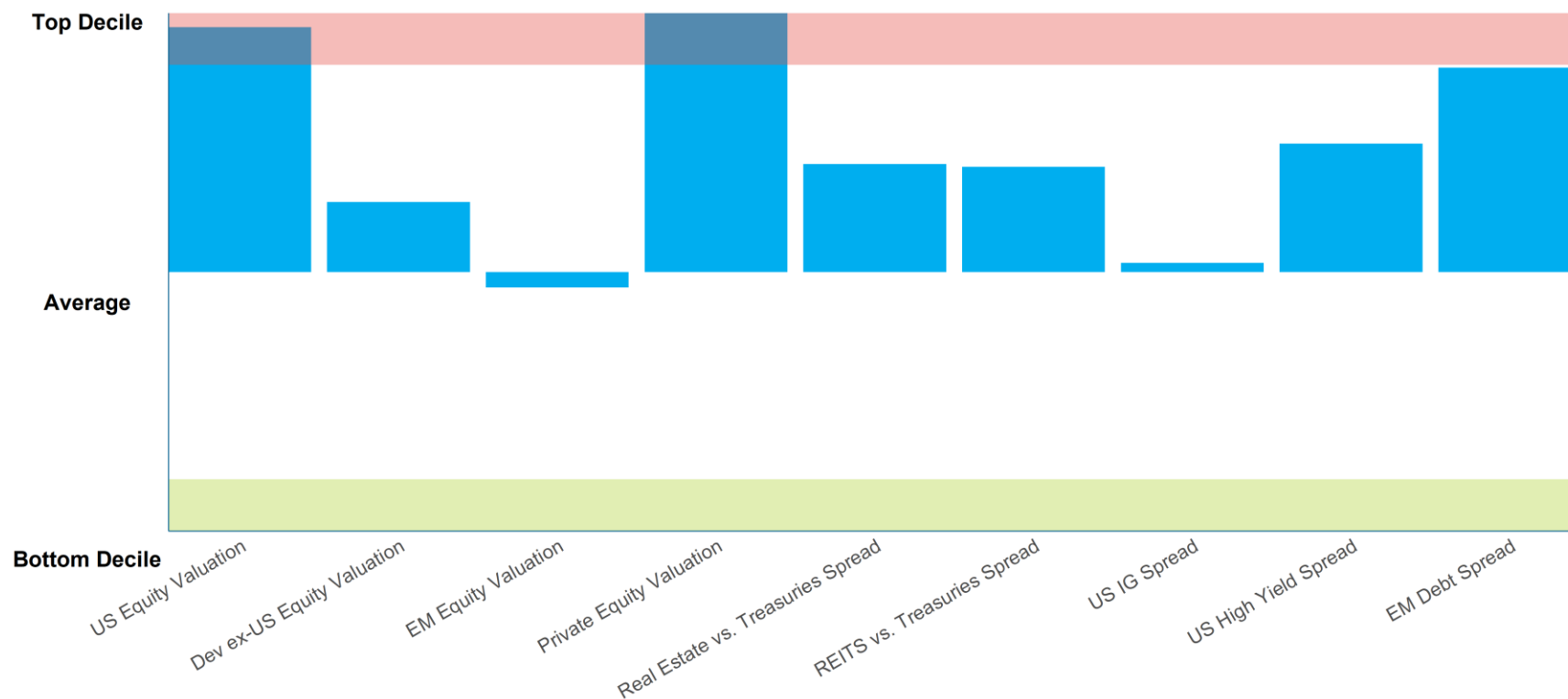
Capital Markets Outlook & Risk Metrics

As of September 30, 2024

Capital Markets Outlook

- In September, the Fed delivered a long-anticipated cut in interest rates as data showed continued moderation in inflation, growth, and unemployment. The market expects that the 50 basis point reduction in the Fed Funds Rate will be followed by more cuts, though the pace remains unclear, and the FOMC will not meet again until early November.
- On September 24th, China unveiled ambitious policies to boost stock prices and stimulate the economy, including loans for share-buybacks, interest rate cuts, reducing reserve requirements, and offering troubled asset exchanges to financial institutions. Chinese stock prices surged, with the MSCI China returning 23.9% in the month of September.
- Boosted by Chinese markets, emerging market stocks had a strong month (MSCI EM +6.7%), outperforming US (S&P 500 +2.1%) and developed market (MSCI EAFE +0.9%) stocks.
- With policy rates declining, most fixed income markets rallied. Long government bonds (+2.0%) outperformed high yield (+1.6%), TIPS (+1.5%), and the Bloomberg Agg (+1.3%) in September
- Most other markets joined the rally, as commodities, natural resources, infrastructure, and public real estate delivered healthy returns in September. Utilities continues to benefit from AI enthusiasm and power demand, returning 30% year-to-date.

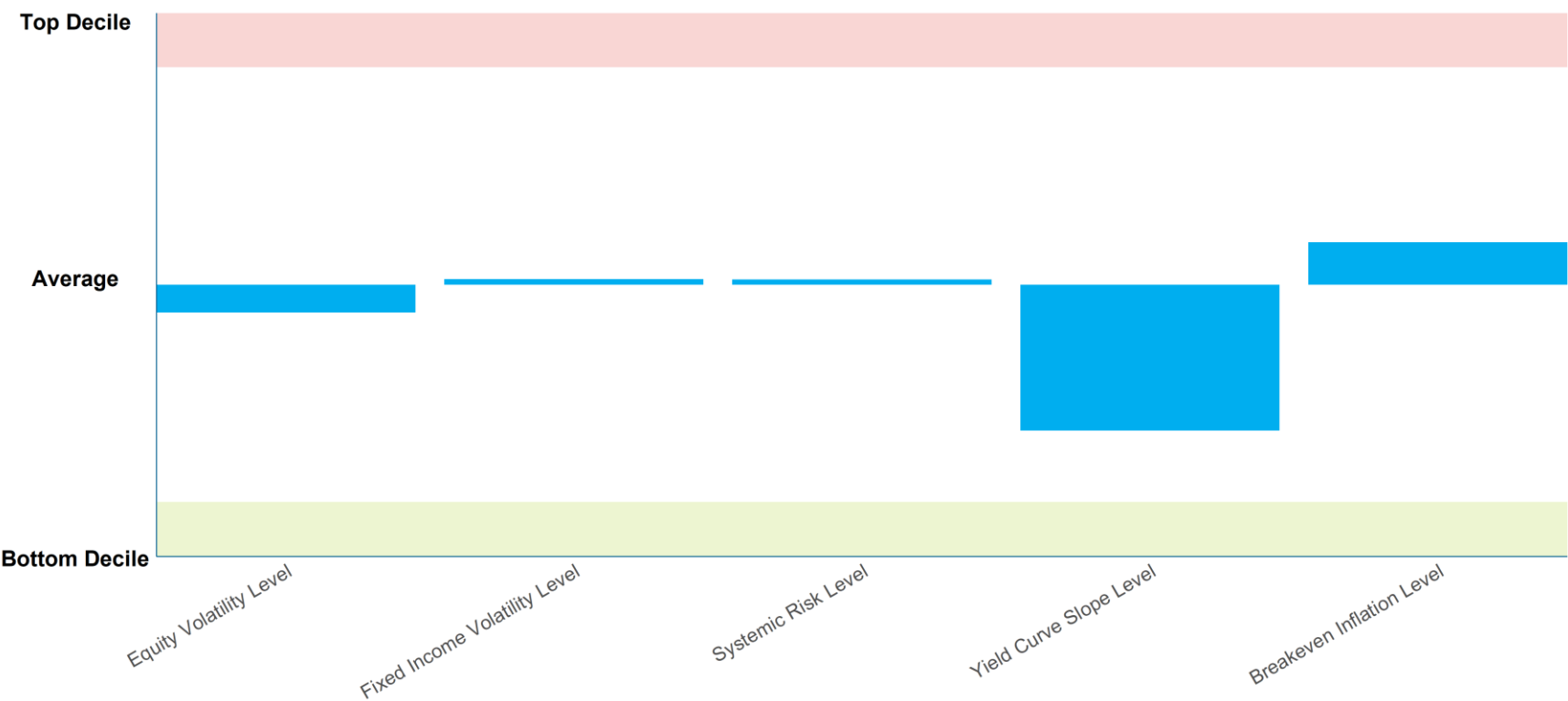
Risk Overview/Dashboard (1) (As of September 30, 2024)¹



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

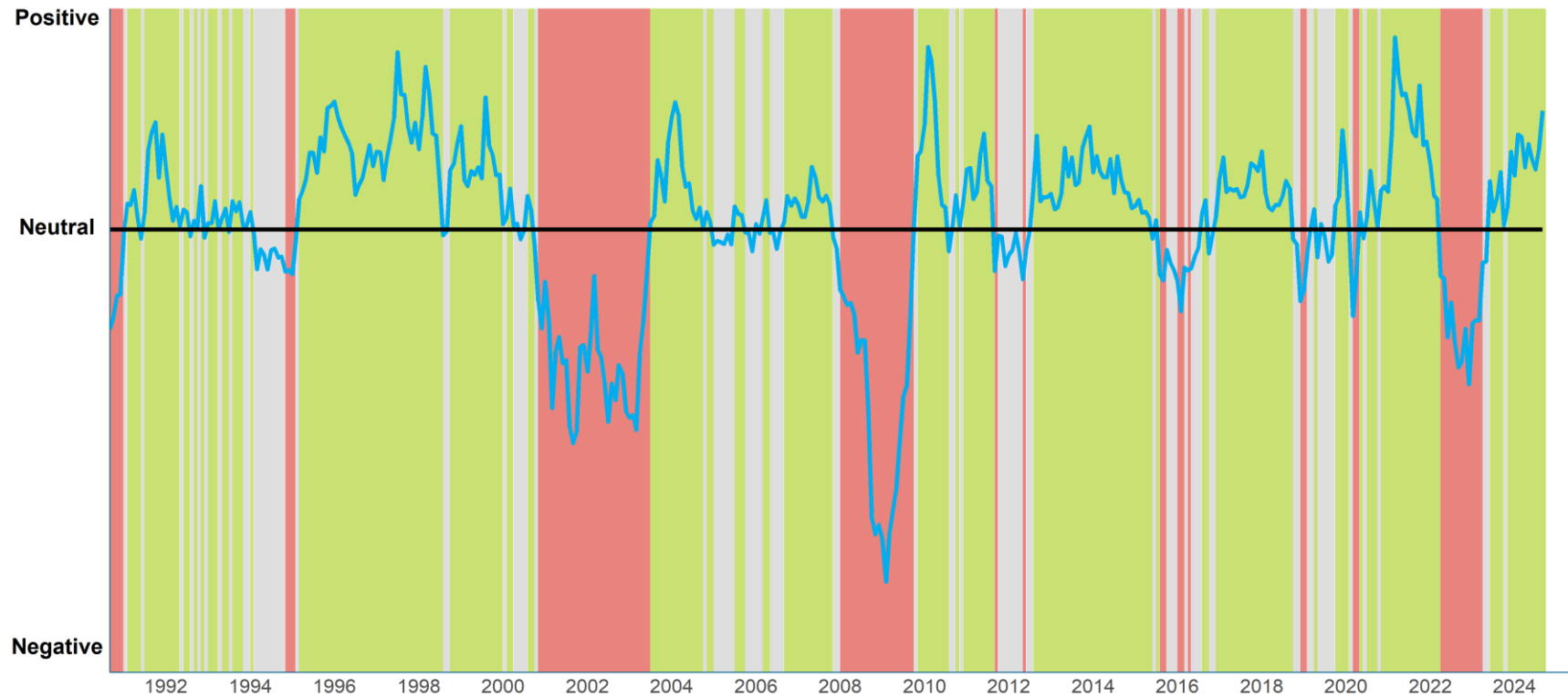
¹ With the exception of Private Equity Valuation, that is YTD as of September 30, 2024.

Risk Overview/Dashboard (2)
(As of September 30, 2024)

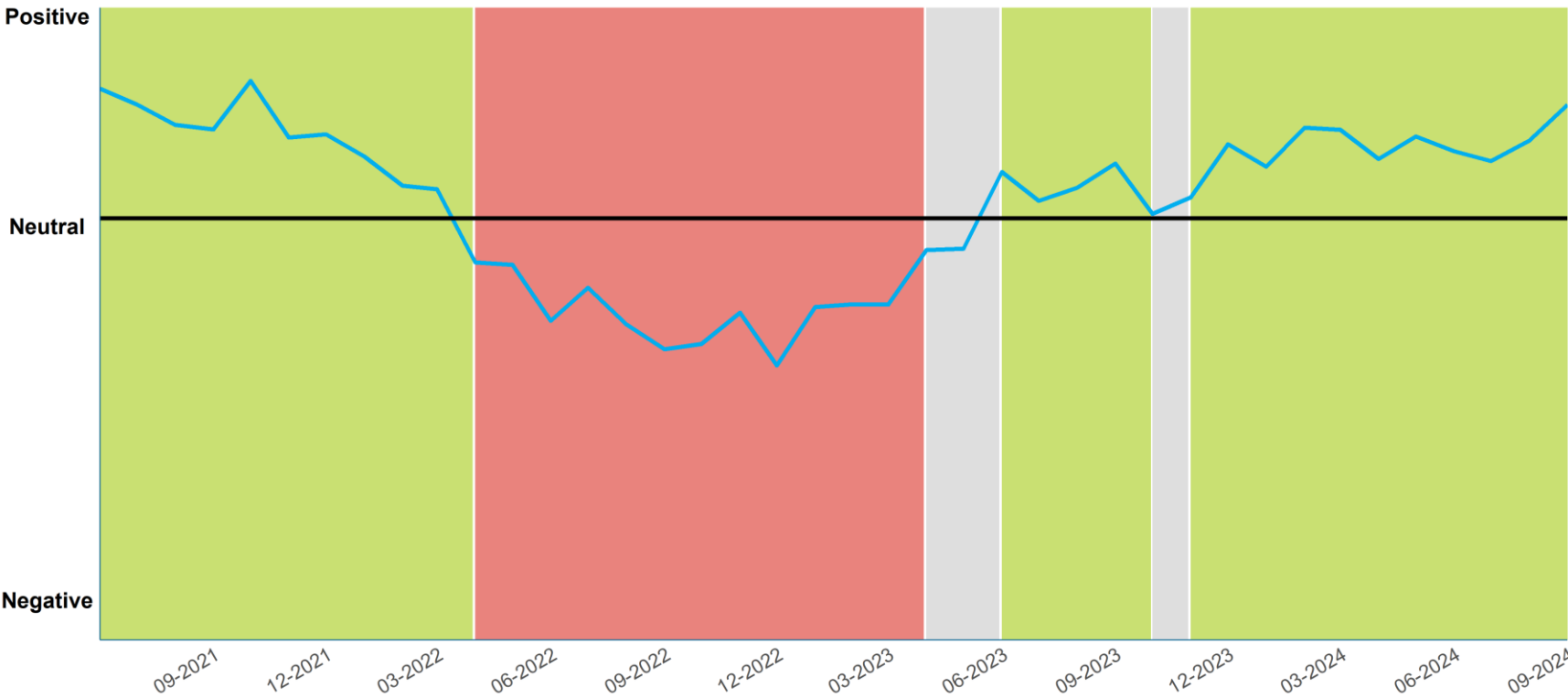


→ Dashboard (2) shows how the current level of each indicator compares to its respective history.

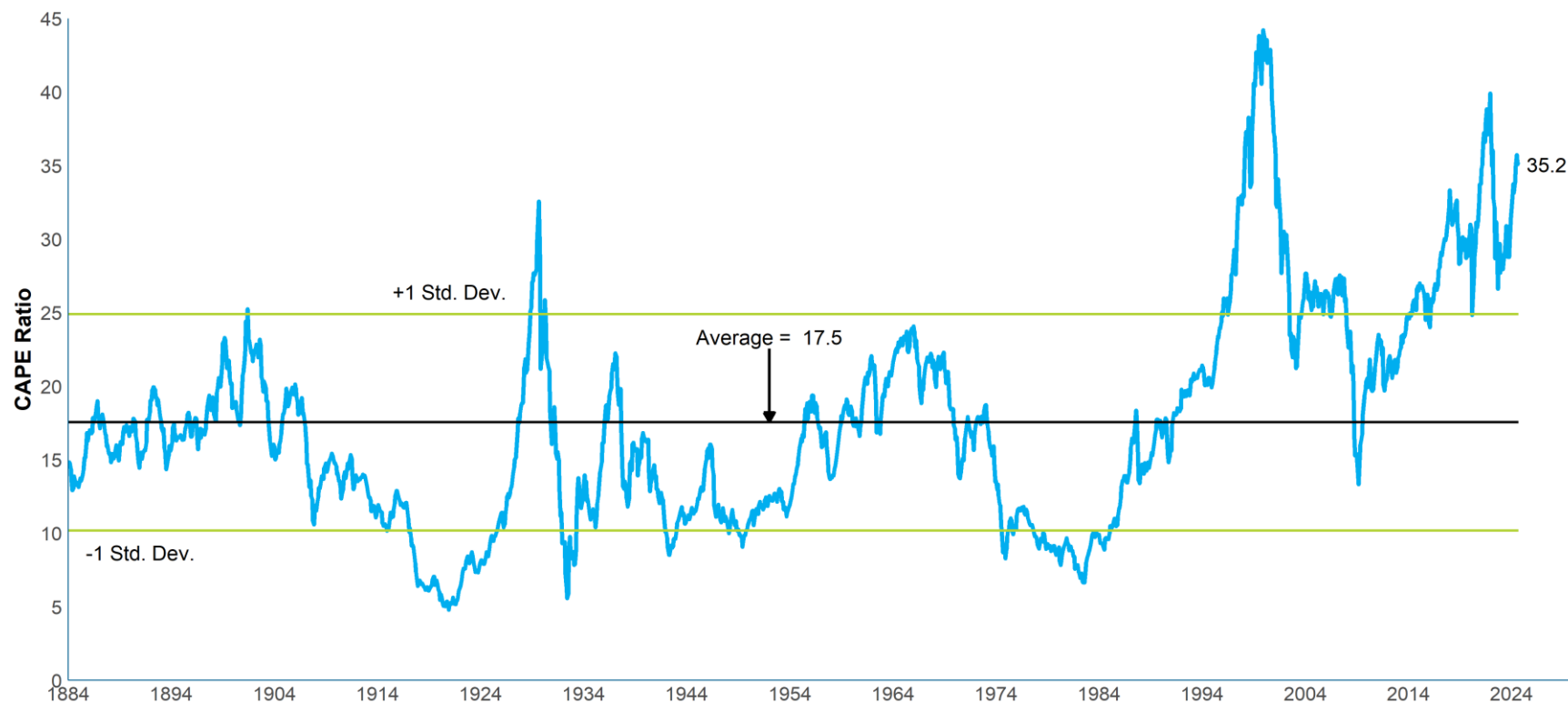
Market Sentiment Indicator (All History) (As of September 30, 2024)



Market Sentiment Indicator (Last Three Years)
(As of September 30, 2024)



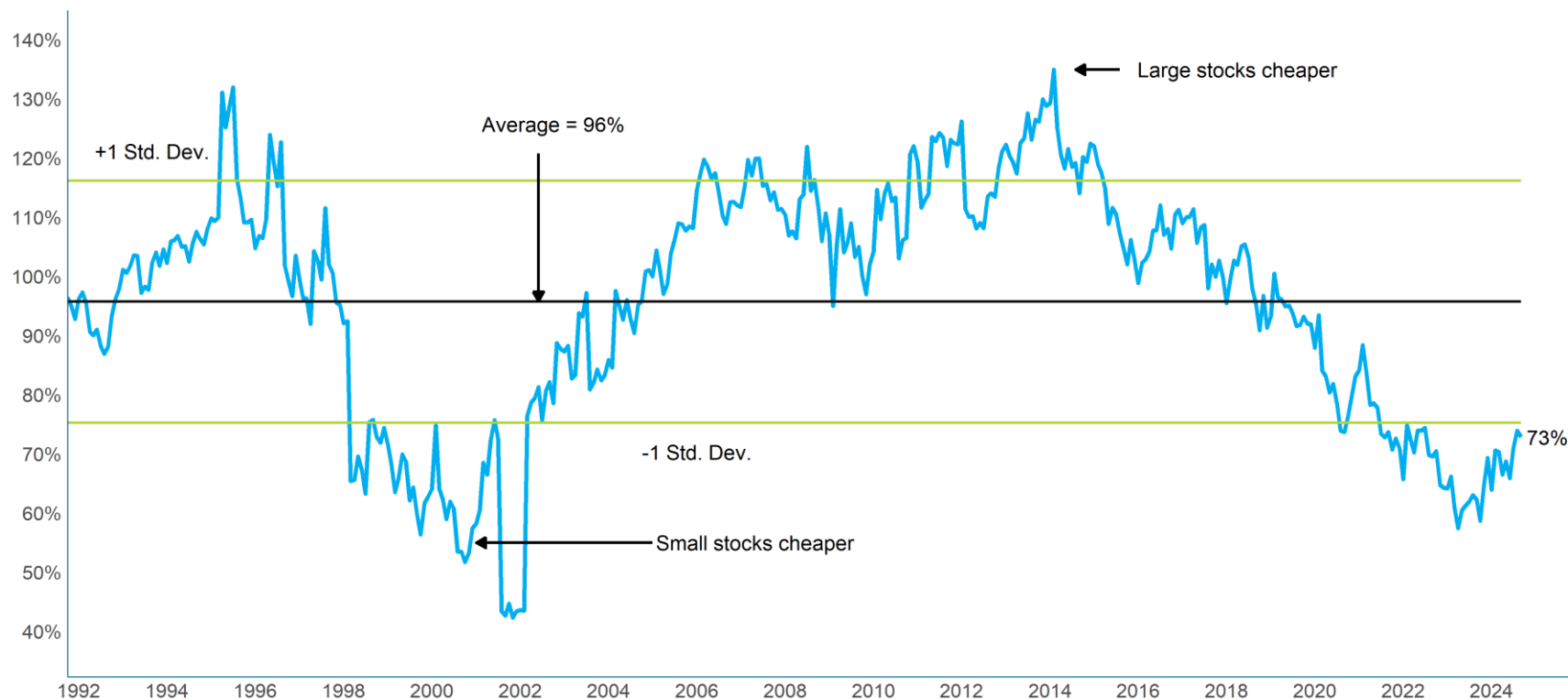
US Equity Cyclically Adjusted P/E¹ (As of September 30, 2024)



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

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group.

Small Cap P/E vs. Large Cap P/E¹ (As of September 30, 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.

¹ Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments and Bloomberg. Prior months unavailable on Bloomberg are backfilled with last reported earnings. Earnings figures represent 12-month "as reported" earnings.

Growth P/E vs. Value P/E¹ (As of September 30, 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.

¹ Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.

Developed International Equity Cyclically Adjusted P/E¹ (As of September 30, 2024)



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

¹ Developed International Equity (MSCI EAFE Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.

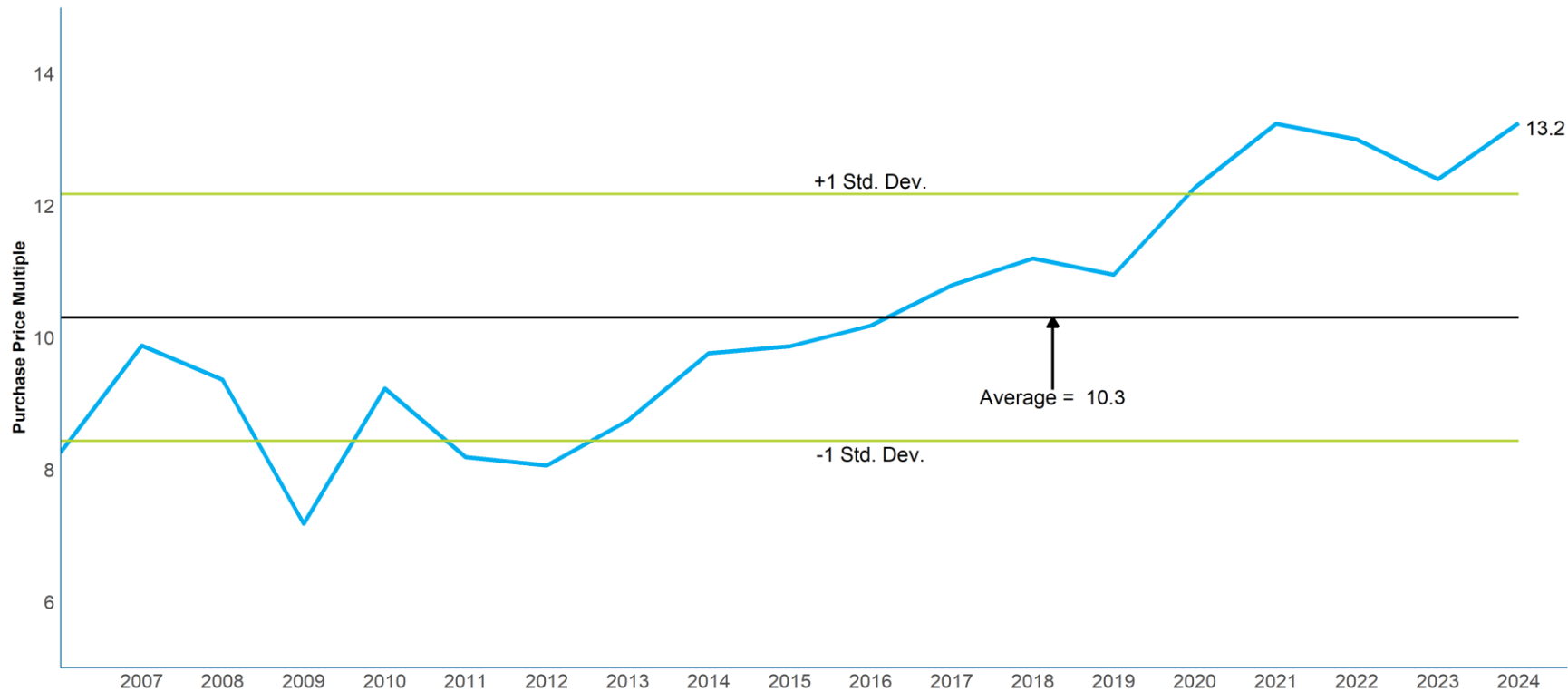
Emerging Market Equity Cyclically Adjusted P/E¹ (As of September 30, 2024)



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

¹ Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.

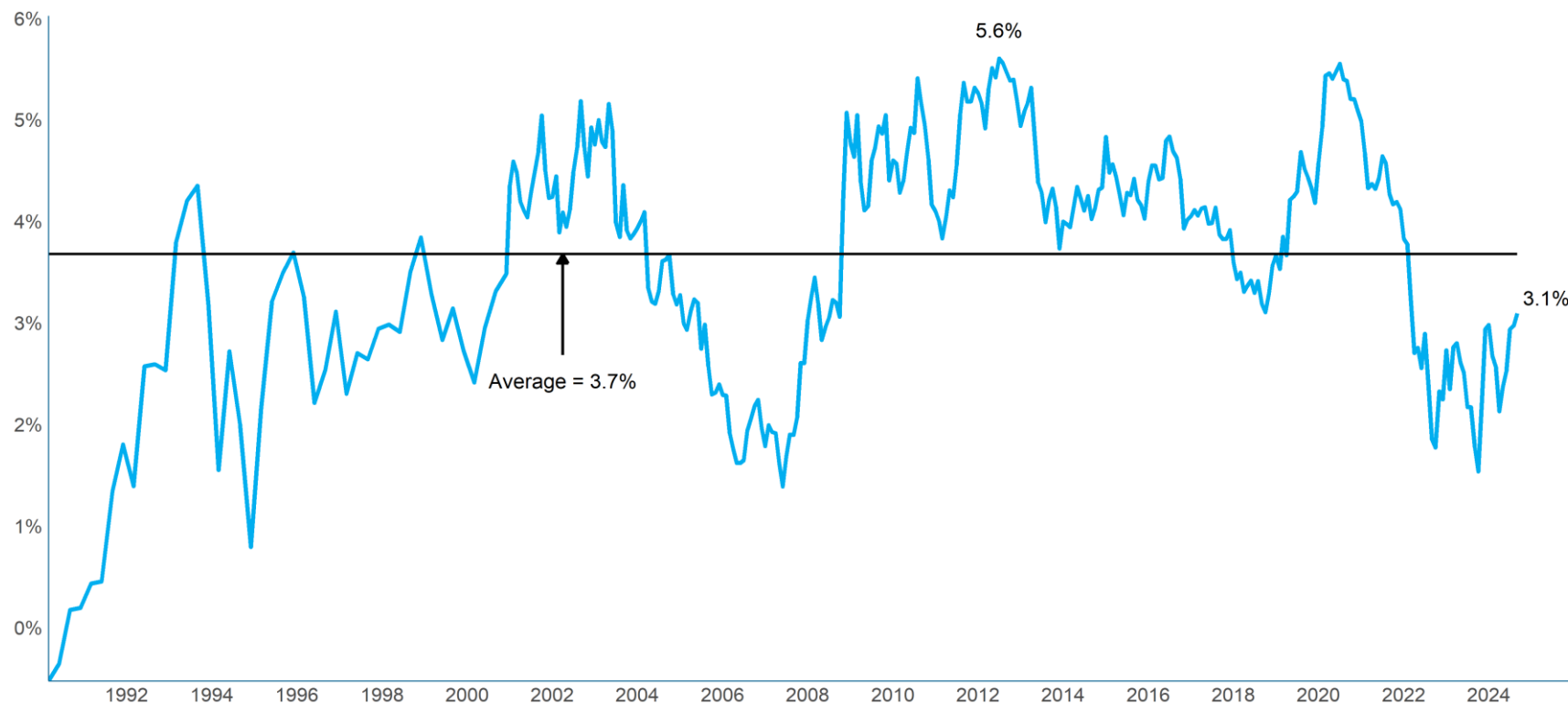
Private Equity Multiples¹ (As of September 30, 2024)



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

¹ Private Equity Multiples – Source: Preqin Median EBITDA Multiples Paid in All LBOs. Accessed September 30, 2024.

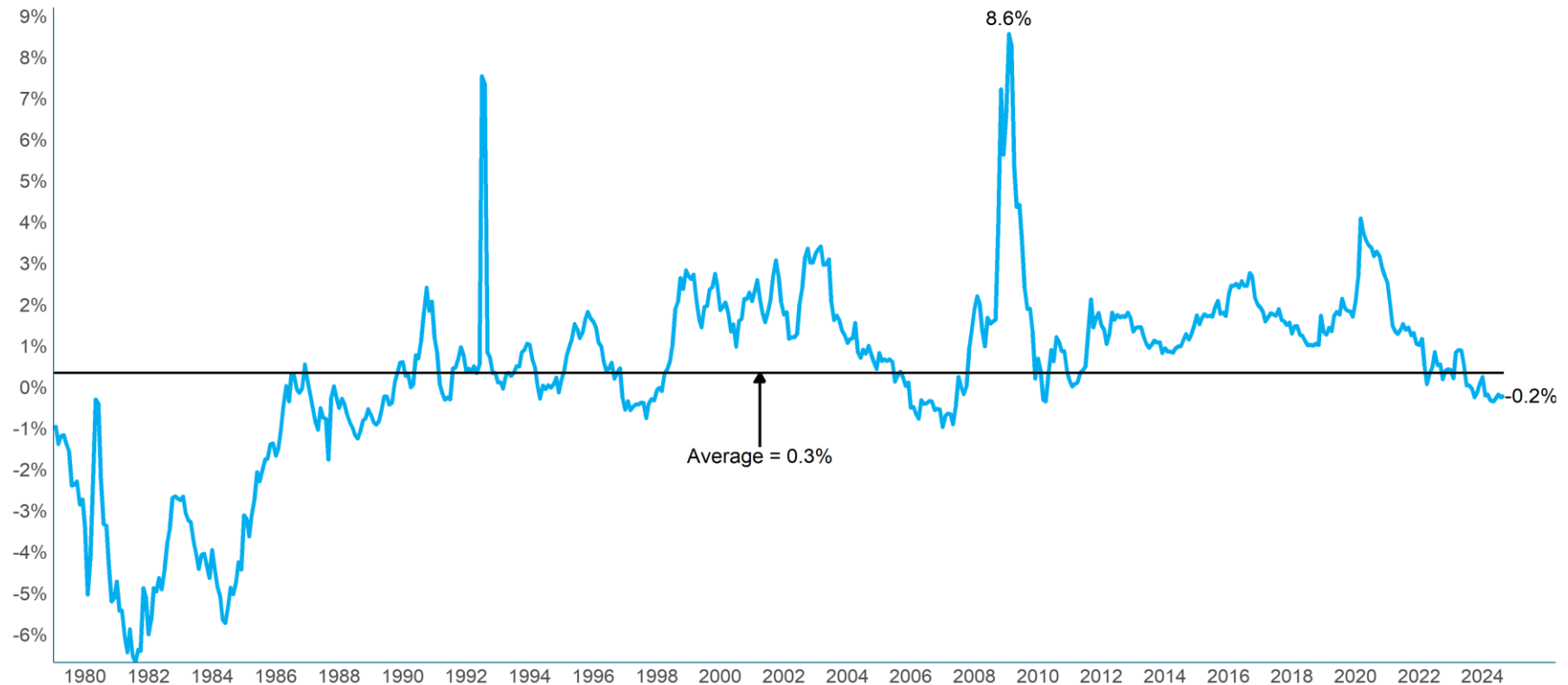
Core Real Estate Spread vs. Ten-Year Treasury¹ (As of September 30, 2024)



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

¹ Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, FRED, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction-based indices from Real Capital Analytics and Meketa Investment Group.

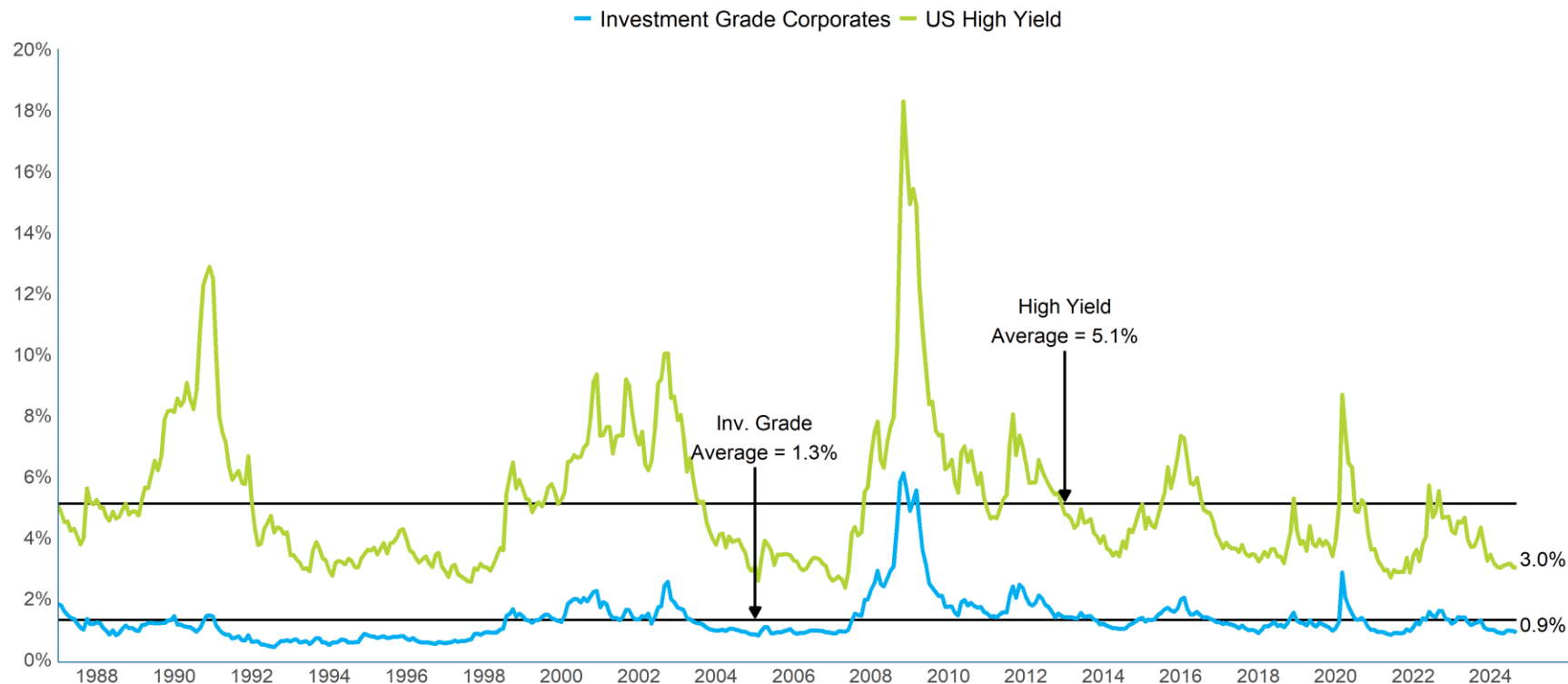
REITs Dividend Yield Spread vs. Ten-Year Treasury¹ (As of September 30, 2024)



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

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

Credit Spreads¹ (As of September 30, 2024)



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

¹ Credit Spreads – Source: Bloomberg. High Yield is proxied by the Bloomberg High Yield Index and Investment Grade Corporates are proxied by the Bloomberg US Corporate Investment Grade Index. Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year US Treasury yield.

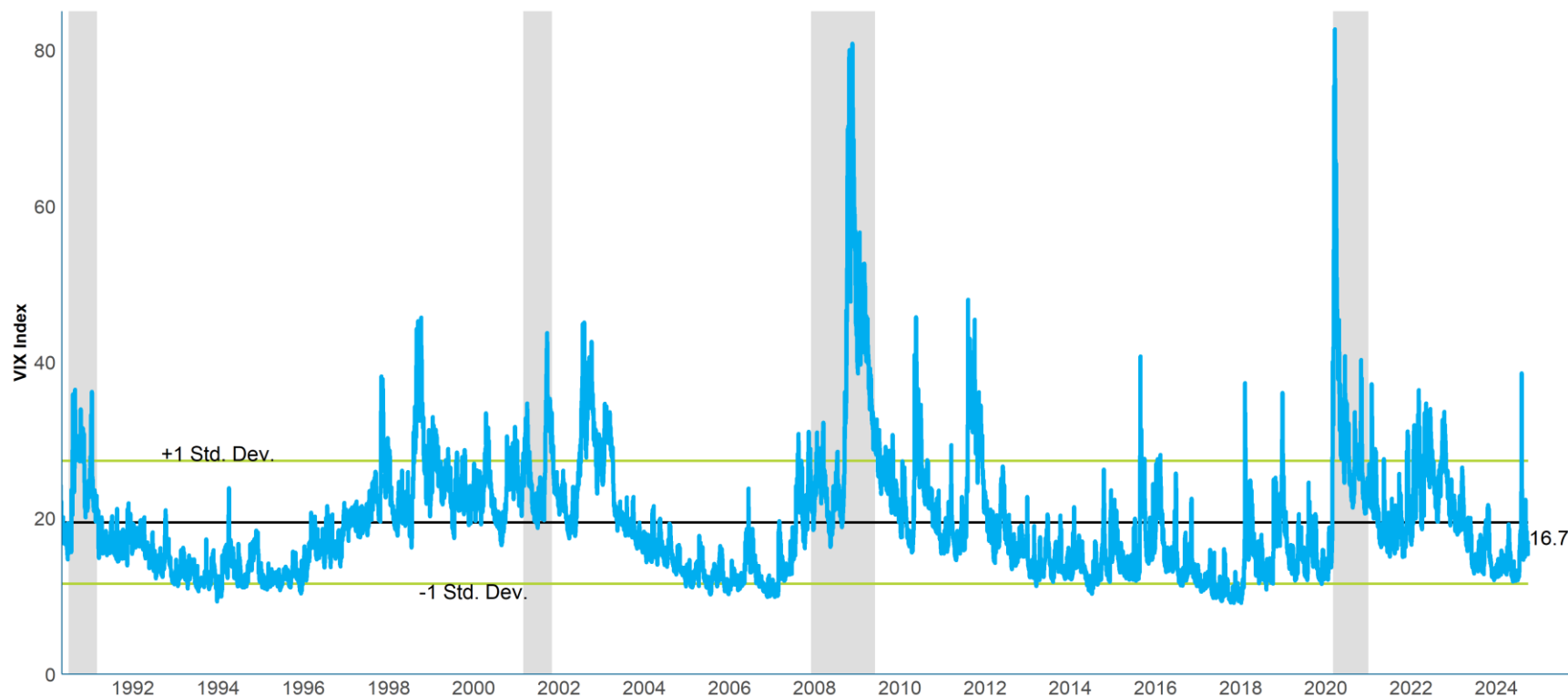
Emerging Market Debt Spreads¹ (As of September 30, 2024)



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

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

Equity Volatility¹ (As of September 30, 2024)

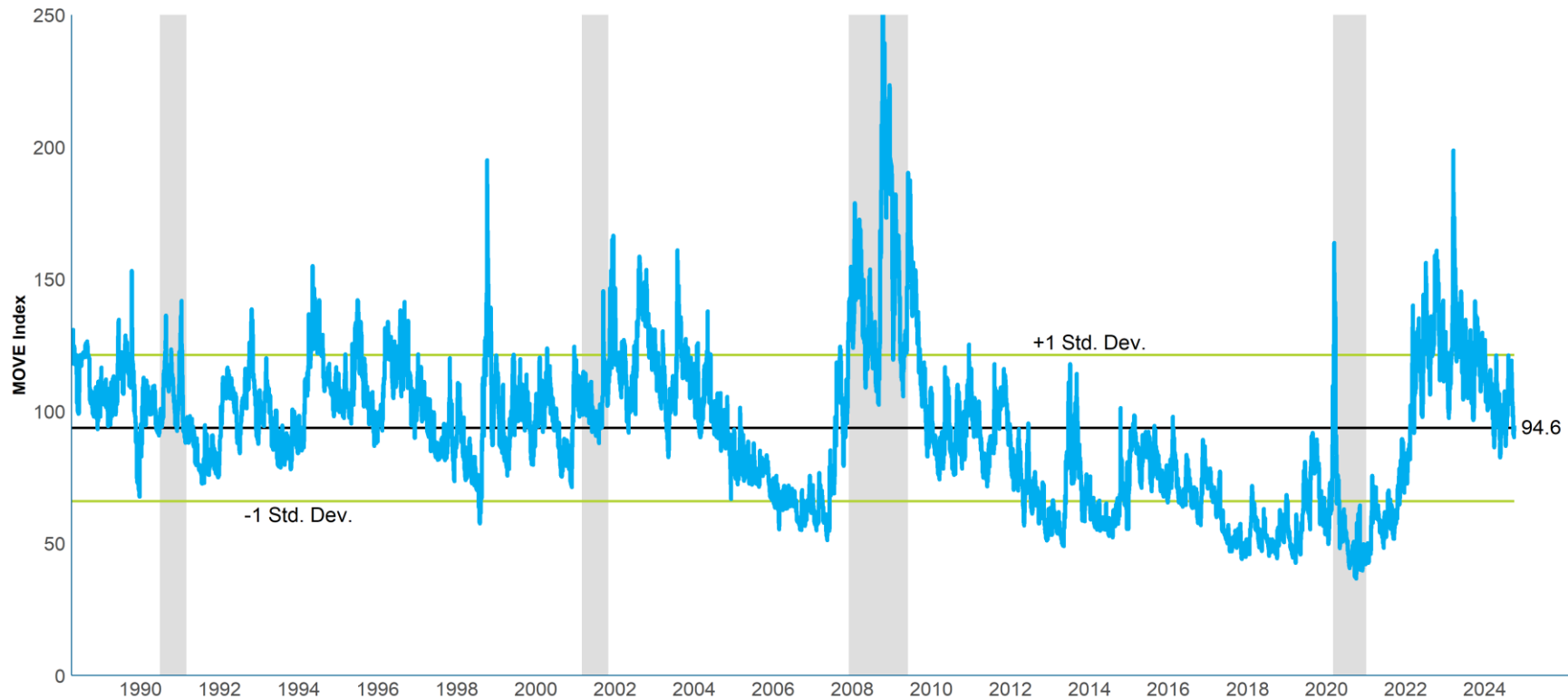


→ This chart details historical implied equity market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

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

² Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.

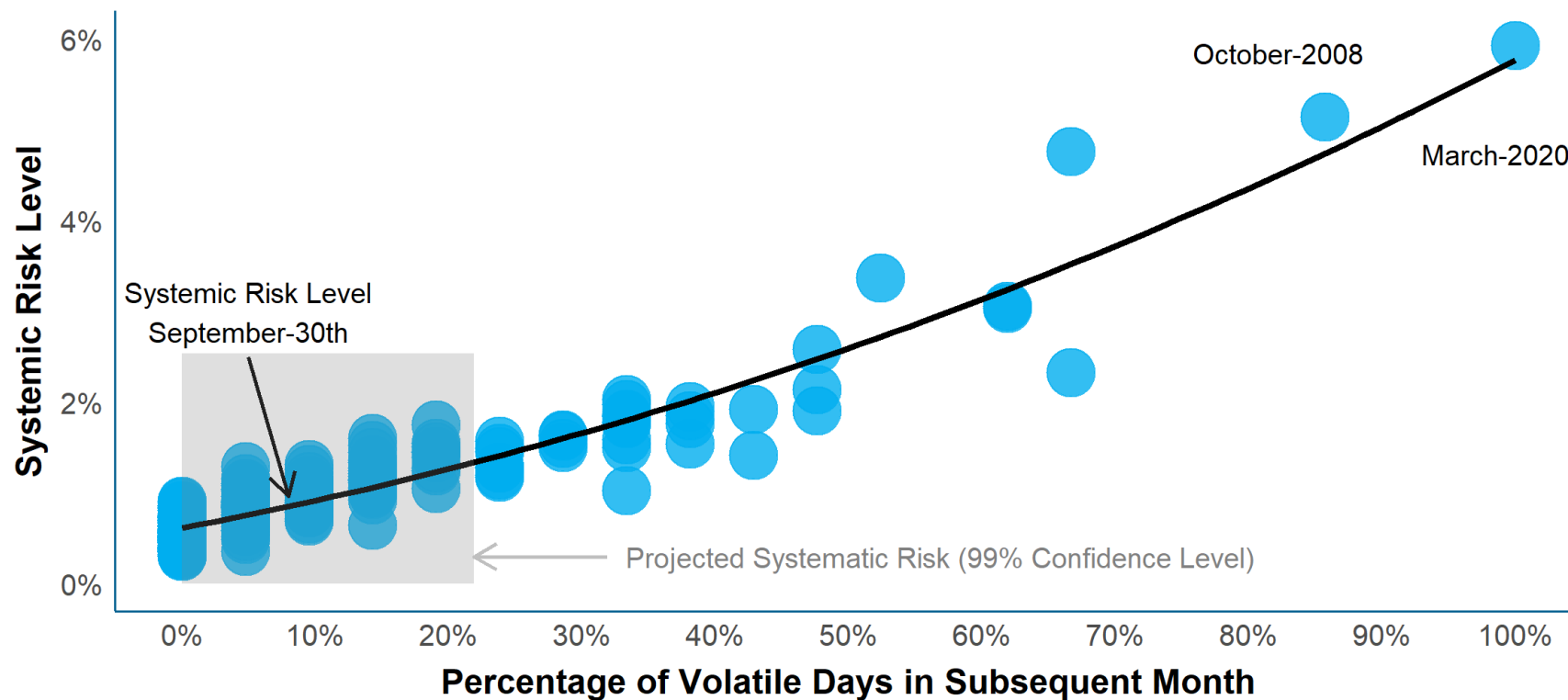
Fixed Income Volatility¹ (As of September 30, 2024)



→ 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.

¹ Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.

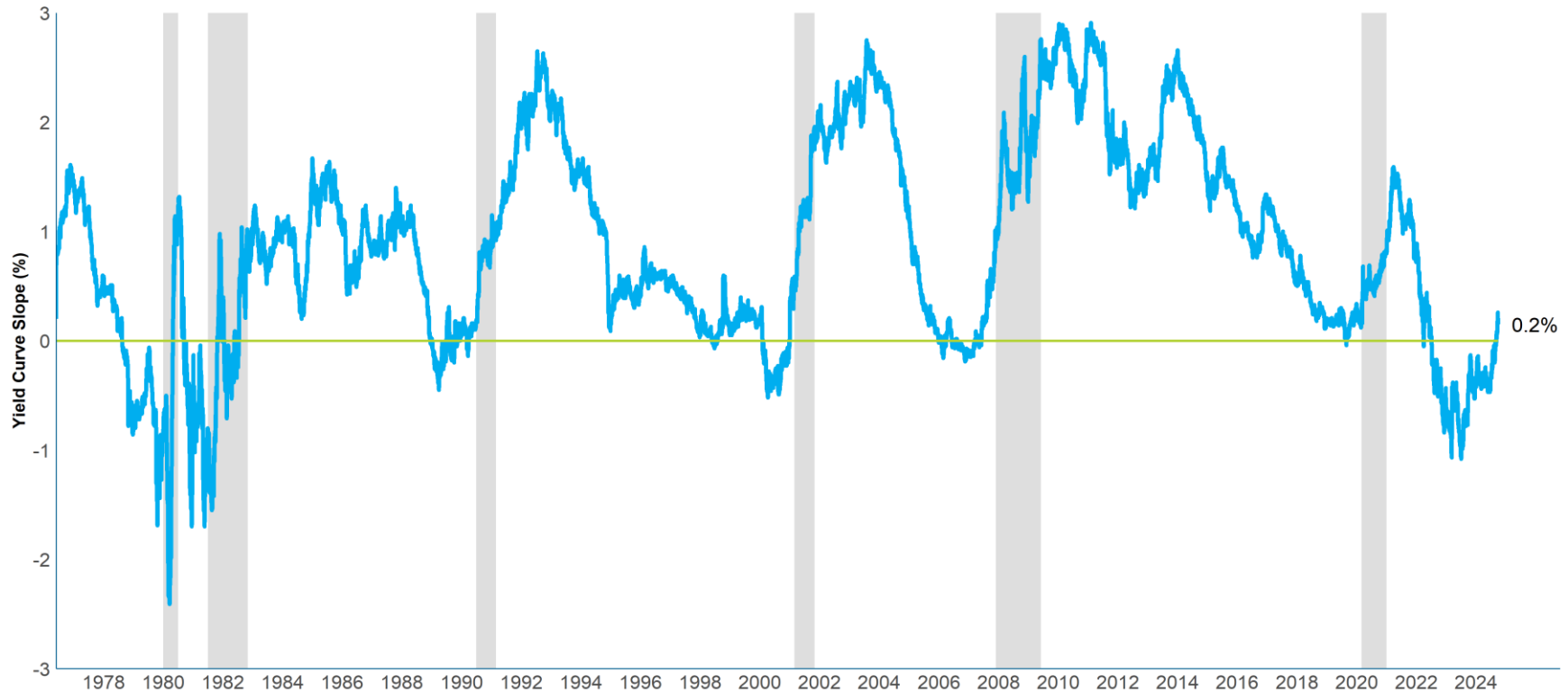
Systemic Risk and Volatile Market Days¹ (As of September 30, 2024)



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

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

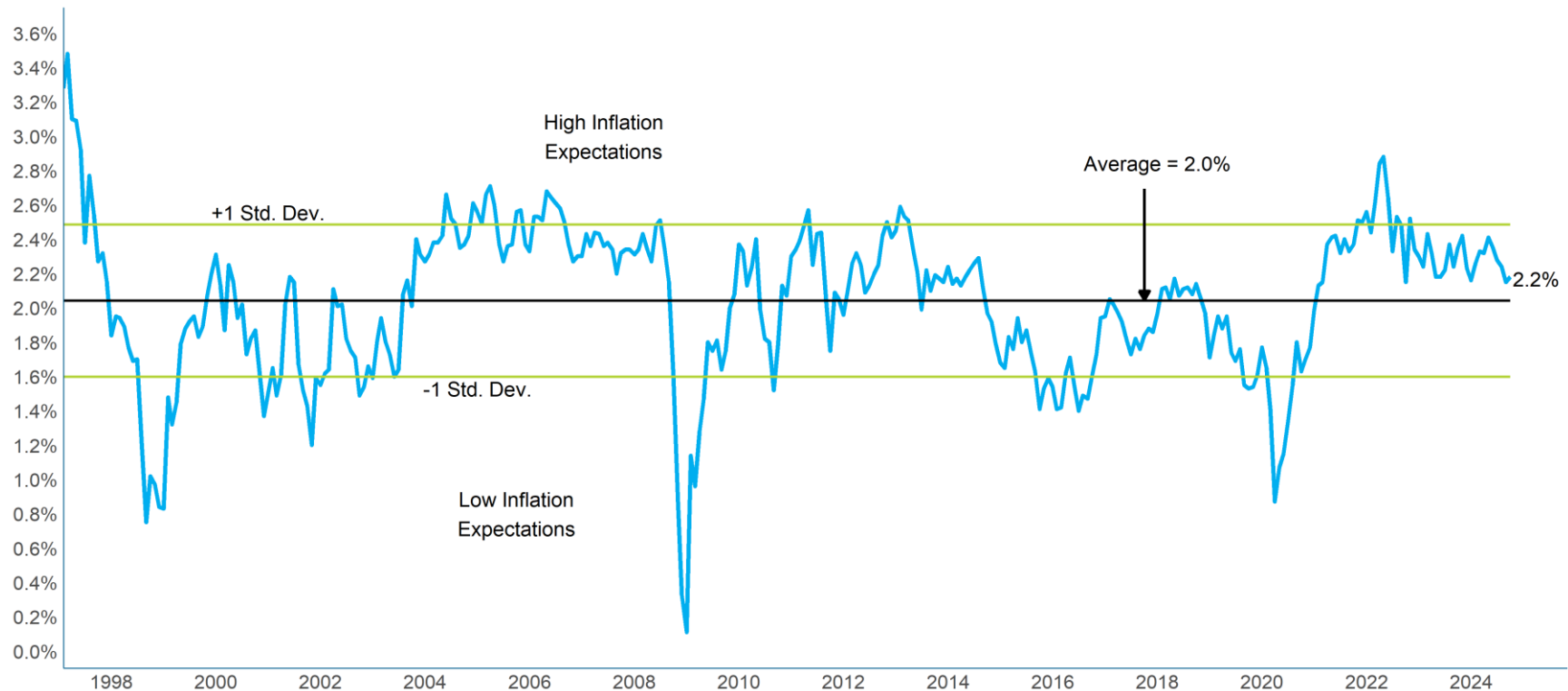
Yield Curve Slope (Ten Minus Two)¹
(As of September 30, 2024)



→ 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.

¹ Yield Curve Slope (Ten Minus Two) – Source: FRED. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.

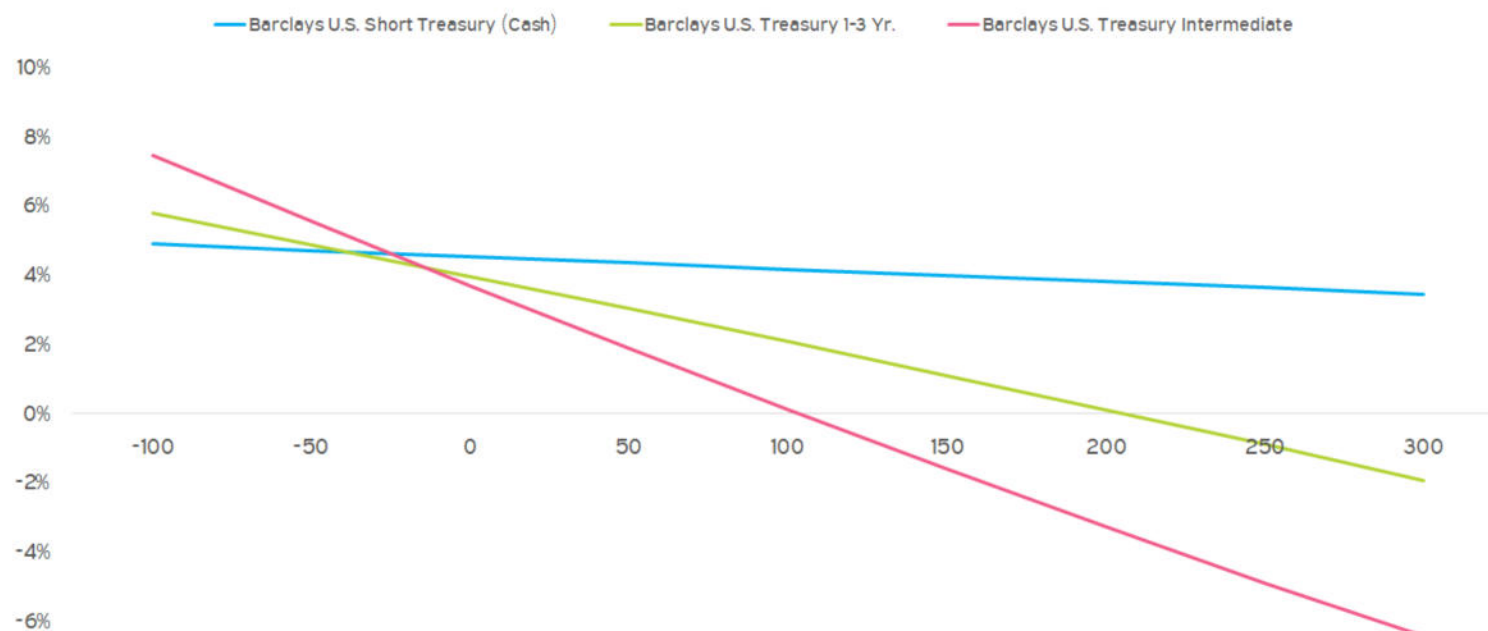
Ten-Year Breakeven Inflation¹ (As of September 30, 2024)



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

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

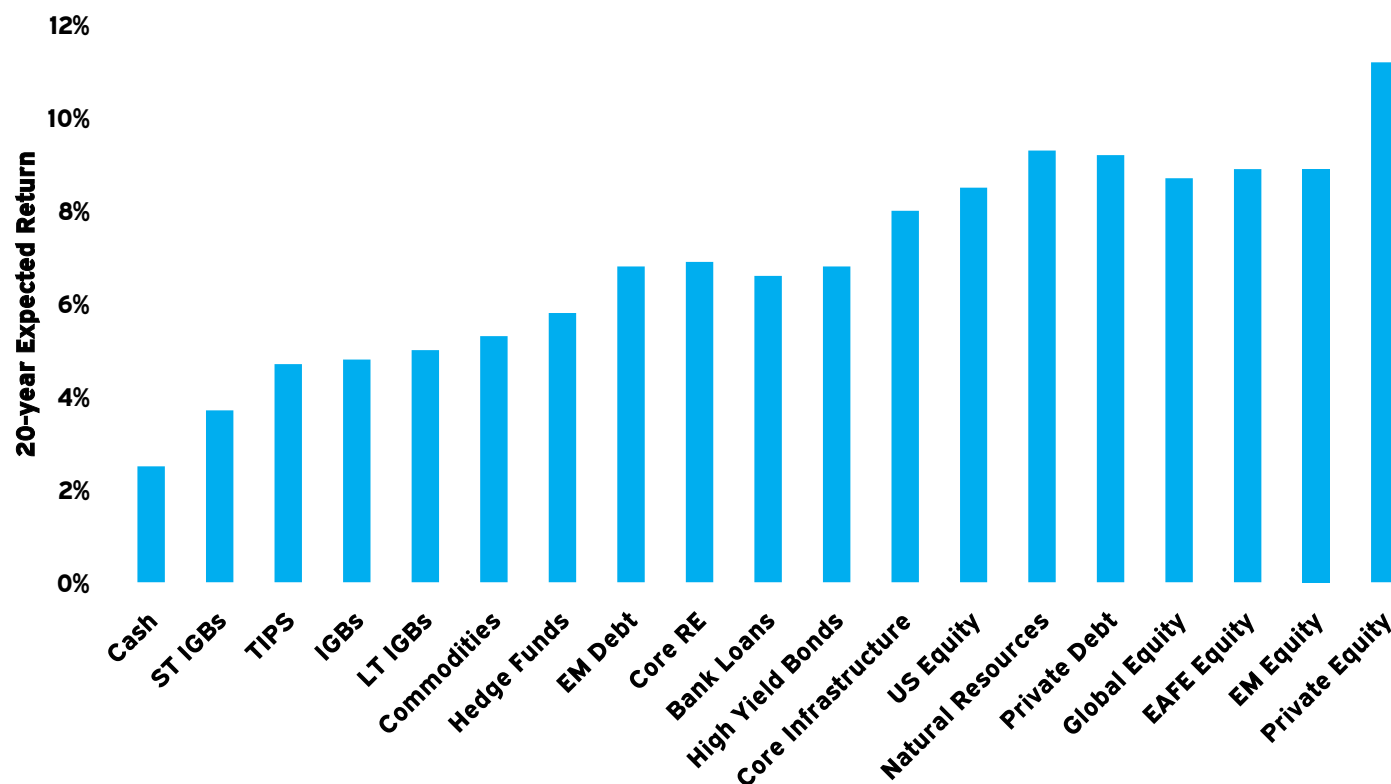
Total Return Given Changes in Interest Rates (bps)¹ (As September 30, 2024)



	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)	4.9%	4.7%	4.5%	4.3%	4.2%	4.0%	3.8%	3.6%	3.4%	0.36	4.51%
Barclays US Treasury 1-3 Yr.	5.8%	4.9%	4.0%	3.0%	2.1%	1.1%	0.1%	-0.9%	-1.9%	1.85	3.95%
Barclays US Treasury Intermediate	7.4%	5.5%	3.7%	1.8%	0.1%	-1.6%	-3.3%	-4.9%	-6.5%	3.68	3.66%
Barclays US Treasury Long	21.2%	12.3%	4.2%	-3.1%	-9.7%	-15.4%	-20.4%	-24.6%	-28.0%	15.42	4.17%

¹ Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Source: Bloomberg, and Meketa Investment Group.

Long-Term Outlook – 20-Year Annualized Expected Returns¹



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

¹ Source: Meketa Investment Group's 2024 Asset Study.

Appendix

Data Sources and Explanations¹

- US Equity Cyclically Adjusted P/E on S&P 500 Index – Source: Robert Shiller and Yale University.
- Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) – Source: Russell Investments. Earnings figures represent 12-month “as reported” earnings.
- Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E – Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month “as reported” earnings.
- Developed International Equity (MSCI EAFE) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.
- Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years.
- Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.
- Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction-based indices from Real Capital Analytics and Meketa Investment Group.

¹ All Data as of September 30, 2024, unless otherwise noted.

Appendix

Data Sources and Explanations¹

- REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity Index.
- Credit Spreads – Source: Bloomberg High Yield is proxied by the Bloomberg High Yield Index and Investment Grade Corporates are proxied by the Bloomberg US Corporate Investment Grade Index.
 - Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year Treasury Yield.
- EM Debt Spreads – Source: Bloomberg, and Meketa Investment Group. Option Adjusted Spread (OAS) for the Bloomberg EM USD Aggregate Index.
- Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.
- Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.
- Systemic Risk and Volatile Market Days – Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.
- Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.

¹ All Data as of September 30, 2024, unless otherwise noted.

Appendix

Data Sources and Explanations¹

- Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.
- Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

¹ All Data as of September 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.

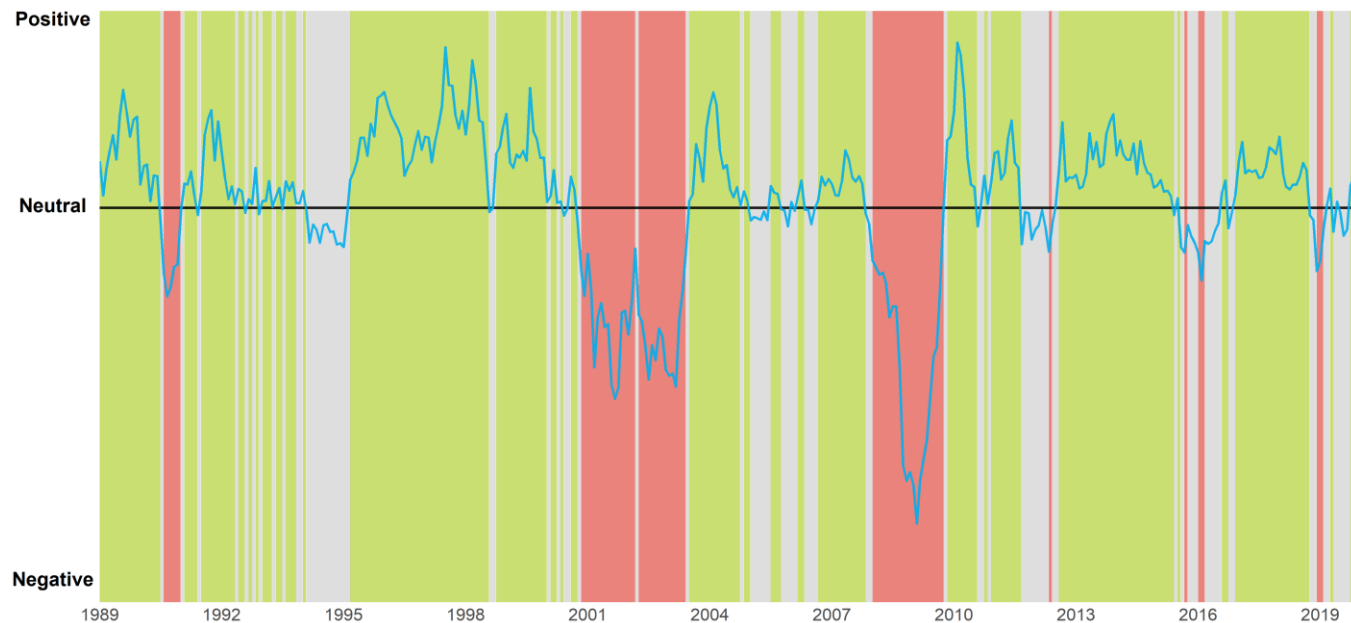
→ Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market correction take 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 measure¹. The color reading on the graph is determined as follows:
- If both stock return momentum and bond spread momentum are positive = GREEN (positive).
 - If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive).
 - If both stock return momentum and bond spread momentum are negative = RED (negative).

¹ Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.
“Time Series Momentum” Moskowitz, Ooi, Pedersen, August 2010. <http://pages.stern.nyu.edu/~lpedersen/papers/TimeSeriesMomentum.pdf>

What does the Meketa Market Sentiment Indicator (MIG-MSI) mean? Why might it be useful?

→ There is strong evidence that time series momentum is significant and persistent. Across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12-month period. The MIG-MSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

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REPORT

SBI Comprehensive Performance Report

September 30, 2024

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Quarterly Report

Comprehensive Performance Report

September 30, 2024



Description of SBI Investment Programs

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.

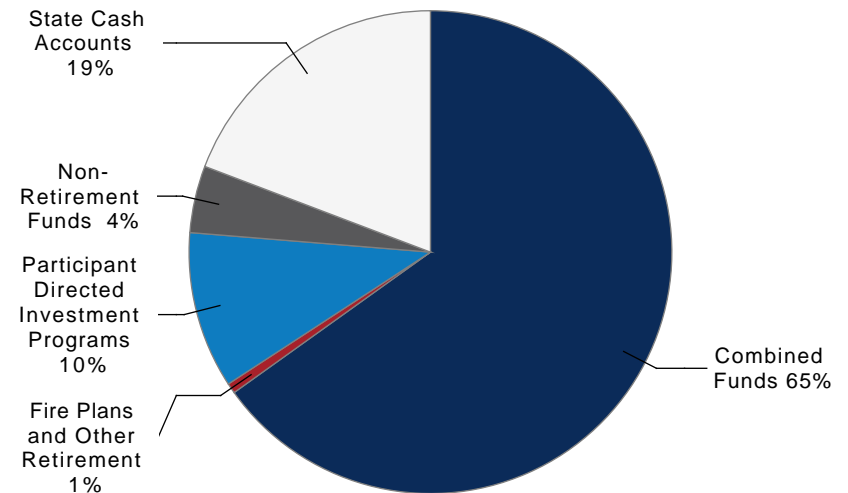
State Cash

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>
Combined Funds	\$97,619
Fire Plans + Other Retirement Plans	\$1,025
Participant Directed Investment Program	\$15,730
State Deferred Compensation Plan	\$10,696
Health Care Savings Plan	\$2,181
Unclassified Employees Retirement Plan	\$424
Hennepin County Supplemental Retirement Plan	\$186
PERA Defined Contribution Plan	\$106
Minnesota College Savings Plan	\$2,085
Minnesota Achieving a Better Life Experience Plan	\$51
Non-Retirement Funds	\$6,728
Assigned Risk Plan	\$277
Permanent School Fund	\$2,240
Environmental Trust Fund	\$1,973
Closed Landfill Investment Fund	\$157
Miscellaneous Trust Funds	\$1,035
Other Postemployment Benefits Accounts	\$1,046
State Cash	\$28,813
Invested Treasurer's Cash	\$27,633
Other State Cash Accounts	\$1,180
Total SBI AUM	\$149,915



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



Quarterly Report

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Performance Reporting Legend

Manager Level Data

Aggregate Level Data

Sub-Asset Class Level Data

Asset Class Level Data

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

Combined Funds

September 30, 2024



Combined Funds Summary

Combined Funds Change in Market Value (\$Millions)

	One Quarter
COMBINED FUNDS	
Beginning Market Value	\$93,679
Net Contributions	-674
Investment Return	4,614
Ending Market Value	97,619

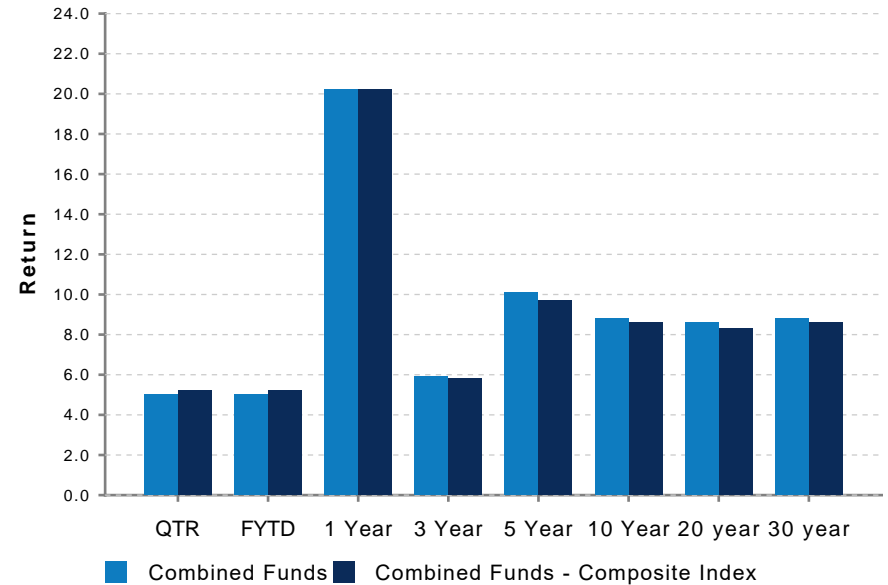
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

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.

	QTR	FYTD	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr	30 Yr
Combined Funds	5.0%	5.0%	20.2%	5.9%	10.1%	8.8%	8.6%	8.8%
Combined Funds-Composite Index	5.2%	5.2%	20.2%	5.8%	9.7%	8.6%	8.3%	8.6%
Excess	-0.2%	-0.2%	-0.0%	0.1%	0.4%	0.2%	0.2%	0.2%

Asset Growth

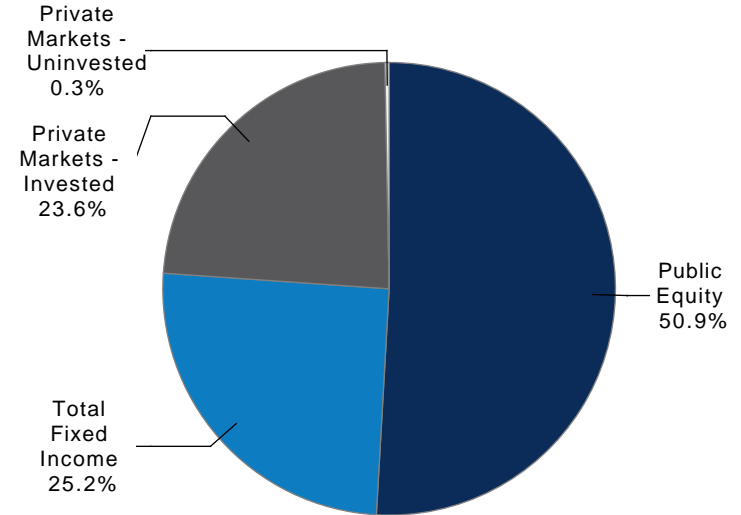


Combined Funds Summary

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.

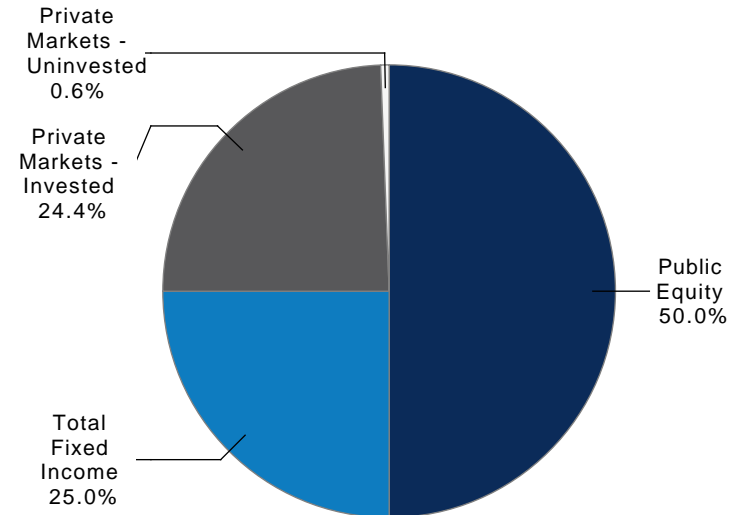
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$49,649	50.9%	50.0%
Total Fixed Income	24,630	25.2	25.0
Private Markets - Total	23,340	23.9	25.0
Private Markets - Invested	23,067	23.6	
Private Markets - Uninvested	273	0.3	
TOTAL	97,619	100.0	



Composite Index Comparison

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

	<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	24.4	Private Markets
Private Markets - Uninvested	0.6	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	\$49.6	50.9%	50.0%	6.2%	6.2%	31.5%	8.4%	13.0%	10.6%	9.4%	9.5
Public Equity Benchmark				6.8	6.8	31.9	8.3	12.7	10.5	9.3	9.2
Excess				-0.6	-0.6	-0.4	0.1	0.3	0.1	0.1	0.3
Domestic Equity	32.8	33.6	33.5	6.2	6.2	35.5	10.2	15.4	12.8	10.5	10.4
Domestic Equity Benchmark				6.2	6.2	35.2	10.3	15.2	12.8	10.6	10.5
Excess				-0.0	-0.0	0.3	-0.1	0.2	-0.0	-0.1	-0.1
International Equity	15.8	16.2	16.5	6.4	6.4	23.8	5.1	8.5	5.9	6.6	6.1
International Equity Benchmark				8.1	8.1	25.4	4.1	7.5	5.2	6.1	5.4
Excess				-1.7	-1.7	-1.6	1.0	0.9	0.7	0.5	0.7
Global Equity	1.1	1.1	0.0	5.6	5.6	28.0	1.5				
MSCI AC World Index (net)				6.6	6.6	31.8	8.1				
Excess				-1.0	-1.0	-3.7	-6.6				

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	\$24.6	25.2%	25.0%	5.1%	5.1%	11.9%	-1.2%	0.8%	2.5%	3.7%	5.1%
Total Fixed Income Benchmark				5.0%	5.0%	10.9%	-1.7%	0.2%	2.0%	3.3%	4.7%
Excess				0.1%	0.1%	1.0%	0.5%	0.6%	0.5%	0.4%	0.4%
Core/Core Plus	\$5.4	5.6%	5.0	5.3%	5.3%	12.8%	-1.2%	1.0%	2.4%	3.7%	5.1%
Core Bonds Benchmark				5.2%	5.2%	11.6%	-1.4%	0.3%	1.8%	3.2%	4.7%
Excess				0.1%	0.1%	1.3%	0.2%	0.7%	0.6%	0.5%	0.4%
Return Seeking Fixed Income	\$4.8	5.0%	5.0	5.0%	5.0%	14.0%	1.2%				
Bloomberg U.S. Aggregate				5.2%	5.2%	11.6%	-1.4%				
Excess				-0.2%	-0.2%	2.5%	2.6%				
Treasury Protection	\$9.4	9.7%	10.0	6.6%	6.6%	13.0%	-4.7%	-1.9%			
Bloomberg Treasury 5+ Year				6.5%	6.5%	12.8%	-4.7%	-1.9%			
Excess				0.0%	0.0%	0.2%	0.0%	0.0%			
Laddered Bond + Cash	\$4.9	5.0%	5.0	1.6%	1.6%	5.7%	3.5%	2.3%	1.7%	1.8%	3.1%
ICE BofA US 3-Month Treasury Bill				1.4%	1.4%	5.5%	3.5%	2.3%	1.6%	1.6%	2.5%
Excess				0.2%	0.2%	0.3%	0.0%	-0.0%	0.1%	0.2%	0.6%

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	2.2%	2.2%	7.8%	8.5%	13.0%	11.2%	13.5%	12.6%	13.6%
Private Markets -Uninvested (1)	1.1%	1.1%	5.3%	0.3%					
Private Equity	2.5%	2.5%	9.2%	8.1%	15.8%	15.1%	15.5%	13.8%	15.6%
Private Credit	1.5%	1.5%	8.4%	11.7%	11.6%	12.2%	12.5%	12.2%	
Resources	2.0%	2.0%	8.0%	11.1%	5.7%	0.3%	12.5%	13.0%	12.9%
Real Estate	0.9%	0.9%	-4.6%	5.9%	8.5%	9.7%	8.7%	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

Asset Class & Manager Performance

September 30, 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

September 30, 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>
Total Domestic Equity										
ACTIVE DOMESTIC EQUITY AGGREGATE (1)	\$3,213,709,213	9.6%	7.3%	7.3%	31.3%	4.4%	12.7%	10.8%	8.6%	06/1996
Active Domestic Equity Benchmark			7.9	7.9	30.3	5.5	11.9	10.5	9.1	06/1996
Excess			-0.6	-0.6	0.9	-1.2	0.9	0.2	-0.5	
SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)	4,297,622,905	12.9	5.9	5.9	37.9	12.2	16.6	13.5	9.7	06/1996
Semi Passive Domestic Equity Benchmark			6.1	6.1	35.7	10.8	15.6	13.1	9.6	06/1996
Excess			-0.2	-0.2	2.2	1.4	1.0	0.4	0.2	
PASSIVE DOMESTIC EQUITY AGGREGATE (3)	25,924,290,752	77.5	6.1	6.1	35.7	10.8	15.6	13.1	9.8	06/1996
Passive Domestic Equity Benchmark			6.1	6.1	35.6	10.8	15.6	13.1	9.9	06/1996
Excess			-0.0	-0.0	0.0	-0.0	0.0	-0.0	-0.1	
TRANSITION AGGREGATE DOMESTIC EQUITY (4)	2,865	0.0								
TOTAL DOMESTIC EQUITY (5)	33,435,625,734	100.0	6.2	6.2	35.5	10.2	15.4	12.8	11.0	01/1984
Domestic Equity Benchmark			6.2	6.2	35.2	10.3	15.2	12.8	11.1	01/1984
Excess			-0.0	-0.0	0.3	-0.1	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>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Total Domestic Equity					
ACTIVE DOMESTIC EQUITY AGGREGATE (1)	20.9%	-21.3%	18.5%	27.3%	27.6%
Active Domestic Equity Benchmark	19.4	-19.4	20.3	19.8	28.2
Excess	1.5	-1.9	-1.7	7.5	-0.6
SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)	27.5	-18.7	28.8	21.0	30.9
Semi Passive Domestic Equity Benchmark	26.5	-19.1	26.5	21.0	31.4
Excess	1.0	0.4	2.3	0.0	-0.5
PASSIVE DOMESTIC EQUITY AGGREGATE (3)	26.5	-19.2	26.5	20.8	31.3
Passive Domestic Equity Benchmark	26.5	-19.1	26.4	20.8	31.3
Excess	0.0	-0.0	0.1	0.0	0.0
TRANSITION AGGREGATE DOMESTIC EQUITY (4)					
TOTAL DOMESTIC EQUITY (5)	26.0	-19.4	25.8	21.7	30.7
Domestic Equity Benchmark	26.0	-19.2	25.7	20.8	30.8
Excess	0.1	-0.2	0.1	0.9	-0.1

(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>
Active Large Cap Growth										
SANDS	\$233,017,745	0.7%	-0.8%	-0.8%	40.6%	-6.3%	11.9%	11.8%	11.2%	01/2005
Russell 1000 Growth			3.2	3.2	42.2	12.0	19.7	16.5	12.3	01/2005
Excess			-4.0	-4.0	-1.6	-18.3	-7.9	-4.7	-1.1	
WINSLOW	266,964,866	0.8	2.4	2.4	47.5	10.2	18.4	15.9	12.6	01/2005
Russell 1000 Growth			3.2	3.2	42.2	12.0	19.7	16.5	12.3	01/2005
Excess			-0.8	-0.8	5.3	-1.8	-1.3	-0.6	0.3	
RUSSELL 1000 GROWTH AGGREGATE (1)	499,982,611	1.5	0.9	0.9	44.2	1.0	18.9	16.1	11.9	11/2003
Russell 1000 Growth			3.2	3.2	42.2	12.0	19.7	16.5	12.2	11/2003
Excess			-2.3	-2.3	2.0	-11.0	-0.9	-0.4	-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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Large Cap Growth					
SANDS	52.0%	-49.3%	5.2%	71.0%	33.5%
Russell 1000 Growth	42.7	-29.1	27.6	38.5	36.4
Excess	9.3	-20.2	-22.4	32.5	-2.8
WINSLOW	43.7	-31.0	24.8	37.6	34.2
Russell 1000 Growth	42.7	-29.1	27.6	38.5	36.4
Excess	1.0	-1.8	-2.8	-0.9	-2.2
RUSSELL 1000 GROWTH AGGREGATE (1)	47.7	-41.3	12.8	81.3	37.3
Russell 1000 Growth	42.7	-29.1	27.6	38.5	36.4
Excess	5.1	-12.1	-14.8	42.8	0.9

(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.



	<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>
Semi-Passive Large Cap										
BLACKROCK	\$2,143,881,074	6.4%	6.0%	6.0%	38.5%	11.8%	16.2%	13.8%	11.0%	01/1995
Semi Passive Domestic Equity Benchmark			6.1	6.1	35.7	10.8	15.6	13.1	10.5	01/1995
Excess			-0.1	-0.1	2.9	1.0	0.6	0.7	0.4	
J.P. MORGAN	2,153,741,831	6.4	5.8	5.8	37.3	12.6	17.1	13.8	11.0	01/1995
Semi Passive Domestic Equity Benchmark			6.1	6.1	35.7	10.8	15.6	13.1	10.5	01/1995
Excess			-0.2	-0.2	1.6	1.8	1.4	0.7	0.4	
SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE	4,297,622,905	12.9	5.9	5.9	37.9	12.2	16.6	13.5	9.7	06/1996
Semi Passive Domestic Equity Benchmark			6.1	6.1	35.7	10.8	15.6	13.1	9.6	06/1996
Excess			-0.2	-0.2	2.2	1.4	1.0	0.4	0.2	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Semi-Passive Large Cap					
BLACKROCK	26.9%	-19.2%	28.3%	20.7%	30.4%
Semi Passive Domestic Equity Benchmark	26.5	-19.1	26.5	21.0	31.4
Excess	0.4	-0.1	1.8	-0.3	-1.0
J.P. MORGAN	28.1	-18.1	29.3	21.2	31.3
Semi Passive Domestic Equity Benchmark	26.5	-19.1	26.5	21.0	31.4
Excess	1.6	1.0	2.8	0.3	-0.1
SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE	27.5	-18.7	28.8	21.0	30.9
Semi Passive Domestic Equity Benchmark	26.5	-19.1	26.5	21.0	31.4
Excess	1.0	0.4	2.3	0.0	-0.5



	<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>
Active Large Cap Value										
BARROW HANLEY	\$444,715,970	1.3%	9.5%	9.5%	29.8%	13.7%	13.2%	10.7%	9.4%	04/2004
Russell 1000 Value			9.4	9.4	27.8	9.0	10.7	9.2	8.4	04/2004
Excess			0.1	0.1	2.1	4.6	2.5	1.5	1.0	
LSV	383,262,521	1.1	8.1	8.1	26.8	8.9	11.1	9.4	9.3	04/2004
Russell 1000 Value			9.4	9.4	27.8	9.0	10.7	9.2	8.4	04/2004
Excess			-1.3	-1.3	-0.9	-0.1	0.4	0.2	0.8	
RUSSELL 1000 VALUE AGGREGATE	827,978,491	2.5	8.9	8.9	28.4	11.3	12.5	10.3	9.4	10/2003
Russell 1000 Value			9.4	9.4	27.8	9.0	10.7	9.2	9.1	10/2003
Excess			-0.6	-0.6	0.7	2.3	1.8	1.1	0.3	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Large Cap Value					
BARROW HANLEY	12.0%	1.1%	27.7%	2.4%	26.9%
Russell 1000 Value	11.5	-7.5	25.2	2.8	26.5
Excess	0.5	8.6	2.5	-0.4	0.4
LSV					
LSV	10.5	-6.3	29.7	-1.3	26.9
Russell 1000 Value	11.5	-7.5	25.2	2.8	26.5
Excess	-0.9	1.3	4.5	-4.1	0.4
RUSSELL 1000 VALUE AGGREGATE					
RUSSELL 1000 VALUE AGGREGATE	11.3	-2.6	28.8	1.6	27.4
Russell 1000 Value	11.5	-7.5	25.2	2.8	26.5
Excess	-0.2	4.9	3.7	-1.2	0.9



	<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>
Active Small Cap Growth										
ARROWMARK	\$194,874,025	0.6%	5.6%	5.6%	23.7%	-2.2%	7.6%		10.0%	11/2016
Russell 2000 Growth			8.4	8.4	27.7	-0.4	8.8		10.2	11/2016
Excess			-2.8	-2.8	-4.0	-1.9	-1.2		-0.2	
HOOD RIVER	219,224,694	0.7	11.0	11.0	51.5	6.4	20.5		17.2	11/2016
Russell 2000 Growth			8.4	8.4	27.7	-0.4	8.8		10.2	11/2016
Excess			2.6	2.6	23.9	6.8	11.7		7.1	
RICE HALL JAMES	203,351,975	0.6	9.5	9.5	28.8	0.8	9.0		10.6	11/2016
Russell 2000 Growth			8.4	8.4	27.7	-0.4	8.8		10.2	11/2016
Excess			1.1	1.1	1.2	1.2	0.2		0.4	
WELLINGTON	216,047,120	0.6	7.5	7.5	27.4	-1.0	8.7		10.3	11/2016
Russell 2000 Growth			8.4	8.4	27.7	-0.4	8.8		10.2	11/2016
Excess			-0.9	-0.9	-0.2	-0.6	-0.1		0.2	
RUSSELL 2000 GROWTH AGGREGATE	833,497,814	2.5	8.5	8.5	32.7	1.0	11.5	9.6%	8.1	11/2003
Russell 2000 Growth			8.4	8.4	27.7	-0.4	8.8	8.9	8.7	11/2003
Excess			0.1	0.1	5.0	1.4	2.7	0.7	-0.6	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Small Cap Growth					
ARROWMARK	19.9%	-23.3%	6.1%	21.9%	20.1%
Russell 2000 Growth	18.7	-26.4	2.8	34.6	28.5
Excess	1.3	3.1	3.2	-12.8	-8.4
HOOD RIVER	21.9	-27.7	24.2	61.7	24.3
Russell 2000 Growth	18.7	-26.4	2.8	34.6	28.5
Excess	3.3	-1.4	21.4	27.0	-4.2
RICE HALL JAMES	14.3	-24.4	15.6	23.8	18.0
Russell 2000 Growth	18.7	-26.4	2.8	34.6	28.5
Excess	-4.3	2.0	12.8	-10.8	-10.5
WELLINGTON	18.5	-28.5	4.3	33.1	35.6
Russell 2000 Growth	18.7	-26.4	2.8	34.6	28.5
Excess	-0.1	-2.1	1.4	-1.5	7.1
RUSSELL 2000 GROWTH AGGREGATE	18.7	-26.3	12.4	35.4	24.6
Russell 2000 Growth	18.7	-26.4	2.8	34.6	28.5
Excess	0.1	0.0	9.5	0.8	-3.9



	<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>
Active Small Cap Value										
GOLDMAN SACHS	\$196,187,028	0.6%	8.9%	8.9%	23.5%	3.6%	7.7%	7.6%	8.7%	01/2004
Russell 2000 Value			10.2	10.2	25.9	3.8	9.3	8.2	7.8	01/2004
Excess			-1.3	-1.3	-2.4	-0.1	-1.6	-0.6	0.8	
HOTCHKIS AND WILEY	205,878,992	0.6	5.5	5.5	17.2	10.3	13.8	8.9	9.0	01/2004
Russell 2000 Value			10.2	10.2	25.9	3.8	9.3	8.2	7.8	01/2004
Excess			-4.7	-4.7	-8.7	6.5	4.5	0.7	1.1	
MARTINGALE	192,133,685	0.6	10.0	10.0	26.6	10.0	12.3	9.8	8.5	01/2004
Russell 2000 Value			10.2	10.2	25.9	3.8	9.3	8.2	7.8	01/2004
Excess			-0.2	-0.2	0.7	6.3	3.1	1.6	0.6	
PEREGRINE	216,859,802	0.6	10.9	10.9	26.1	4.7	9.4	8.2	9.6	07/2000
Russell 2000 Value			10.2	10.2	25.9	3.8	9.3	8.2	9.1	07/2000
Excess			0.7	0.7	0.2	0.9	0.1	-0.1	0.5	
RUSSELL 2000 VALUE AGGREGATE	811,059,507	2.4	8.8	8.8	23.1	6.4	10.2	8.3	9.0	10/2003
Russell 2000 Value			10.2	10.2	25.9	3.8	9.3	8.2	8.5	10/2003
Excess			-1.4	-1.4	-2.7	2.6	0.9	0.1	0.5	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Small Cap Value					
GOLDMAN SACHS	11.9%	-14.4%	27.0%	2.4%	23.2%
Russell 2000 Value	14.6	-14.5	28.3	4.6	22.4
Excess	-2.8	0.1	-1.3	-2.3	0.8
HOTCHKIS AND WILEY	18.8	3.1	36.5	-0.2	19.7
Russell 2000 Value	14.6	-14.5	28.3	4.6	22.4
Excess	4.2	17.6	8.2	-4.8	-2.7
MARTINGALE	20.7	-8.0	41.3	-4.6	21.1
Russell 2000 Value	14.6	-14.5	28.3	4.6	22.4
Excess	6.1	6.4	13.0	-9.2	-1.3
PEREGRINE	9.2	-12.5	28.6	7.3	21.1
Russell 2000 Value	14.6	-14.5	28.3	4.6	22.4
Excess	-5.4	2.0	0.3	2.7	-1.3
RUSSELL 2000 VALUE AGGREGATE	14.2	-9.4	31.8	1.5	21.3
Russell 2000 Value	14.6	-14.5	28.3	4.6	22.4
Excess	-0.5	5.1	3.5	-3.1	-1.1



	<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>
Active All Cap										
ZEVENBERGEN (1)	\$241,190,790	0.7%	7.3%	7.3%	42.2%	-5.1%	16.3%	14.0%	11.6%	04/1994
Zevenbergen Custom Benchmark			3.4	3.4	41.5	11.3	20.3	16.8		04/1994
Excess			3.8	3.8	0.7	-16.4	-4.0	-2.8		
ACTIVE RUSSELL 3000 GROWTH (2)	241,190,790	0.7	7.3	7.3	42.2	-5.1			-5.2	01/2021
Russell 3000 Growth TR			3.4	3.4	41.5	11.3			12.7	01/2021
Excess			3.8	3.8	0.7	-16.4			-17.9	

(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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active All Cap					
ZEVENBERGEN (1)	66.6%	-55.7%	-9.7%	126.2%	43.0%
Zevenbergen Custom Benchmark	41.2	-29.0	32.3	38.5	36.4
Excess	25.4	-26.8	-42.0	87.7	6.7
ACTIVE RUSSELL 3000 GROWTH (2)					
ACTIVE RUSSELL 3000 GROWTH (2)	66.6	-55.7	-9.7		
Russell 3000 Growth TR	41.2	-29.0	25.8		
Excess	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.



	<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>
Total Passive Domestic Equity										
BLACKROCK RUSSELL 1000	\$24,852,670,270	74.3%	6.1%	6.1%	35.7%	10.8%	15.6%		15.2%	11/2016
RUSSELL 1000 (DAILY)			6.1	6.1	35.7	10.8	15.6		15.2	11/2016
Excess			-0.0	-0.0	0.0	-0.0	-0.0		-0.0	
BLACKROCK RUSSELL 2000	74,335,440	0.2	9.2	9.2	26.8	2.0	9.9		8.7	11/2018
RUSSELL 2000 (DAILY)			9.3	9.3	26.8	1.8	9.4		8.3	11/2018
Excess			-0.0	-0.0	0.1	0.2	0.5		0.4	
BLACKROCK RUSSELL 3000 (1)	997,285,042	3.0	6.2	6.2	35.3	10.3	15.5	12.9%	10.3	07/1995
Passive Manager Benchmark			6.2	6.2	35.2	10.3	15.3	12.8	10.2	07/1995
Excess			0.0	0.0	0.1	0.1	0.2	0.1	0.1	
PASSIVE DOMESTIC EQUITY AGGREGATE (2)	25,924,290,752	77.5	6.1	6.1	35.7	10.8	15.6	13.1	9.8	06/1996
Passive Domestic Equity Benchmark			6.1	6.1	35.6	10.8	15.6	13.1	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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Total Passive Domestic Equity					
BLACKROCK RUSSELL 1000	26.6%	-19.2%	26.5%	20.9%	31.4%
RUSSELL 1000 (DAILY)	26.5	-19.1	26.5	21.0	31.4
Excess	0.0	-0.0	0.1	-0.0	0.0
BLACKROCK RUSSELL 2000	16.7	-19.9	16.0	20.8	25.2
RUSSELL 2000 (DAILY)	16.9	-20.4	14.8	20.0	25.5
Excess	-0.3	0.6	1.2	0.8	-0.3
BLACKROCK RUSSELL 3000 (1)	26.0	-19.2	26.2	21.2	31.1
Passive Manager Benchmark	26.0	-19.2	25.7	20.9	31.0
Excess	0.1	0.0	0.5	0.3	0.0
PASSIVE DOMESTIC EQUITY AGGREGATE (2)	26.5	-19.2	26.5	20.8	31.3
Passive Domestic Equity Benchmark	26.5	-19.1	26.4	20.8	31.3
Excess	0.0	-0.0	0.1	0.0	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.

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International Equity

September 30, 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>
Total International Equity										
DEVELOPED MARKETS (1)	\$11,330,804,660		6.1%	6.1%	23.7%	7.2%	9.8%	6.7%	5.9%	01/1997
BENCHMARK DM			7.8	7.8	25.0	5.6	8.4	5.7	3.0	01/1997
Excess			-1.7	-1.7	-1.3	1.6	1.4	1.0	2.9	
EMERGING MARKETS (2)	3,720,583,162	23.3%	6.6	6.6	24.6	-0.2	5.5	3.9	5.6	11/1996
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7	4.0	5.8	11/1996
Excess			-2.1	-2.1	-1.5	-0.6	-0.2	-0.1	-0.3	
ACWI EX-US AGGREGATE	443,531,413	2.8	6.7	6.7	22.9	5.6			7.4	01/2021
MSCI AC WORLD ex US (NET) - DAILY			8.1	8.1	25.4	4.1			4.9	01/2021
Excess			-1.3	-1.3	-2.4	1.5			2.5	
CHINA ONLY AGGREGATE	130,039,181	0.8	25.6	25.6	9.5	-7.1			-7.7	01/2021
MSCI China A			21.5	21.5	14.9	-7.5			-6.0	01/2021
Excess			4.2	4.2	-5.4	0.4			-1.7	
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)	356,620,180	2.2								
TOTAL INTERNATIONAL EQUITY (4)	15,977,289,173	100.0	6.4	6.4	23.8	5.1	8.5	5.9	6.6	10/1992
International Equity Benchmark			8.1	8.1	25.4	4.1	7.5	5.2	6.1	10/1992
Excess			-1.7	-1.7	-1.6	1.0	0.9	0.7	0.5	

(1) The current benchmark for Developed Markets, Benchmark DM, is the Standard (large + mid) MSCI World ex USA (net).

(2) The current benchmark for Emerging Markets, Benchmark EM, is the Standard (large + mid) MSCI Emerging Markets Free (net).

(3) The Transition Aggregate International Equity 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>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Total International Equity					
DEVELOPED MARKETS (1)	17.8%	-10.7%	13.5%	8.9%	23.3%
BENCHMARK DM	17.9	-14.3	12.6	7.6	22.5
Excess	-0.1	3.6	0.9	1.3	0.8
EMERGING MARKETS (2)					
EMERGING MARKETS (2)	10.2	-21.1	-1.5	17.9	20.3
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	0.4	-1.0	1.1	-0.4	1.9
ACWI EX-US AGGREGATE					
ACWI EX-US AGGREGATE	17.9	-12.6	12.8		
MSCI AC WORLD ex US (NET) - DAILY	15.6	-16.0	7.8		
Excess	2.3	3.4	4.9		
CHINA ONLY AGGREGATE					
CHINA ONLY AGGREGATE	-10.0	-24.5	-2.9		
MSCI China A	-13.5	-25.9	3.2		
Excess	3.5	1.4	-6.1		
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)					
TOTAL INTERNATIONAL EQUITY (4)	15.6	-13.7	8.9	11.4	22.4
International Equity Benchmark	15.6	-16.0	7.8	10.5	21.5
Excess	-0.1	2.3	1.1	0.8	0.9

(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>
Active Developed Markets										
ACADIAN	\$631,250,713	4.0%	7.2%	7.2%	26.7%	6.1%	9.3%	8.3%	7.0%	07/2005
BENCHMARK DM			7.8	7.8	25.0	5.6	8.4	5.7	5.6	07/2005
Excess			-0.6	-0.6	1.7	0.4	0.9	2.6	1.4	
COLUMBIA	558,769,474	3.5	6.1	6.1	27.6	6.8	11.0	8.4	4.6	03/2000
BENCHMARK DM			7.8	7.8	25.0	5.6	8.4	5.7	4.3	03/2000
Excess			-1.7	-1.7	2.6	1.2	2.6	2.7	0.3	
FIDELITY	546,747,103	3.4	8.2	8.2	25.6	4.7	9.5	7.0	7.0	07/2005
BENCHMARK DM			7.8	7.8	25.0	5.6	8.4	5.7	5.6	07/2005
Excess			0.5	0.5	0.6	-1.0	1.2	1.3	1.4	
JP MORGAN	399,274,594	2.5	6.6	6.6	24.3	3.6	8.1	5.9	5.8	07/2005
BENCHMARK DM			7.8	7.8	25.0	5.6	8.4	5.7	5.6	07/2005
Excess			-1.1	-1.1	-0.7	-2.0	-0.3	0.2	0.1	
MARATHON	468,155,759	2.9	8.6	8.6	25.2	6.4	9.5	6.9	8.1	11/1993
BENCHMARK DM			7.8	7.8	25.0	5.6	8.4	5.7	5.5	11/1993
Excess			0.9	0.9	0.2	0.8	1.2	1.3	2.6	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Developed Markets					
ACADIAN	12.4%	-12.5%	13.6%	11.7%	19.1%
BENCHMARK DM	17.9	-14.3	12.6	7.6	22.5
Excess	-5.5	1.8	0.9	4.2	-3.4
COLUMBIA	21.1	-15.0	14.2	15.0	28.9
BENCHMARK DM	17.9	-14.3	12.6	7.6	22.5
Excess	3.2	-0.7	1.6	7.4	6.4
FIDELITY	18.0	-17.4	13.0	15.4	27.1
BENCHMARK DM	17.9	-14.3	12.6	7.6	22.5
Excess	0.1	-3.2	0.4	7.8	4.6
JP MORGAN	17.1	-19.0	13.3	14.2	28.5
BENCHMARK DM	17.9	-14.3	12.6	7.6	22.5
Excess	-0.9	-4.7	0.7	6.6	6.0
MARATHON	18.2	-12.1	12.8	7.6	23.5
BENCHMARK DM	17.9	-14.3	12.6	7.6	22.5
Excess	0.3	2.2	0.2	0.1	1.0



	<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>
Total Developed Markets										
Active Developed Markets Aggregate (1)	\$2,604,197,642	16.3%	7.3%	7.3%	26.0%	5.6%	9.3%	6.7%	6.0%	06/1996
BENCHMARK DM			7.8%	7.8%	25.0%	5.6%	8.4%	5.7%	3.0%	06/1996
Excess			-0.4%	-0.4%	1.0%	-0.1%	1.0%	1.0%	3.1%	
SSgA DEVELOPED MARKETS PASSIVE	\$8,800,011,830	55.1%	7.8%	7.8%	25.5%	6.1%	8.9%	6.1%		
BENCHMARK DM			7.8%	7.8%	25.0%	5.6%	8.4%	5.7%		
Excess			0.1%	0.1%	0.6%	0.5%	0.5%	0.4%		
RECORD CURRENCY (2)	-\$77,310,766	-0.5%	-1.6%	-1.6%	-1.9%	1.4%				10/2020
DEVELOPED MARKETS TOTAL (3)	\$11,330,804,660		6.1%	6.1%	23.7%	7.2%	9.8%	6.7%	5.9%	01/1997
BENCHMARK DM			7.8%	7.8%	25.0%	5.6%	8.4%	5.7%	3.0%	01/1997
Excess			-1.7%	-1.7%	-1.3%	1.6%	1.4%	1.0%	2.9%	

(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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Total Developed Markets					
Active Developed Markets Aggregate	17.6%	-15.2%	12.5%	12.2%	24.4%
BENCHMARK DM	17.9%	-14.3%	12.6%	7.6%	22.5%
Excess	-0.4%	-0.9%	-0.1%	4.6%	1.9%
SSgA DEVELOPED MARKETS PASSIVE	18.5%	-13.8%	13.0%	8.2%	23.0%
BENCHMARK DM	17.9%	-14.3%	12.6%	7.6%	22.5%
Excess	0.5%	0.5%	0.4%	0.6%	0.5%
DEVELOPED MARKETS TOTAL	17.8%	-10.7%	13.5%	8.9%	23.3%
BENCHMARK DM	17.9%	-14.3%	12.6%	7.6%	22.5%
Excess	-0.1%	3.6%	0.9%	1.3%	0.8%



	<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>
Active Emerging Markets										
MARTIN CURRIE	\$580,600,512	3.6%	7.5%	7.5%	21.8%	-4.3%	4.4%		5.7%	04/2017
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7		5.3	04/2017
Excess			-1.2	-1.2	-4.2	-4.7	-1.4		0.4	
MACQUARIE	552,167,898	3.5	0.1	0.1	31.4	0.6	6.7		6.4	04/2017
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7		5.3	04/2017
Excess			-8.6	-8.6	5.4	0.2	0.9		1.1	
MORGAN STANLEY	654,605,296	4.1	5.2	5.2	26.6	-0.5	5.5	4.0%	8.2	01/2001
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7	4.0	8.0	01/2001
Excess			-3.5	-3.5	0.5	-0.9	-0.3	-0.0	0.2	
PZENA	688,626,260	4.3	11.7	11.7	25.4	8.5	11.6		8.2	04/2017
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7		5.3	04/2017
Excess			3.0	3.0	-0.7	8.1	5.8		2.9	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Emerging Markets					
MARTIN CURRIE	5.8%	-25.7%	-3.5%	26.5%	27.3%
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	-4.1	-5.6	-1.0	8.2	8.8
MACQUARIE	16.0	-26.5	-2.2	24.2	23.2
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	6.1	-6.4	0.3	5.9	4.7
MORGAN STANLEY	10.8	-23.8	3.5	15.7	20.4
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	1.0	-3.7	6.0	-2.6	1.9
PZENA	19.7	-7.4	9.3	7.7	13.4
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	9.9	12.7	11.8	-10.6	-5.1



	<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>
Total Emerging Markets										
ACTIVE EMERGING MARKETS AGGREGATE (1)	\$2,475,999,965	15.5%	6.2%	6.2%	24.9%	-0.1%	5.6%	3.8%	4.3%	01/2012
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7	4.0	4.5	01/2012
Excess			-2.5	-2.5	-1.2	-0.5	-0.1	-0.2	-0.2	
SSGA EMERGING MARKETS PASSIVE	1,244,199,730	7.8	8.0	8.0	24.3	-0.2	5.3	3.8	4.3	01/2012
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7	4.0	4.5	01/2012
Excess			-0.8	-0.8	-1.8	-0.6	-0.5	-0.2	-0.1	
EMERGING MARKETS TOTAL (1)	3,720,583,162	23.3	6.6	6.6	24.6	-0.2	5.5	3.9	5.6	11/1996
BENCHMARK EM			8.7	8.7	26.1	0.4	5.7	4.0	5.8	11/1996
Excess			-2.1	-2.1	-1.5	-0.6	-0.2	-0.1	-0.3	

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



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Total Emerging Markets					
ACTIVE EMERGING MARKETS AGGREGATE (1)	10.6%	-21.4%	-0.9%	17.6%	21.4%
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	0.8	-1.3	1.6	-0.7	3.0
SSGA EMERGING MARKETS PASSIVE	9.4	-20.4	-2.9	18.3	18.1
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	-0.4	-0.3	-0.3	0.0	-0.3
EMERGING MARKETS TOTAL	10.2	-21.1	-1.5	17.9	20.3
BENCHMARK EM	9.8	-20.1	-2.5	18.3	18.4
Excess	0.4	-1.0	1.1	-0.4	1.9

(1) 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>
Active ACWI ex-US										
EARNEST PARTNERS ACWI EX US	\$443,531,413	2.8%	6.7%	6.7%	22.9%	5.6%			7.4%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			8.1%	8.1%	25.4%	4.1%			4.9%	01/2021
Excess			-1.3%	-1.3%	-2.4%	1.5%			2.5%	
TOTAL ACWI EX-US AGGREGATE										
TOTAL ACWI EX-US AGGREGATE	\$443,531,413	2.8%	6.7%	6.7%	22.9%	5.6%			7.4%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			8.1%	8.1%	25.4%	4.1%			4.9%	01/2021
Excess			-1.3%	-1.3%	-2.4%	1.5%			2.5%	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active ACWI ex-US					
EARNEST PARTNERS ACWI EX US	17.9%	-12.6%	12.8%		
MSCI AC WORLD ex US (NET) - DAILY	15.6	-16.0	7.8		
Excess	2.3	3.4	4.9		
TOTAL ACWI EX-US AGGREGATE					
MSCI AC WORLD ex US (NET) - DAILY	15.6	-16.0	7.8		
Excess	2.3	3.4	4.9		



	<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>
China Only Managers										
EARNEST PARTNERS CHINA	\$130,039,181	0.8%	25.6%	25.6%	9.5%	-7.1%			-7.7%	01/2021
MSCI China A			21.5	21.5	14.9	-7.5			-6.0	01/2021
Excess			4.2	4.2	-5.4	0.4			-1.7	
CHINA ONLY AGGREGATE	130,039,181	0.8	25.6	25.6	9.5	-7.1			-7.7	01/2021
MSCI China A			21.5	21.5	14.9	-7.5			-6.0	01/2021
Excess			4.2	4.2	-5.4	0.4			-1.7	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
China Only Managers					
EARNEST PARTNERS CHINA	-10.0%	-24.5%	-2.9%		
MSCI China A	-13.5	-25.9	3.2		
Excess	3.5	1.4	-6.1		
CHINA ONLY AGGREGATE					
	-10.0	-24.5	-2.9		
MSCI China A	-13.5	-25.9	3.2		
Excess	3.5	1.4	-6.1		



	<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>
Emerging Markets Transition Portfolio										
NISA EMERGING MARKETS (1)	\$346,079,253	2.2%	7.8%	7.8%					7.8%	07/2024
BENCHMARK EM			8.7	8.7					8.7	07/2024
Excess			-0.9	-0.9					-0.9	
NISA EMERGING MARKETS (1)	346,079,253	2.2	7.8	7.8					7.8	07/2024
BENCHMARK EM			8.7	8.7					8.7	07/2024
Excess			-0.9	-0.9					-0.9	

(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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Emerging Markets Transition Portfolio					
NISA EMERGING MARKETS (1)					
BENCHMARK EM					
Excess					
NISA EMERGING MARKETS (1)					
BENCHMARK EM					
Excess					

(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.

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Global Equity

September 30, 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>
Global Equity Managers										
ARIEL INVESTMENTS	\$418,615,231	38.3%	7.2%	7.2%	20.8%	8.3%			8.3%	01/2021
MSCI AC WORLD NET USD DAILY			6.6	6.6	31.8	8.1			9.5	01/2021
Excess			0.6	0.6	-10.9	0.3			-1.2	
BAILLIE GIFFORD	270,557,666	24.8	5.3	5.3	39.7	-5.1			-2.6	01/2021
MSCI AC WORLD NET USD DAILY			6.6	6.6	31.8	8.1			9.5	01/2021
Excess			-1.3	-1.3	7.9	-13.2			-12.1	
MARTIN CURRIE INVESTMENTS - GLOBAL EQ	402,818,963	36.9	4.1	4.1	28.9	-0.0			1.6	01/2021
MSCI AC WORLD NET USD DAILY			6.6	6.6	31.8	8.1			9.5	01/2021
Excess			-2.5	-2.5	-2.8	-8.1			-7.8	
GLOBAL EQUITY	1,091,991,860	100.0	5.6	5.6	28.0	1.5			2.8	01/2021
MSCI AC WORLD NET USD DAILY			6.6	6.6	31.8	8.1			9.5	01/2021
Excess			-1.0	-1.0	-3.7	-6.6			-6.6	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Global Equity Managers					
ARIEL INVESTMENTS	14.1%	-5.6%	12.1%		
MSCI AC WORLD NET USD DAILY	22.2	-18.4	18.5		
Excess	-8.1	12.8	-6.5		
BAILLIE GIFFORD	38.0	-46.9	3.1		
MSCI AC WORLD NET USD DAILY	22.2	-18.4	18.5		
Excess	15.8	-28.5	-15.5		
MARTIN CURRIE INVESTMENTS - GLOBAL EQ	23.8	-32.9	12.8		
MSCI AC WORLD NET USD DAILY	22.2	-18.4	18.5		
Excess	1.6	-14.5	-5.8		
GLOBAL EQUITY	22.6	-27.7	9.6		
MSCI AC WORLD NET USD DAILY	22.2	-18.4	18.5		
Excess	0.4	-9.4	-8.9		

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Core/Core Plus Bonds

September 30, 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>
Bonds										
CORE (1)	\$2,526,172,457	44.4%	5.5%	5.5%	13.0%	-0.3%			0.0%	11/2020
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4			-1.2	11/2020
Excess			0.3	0.3	1.4	1.0			1.2	
CORE PLUS (1)	3,164,128,897	55.6	5.2	5.2	12.7	-1.8			-1.0	11/2020
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4			-1.2	11/2020
Excess			0.0	0.0	1.1	-0.4			0.1	
TRANSITION AGGREGATE CORE BONDS (2)	21,106	0.0								
TOTAL CORE/CORE PLUS BONDS (3)	5,690,322,460	100.0	5.3	5.3	12.8	-1.2	1.0%	2.4%	6.7	07/1984
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4	0.3	1.8	6.3	07/1984
Excess			0.1	0.1	1.3	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>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Bonds					
CORE (1)	7.3%	-12.3%	-1.0%		
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5		
Excess	1.7	0.7	0.5		
CORE PLUS (1)	6.8	-15.2	-1.1		
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5		
Excess	1.3	-2.2	0.4		
TRANSITION AGGREGATE CORE BONDS (2)					
TOTAL CORE/CORE PLUS BONDS (3)	7.0	-14.1	-1.1	9.7%	9.7%
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5	7.5	8.7
Excess	1.5	-1.1	0.5	2.2	1.0

(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>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>
Active Core										
DODGE & COX	\$1,289,595,137	22.7%	5.7%	5.7%	13.6%	0.4%	2.1%	2.9%	5.2%	02/2000
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4	0.3	1.8	4.1	02/2000
Excess			0.5	0.5	2.0	1.8	1.8	1.1	1.1	
BLACKROCK	1,236,577,320	21.7	5.3	5.3	12.3	-1.1	0.7	2.1	4.5	04/1996
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4	0.3	1.8	4.4	04/1996
Excess			0.1	0.1	0.7	0.2	0.4	0.3	0.1	
CORE	2,526,172,457	44.4	5.5	5.5	13.0	-0.3			0.0	11/2020
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4			-1.2	11/2020
Excess			0.3	0.3	1.4	1.0			1.2	

(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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Active Core					
DODGE & COX	8.0%	-11.3%	-0.7%	9.4%	9.6%
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5	7.5	8.7
Excess	2.5	1.7	0.8	1.8	0.9
BLACKROCK					
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5	7.5	8.7
Excess	0.9	-0.4	0.2	0.8	0.6
CORE					
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5		
Excess	1.7	0.7	0.5		



	<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>
Core Plus Bonds										
GOLDMAN SACHS	\$1,185,482,028	20.8%	5.3%	5.3%	12.5%	-1.3%	0.7%	2.2%	4.8%	07/1993
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4	0.3	1.8	4.5	07/1993
Excess			0.1	0.1	0.9	0.1	0.4	0.3	0.3	
NEUBERGER	1,165,158,546	20.5	5.1	5.1	13.4	-1.0	1.2	2.4	5.7	07/1988
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4	0.3	1.8	5.4	07/1988
Excess			-0.0	-0.0	1.8	0.4	0.9	0.5	0.3	
WESTERN	813,488,323	14.3	5.1	5.1	12.3	-2.9	0.3	2.4	7.3	07/1984
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4	0.3	1.8	6.3	07/1984
Excess			-0.0	-0.0	0.7	-1.5	-0.1	0.5	1.0	
CORE PLUS	3,164,128,897	55.6	5.2	5.2	12.7	-1.8			-1.0	11/2020
Bloomberg U.S. Aggregate			5.2	5.2	11.6	-1.4			-1.2	11/2020
Excess			0.0	0.0	1.1	-0.4			0.1	

(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.



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Core Plus Bonds					
GOLDMAN SACHS	6.3%	-13.9%	-1.5%	9.0%	9.6%
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5	7.5	8.7
Excess	0.8	-0.9	0.0	1.5	0.9
NEUBERGER	6.7	-13.8	-0.6	9.9	9.0
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5	7.5	8.7
Excess	1.2	-0.8	1.0	2.4	0.3
WESTERN	7.4	-17.6	-1.3	10.9	11.1
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5	7.5	8.7
Excess	1.8	-4.6	0.3	3.4	2.4
CORE PLUS	6.8	-15.2	-1.1		
Bloomberg U.S. Aggregate	5.5	-13.0	-1.5		
Excess	1.3	-2.2	0.4		

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Return Seeking Bonds

September 30, 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>
Return Seeking Bonds Managers										
COLUMBIA CREDIT PLUS	\$994,511,087	20.5%	5.6%	5.6%	14.6%	-0.8%			-0.1%	12/2020
Credit Plus Benchmark			5.5	5.5	14.2	-0.3			-0.2	12/2020
Excess			0.1	0.1	0.4	-0.5			0.1	
PIMCO CREDIT PLUS	1,024,016,315	21.1	5.5	5.5	14.5	-0.1			0.3	12/2020
Credit Plus Benchmark			5.5	5.5	14.2	-0.3			-0.2	12/2020
Excess			0.0	0.0	0.3	0.2			0.5	
CREDIT PLUS	2,018,527,403	41.7	5.6	5.6	14.6	-0.5			0.1	12/2020
Credit Plus Benchmark			5.5	5.5	14.2	-0.3			-0.2	12/2020
Excess			0.1	0.1	0.4	-0.2			0.3	
BLACKROCK OPPORTUNISTIC	542,557,973	11.2	3.8	3.8	10.4	2.3			2.1	12/2020
ICE BofA US 3-Month Treasury Bill			1.4	1.4	5.5	3.5			2.7	12/2020
Excess			2.4	2.4	4.9	-1.2			-0.6	
ASHMORE EMERGING MARKETS	350,938,870	7.2	8.2	8.2	17.4	-1.9			-3.3	01/2021
JPM JEMB Sovereign-only 50-50			7.6	7.6	16.0	0.1			-1.0	01/2021
Excess			0.7	0.7	1.4	-2.0			-2.4	
TCW SECURITIZED CREDIT	493,698,288	10.2	3.3	3.3	10.3	3.2			3.0	07/2021
ICE BofA US 3-Month Treasury Bill			1.4	1.4	5.5	3.5			3.2	07/2021
Excess			1.9	1.9	4.8	-0.3			-0.2	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Return Seeking Bonds Managers					
COLUMBIA CREDIT PLUS	9.0%	-15.3%	1.1%		
Credit Plus Benchmark	8.6	-13.7	0.0		
Excess	0.5	-1.6	1.1		
PIMCO CREDIT PLUS	8.4	-13.6	0.8		
Credit Plus Benchmark	8.6	-13.7	0.0		
Excess	-0.1	0.1	0.7		
CREDIT PLUS	8.7	-14.5	0.9		
Credit Plus Benchmark	8.6	-13.7	0.0		
Excess	0.2	-0.7	0.9		
BLACKROCK OPPORTUNISTIC	7.7	-5.4	0.3		
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0		
Excess	2.7	-6.8	0.2		
ASHMORE EMERGING MARKETS	10.9	-17.2	-10.1		
JPM JEMB Sovereign-only 50-50	11.9	-14.8	-5.3		
Excess	-1.0	-2.4	-4.8		
TCW SECURITIZED CREDIT	7.1	-4.6			
ICE BofA US 3-Month Treasury Bill	5.0	1.5			
Excess	2.1	-6.1			



	<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>
Return Seeking Bonds Managers										
PAYDEN RYGEL	\$333,589,278	6.9%	4.1%	4.1%	14.0%	2.7%			2.8%	01/2021
Multi-Asset Credit Benchmark			4.2	4.2	14.3	2.9			2.9	01/2021
Excess			-0.1	-0.1	-0.2	-0.2			-0.1	
PGIM	389,302,177	8.0	4.5	4.5	15.3	2.8			2.7	01/2021
Multi-Asset Credit Benchmark			4.2	4.2	14.3	2.9			2.9	01/2021
Excess			0.3	0.3	1.0	-0.1			-0.2	
MULTI-ASSET CREDIT	722,891,455	14.9	4.3	4.3	14.7	2.8			2.8	01/2021
Multi-Asset Credit Benchmark			4.2	4.2	14.3	2.9			2.9	01/2021
Excess			0.1	0.1	0.4	-0.1			-0.2	
KKR	359,092,214	7.4	4.7	4.7	15.5	3.5			3.8	01/2021
ICE BofA US Cash Pay HY Constrained			5.3	5.3	15.6	3.1			3.7	01/2021
Excess			-0.6	-0.6	-0.0	0.4			0.1	
OAKTREE	355,000,575	7.3	5.1	5.1	15.6	3.6			3.8	01/2021
ICE BofA US Cash Pay HY Constrained			5.3	5.3	15.6	3.1			3.7	01/2021
Excess			-0.1	-0.1	0.1	0.5			0.1	
HIGH YIELD	714,092,789	14.7	4.9	4.9	15.6	3.5			3.8	01/2021
ICE BofA US Cash Pay HY Constrained			5.3	5.3	15.6	3.1			3.7	01/2021
Excess			-0.4	-0.4	0.0	0.4			0.1	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Return Seeking Bonds Managers					
PAYDEN RYSEL	11.7%	-9.6%	2.6%		
Multi-Asset Credit Benchmark	12.3	-10.0	2.7		
Excess	-0.6	0.4	-0.1		
PGIM	12.3	-11.5	3.2		
Multi-Asset Credit Benchmark	12.3	-10.0	2.7		
Excess	-0.0	-1.5	0.5		
MULTI-ASSET CREDIT	12.0	-10.6	2.9		
Multi-Asset Credit Benchmark	12.3	-10.0	2.7		
Excess	-0.3	-0.6	0.2		
KKR	13.9	-11.0	4.7		
ICE BofA US Cash Pay HY Constrained	13.4	-11.1	5.3		
Excess	0.5	0.1	-0.6		
OAKTREE	12.4	-9.5	4.5		
ICE BofA US Cash Pay HY Constrained	13.4	-11.1	5.3		
Excess	-1.0	1.6	-0.8		
HIGH YIELD	13.2	-10.3	4.6		
ICE BofA US Cash Pay HY Constrained	13.4	-11.1	5.3		
Excess	-0.2	0.8	-0.7		



	<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>
Return Seeking Bonds										
CREDIT PLUS	\$2,018,527,403	41.7%	5.6%	5.6%	14.6%	-0.5%			0.1%	12/2020
Credit Plus Benchmark			5.5	5.5	14.2	-0.3			-0.2	12/2020
Excess			0.1	0.1	0.4	-0.2			0.3	
OPPORTUNISTIC FI	542,557,973	11.2	3.8	3.8	10.4	2.3			2.1	12/2020
ICE BofA US 3-Month Treasury Bill			1.4	1.4	5.5	3.5			2.7	12/2020
Excess			2.4	2.4	4.9	-1.2			-0.6	
EMERGING MARKET DEBT	350,938,870	7.2	8.2	8.2	17.4	-1.9			-3.3	01/2021
JPM JEMB Sovereign-only 50-50			7.6	7.6	16.0	0.1			-1.0	01/2021
Excess			0.7	0.7	1.4	-2.0			-2.4	
SECURITIZED CREDIT	493,698,288	10.2	3.3	3.3	10.3	3.2			2.9	06/2021
ICE BofA US 3-Month Treasury Bill			1.4	1.4	5.5	3.5			3.1	06/2021
Excess			1.9	1.9	4.8	-0.3			-0.2	
MULTI-ASSET CREDIT	722,891,455	14.9	4.3	4.3	14.7	2.8			2.8	01/2021
Multi-Asset Credit Benchmark			4.2	4.2	14.3	2.9			2.9	01/2021
Excess			0.1	0.1	0.4	-0.1			-0.2	
HIGH YIELD	714,092,789	14.7	4.9	4.9	15.6	3.5			3.8	01/2021
ICE BofA US Cash Pay HY Constrained			5.3	5.3	15.6	3.1			3.7	01/2021
Excess			-0.4	-0.4	0.0	0.4			0.1	
RETURN SEEKING BONDS	4,842,714,204	100.0	5.0	5.0	14.0	1.3			1.4	12/2020
Return Seeking Fixed Income Benchmark			4.5	4.5	12.6	1.5			1.5	12/2020
Excess			0.5	0.5	1.4	-0.3			-0.1	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Return Seeking Bonds					
CREDIT PLUS	8.7%	-14.5%	0.9%		
Credit Plus Benchmark	8.6	-13.7	0.0		
Excess	0.2	-0.7	0.9		
OPPORTUNISTIC FI					
ICE BofA US 3-Month Treasury Bill	7.7	-5.4	0.3		
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0		
Excess	2.7	-6.8	0.2		
EMERGING MARKET DEBT					
JPM JEMB Sovereign-only 50-50	10.9	-17.2	-10.1		
JPM JEMB Sovereign-only 50-50	11.9	-14.8	-5.3		
Excess	-1.0	-2.4	-4.8		
SECURITIZED CREDIT					
ICE BofA US 3-Month Treasury Bill	7.1	-4.6			
ICE BofA US 3-Month Treasury Bill	5.0	1.5			
Excess	2.1	-6.1			
MULTI-ASSET CREDIT					
Multi-Asset Credit Benchmark	12.0	-10.6	2.9		
Multi-Asset Credit Benchmark	12.3	-10.0	2.7		
Excess	-0.3	-0.6	0.2		
HIGH YIELD					
ICE BofA US Cash Pay HY Constrained	13.2	-10.3	4.6		
ICE BofA US Cash Pay HY Constrained	13.4	-11.1	5.3		
Excess	-0.2	0.8	-0.7		
RETURN SEEKING BONDS					
Return Seeking Fixed Income Benchmark	9.8	-11.3	0.9		
Return Seeking Fixed Income Benchmark	9.3	-9.8	0.8		
Excess	0.5	-1.6	0.1		

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Treasuries

September 30, 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>
Treasuries Managers										
BLACKROCK	\$3,137,280,562	33.2%	6.5%	6.5%	12.9%	-4.8%	-2.0%		0.6%	02/2018
Bloomberg Treasury 5+ Year			6.5	6.5	12.8	-4.7	-1.9		0.7	02/2018
Excess			-0.0	-0.0	0.1	-0.1	-0.1		-0.1	
GOLDMAN SACHS	2,841,642,025	30.1	6.6	6.6	13.0	-4.6	-1.9		0.8	02/2018
Bloomberg Treasury 5+ Year			6.5	6.5	12.8	-4.7	-1.9		0.7	02/2018
Excess			0.1	0.1	0.2	0.1	0.1		0.1	
NEUBERGER	3,465,442,967	36.7	6.6	6.6	13.1	-4.7	-1.8		0.8	02/2018
Bloomberg Treasury 5+ Year			6.5	6.5	12.8	-4.7	-1.9		0.7	02/2018
Excess			0.1	0.1	0.4	0.0	0.1		0.1	
TOTAL TREASURIES	9,444,365,554	100.0	6.6	6.6	13.0	-4.7	-1.9		0.7	02/2018
Bloomberg Treasury 5+ Year			6.5	6.5	12.8	-4.7	-1.9		0.7	02/2018
Excess			0.0	0.0	0.2	0.0	0.1		0.0	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Treasuries Managers					
BLACKROCK	4.1%	-20.6%	-4.0%	12.5%	10.4%
Bloomberg Treasury 5+ Year	3.7	-20.3	-3.8	12.8	10.4
Excess	0.5	-0.3	-0.2	-0.3	-0.1
GOLDMAN SACHS	4.4	-20.6	-3.9	12.7	10.6
Bloomberg Treasury 5+ Year	3.7	-20.3	-3.8	12.8	10.4
Excess	0.7	-0.3	-0.1	-0.1	0.1
NEUBERGER	4.1	-20.5	-3.4	12.8	10.4
Bloomberg Treasury 5+ Year	3.7	-20.3	-3.8	12.8	10.4
Excess	0.4	-0.2	0.4	-0.1	-0.0
TOTAL TREASURIES	4.2	-20.6	-3.7	12.7	10.4
Bloomberg Treasury 5+ Year	3.7	-20.3	-3.8	12.8	10.4
Excess	0.5	-0.3	0.0	-0.2	0.0

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Laddered Bonds + Cash

September 30, 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>
Laddered Bond and Cash Managers									
Neuberger Berman Ladder Bond	\$1,679,246,015	34.3%	1.7%	5.7%	3.4%			2.6%	11/2020
ICE BofA US 3-Month Treasury Bill			1.4	5.5	3.5			2.7	11/2020
Excess			0.3	0.3	-0.1			-0.0	
Goldman Sachs Ladder Bond	1,680,889,100	34.3	1.7	5.8	3.4			2.7	11/2020
ICE BofA US 3-Month Treasury Bill			1.4	5.5	3.5			2.7	11/2020
Excess			0.3	0.3	-0.1			-0.0	
Treasury Ladder Aggregate	3,360,135,115	68.6	1.7	5.8	3.4			2.6	11/2020
ICE BofA US 3-Month Treasury Bill			1.4	5.5	3.5			2.7	11/2020
Excess			0.3	0.3	-0.1			-0.0	
Combined Funds STIF	1,463,355,637	29.9	1.4	5.6	3.7	2.4%	1.7%	1.8	01/2004
iMoneyNet Money Fund Average-All Taxable			1.2	5.1	3.3	2.1	1.4	1.4	01/2004
Excess			0.1	0.5	0.4	0.3	0.3	0.4	
TEACHERS RETIREMENT CD REPO	71,823,159	1.5	1.4	5.6	3.6	2.5	1.8	1.5	02/2012
ICE BofA US 3-Month Treasury Bill			1.4	5.5	3.5	2.3	1.6	1.3	02/2012
Excess			0.0	0.2	0.1	0.2	0.2	0.2	
Laddered Bond + Cash	4,895,632,136	100.0	1.6	5.7	3.5	2.3	1.7	4.2	12/1977
ICE BofA US 3-Month Treasury Bill			1.4	5.5	3.5	2.3	1.6	4.4	12/1977
Excess			0.2	0.3	0.0	-0.0	0.1	-0.2	



	<u>2023 Calendar Return</u>	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>
Laddered Bond and Cash Managers					
Neuberger Berman Ladder Bond	5.2%	0.8%	0.0%		
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0		
Excess	0.2	-0.6	-0.0		
Goldman Sachs Ladder Bond	5.2	0.9	0.1		
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0		
Excess	0.2	-0.5	0.0		
Treasury Ladder Aggregate	5.2	0.9	0.0		
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0		
Excess	0.2	-0.6	-0.0		
Combined Funds STIF	5.3	1.7	0.1	0.5%	2.3%
iMoneyNet Money Fund Average-All Taxable	4.8	1.4	0.0	0.3	1.9
Excess	0.5	0.4	0.1	0.2	0.5
TEACHERS RETIREMENT CD REPO	5.2	1.5	0.1	1.0	2.5
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0	0.7	2.3
Excess	0.2	0.1	0.0	0.4	0.2
Laddered Bond + Cash	5.2	1.1	0.0	0.6	2.3
ICE BofA US 3-Month Treasury Bill	5.0	1.5	0.0	0.7	2.3
Excess	0.2	-0.4	-0.0	-0.1	0.1

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Private Markets

September 30, 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	2.2%	2.2%	7.8%	8.5%	13.0%	11.2%	13.5%	12.6%	13.6%
Private Markets -Uninvested(1)	1.1%	1.1%	5.3%	0.3%					
Private Equity	2.5%	2.5%	9.2%	8.1%	15.8%	15.1%	15.5%	13.8%	15.6%
Private Credit	1.5%	1.5%	8.4%	11.7%	11.6%	12.2%	12.5%	12.2%	
Resources	2.0%	2.0%	8.0%	11.1%	5.7%	0.3%	12.5%	13.0%	12.9%
Real Estate	0.9%	0.9%	-4.6%	5.9%	8.5%	9.7%	8.7%	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 September 30, 2024
Private Markets Investments



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Private Equity	26,232,311,749	20,678,823,988	16,526,258,876	7,773,912,593	16,705,428,801	1.61	13.9	
Adams Street Partners, LLC	465,355,000	310,903,184	160,643,230	155,261,175	271,607,343	1.39	11.8	
Adams Street Global Secondary Fund 5 LP	100,000,000	77,114,692	84,117,479	22,885,308	21,293,002	1.37	6.2	2012
Adams Street Global Secondary Fund 6	100,000,000	80,400,008	76,525,751	19,599,992	52,340,485	1.60	18.3	2017
Adams Street Global Secondary Fund 7	265,355,000	153,388,484	0	112,775,875	197,973,857	1.29	28.2	2021
Advent International Group	505,000,000	417,158,322	391,644,242	90,925,632	314,369,628	1.69	14.9	
Advent International GPE VI-A, L.P.	50,000,000	52,993,313	103,400,194	0	3,901,781	2.02	16.4	2008
Advent International GPE VII, L.P.	90,000,000	86,490,641	146,622,935	3,600,000	9,471,719	1.80	13.2	2012
Advent International GPE VIII-B	100,000,000	100,000,000	120,352,104	0	86,649,049	2.07	16.4	2016
Advent International GPE IX	115,000,000	107,532,348	21,269,009	7,467,652	137,772,264	1.48	13.5	2019
Advent International GPE X	150,000,000	70,142,020	0	79,857,980	76,574,815	1.09	8.5	2022
Affinity Ventures	5,000,000	5,000,000	2,048,042	0	55,501	0.42	-17.4	
Affinity Ventures V, L.P.	5,000,000	5,000,000	2,048,042	0	55,501	0.42	-17.4	2008
Apax Partners	600,000,000	555,078,951	583,773,154	138,568,194	299,970,328	1.59	14.4	
APAX VIII - USD	200,000,000	240,451,261	364,650,169	7,966,190	18,911,662	1.60	13.0	2013
Apax IX USD L.P.	150,000,000	159,780,868	199,713,410	16,039,251	107,447,723	1.92	18.7	2016
Apax X USD L.P.	150,000,000	145,220,761	19,409,575	24,188,814	163,733,189	1.26	10.8	2019
Apax XI	100,000,000	9,626,060	0	90,373,940	9,877,753	1.03	9.1	2022
Arsenal Capital Partners	175,000,000	119,449,235	14,830,823	65,805,594	114,069,263	1.08	2.8	
Arsenal Capital Partners V, L.P.	75,000,000	73,622,160	13,742,826	10,563,735	78,465,687	1.25	6.3	2019
Arsenal Capital Partners VI LP	100,000,000	45,827,075	1,087,997	55,241,859	35,603,576	0.80	-15.7	2021
Asia Alternatives	649,000,000	241,404,139	30,308,702	425,765,664	231,826,396	1.09	3.7	
Asia Alternatives Capital Partners V	99,000,000	107,888,911	28,409,461	9,139,680	107,603,094	1.26	7.1	2017
MN Asia Investors	550,000,000	133,515,228	1,899,241	416,625,984	124,223,302	0.94	-3.9	2020
Banc Fund	178,551,387	187,466,811	87,373,711	0	152,250,587	1.28	4.3	
Banc Fund IX, L.P.	107,205,932	107,205,932	76,958,514	0	72,626,682	1.40	5.0	2014
Banc Fund X, L.P.	71,345,455	80,260,879	10,415,197	0	79,623,905	1.12	2.6	2018
BlackRock	950,000,000	954,617,522	491,202,825	0	1,563,384,323	2.15	28.3	
BlackRock Long Term Capital, SCSP	950,000,000	954,617,522	491,202,825	0	1,563,384,323	2.15	28.3	2019
Blackstone Group L.P.	1,685,000,000	972,118,516	773,343,262	832,996,773	614,306,065	1.43	13.8	
Blackstone Capital Partners Asia II	270,000,000	81,420,967	3,287,307	190,248,025	99,556,464	1.26	20.5	2021
Blackstone Capital Partners IV, L.P.	70,000,000	84,481,419	201,562,974	1,765,384	58,572	2.39	37.0	2002
Blackstone Capital Partners V L.P.	140,000,000	152,431,082	246,495,819	7,027,560	577,205	1.62	8.0	2006
Blackstone Capital Partners VI, L.P.	100,000,000	106,951,296	170,525,545	10,975,597	23,509,467	1.81	12.2	2008
Blackstone Capital Partners VII	130,000,000	140,663,947	111,356,042	9,306,402	112,473,663	1.59	11.9	2015
Blackstone Capital Partners VIII LP	150,000,000	126,253,892	12,908,969	43,343,245	134,286,968	1.17	7.8	2019
Blackstone Capital Partners IX	150,000,000	0	0	150,000,000	0		0.0	2022
Blackstone Energy Transition Partners IV L.P.	150,000,000	0	0	150,000,000	0		0.0	2024
Blackstone Growth	250,000,000	214,362,999	26,372,335	59,807,461	180,170,383	0.96	-1.5	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	63,673,341	0.98	-0.6	2021

Minnesota State Board of Investment
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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Blackstone Strategic Partners	790,500,000	632,772,782	753,533,569	207,805,525	223,735,353	1.54	14.0	
Strategic Partners IV VC, L.P.	40,500,000	42,325,414	63,954,747	1,084,828	68,506	1.51	9.0	2008
Strategic Partners IV-B	100,000,000	99,541,961	155,239,588	3,156,298	72,024	1.56	12.1	2008
Strategic Partners V, LP	100,000,000	87,497,031	141,091,599	1,706,005	153,679	1.61	18.2	2011
Strategic Partners VI, L.P.	150,000,000	104,717,384	139,590,349	22,196,348	18,513,645	1.51	13.6	2014
Strategic Partners VII, L.P.	150,000,000	125,108,307	153,548,426	42,803,433	53,126,695	1.65	16.3	2016
Strategic Partners VIII	150,000,000	125,735,508	95,151,365	79,871,490	100,207,873	1.55	23.8	2018
Strategic Partners IX	100,000,000	47,847,177	4,957,494	56,987,124	51,592,931	1.18	15.3	2022
Blue Owl Capital	775,000,000	527,955,943	446,674,635	577,104,247	494,190,615	1.78	27.8	
Blue Owl GP Stakes III	175,000,000	221,695,932	235,222,028	108,112,491	186,818,053	1.90	25.3	2015
Blue Owl GP Stakes IV	250,000,000	212,166,481	171,459,041	175,563,371	234,672,530	1.91	37.3	2018
Blue Owl GP Stakes V	200,000,000	94,093,530	39,993,566	143,428,384	72,700,031	1.20	13.1	2020
Blue Owl GP Stakes VI	150,000,000	0	0	150,000,000	0		0.0	2024
Bridgepoint	388,100,328	188,347,293	48,728,031	193,839,093	245,771,631	1.56	16.7	
Bridgepoint Development Capital V, L.P.	111,605,025	0	0	111,605,025	0		0.0	2024
Bridgepoint Europe VI L.P.	167,407,538	161,699,396	46,431,072	6,923,654	223,268,133	1.67	17.2	2018
Bridgepoint Europe VII	109,087,765	26,647,897	2,296,960	75,310,413	22,503,498	0.93	-10.9	2022
Brookfield Asset Management Inc.	500,000,000	451,014,231	270,709,382	110,458,310	483,618,024	1.67	26.0	
Brookfield Capital Partners Fund IV	100,000,000	116,038,574	225,322,438	5,915,245	52,764,740	2.40	42.0	2015
Brookfield Capital Partners V L.P.	250,000,000	267,031,672	43,495,287	20,870,794	345,658,731	1.46	13.3	2018
Brookfield Capital Partners Fund VI	150,000,000	67,943,984	1,891,657	83,672,272	85,194,553	1.28	22.1	2022
Canyon Partners	125,000,000	146,475,843	84,328,671	0	109,232,788	1.32	11.7	
Canyon Distressed Opportunity Fund III	125,000,000	146,475,843	84,328,671	0	109,232,788	1.32	11.7	2020
Cardinal Partners	10,000,000	10,000,000	39,196,082	0	118,598	3.93	10.6	
DSV Partners IV	10,000,000	10,000,000	39,196,082	0	118,598	3.93	10.6	1985
Carlyle Group	400,000,000	360,315,976	86,081,182	114,162,107	345,286,457	1.20	6.7	
Carlyle Strategic Partners IV, L.P.	100,000,000	119,848,374	53,429,269	32,306,465	83,397,726	1.14	5.2	2016
Carlyle Partners VII, L.P.	150,000,000	159,147,171	25,650,226	6,263,341	180,582,713	1.30	7.5	2017
Carlyle Partners VIII	150,000,000	81,320,431	7,001,687	75,592,301	81,306,017	1.09	6.6	2021
CarVal Investors	600,000,000	532,109,760	473,204,549	37,500,000	251,909,942	1.36	8.1	
CVI Credit Value Fund A II	150,000,000	142,500,000	200,538,622	7,500,000	3,134,836	1.43	8.3	2012
CVI Credit Value Fund A III	150,000,000	142,500,000	181,357,900	7,500,000	15,091,553	1.38	8.4	2015
CVI Credit Value Fund IV	150,000,000	104,609,760	63,766,666	15,000,000	97,072,529	1.54	7.7	2017
CVI Credit Value Fund V	150,000,000	142,500,000	27,541,361	7,500,000	136,611,023	1.15	7.3	2020
Clearlake Capital	100,000,000	57,849,852	268,947	42,308,461	64,376,719	1.12	5.7	
Clearlake Capital Partners VII	100,000,000	57,849,852	268,947	42,308,461	64,376,719	1.12	5.7	2022
Court Square	589,419,132	517,455,328	681,304,913	132,178,226	302,619,250	1.90	15.0	
Court Square Capital Partners II, L.P.	164,419,132	170,270,247	298,783,330	5,656,060	166,999	1.76	12.3	2006
Court Square Capital Partners III, L.P.	175,000,000	190,995,651	334,693,559	5,249,260	130,153,516	2.43	20.7	2012
Court Square Capital Partners IV, L.P.	150,000,000	156,189,430	47,828,024	21,272,906	172,298,735	1.41	15.7	2018
Court Square Capital Partners V, L.P.	100,000,000	0	0	100,000,000	0		0.0	2024
CVC Capital Partners	474,321,358	445,966,618	679,560,272	127,394,707	217,965,130	2.01	16.4	
CVC Capital Partners VI	251,111,307	292,082,520	384,002,045	14,195,696	214,361,429	2.05	16.1	2013
CVC Capital Partners IX	111,605,025	0	0	111,605,025	0		0.0	2023
CVC European Equity Partners V, L.P.	111,605,025	153,884,098	295,558,227	1,593,986	3,603,701	1.94	16.7	2008

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Dawson Partners	400,000,000	342,827,326	197,973,231	128,678,076	208,822,468	1.19	12.8	
Dawson Portfolio Finance 3	100,000,000	106,093,802	96,549,128	11,600,486	42,089,574	1.31	13.7	2019
Dawson Portfolio Finance 4	100,000,000	105,414,128	65,176,265	19,032,301	60,636,157	1.19	11.4	2020
Dawson Portfolio Finance 5	100,000,000	76,181,120	30,927,901	47,909,702	53,980,247	1.11	10.7	2021
Dawson Portfolio Finance 6	100,000,000	55,138,276	5,319,937	50,135,587	52,116,490	1.04	17.9	2024
Goldman, Sachs & Co.	449,800,000	391,811,933	365,844,514	158,361,906	228,446,609	1.52	10.8	
GS Capital Partners VI, L.P.	100,000,000	110,368,097	143,690,972	2,551,356	1,283,007	1.31	7.1	2007
GS China-US Cooperation Fund	99,800,000	42,125,012	523,330	58,083,600	53,774,502	1.29	7.6	2018
GS Vintage VII	100,000,000	90,577,618	92,228,409	61,734,228	55,921,078	1.64	14.2	2016
West Street Capital Partners VII, L.P.	150,000,000	148,741,206	129,401,803	35,992,722	117,468,022	1.66	16.6	2016
Goldner Hawn Johnson & Morrison	150,510,266	89,791,247	106,218,463	61,350,986	67,364,192	1.93	21.4	
GHJM TrailHead Fund	20,000,000	17,572,130	55,500,283	2,894,486	941,833	3.21	19.6	2012
Goldner Hawn Fund VII, L.P.	57,755,138	48,781,366	50,716,280	9,139,123	38,923,737	1.84	26.7	2018
Goldner Hawn VIII	72,755,128	23,437,751	1,900	49,317,377	27,498,622	1.17	30.5	2023
Green Equity Investors	325,000,000	350,826,989	288,326,817	20,548,771	348,691,868	1.82	13.1	
Green Equity Investors VI, L.P.	200,000,000	232,647,779	278,724,184	4,125,348	200,172,636	2.06	13.4	2012
Green Equity Investors VIII	125,000,000	118,179,210	9,602,633	16,423,423	148,519,232	1.34	10.6	2020
GTCR	110,000,000	108,893,534	266,749,865	10,416,556	76,160,388	3.15	31.3	
GTCR XI	110,000,000	108,893,534	266,749,865	10,416,556	76,160,388	3.15	31.3	2013
HarbourVest	21,544,485	20,948,171	27,826,579	802,293	3,650,443	1.50	11.4	
Dover Street VII Cayman Fund L.P.	2,198,112	2,074,270	1,856,658	132,416	3,340	0.90	-4.6	2014
HarbourVest Intl PE Partners V-Cayman US	3,464,520	3,346,199	4,530,727	178,568	5,334	1.36	13.5	2014
Harbourvest Intl PE Partners VI-Cayman	4,184,244	4,040,737	6,117,317	195,309	1,635,148	1.92	14.2	2014
HarbourVest Partners VIII Cayman Buyout	4,506,711	4,395,883	6,132,214	156,000	55,589	1.41	12.9	2014
HarbourVest Partners VIII-Cayman Venture	7,190,898	7,091,082	9,189,664	140,000	1,951,032	1.57	10.8	2014
Hellman & Friedman	575,000,000	429,119,054	206,767,988	183,591,304	463,909,675	1.56	17.7	
Hellman & Friedman Capital Partners VII, L.P.	50,000,000	49,914,704	161,459,211	2,183,886	4,456,416	3.32	24.8	2009
Hellman & Friedman Investors IX, L.P.	175,000,000	179,709,364	20,790,279	11,777,893	247,356,399	1.49	12.0	2018
Hellman & Friedman Capital Partners X	250,000,000	199,494,986	24,518,498	69,629,525	212,096,860	1.19	8.0	2021
Hellman & Friedman Capital Partners XI	100,000,000	0	0	100,000,000	0		0.0	2023
IK Limited	585,926,383	506,611,260	575,629,798	122,341,822	269,833,834	1.67	14.5	
IK Fund VII	167,407,538	179,393,652	322,286,061	8,464,429	10,799,740	1.86	14.0	2013
IK Fund VIII	167,407,538	179,399,641	253,343,736	8,567,893	85,478,185	1.89	17.9	2016
IK Fund IX	150,666,784	147,817,968	0	4,864,978	173,555,910	1.17	6.7	2019
IK Fund X	100,444,523	0	0	100,444,523	0		0.0	2022
Kohlberg, Kravis, Roberts & Co.	1,597,000,000	1,140,578,889	665,905,171	536,753,969	1,051,139,295	1.51	16.0	
KKR Americas Fund XII L.P.	150,000,000	149,829,557	111,081,262	16,021,927	179,018,023	1.94	18.5	2016
KKR Ascendant Strategy	150,000,000	0	0	150,000,000	0		0.0	2023
KKR Asian Fund III	100,000,000	97,690,260	77,881,970	14,566,150	119,047,684	2.02	21.6	2017
KKR Asian Fund IV	150,000,000	83,327,257	12,247,385	81,644,354	94,452,226	1.28	12.6	2020
KKR Core Investments Partnership	97,000,000	105,297,587	13,399,690	24,319	126,789,075	1.33	11.7	2021
KKR Core Investments Fund II	100,000,000	25,529,026	0	74,590,974	27,001,562	1.06	5.8	2022
KKR Europe V	100,000,000	96,241,713	22,023,961	11,038,379	106,982,730	1.34	10.4	2018
KKR European Fund VI (USD) SCSp	100,000,000	25,686,226	0	77,256,323	13,654,235	0.53	-44.0	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	139,344,206	1,021,516	12,664,145	151,888,512	1.10	5.9	2021
KKR North America Fund XIII	300,000,000	212,465,487	3,157,645	98,947,398	232,305,249	1.11	7.8	2021

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Lexington Partners	1,645,000,000	1,227,839,008	871,657,862	504,424,640	1,000,587,153	1.52	12.9	
Lexington Capital Partners VI-B, L.P.	100,000,000	98,374,022	145,958,371	1,634,703	510,215	1.49	7.9	2005
Lexington Capital Partners VII, L.P.	200,000,000	173,297,773	272,582,013	30,670,593	17,146,344	1.67	14.3	2009
Lexington Capital Partners VIII, L.P.	150,000,000	139,464,931	155,064,945	29,585,293	75,859,832	1.66	14.8	2014
Lexington Capital Partners IX, L.P.	150,000,000	132,581,385	47,187,904	33,003,469	150,352,265	1.49	18.0	2018
Lexington Capital Partners X	100,000,000	40,172,158	2,211,499	61,891,288	47,287,530	1.23	27.3	2021
Lexington Co-Investment Partners IV	200,000,000	219,778,969	181,218,681	4,025,227	213,602,070	1.80	15.6	2017
Lexington Co-Investment Partners V	300,000,000	302,146,975	27,296,642	19,216,637	362,140,033	1.29	14.5	2020
Lexington Co-Investment Partners V Overage	45,000,000	38,124,900	1,805,011	8,295,325	45,726,053	1.25	10.8	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	38,332,796	16,102,105	87,962,811	1.51	15.7	2016
Madison Dearborn Capital Partners LLC	200,000,000	202,572,491	104,884,917	36,299,809	173,574,443	1.37	9.9	
Madison Dearborn Capital Partners VII, L.P.	100,000,000	101,686,399	70,414,032	15,842,064	86,521,310	1.54	9.8	2015
Madison Dearborn Capital Partners VIII-A, L.P.	100,000,000	100,886,092	34,470,885	20,457,745	87,053,132	1.20	10.4	2019
Marathon	400,000,000	245,183,481	80,305,057	168,388,494	216,187,995	1.21	10.1	
Marathon Distressed Credit Fund	200,000,000	161,906,171	72,452,944	44,000,000	139,402,469	1.31	10.4	2020
Marathon Distressed Credit Fund II	200,000,000	83,277,310	7,852,113	124,388,494	76,785,526	1.02	4.9	2023
Merced Capital	178,737,500	184,266,287	170,420,389	0	57,798,418	1.24	4.0	
Merced Partners IV	125,000,000	124,968,390	126,847,539	0	13,664,264	1.12	2.4	2013
Merced Partners V	53,737,500	59,297,897	43,572,850	0	44,134,154	1.48	7.1	2017
MHR Institutional Partners	75,000,000	83,772,509	27,479,951	10,985,519	94,143,694	1.45	8.4	
MHR Institutional Partners IV LP	75,000,000	83,772,509	27,479,951	10,985,519	94,143,694	1.45	8.4	2014
Nordic Capital	594,569,625	568,048,720	384,095,760	177,973,731	482,516,645	1.53	13.6	
Nordic Capital Fund VIII	167,407,538	228,229,426	296,912,142	12,954,277	52,273,420	1.53	11.9	2013
Nordic Capital IX Beta, L.P.	167,407,538	186,930,398	87,130,766	71,466,684	229,875,229	1.70	16.5	2017
Nordic Capital Fund X	150,666,784	120,307,140	0	26,860,835	168,224,057	1.40	16.7	2020
Nordic Capital Fund XI	109,087,765	32,581,755	52,852	66,691,935	32,143,939	0.99	-2.0	2022
Oak Hill Capital Management, Inc.	250,000,000	249,756,586	281,904,861	9,023,324	159,466,603	1.77	27.2	
Oak Hill Capital Partners IV Onshore LP	150,000,000	154,205,648	262,681,299	3,948,673	41,521,550	1.97	32.1	2016
Oak Hill Capital Partners V	100,000,000	95,550,938	19,223,562	5,074,651	117,945,053	1.44	13.8	2018
Oaktree Capital Management, LLC	400,000,000	250,391,323	88,137,543	202,737,553	228,177,254	1.26	7.4	
Oaktree Special Situations Fund, L.P.	100,000,000	104,011,402	30,479,144	7,741,294	64,456,713	0.91	-1.8	2014
Oaktree Special Situations Fund II, L.P.	100,000,000	99,295,501	57,658,399	42,579,241	111,003,165	1.70	31.2	2018
Oaktree Special Situations Fund III	200,000,000	47,084,420	0	152,417,018	52,717,376	1.12	9.4	2022
Paine & Partners, LLC	325,000,000	263,960,838	91,482,461	87,003,239	259,816,541	1.33	10.1	
Paine Schwartz Food Chain Fund IV	75,000,000	72,113,553	35,687,174	11,745,068	63,421,058	1.37	6.7	2014
Paine Schwartz Food Chain Fund V, L.P.	150,000,000	138,673,185	53,257,921	25,753,712	146,463,597	1.44	16.5	2018
Paine Schwartz Food Chain VI	100,000,000	53,174,100	2,537,366	49,504,459	49,931,886	0.99	-1.4	2023
Permal PE	5,337,098	4,406,696	4,794,251	1,090,000	250,077	1.14	4.4	
Glouston Private Equity Opportunities IV	5,337,098	4,406,696	4,794,251	1,090,000	250,077	1.14	4.4	2014
Permira	619,407,891	531,794,943	506,935,370	147,803,643	526,360,490	1.94	18.1	
Permira V, L.P.	167,407,538	185,587,455	403,216,295	4,698,331	113,239,851	2.78	20.8	2013
Permira VI, L.P.	133,926,030	130,906,122	90,833,042	27,107,709	173,175,411	2.02	16.1	2016
Permira VII L.P.1	150,666,784	150,182,979	12,886,033	15,841,936	170,193,269	1.22	6.6	2019
Permira VIII	167,407,538	65,118,388	0	100,155,667	69,751,959	1.07	7.7	2022

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Public Pension Capital Management	285,000,000	231,123,755	220,140,593	85,978,937	211,657,487	1.87	23.1	
Public Pension Capital, LLC	285,000,000	231,123,755	220,140,593	85,978,937	211,657,487	1.87	23.1	2014
Silver Lake Partners	335,000,000	351,280,328	468,784,293	29,971,725	317,829,338	2.24	18.8	
Silver Lake Partners III, L.P.	100,000,000	94,847,280	216,151,487	9,528,468	22,787,603	2.52	18.8	2007
Silver Lake Partners IV	100,000,000	118,069,760	169,275,005	2,881,307	153,215,939	2.73	21.6	2012
Silver Lake Partners V, L.P.	135,000,000	138,363,288	83,357,801	17,561,950	141,825,796	1.63	13.2	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	23,842,845	1.44	4.9	
Split Rock Partners LP	50,000,000	47,890,906	58,794,192	2,109,094	3,437,322	1.30	3.1	2005
Split Rock Partners II, LP	60,000,000	59,165,000	71,696,462	835,000	20,405,523	1.56	7.1	2008
Stellex Capital Management	200,000,000	0	0	200,000,000	0		0.0	
Stellex Capital Partners III	200,000,000	0	0	200,000,000	0		0.0	2024
Summit Partners	600,000,000	477,847,334	444,283,502	254,075,058	413,836,894	1.80	23.7	
Summit Partners Growth Equity Fund VIII	100,000,000	116,727,192	256,409,402	13,270,529	27,205,901	2.43	25.8	2011
Summit Partners Growth Equity Fund IX	100,000,000	134,554,799	153,114,228	32,610,000	122,315,577	2.05	25.2	2015
Summit Partners Growth Equity Fund X-A	150,000,000	143,046,635	33,741,303	40,694,668	172,633,011	1.44	14.3	2019
Summit Partners Growth Equity Fund XI	250,000,000	83,518,708	1,018,569	167,499,861	91,682,404	1.11	8.2	2021
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	525,000,000	549,019,560	360,152,038	81,671,849	563,612,855	1.68	21.4	
Thoma Cressey Fund VII, L.P.	50,000,000	50,000,000	107,057,940	0	335,948	2.15	23.6	2000
Thoma Bravo Fund XII, L.P.	75,000,000	81,949,004	84,992,456	18,452,144	95,619,918	2.20	16.2	2016
Thoma Bravo Fund XIII, L.P.	150,000,000	184,783,234	135,115,830	12,475,387	217,680,370	1.91	24.1	2018
Thoma Bravo Fund XIV	150,000,000	160,903,846	32,966,256	22,062,373	160,547,701	1.20	6.9	2020
Thoma Bravo Fund XV LP	100,000,000	71,383,476	19,556	28,681,945	89,428,918	1.25	13.0	2021
Thomas H. Lee Partners	400,000,000	338,810,297	301,774,973	91,345,542	226,264,609	1.56	20.6	
Thomas H. Lee Equity Fund VII, LP.	100,000,000	99,998,423	137,891,993	10,163,734	38,022,290	1.76	18.9	2015
Thomas H. Lee Equity Fund VIII, L.P.	150,000,000	151,472,318	163,882,980	18,521,364	97,835,922	1.73	28.3	2018
Thomas H. Lee Equity Fund IX	150,000,000	87,339,556	0	62,660,444	90,406,397	1.04	2.2	2021
TPG Capital	800,000,000	537,461,417	238,625,973	320,575,638	529,838,155	1.43	16.9	
TPG Growth V	150,000,000	146,470,367	16,607,395	18,970,040	177,474,672	1.33	14.5	2021
TPG Growth VI, L.P.	150,000,000	13,091,576	0	136,908,424	13,619,651	1.04	4.0	2023
TPG Partners VII, L.P.	100,000,000	101,722,437	169,824,682	10,606,663	33,135,033	2.00	19.2	2015
TPG Partners VIII	150,000,000	150,637,091	36,472,020	17,876,564	179,883,031	1.44	16.6	2018
TPG Partners IX, L.P.	100,000,000	43,437,867	3,371,101	59,893,423	42,513,092	1.06	9.6	2022
TPG Tech Adjacencies II, L.P.	150,000,000	82,102,079	12,350,775	76,320,524	83,212,677	1.16	9.7	2021
Vance Street Capital Partners	85,000,000	0	0	85,000,000	0		0.0	
Vance Street Capital IV, L.P.	85,000,000	0	0	85,000,000	0		0.0	2024
Varde Fund	538,647,435	526,571,585	548,494,879	16,308,692	198,078,633	1.42	7.2	
Varde Fund X, LP	150,000,000	150,000,000	253,807,303	0	5,170,478	1.73	9.9	2010
Varde Fund XI, LP	200,000,000	200,000,000	232,219,414	0	28,593,151	1.30	4.2	2013
Varde Fund XIII, L.P.	150,000,000	144,000,000	58,235,320	6,000,000	132,036,835	1.32	8.7	2018
Varde Fund XIV	38,647,435	32,571,585	4,232,842	10,308,692	32,278,168	1.12	9.3	2022
Vestar Capital Partners	250,000,000	254,247,677	250,333,440	19,037,386	169,554,093	1.65	19.3	
Vestar Capital Partners VI, LP	100,000,000	109,951,730	190,183,005	357,259	50,514,437	2.19	23.9	2011
Vestar Capital Partners VII, L.P.	150,000,000	144,295,947	60,150,435	18,680,127	119,039,657	1.24	8.2	2017

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Vista Equity Partners	200,000,000	160,365,269	77,223	40,847,634	221,069,957	1.38	9.3	
Vista Equity Partners Perennial	200,000,000	160,365,269	77,223	40,847,634	221,069,957	1.38	9.3	2020
Warburg Pincus	1,316,000,000	1,125,272,680	1,056,803,850	198,805,000	773,970,390	1.63	11.0	
Warburg Pincus China, L.P.	45,000,000	46,935,000	19,627,200	0	39,781,777	1.27	5.1	2016
Warburg Pincus China-Southeast Asia II	50,000,000	29,000,000	4,527,500	21,000,000	26,359,345	1.07	2.6	2019
Warburg Pincus Financial Sector	90,000,000	90,479,948	63,283,320	3,555,000	106,984,656	1.88	16.9	2017
Warburg Pincus Global Growth, L.P.	250,000,000	238,061,456	59,855,440	14,500,000	297,303,562	1.50	12.3	2018
Warburg Pincus Global Growth 14, L.P.	300,000,000	139,453,824	5,553,000	159,750,000	148,335,479	1.10	8.3	2022
Warburg Pincus Private Equity IX, L.P.	100,000,000	100,000,000	172,072,950	0	119,623	1.72	9.6	2005
Warburg Pincus Private Equity X, L.P.	150,000,000	150,000,000	266,806,541	0	3,472,598	1.80	9.5	2007
Warburg Pincus Private Equity XI, L.P.	200,000,000	200,342,452	301,309,821	0	48,770,087	1.75	11.7	2012
Warburg Pincus Private Equity XII, L.P.	131,000,000	131,000,000	163,768,078	0	102,843,263	2.04	16.0	2015
Wayzata Investment Partners	150,000,000	68,415,000	69,775,013	0	4,623,016	1.09	1.6	
Wayzata Opportunities Fund III	150,000,000	68,415,000	69,775,013	0	4,623,016	1.09	1.6	2012
Wellspring Capital Partners	125,000,000	153,842,297	118,787,831	10,722,723	109,420,060	1.48	14.2	
Wellspring Capital Partners VI, L.P.	125,000,000	153,842,297	118,787,831	10,722,723	109,420,060	1.48	14.2	2016
Welsh, Carson, Anderson & Stowe	650,000,000	549,561,675	570,029,230	100,438,325	370,039,003	1.71	16.6	
Welsh, Carson, Anderson & Stowe XI, L.P.	100,000,000	100,000,000	165,834,341	0	473,548	1.66	11.5	2008
Welsh, Carson, Anderson & Stowe XII, L.P.	150,000,000	150,000,000	297,651,309	0	71,235,704	2.46	24.6	2014
Welsh, Carson, Anderson & Stowe XIII, L.P.	250,000,000	246,650,576	106,543,580	3,349,424	252,369,742	1.46	18.1	2018
Welsh, Carson, Anderson & Stowe XIV	150,000,000	52,911,099	0	97,088,901	45,960,009	0.87	-12.1	2022
Wind Point Partners	200,000,000	149,350,249	41,972,235	72,639,544	169,116,883	1.41	16.0	
Wind Point Partners IX	100,000,000	101,367,328	40,494,100	20,622,465	111,612,759	1.50	16.2	2019
Wind Point Partners X	100,000,000	47,982,921	1,478,135	52,017,079	57,504,124	1.23	15.0	2022
Windjammer Capital Investors	441,708,861	271,737,367	293,634,074	195,026,102	185,112,555	1.76	12.0	
Windjammer Capital Fund VI	175,000,000	18,683,605	0	156,316,395	16,011,065	0.86	-44.2	2023
Windjammer Mezzanine & Equity Fund II	66,708,861	55,215,684	85,949,062	10,139,363	70,131	1.56	9.0	2000
Windjammer Senior Equity Fund IV, L.P.	100,000,000	94,912,840	166,983,745	20,995,802	72,212,498	2.52	17.0	2012
Windjammer Senior Equity Fund V, L.P.	100,000,000	102,925,238	40,701,267	7,574,542	96,818,861	1.34	13.0	2017

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Summit Partners	95,000,000	100,222,879	137,545,095	11,318,717	2,272,013	1.40	9.1	
Summit Subordinated Debt Fund III, L.P.	45,000,000	44,088,494	62,804,226	2,250,000	555,972	1.44	8.6	2004
Summit Subordinated Debt Fund IV, L.P.	50,000,000	56,134,385	74,740,869	9,068,717	1,716,041	1.36	9.8	2008
TCW	189,570,000	174,519,135	166,976,431	62,214,056	59,260,602	1.30	8.5	
TCW Direct Lending LLC	89,570,000	83,599,652	90,921,109	14,899,409	16,353,822	1.28	7.7	2014
TCW Direct Lending VII	100,000,000	90,919,484	76,055,322	47,314,647	42,906,779	1.31	9.5	2018
Torchlight Investors	150,000,000	60,000,000	13,714,286	103,714,286	46,447,621	1.00	0.4	
Torchlight Debt Fund VIII	150,000,000	60,000,000	13,714,286	103,714,286	46,447,621	1.00	0.4	2023
TSSP	375,000,000	258,008,828	64,479,551	151,249,561	253,750,551	1.23	9.8	
TSSP Opportunities Partners IV (A), L.P.	50,000,000	40,386,311	20,028,485	6,663,782	36,454,790	1.40	10.4	2018
Sixth Street Opportunities Partners V	75,000,000	54,482,474	712,372	21,220,699	57,294,646	1.06	5.2	2021
Sixth Street TAO Partners (B), L.P.	50,000,000	56,852,937	24,663,244	21,215,413	48,565,343	1.29	8.6	2018
Sixth Street TAO Partners (D), L.P.	100,000,000	71,760,400	19,075,450	36,678,816	76,195,019	1.33	12.2	2018
Sixth Street TAO Partners (B) Vintage 2023	100,000,000	34,526,706	0	65,470,851	35,240,753	1.02	6.1	2023

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Private Credit	4,215,010,084	3,555,466,922	2,663,923,265	1,219,561,789	2,071,697,282	1.33	10.2	
Audax Group	350,000,000	258,146,986	238,710,904	121,829,772	84,802,000	1.25	10.1	
Audax Mezzanine Fund III, L.P.	100,000,000	105,485,676	133,977,984	0	5,659,187	1.32	9.7	2010
Audax Mezzanine Fund IV-A, L.P.	100,000,000	94,498,024	88,014,468	21,979,770	28,328,096	1.23	10.1	2015
Audax Mezzanine Fund V	150,000,000	58,163,286	16,718,452	99,850,002	50,814,718	1.16	14.2	2020
Avenue Capital Partners	200,000,000	200,977,328	273,846,542	0	85,035,722	1.79	10.1	
Avenue Energy Opportunities Fund, L.P.	100,000,000	100,977,328	119,101,528	0	38,215,320	1.56	6.7	2014
Avenue Energy Opportunities Fund II	100,000,000	100,000,000	154,745,014	0	46,820,402	2.02	15.0	2017
BlackRock	97,500,000	94,266,552	38,697,495	3,233,448	91,317,706	1.38	8.4	
BlackRock Middle Market Senior Fund	97,500,000	94,266,552	38,697,495	3,233,448	91,317,706	1.38	8.4	2018
Brookfield Asset Management Inc.	200,000,000	115,222,920	45,825,779	119,015,507	81,318,939	1.10	9.1	
Brookfield Real Estate Finance Fund VI	200,000,000	115,222,920	45,825,779	119,015,507	81,318,939	1.10	9.1	2021
Castlelake L.P.	100,000,000	0	0	100,000,000	0		0.0	
Castlelake Aviation V Stable Yield	100,000,000	0	0	100,000,000	0		0.0	2023
Energy Capital Partners	28,087,500	40,453,743	22,803,663	8,262,771	22,643,114	1.12	6.7	
Energy Capital Credit Solutions II-A	28,087,500	40,453,743	22,803,663	8,262,771	22,643,114	1.12	6.7	2018
Gold Hill	25,852,584	25,852,584	48,393,297	0	2,491,285	1.97	14.3	
Gold Hill 2008	25,852,584	25,852,584	48,393,297	0	2,491,285	1.97	14.3	2008
HPS Investment Partners	200,000,000	160,760,195	60,508,237	68,658,559	144,398,436	1.27	11.6	
HPS Mezzanine Partners 2019, L.P.	100,000,000	105,058,527	54,624,049	18,623,136	84,600,313	1.33	10.8	2019
HPS Strategic Investment Partners V	100,000,000	55,701,668	5,884,188	50,035,423	59,798,123	1.18	15.8	2022
Kohlberg, Kravis, Roberts & Co.	274,000,000	383,219,983	365,268,125	80,601,499	95,280,466	1.20	9.6	
KKR Lending Partners II L.P.	75,000,000	87,059,946	85,209,374	8,802,924	4,914,051	1.04	1.7	2015
KKR Lending Partners III L.P.	199,000,000	296,160,037	280,058,751	71,798,575	90,366,415	1.25	13.2	2017
LBC Credit Partners	200,000,000	208,697,920	194,922,698	52,684,740	67,335,590	1.26	11.0	
LBC Credit Partners IV, L.P.	100,000,000	120,034,080	133,638,734	12,850,249	11,968,401	1.21	9.0	2016
LBC Credit Partners V, L.P.	100,000,000	88,663,840	61,283,964	39,834,491	55,367,189	1.32	15.3	2019
Marathon	200,000,000	158,022,008	28,480,760	48,000,000	178,780,580	1.31	10.3	
Marathon Secured Private Strategies Fund II	100,000,000	96,022,008	28,298,063	10,000,000	113,496,750	1.48	10.9	2019
Marathon Secured Private Strategies Fund III	100,000,000	62,000,000	182,698	38,000,000	65,283,830	1.06	6.0	2022
Merit Capital Partners	275,000,000	215,421,582	221,635,904	59,511,618	124,720,567	1.61	12.5	
Merit Mezzanine Fund V, LP	75,000,000	72,306,122	114,022,067	2,693,878	11,804,154	1.74	10.4	2009
Merit Mezzanine Fund VI	100,000,000	92,629,096	106,432,018	7,304,104	55,818,708	1.75	16.8	2016
Merit Mezzanine Fund VII	100,000,000	50,486,364	1,181,818	49,513,636	57,097,704	1.15	12.5	2020
Oaktree Capital Management, LLC	650,000,000	528,458,997	134,347,562	135,100,000	543,916,927	1.28	9.6	
Oaktree Opportunities Fund X, L.P.	50,000,000	46,500,060	46,604,660	8,500,000	23,869,775	1.52	9.0	2015
Oaktree Opportunities Fund Xb, L.P.	100,000,000	75,005,568	16,333,482	25,000,000	103,408,539	1.60	11.8	2015
Oaktree Opportunities Fund XI	300,000,000	255,012,470	36,129,703	45,000,000	282,370,917	1.25	9.9	2020
Oaktree Real Estate Debt III	200,000,000	151,940,899	35,279,717	56,600,000	134,267,696	1.12	6.6	2020
PIMCO BRAVO	5,000,000	4,501,479	5,714,432	0	272,599	1.33	6.0	
PIMCO Bravo Fund OnShore Feeder II	5,000,000	4,501,479	5,714,432	0	272,599	1.33	6.0	2014
Prudential Global Investment Mgmt	600,000,000	568,713,804	602,052,505	94,167,254	187,652,564	1.39	10.1	
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	2,008,766	1.72	14.1	2009
Prudential Capital Partners IV	100,000,000	114,854,058	143,030,415	1,948,707	17,240,466	1.40	9.1	2012
Prudential Capital Partners V, L.P.	150,000,000	160,865,437	122,637,884	5,416,392	73,317,558	1.22	6.3	2016
PGIM Capital Partners VI, L.P.	150,000,000	92,176,372	15,391,614	62,298,854	94,664,880	1.19	13.6	2020

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Real Assets	4,397,571,518	4,114,364,340	3,168,219,741	642,378,207	2,063,703,310	1.27	5.1	
BlackRock	198,500,000	192,343,863	103,809,359	23,318,858	129,943,210	1.22	6.9	
BlackRock Global Renewable Power Fund II	98,500,000	108,982,081	100,944,099	4,886,616	33,534,338	1.23	5.9	2017
BlackRock Global Renewable Power Infrastructure III	100,000,000	83,361,782	2,865,259	18,432,242	96,408,872	1.19	10.0	2019
EIG Global Energy Partners	450,000,000	473,254,572	401,007,878	75,356,663	103,948,013	1.07	1.5	
EIG Energy Fund XIV	100,000,000	113,459,470	95,309,310	2,761,129	3,436,627	0.87	-5.0	2007
EIG Energy Fund XV	150,000,000	161,570,371	159,449,534	22,871,323	9,420,326	1.05	1.1	2010
EIG Energy Fund XVI	200,000,000	198,224,731	146,249,034	49,724,211	91,091,060	1.20	3.9	2013
Encap Energy	300,000,000	323,440,801	366,866,270	7,245,678	133,543,375	1.55	8.9	
EnCap Energy Capital Fund VIII, L.P.	100,000,000	103,407,978	70,961,643	0	37,928,865	1.05	0.9	2010
Encap Energy Fund IX	100,000,000	113,725,245	150,736,207	3,890,055	23,481,122	1.53	10.9	2012
EnCap Energy Capital Fund X, L.P.	100,000,000	106,307,577	145,168,420	3,355,623	72,133,387	2.04	16.3	2015
Energy & Minerals Group	680,000,000	703,331,978	437,403,770	38,804,270	521,144,799	1.36	5.9	
NGP Midstream & Resources, L.P.	100,000,000	103,590,296	179,705,647	17,857	2,088,803	1.75	13.1	2007
The Energy & Minerals Group Fund II, L.P.	100,000,000	109,712,894	112,052,043	170,365	100,429,982	1.94	11.0	2011
The Energy & Minerals Group Fund III, L.P.	200,000,000	210,808,542	42,493,520	39,583	102,411,544	0.69	-4.7	2014
The Energy & Minerals Group Fund IV, LP	150,000,000	166,551,587	97,942,785	12,889,682	149,787,137	1.49	7.9	2015
The Energy & Minerals Group Fund V	112,500,000	95,435,275	3,658,916	20,097,080	141,482,169	1.52	10.0	2019
The Energy & Minerals Group Fund V Accordion, LP	17,500,000	17,233,384	1,550,859	5,589,703	24,945,164	1.54	10.2	2019
Energy Capital Partners	500,000,000	468,200,984	380,087,071	143,401,529	322,696,071	1.50	12.9	
Energy Capital Partners III, L.P.	200,000,000	239,038,835	314,765,322	30,959,867	69,155,102	1.61	12.2	2013
Energy Capital Partners IV-A, LP	150,000,000	167,260,945	61,140,016	19,928,542	186,081,721	1.48	15.1	2017
Energy Capital Partners V	150,000,000	61,901,204	4,181,733	92,513,120	67,459,248	1.16	13.0	2023
Enervest Management Partners	100,000,000	100,019,462	112,074,242	4,905,100	48,670,654	1.61	9.8	
EnerVest Energy Institutional Fund XIV-A, L.P.	100,000,000	100,019,462	112,074,242	4,905,100	48,670,654	1.61	9.8	2015
First Reserve	500,000,000	554,780,495	319,439,415	11,058,656	84,731,546	0.73	-6.6	
First Reserve Fund XI, L.P.	150,000,000	150,292,121	100,073,809	0	0	0.67	-8.8	2006
First Reserve Fund XII, L.P.	150,000,000	165,617,044	85,669,271	0	92,852	0.52	-18.0	2008
First Reserve Fund XIII, L.P.	200,000,000	238,871,330	133,696,335	11,058,656	84,638,694	0.91	-2.4	2013
Kohlberg, Kravis, Roberts & Co.	449,850,000	216,051,978	72,377,749	253,637,372	211,464,046	1.31	10.9	
KKR Global Infrastructure Investors III	149,850,000	143,108,448	70,171,452	21,312,249	132,750,939	1.42	11.7	2018
KKR Global Infrastructure Investors IV	100,000,000	72,943,530	2,206,297	32,325,123	78,713,106	1.11	6.7	2021
KKR Global Infrastructure Investors V	200,000,000	0	0	200,000,000	0		0.0	2024
Merit Energy Partners	519,721,518	440,294,912	238,464,581	38,949,467	318,912,694	1.27	3.8	
Merit Energy Partners F-II, L.P.	100,000,000	59,522,861	36,375,957	0	1,489,113	0.64	-6.5	2006
Merit Energy Partners H	100,000,000	100,000,000	31,860,302	0	37,903,452	0.70	-4.6	2011
Merit Energy Partners I, L.P.	169,721,518	169,721,518	128,639,060	0	142,693,026	1.60	8.1	2014
Merit Energy Partners K, L.P.	150,000,000	111,050,533	41,589,262	38,949,467	136,827,104	1.61	22.8	2019
NGP	599,500,000	608,292,290	700,039,407	32,180,614	164,710,902	1.42	9.2	
Natural Gas Partners IX, LP	150,000,000	174,005,353	249,411,654	605,481	85,295	1.43	12.0	2007
NGP Natural Resources X, L.P.	150,000,000	149,697,949	135,778,600	302,051	12,783,433	0.99	-0.2	2011
NGP Natural Resources XI, L.P.	150,000,000	157,922,049	189,435,787	4,736,941	68,283,016	1.63	10.5	2014
NGP Natural Resources XII, L.P.	149,500,000	126,666,939	125,413,366	26,536,141	83,559,159	1.65	14.8	2017
Sheridan	100,000,000	34,353,005	36,650,000	13,520,000	23,938,000	1.76	12.0	
Sheridan Production Partners III-B, L.P.	100,000,000	34,353,005	36,650,000	13,520,000	23,938,000	1.76	12.0	2014

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Real Estate	4,598,147,868	3,391,635,992	2,146,043,919	1,654,315,866	2,161,544,834	1.27	7.8	
Angelo, Gordon & Co.	750,000,000	510,355,141	333,248,190	291,030,000	327,089,896	1.29	8.3	
AG Asia Realty Fund III, L.P.	50,000,000	47,587,261	47,125,000	6,196,250	14,630,568	1.30	8.6	2016
AG Asia Realty Fund IV, L.P.	100,000,000	88,737,105	68,750,000	27,047,500	51,618,920	1.36	12.1	2018
AG Asia Realty Fund V	100,000,000	20,677,470	0	78,250,000	20,468,947	0.99	-1.5	2023
AG Europe Realty Fund II, L.P.	75,000,000	68,456,549	36,735,759	12,768,750	58,780,788	1.40	7.7	2018
AG Europe Realty Fund III	75,000,000	56,328,427	3,750,000	19,312,500	65,201,431	1.22	8.6	2020
AG Europe Realty Fund IV	100,000,000	0	0	100,000,000	0		0.0	2024
AG Realty Fund IX	100,000,000	92,141,126	93,250,000	11,650,000	23,760,905	1.27	5.4	2014
AG Realty Fund X, L.P.	150,000,000	136,427,203	83,637,431	35,805,000	92,628,336	1.29	10.7	2018
Blackstone	1,224,500,000	990,758,236	939,235,947	415,007,167	581,349,129	1.53	12.1	
Blackstone Real Estate Partners Asia II	74,500,000	72,869,868	20,659,847	12,885,561	64,456,661	1.17	4.6	2017
Blackstone Real Estate Partners Asia III	100,000,000	20,700,284	2,368	82,371,606	15,828,570	0.76	-15.3	2021
Blackstone Real Estate Partners Europe Fund VII	100,000,000	9,577,134	0	91,560,366	9,552,990	1.00	-0.3	2023
Blackstone Real Estate Partners V	100,000,000	104,217,981	209,143,624	417,405	119,271	2.01	10.8	2006
Blackstone Real Estate Partners VI, L.P.	100,000,000	109,582,860	220,260,491	736,180	72,192	2.01	13.1	2007
Blackstone Real Estate Partners VII, LP	100,000,000	115,642,883	183,531,241	7,609,607	14,791,778	1.71	14.4	2011
Blackstone Real Estate VIII, TE.1 L.P.	150,000,000	177,836,300	189,123,866	19,186,562	98,255,344	1.62	13.5	2015
Blackstone Real Estate Partners IX, L.P.	300,000,000	327,239,830	114,588,167	46,496,375	328,895,638	1.36	12.9	2018
Blackstone Real Estate Partners X	200,000,000	53,091,097	1,926,342	153,743,504	49,376,684	0.97	-6.6	2022
Blackstone Strategic Partners	50,000,000	51,507,991	50,981,752	907,704	66,396	0.99	-0.1	
Strategic Partners IV RE, L.P.	50,000,000	51,507,991	50,981,752	907,704	66,396	0.99	-0.1	2008
Brookfield Asset Management Inc.	400,000,000	210,634,862	21,563,541	210,861,872	205,492,916	1.08	5.5	
Brookfield Strategic Real Estate Partners IV	300,000,000	210,634,862	21,563,541	110,861,872	205,492,916	1.08	5.5	2021
Brookfield Strategic Real Estate Partners V	100,000,000	0	0	100,000,000	0		0.0	2023
Carlyle Group	450,000,000	247,296,407	129,478,803	281,768,418	176,358,894	1.24	16.2	
Carlyle Realty Partners VIII, L.P.	150,000,000	129,967,901	126,590,970	96,199,936	64,665,073	1.47	21.4	2017
Carlyle Realty Partners IX	300,000,000	117,328,506	2,887,833	185,568,482	111,693,821	0.98	-2.6	2021
Kohlberg, Kravis, Roberts & Co.	125,000,000	111,013,879	14,492,411	30,890,901	94,375,992	0.98	-1.1	
KKR Real Estate Partners Americas III	125,000,000	111,013,879	14,492,411	30,890,901	94,375,992	0.98	-1.1	2021
Landmark Partners	249,500,000	130,530,478	69,865,481	141,184,133	89,751,773	1.22	9.8	
Landmark Real Estate Partners VIII, L.P.	149,500,000	121,814,526	69,865,481	49,900,085	83,811,137	1.26	10.6	2016
Landmark Real Estate Partners IX	100,000,000	8,715,952	0	91,284,048	5,940,636	0.68	-79.6	2021
Lubert Adler	174,147,868	159,857,744	96,628,217	20,194,886	106,912,673	1.27	11.4	
Lubert-Adler Real Estate Fund VII-B, L.P.	74,147,868	67,585,213	86,651,406	7,414,787	16,595,226	1.53	14.6	2017
Lubert-Adler Recovery and Enhancement Capital Fund	100,000,000	92,272,530	9,976,811	12,780,099	90,317,447	1.09	4.9	2021
Oaktree Capital Management, LLC	200,000,000	170,475,519	37,922,552	64,000,000	146,748,084	1.08	6.1	
Oaktree Real Estate Opportunities Fund VIII	200,000,000	170,475,519	37,922,552	64,000,000	146,748,084	1.08	6.1	2020
Rockpoint	200,000,000	195,538,407	69,882,159	27,603,294	128,024,950	1.01	0.4	
Rockpoint Real Estate Fund V, L.P.	100,000,000	103,945,647	58,755,434	14,217,829	33,946,695	0.89	-3.1	2014
Rockpoint Real Estate Fund VI, L.P.	100,000,000	91,592,760	11,126,725	13,385,465	94,078,255	1.15	5.6	2019
Rockwood	200,000,000	187,087,462	61,784,022	17,093,241	114,613,515	0.94	-1.9	
Rockwood Capital RE Partners X, L.P.	100,000,000	99,845,593	57,507,174	1,838,936	37,962,088	0.96	-1.2	2015
Rockwood Capital RE Partners XI	100,000,000	87,241,869	4,276,848	15,254,305	76,651,427	0.93	-3.0	2019

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Silverpeak Real Estate Partners	225,000,000	144,079,867	109,366,116	86,274,250	3,116,957	0.78	-3.9	
Silverpeak Legacy Pension Partners II, L.P.	75,000,000	73,069,012	92,033,940	7,496,058	425,824	1.27	4.2	2005
Silverpeak Legacy Pension Partners III, L.P.	150,000,000	71,010,855	17,332,177	78,778,192	2,691,133	0.28	-12.0	2008
TA Associates Realty	350,000,000	282,500,000	211,594,727	67,500,000	187,643,659	1.41	11.6	
Realty Associates Fund XI	100,000,000	100,000,000	159,955,612	0	304,872	1.60	10.8	2015
Realty Associates Fund XII	100,000,000	100,000,000	39,195,595	0	105,459,395	1.45	11.7	2018
Realty Associates Fund XIII	150,000,000	82,500,000	12,443,520	67,500,000	81,879,392	1.14	26.7	2023
Fund Total	39,443,041,219	31,740,291,242	24,504,445,801	11,290,168,454	23,002,374,227	1.50	11.61	
<i>Difference**</i>					64,407,869			
Private Markets Total with Difference					23,066,782,096			

<i>Private Markets Portfolio Status</i>	Managers	Funds
Private Equity	60	193
Private Credit	19	41
Real Assets	11	33
Real Estate	13	37
Total	103	304

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.

Arsenal Capital Partners V, L.P. performance and valuation data may differ from final year-end reporting.

*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

Participant Directed Investment Program

September 30, 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.
- The Mutual Fund Line-up is an investment platform that offers participants three sets of investment options. The first is a set of actively and passively managed mutual funds, a Stable Value Account and a Money Market Fund. The second is a set of target date funds called Minnesota Target Date Retirement Funds. The third is a self-directed brokerage account window which offers thousands of mutual funds. The SBI has no direct management responsibilities for funds within the self-directed brokerage account window. 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.
- 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. These returns are net of investment management fees and transaction costs. They do not, however, reflect administrative expenses that may be deducted by the retirement systems or other agencies to defray administrative costs.



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	\$127,221,089	5.7%	25.6%	6.0%	9.9%	8.9%	01/1980
U.S. EQUITY ACTIVELY MANAGED FUND	107,516,419	6.1	36.7	9.6	16.0	13.2	07/1986
U.S. EQUITY INDEX FUND	415,295,822	6.2	35.3	10.3	15.5	12.9	07/1986
BROAD INTERNATIONAL EQUITY FUND	158,469,562	6.4	23.8	5.1	8.5	5.9	09/1994
BOND FUND	113,849,567	5.3	12.8	-1.2	1.0	2.4	07/1986
MONEY MARKET FUND	866,364,785	1.4	5.7	3.8	2.5	1.9	07/1986
STABLE VALUE ACCOUNT	1,516,162,913	0.8	3.2	2.6	2.5	2.4	11/1994
VOLUNTEER FIREFIGHTER ACCOUNT	191,575,702	5.7	21.8	4.0	7.4	6.8	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>
BALANCED FUND	\$127,221,089	5.7%	25.6%	6.0%	9.9%	8.9%
SIF BALANCED FUND BENCHMARK		5.6%	25.0%	6.0%	9.5%	8.6%
Excess		0.0%	0.6%	-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>
U.S. EQUITY ACTIVELY MANAGED FUND	107,516,419	6.1	36.7	9.6	16.0	13.2
Russell 3000		6.2	35.2	10.3	15.3	12.8
Excess		-0.1	1.5	-0.7	0.8	0.4



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>
U.S. EQUITY INDEX FUND	\$415,295,822	6.2%	35.3%	10.3%	15.5%	12.9%
Russell 3000		6.2%	35.2%	10.3%	15.3%	12.8%
Excess		0.0%	0.1%	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>
BROAD INTERNATIONAL EQUITY FUND	158,469,562	6.4	23.8	5.1	8.5	5.9
International Equity Benchmark		8.1	25.4	4.1	7.5	5.2
Excess		-1.7	-1.6	1.0	0.9	0.7



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>
BOND FUND	\$113,849,567	5.3%	12.8%	-1.2%	1.0%	2.4%
Bloomberg U.S. Aggregate		5.2%	11.6%	-1.4%	0.3%	1.8%
Excess		0.1%	1.3%	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>
MONEY MARKET FUND	866,364,785	1.4	5.7	3.8	2.5	1.9
ICE BofA US 3-Month Treasury Bill		1.4	5.5	3.5	2.3	1.6
Excess		0.0	0.3	0.3	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>
STABLE VALUE ACCOUNT	\$1,516,162,913	0.8%	3.2%	2.6%	2.5%	2.4%
Fixed Interest Blended Benchmark		1.1%	4.8%	4.0%	2.8%	2.4%
Excess		-0.2%	-1.6%	-1.4%	-0.3%	-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>
VOLUNTEER FIREIGHTER ACCOUNT	191,575,702	5.7	21.8	4.0	7.4	6.8
SIF Volunteer Firefighter Account		5.8	21.2	3.9	6.9	6.4
Excess		-0.1	0.5	0.1	0.5	0.4



Mutual Funds

The mutual fund investment line-up provides investment options to 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 plan. (In most cases, the primary plan is a defined benefit plan administered by TRA, PERA, or MSRS.) Participants can choose from active and passively managed stock and bond funds, a Stable Value Account, a Money Market Fund, a set of 10 target date retirement fund options, and a brokerage window where participants can choose from hundreds of mutual funds.

	<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	\$1,055,356,567	6.2%	35.3%	10.1%	15.2%		07/2019
VANGUARD INSTITUTIONAL INDEX	2,305,482,738	5.9	36.3	11.9	16.0	13.4%	07/1999
VANGUARD DIVIDEND GROWTH FUND	1,090,488,126	9.7	26.3	9.5	11.5		10/2016
VANGUARD MID-CAP INDEX FUND	848,400,398	9.4	28.8	5.3	11.2	10.2	01/2004
T.ROWE PRICE SMALL CAP STOCKS FUND	932,772,219	9.3	26.2	0.9	9.3	10.6	04/2000
FIDELITY DIVERSIFIED INTERNATIONAL TRUST	383,703,163	5.5	26.2	2.4	9.0	6.8	07/1999
VANGUARD TOTAL INTERNATIONAL STOCK INDEX FUND	439,327,875	8.0	24.9	4.0	7.8	5.5	07/2011
VANGUARD BALANCED INDEX FUND	1,568,390,676	5.8	25.5	5.6	9.3	8.5	12/2003
DODGE & COX INCOME	314,981,867	5.6	13.5	0.4	2.1	2.9	07/1999
VANGUARD TOTAL BOND MARKET INDEX FUND	345,321,775	5.1	11.4	-1.4	0.3	1.8	12/2003
2025 MN TARGET DATE RETIREMENT FUND	215,218,013	5.4	16.7	2.9	6.1	5.7	07/2011
2030 MN TARGET DATE RETIREMENT FUND	264,069,545	5.9	19.9	3.4	7.4	6.7	07/2011
2035 MN TARGET DATE RETIREMENT FUND	238,176,240	6.5	23.6	4.1	8.5	7.4	07/2011
2040 MN TARGET DATE RETIREMENT FUND	202,729,998	6.8	25.5	4.5	9.1	7.9	07/2011
2045 MN TARGET DATE RETIREMENT FUND	201,310,101	7.0	26.7	4.9	9.7	8.2	07/2011
2050 MN TARGET DATE RETIREMENT FUND	177,849,994	7.1	27.7	5.2	10.1	8.5	07/2011
2055 MN TARGET DATE RETIREMENT FUND	123,400,528	7.2	28.5	5.4	10.5	8.7	07/2011
2060 MN TARGET DATE RETIREMENT FUND	91,664,218	7.3	28.7	5.5	10.5	8.7	07/2011
2065 MN TARGET DATE RETIREMENT FUND	24,428,592	7.3	28.7	5.5			04/2020
INCOME ACCOUNT	213,698,224	5.3	16.0	2.9	5.4	4.6	07/2011
Charles Schwab SDB	95,709,428						08/2017
Charles Schwab SDB Roth	5,083,985						



Mutual Funds

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
Large Cap US Equity						
VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX FUND	\$1,055,356,567	6.2%	35.3%	10.1%	15.2%	07/2019
CRSP US Total Market Index		6.2%	35.2%	10.1%	15.2%	07/2019
Excess		-0.0%	0.0%	0.0%	0.0%	
VANGUARD INSTITUTIONAL INDEX FUND	\$2,305,482,738	5.9%	36.3%	11.9%	16.0%	07/1999
S&P 500		5.9%	36.4%	11.9%	16.0%	07/1999
Excess		-0.0%	-0.0%	-0.0%	-0.0%	
VANGUARD DIVIDEND GROWTH FUND	\$1,090,488,126	9.7%	26.3%	9.5%	11.5%	10/2016
VANGUARD DIVIDEND GROWTH INDEX		9.0%	30.0%	11.1%	12.8%	10/2016
Excess		0.6%	-3.7%	-1.6%	-1.4%	
Mid Cap US Equity						
VANGUARD MID CAP INDEX FUND	\$848,400,398	9.4%	28.8%	5.3%	11.2%	01/2004
CRSP US Mid Cap Index		9.4%	28.8%	5.3%	11.2%	01/2004
Excess		-0.0%	0.0%	0.0%	0.0%	
Small Cap US Equity						
T. ROWE PRICE SMALL-CAP FUND	\$932,772,219	9.3%	26.2%	0.9%	9.3%	04/2000
Russell 2000		9.3%	26.8%	1.8%	9.4%	04/2000
Excess		0.0%	-0.6%	-1.0%	-0.1%	
International Equity						
FIDELITY DIVERSIFIED INT'L	\$383,703,163	5.5%	26.2%	2.4%	9.0%	07/1999
MSCI EAFE FREE (NET)		7.3%	24.8%	5.5%	8.2%	07/1999
Excess		-1.8%	1.5%	-3.1%	0.8%	
VANGUARD TOTAL INT'L STOCK INDEX FUND	\$439,327,875	8.0%	24.9%	4.0%	7.8%	07/2011
FTSE Global All Cap ex US Index Net		8.4%	25.0%	3.9%	7.8%	07/2011
Excess		-0.3%	-0.1%	0.1%	0.0%	



Mutual Funds

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 Income Fund (active)

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						
VANGUARD BALANCED INDEX FUND	\$1,568,390,676	5.8%	25.5%	5.6%	9.3%	12/2003
Vanguard Balanced Fund Benchmark		5.8	25.3	5.6	9.4	12/2003
Excess		0.0	0.2	-0.0	-0.0	
Fixed Income						
DODGE & COX INCOME FUND	314,981,867	5.6	13.5	0.4	2.1	07/1999
Bloomberg U.S. Aggregate		5.2	11.6	-1.4	0.3	07/1999
Excess		0.4	2.0	1.8	1.8	
VANGUARD TOTAL BOND MARKET INDEX FUND	345,321,775	5.1	11.4	-1.4	0.3	12/2003
Bloomberg U.S. Aggregate		5.2	11.6	-1.4	0.3	12/2003
Excess		-0.1	-0.1	-0.0	-0.0	
MONEY MARKET FUND	866,364,785	1.4	5.7	3.8	2.5	07/1986
ICE BofA US 3-Month Treasury Bill		1.4	5.5	3.5	2.3	07/1986
Excess		0.0	0.3	0.3	0.2	
Stable Value						
STABLE VALUE ACCOUNT	1,516,162,913	0.8	3.2	2.6	2.5	11/1994
Fixed Interest Blended Benchmark		1.1	4.8	4.0	2.8	11/1994
Excess		-0.2	-1.6	-1.4	-0.3	

(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 IMI.

(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.



Mutual Funds

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>	
SSgA														
2025 MN TARGET DATE RETIREMENT FUND	\$215,218,013	5.4%	16.7%	2.9%	6.1%	07/2011		2050 MN TARGET DATE RETIREMENT FUND	\$177,849,994	7.1%	27.7%	5.2%	10.1%	07/2011
2025 FUND BENCHMARK		5.4%	16.6%	2.9%	6.1%	07/2011		2050 FUND BENCHMARK		7.2%	27.7%	5.1%	10.1%	07/2011
Excess		-0.0%	0.0%	0.0%	0.0%			Excess		-0.1%	-0.0%	0.1%	0.0%	
2030 MN TARGET DATE RETIREMENT FUND	\$264,069,545	5.9%	19.9%	3.4%	7.4%	07/2011		2055 MN TARGET DATE RETIREMENT FUND	\$123,400,528	7.2%	28.5%	5.4%	10.5%	07/2011
2030 FUND BENCHMARK		5.9%	19.9%	3.4%	7.4%	07/2011		2055 FUND BENCHMARK		7.3%	28.6%	5.3%	10.5%	07/2011
Excess		-0.0%	-0.0%	0.1%	0.0%			Excess		-0.1%	-0.0%	0.1%	0.0%	
2035 MN TARGET DATE RETIREMENT FUND	\$238,176,240	6.5%	23.6%	4.1%	8.5%	07/2011		2060 MN TARGET DATE RETIREMENT FUND	\$91,664,218	7.3%	28.7%	5.5%	10.5%	07/2011
2035 FUND BENCHMARK		6.6%	23.7%	4.1%	8.5%	07/2011		2060 FUND BENCHMARK		7.3%	28.7%	5.4%	10.5%	07/2011
Excess		-0.0%	-0.0%	0.1%	0.0%			Excess		-0.1%	-0.0%	0.1%	0.0%	
2040 MN TARGET DATE RETIREMENT FUND	\$202,729,998	6.8%	25.5%	4.5%	9.1%	07/2011		2065 MN TARGET DATE RETIREMENT FUND	\$24,428,592	7.3%	28.7%	5.5%		04/2020
2040 FUND BENCHMARK		6.8%	25.5%	4.4%	9.1%	07/2011		2065 FUND BENCHMARK		7.3%	28.7%	5.4%		04/2020
Excess		-0.1%	-0.0%	0.1%	0.0%			Excess		-0.1%	-0.0%	0.1%		
2045 MN TARGET DATE RETIREMENT FUND	\$201,310,101	7.0%	26.7%	4.9%	9.7%	07/2011		INCOME ACCOUNT	\$213,698,224	5.3%	16.0%	2.9%	5.4%	07/2011
2045 FUND BENCHMARK		7.0%	26.8%	4.8%	9.6%	07/2011		INCOME ACCOUNT BENCHMARK		5.3%	16.0%	2.8%	5.4%	07/2011
								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: September 30, 2024

Total = \$2,084 Million

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
2040/2041 Enrollment Option	\$23,123,117	7.10%	27.69%				19.65%	5/12/2023
2040-2041 Custom Benchmark		7.15%	27.75%				20.44%	
2038/2039 Enrollment Option	\$51,150,610	6.98%	27.13%	6.33%			5.54%	6/11/2021
2038-2039 Custom Benchmark		7.07%	27.19%	6.41%			5.67%	
2036/2037 Enrollment Option	\$111,502,053	6.89%	26.29%	5.94%			9.52%	10/28/2019
2036-2037 Custom Benchmark		6.97%	26.35%	6.09%			9.51%	
2034/2035 Enrollment Option	\$88,387,795	6.75%	25.22%	5.59%			9.06%	10/28/2019
2034-2035 Custom Benchmark		6.83%	25.33%	5.72%			9.06%	
2032/2033 Enrollment Option	\$92,851,925	6.42%	23.31%	4.89%			8.45%	10/28/2019
2032-2033 Custom Benchmark		6.50%	23.50%	5.06%			8.45%	
2030/2031 Enrollment Option	\$102,702,194	5.85%	20.59%	3.98%			7.51%	10/28/2019
2030-2031 Custom Benchmark		6.05%	21.00%	4.25%			7.57%	
2028/2029 Enrollment Option	\$124,219,512	4.95%	17.50%	3.11%			6.37%	10/28/2019
2028-2029 Custom Benchmark		5.22%	18.14%	3.48%			6.46%	
2026/2027 Enrollment Option	\$152,782,081	3.71%	13.82%	2.14%			5.21%	10/28/2019
2026-2027 Custom Benchmark		4.08%	14.82%	2.71%			5.43%	
2024/2025 Enrollment Option	\$174,561,549	3.01%	10.30%	1.59%			4.32%	10/28/2019
2024-2025 Custom Benchmark		3.34%	11.86%	2.51%			4.68%	
In School Option	\$253,341,755	2.70%	8.96%	2.18%			3.39%	10/28/2019
In School Custom Benchmark		3.14%	10.83%	3.09%			3.56%	

MINNESOTA COLLEGE SAVINGS PLAN

Performance Statistics for the Period Ending: September 30, 2024

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
U.S. and International Equity Option	\$312,982,874	7.63%	32.17%	8.02%	12.03%	10.19%	8.08%	10/ 1/2001
BB: U.S. and International Equity Option		7.66%	32.14%	8.20%	12.09%	10.20%	8.73%	
Moderate Allocation Option	\$114,812,896	6.38%	23.24%	4.74%	7.93%	7.14%	6.11%	8/ 2/2007
BB: Moderate Allocation Option		6.44%	23.42%	4.98%	8.00%	7.23%	6.59%	
100% Fixed-Income Option	\$19,198,927	4.47%	10.81%	-0.28%	1.24%	2.13%	3.00%	8/16/2007
BB: 100% Fixed-Income Option		4.61%	11.12%	-0.13%	1.47%	2.39%	3.52%	
International Equity Index Option	\$11,712,158	7.63%	25.32%	4.93%	7.91%	5.47%	5.73%	6/18/2013
BB: International Equity Index Option		7.59%	25.15%	4.55%	7.82%	5.46%	5.79%	
Money Market Option	\$30,827,687	1.28%	5.31%	3.42%	2.21%	1.49%	1.03%	11/ 1/2007
BB: Money Market Option		1.24%	5.10%	3.28%	2.08%	1.38%	0.96%	
Principal Plus Interest Option	\$87,998,064	0.71%	2.89%	1.95%	1.86%	1.71%	2.35%	10/10/2001
Citigroup 3-Month U.S. Treasury Bill		1.37%	5.63%	3.63%	2.38%	1.67%	1.57%	
Aggressive Allocation Option	\$119,946,622	7.05%	27.69%	6.43%	10.00%	8.68%	8.53%	8/12/2014
BB: Aggressive Allocation Option		7.05%	27.72%	6.61%	10.08%	8.74%	8.53%	
Conservative Allocation Option	\$19,220,288	4.53%	14.87%	2.90%	4.79%	4.55%	4.39%	8/18/2014
BB: Conservative Allocation Option		4.70%	15.74%	3.49%	5.08%	4.71%	4.59%	
Equity and Interest Accumulation Option	\$11,208,064	3.50%	18.10%	6.24%	8.63%	7.25%	7.14%	8/18/2014
BB: Equity and Interest Accumulation Option		3.78%	19.79%	7.32%	9.11%	7.44%	7.39%	
U.S. Large Cap Equity Option	\$177,283,076	5.85%	36.14%	11.74%	15.80%	13.17%	13.24%	8/12/2014
BB: U.S. Large Cap Equity Option		5.89%	36.35%	11.91%	15.98%	13.38%	13.37%	
Large Cap Responsible Equity Option	\$3,609,238	6.30%	33.74%	9.29%			8.67%	6/11/2021
BB: Social Choice Equity Option		5.89%	36.14%	10.55%			9.87%	
Matching Grant	\$985,680	0.71%	2.89%	1.95%	1.86%	1.71%	2.35%	3/22/2002
Citigroup 3-Month U.S. Treasury Bill		1.37%	5.63%	3.63%	2.38%	1.67%	1.57%	

MINNESOTABLE^{plan}

A member of The National ABLE Alliance

Performance as of
09/30/24

Total Market Value: **\$50,992,939**

<u>Fund Name</u>	<u>Market Value</u>	<u>% of Plan</u>	<u>1 Month</u>	<u>3 Months</u>	<u>YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Inception</u>	<u>Date</u>
Aggressive Option	\$4,174,497	8.19%	2.17	7.73	14.69	28.14	5.05	9.83		9.46	12/15/16
ABLE Aggressive Custom Benchmark			2.31	7.92	15.04	28.55	5.30	10.16		9.86	
Variance			(0.14)	(0.19)	(0.35)	(0.41)	(0.25)	(0.33)		(0.40)	
Moderately Aggressive Option	\$4,669,444	9.16%	2.02	7.18	12.89	24.82	4.38	8.59		8.33	12/15/16
ABLE Moderately Aggressive Custom Benchmark			2.15	7.34	13.18	25.25	4.62	8.89		8.72	
Variance			(0.13)	(0.16)	(0.29)	(0.43)	(0.24)	(0.30)		(0.39)	
Growth Option	\$6,695,099	13.13%	1.78	6.34	11.03	21.18	3.59	7.25		7.13	12/15/16
ABLE Growth Custom Benchmark			1.88	6.41	11.36	21.61	3.84	7.53		7.50	
Variance			(0.10)	(0.07)	(0.33)	(0.43)	(0.25)	(0.28)		(0.37)	
Moderate Option	\$6,109,177	11.98%	1.69	5.66	9.34	17.98	2.86	5.90		5.94	12/15/16
ABLE Moderate Custom Benchmark			1.72	5.76	9.64	18.40	3.09	6.16		6.28	
Variance			(0.03)	(0.10)	(0.30)	(0.42)	(0.23)	(0.26)		(0.34)	
Moderately Conservative Option	\$5,363,507	10.52%	1.28	4.40	7.47	13.91	2.79	4.67		4.65	12/15/16
ABLE Moderately Conservative Custom Benchmark			1.33	4.48	7.84	14.40	3.12	4.94		4.97	
Variance			(0.05)	(0.08)	(0.37)	(0.49)	(0.33)	(0.27)		(0.32)	
Conservative Option	\$9,237,822	18.12%	0.73	2.48	4.82	8.20	2.51	2.86		2.80	12/15/16
ABLE Conservative Custom Benchmark			0.83	2.74	5.41	9.00	3.04	3.18		3.12	
Variance			(0.10)	(0.26)	(0.59)	(0.80)	(0.53)	(0.32)		(0.32)	
Checking Account Option	\$14,743,392	28.91%									03/30/17

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Quarterly Report

Non-Retirement

September 30, 2024



Quarterly Report

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

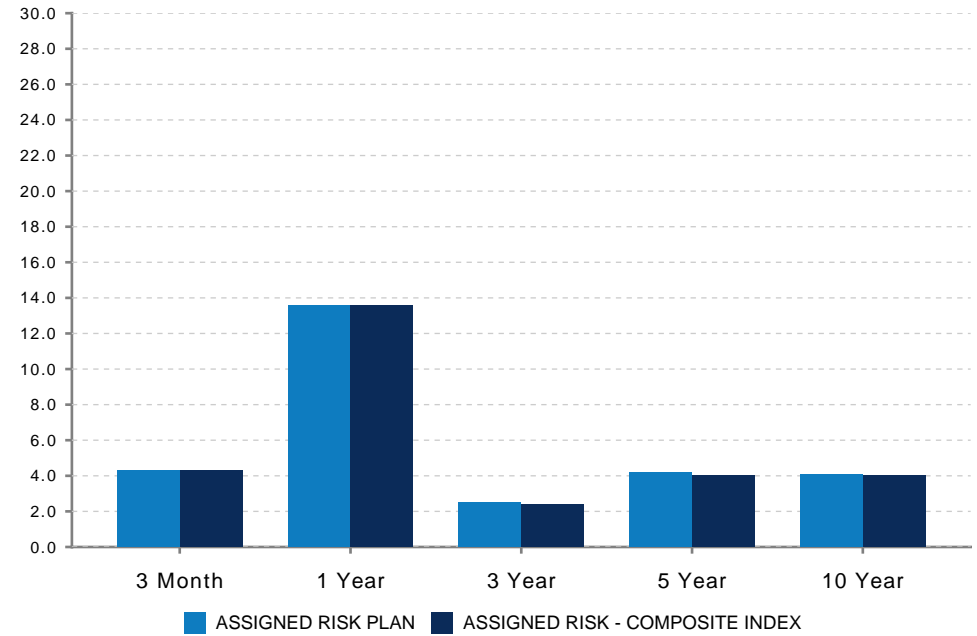
Assigned Risk Plan

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.

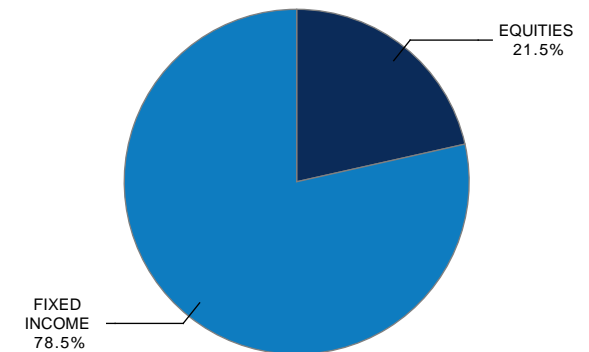
The Assigned Risk Plan is invested in a portfolio of common stocks and bonds

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.



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
ASSIGNED RISK PLAN	\$277,286,504	4.3%	13.6%	2.5%	4.2%	4.1%
EQUITIES	\$59,626,233	5.9%	36.2%	11.9%	16.0%	12.9%
FIXED INCOME	\$217,660,272	3.9%	8.2%	-0.1%	1.0%	1.6%
ASSIGNED RISK - COMPOSITE INDEX		4.3%	13.6%	2.4%	4.0%	4.0%
Excess		-0.0%	0.0%	0.1%	0.3%	0.1%
S&P 500		5.9%	36.4%	11.9%	16.0%	13.4%
Bloomberg U.S. Government: Intermediate		3.9%	8.3%	-0.1%	0.8%	1.5%



Note: Since 12/1/2017 the Assigned Risk equity segment has been managed by Mellon. From 1/17/2017-11/30/2017 it was managed internally by SBI staff. Prior to 1/17/2017 the equity segment was managed by SSgA (formerly GE Investment Mgmt.). RBC manages the fixed income segment of the Fund.



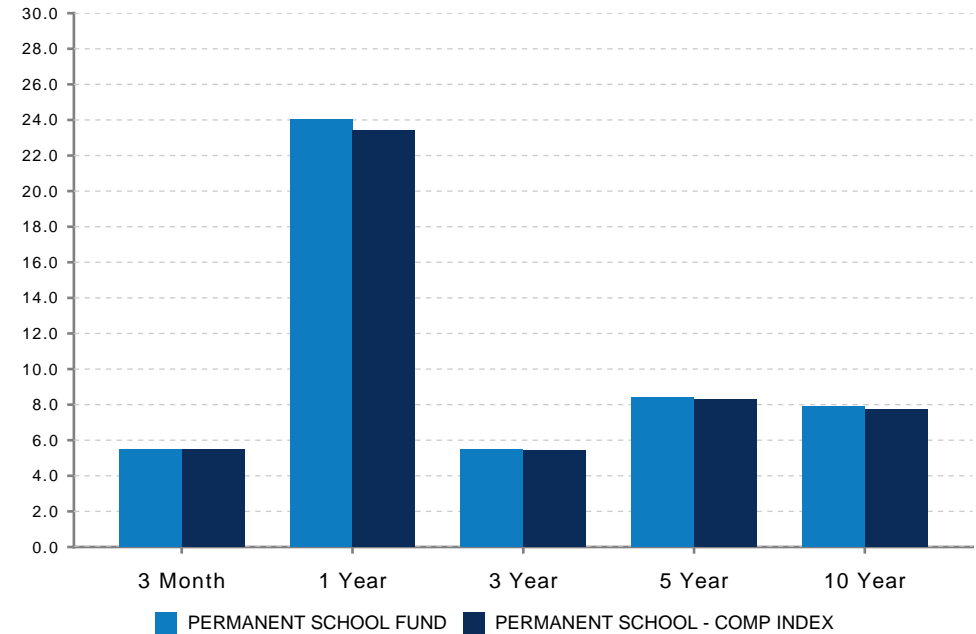
Non-Retirement

Permanent School Fund

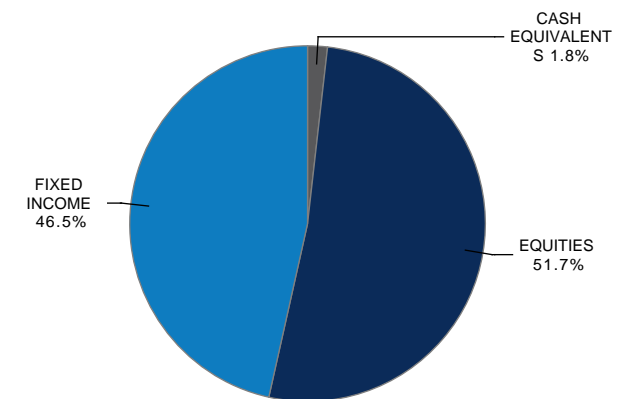
The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is transferred to the school endowment fund and distributed to Minnesota's public schools.

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	\$2,239,879,351	5.5%	24.0%	5.5%	8.4%	7.9%
CASH EQUIVALENTS	\$40,136,486	1.4%	5.6%	3.7%	2.4%	1.7%
EQUITIES	\$1,158,735,852	5.9%	36.2%	11.9%	16.0%	13.4%
FIXED INCOME	\$1,041,007,013	5.3%	12.4%	-1.3%	0.6%	2.2%
PERMANENT SCHOOL - COMP INDEX		5.5%	23.4%	5.4%	8.3%	7.7%
Excess		0.0%	0.6%	0.1%	0.2%	0.2%
S&P 500		5.9%	36.4%	11.9%	16.0%	13.4%
Bloomberg U.S. Aggregate		5.2%	11.6%	-1.4%	0.3%	1.8%



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.



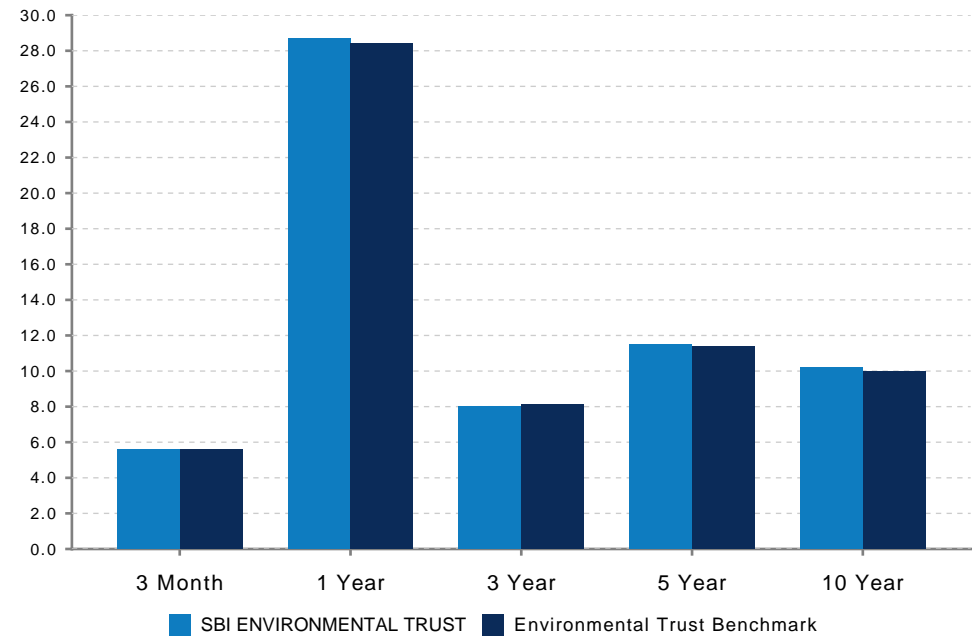
Non-Retirement

Environmental Trust Fund

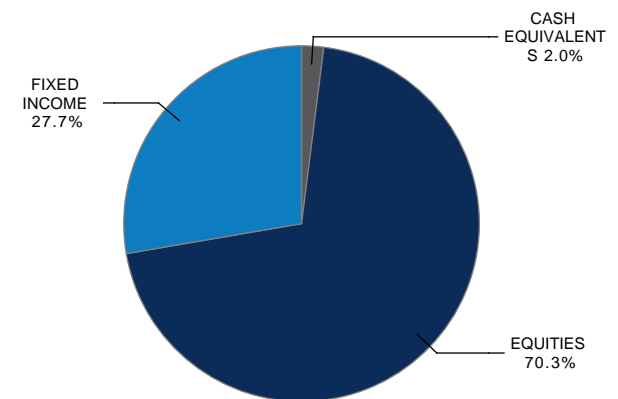
The objective of the Environmental Trust Fund is to increase the market value of the Fund over time in order to increase the annual amount made available for spending within the constraints of maintaining adequate portfolio quality and liquidity.

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.



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
SBI ENVIRONMENTAL TRUST	\$1,972,575,718	5.6%	28.7%	8.0%	11.5%	10.2%
CASH EQUIVALENTS	\$39,054,511	1.4%	5.6%	3.7%	2.4%	1.7%
EQUITIES	\$1,386,912,281	5.9%	36.2%	11.9%	16.0%	13.4%
FIXED INCOME	\$546,608,926	5.3%	12.4%	-1.3%	0.6%	2.2%
ENVIRONMENTAL TRUST BENCHMARK		5.6%	28.4%	8.1%	11.4%	10.0%
Excess		0.0%	0.3%	-0.0%	0.2%	0.1%
S&P 500		5.9%	36.4%	11.9%	16.0%	13.4%
Bloomberg U.S. Aggregate		5.2%	11.6%	-1.4%	0.3%	1.8%



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.

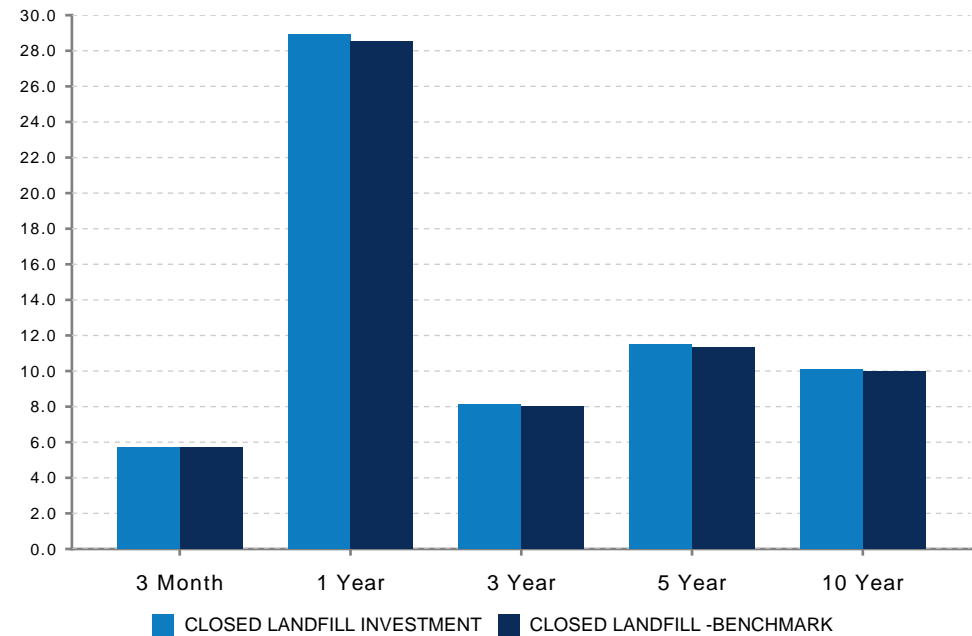


Non-Retirement

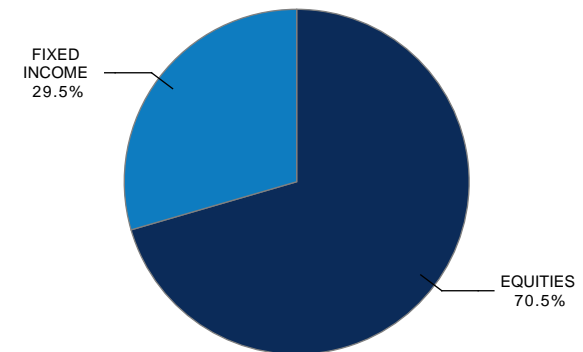
Closed Landfill Investment Fund

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.



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
CLOSED LANDFILL INVESTMENT	\$157,400,063	5.7%	28.9%	8.1%	11.5%	10.1%
EQUITIES	\$111,017,201	5.9%	36.2%	11.9%	16.0%	13.4%
FIXED INCOME	\$46,382,862	5.3%	12.4%	-1.3%	0.6%	2.2%
CLOSED LANDFILL -BENCHMARK		5.7%	28.5%	8.0%	11.3%	10.0%
Excess		0.0%	0.4%	0.2%	0.1%	0.1%
S&P 500		5.9%	36.4%	11.9%	16.0%	13.4%
Bloomberg U.S. Aggregate		5.2%	11.6%	-1.4%	0.3%	1.8%



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>
NON RETIREMENT EQUITY INDEX - MELLON	3,687,246,850	5.9	5.9	36.3	11.9	16.0	13.4	10.6	07/1993
S&P 500 INDEX (DAILY)		5.9	5.9	36.4	11.9	16.0	13.4	10.6	07/1993
Excess		-0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	
NON RETIREMENT FIXED INCOME - PRUDENTIAL	1,827,149,376	5.3	5.3	12.4	-1.3	0.6	2.2	5.1	07/1994
Bloomberg U.S. Aggregate		5.2	5.2	11.6	-1.4	0.3	1.8	4.7	07/1994
Excess		0.1	0.1	0.9	0.1	0.3	0.3	0.5	
ASSIGNED RISK FIXED INCOME - RBC	217,660,317	3.9	3.9	8.2	-0.1	1.0	1.6	4.3	07/1991
RBC Custom Benchmark		3.9	3.9	8.3	-0.1	0.8	1.5	4.3	07/1991
Excess		-0.1	-0.1	-0.1	0.0	0.1	0.1	-0.1	
MET COUNCIL OPEB BOND POOL	124,994,183	3.4	3.4	7.8	0.7	1.1			02/2009
Duluth Laddered Fixed Income Fund	122,671,610	7.9	7.9						07/2024
NON RETIREMENT CASH ACCOUNT	738,798,347	1.4	1.4	5.6	3.7	2.4		2.4	12/2017
ICE BofA US 3-Month Treasury Bill		1.4	1.4	5.5	3.5	2.3		2.3	12/2017

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

State Cash

September 30, 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	27,633,016,246	1.5	5.9	3.2	2.2	1.6
iMoneyNet Money Fund Average-All Taxable		1.2	5.1	3.3	2.1	1.4

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	109,638,255	3.5	8.3	2.1	2.3	2.0
Housing Finance	1,070,356,124	1.8	5.8			



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

Domestic Equity Benchmark:

Since 12/1/2020 the benchmark is the Russell 3000. From 1/1/2019-11/30/2020 the benchmark was 90% Russell 1000 and 10% Russell 2000. From 10/1/2003 to 12/31/2018 it was the Russell 3000. From 7/1/1999 to 9/30/2003, it was the Wilshire 5000 Investable Index. From 11/1/1993 to 6/30/1999, the target was the Wilshire 5000 as reported with no adjustments. Prior to 11/1/1993, the Wilshire 5000 was adjusted to reflect SBI mandated restrictions, which included liquor and tobacco, American Home Products and South Africa.

Fixed Interest Blended Benchmark: Since 6/1/2002, equals 3 Year Constant Maturity Treasury Yield + 45 bps. Prior to this change it was the 3 Year Constant Maturity Treasury Yield + 30 bps.

International Equity Benchmark:

Since 12/1/2020 equals the MSCI ACWI ex-US(Net). From 1/1/2018 to 1/1/2019 it was 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). From 6/1/08 to 12/31/2018 the International Equity asset class target was the Standard (large + mid) MSCI ACWI ex U.S. (net). From 10/1/07 through 5/31/08 the benchmark was the Provisional Standard MSCI ACWI ex U.S. (net). From 10/1/03 to 9/30/07 the target was MSCI ACWI ex U.S. (net). From 1/1/01 to 9/30/03, the target was MSCI EAFE Free (net) plus Emerging Markets Free (net), and from 7/1/99 to 12/31/00 the target was MSCI EAFE Free (net) plus Emerging Markets Free (gross). From 7/1/99 to 9/30/03, the weighting of each index fluctuated with market capitalization. From 10/1/01 to 5/31/02 all international benchmarks being reported were the MSCI Provisional indices. From 12/31/96 to 6/30/99 the benchmark was fixed at 87% EAFE Free (net)/13% Emerging Markets Free (gross). On 5/1/96, the portfolio began transitioning from 100% EAFE Free (net) to the 12/31/96 fixed weights. Prior to 5/1/96 it was 100% the EAFE Free (net).

Multi-Asset Credit Benchmark:

33.33% ICE BofA High Yield, 33.33% S&P LSTA Leveraged Loan, and 33.33% JPM EMBI Global Diversified Index.

Passive Domestic Equity Benchmark:

A weighted average of the Russell 1000, Russell 2000 and Russell 3000 effective 11/1/2018. From 10/1/2016 to 11/1/2018 it was a weighted average of the Russell 1000 and Russell 3000. From 10/1/2003 to 10/1/2016 it was equal to the Russell 3000. From 7/1/2000 to 9/30/2003, it was the Wilshire 5000 Investable Index. From 11/1/1993 to 6/30/2000, the target was the Wilshire 5000 as reported with no adjustments. Prior to 11/1/1993, the Wilshire 5000 was adjusted to reflect SBI mandated restrictions, which included liquor and tobacco, American Home Products and South Africa.

Passive Manager Benchmark:

Russell 3000 effective 10/1/2003. From 7/1/2000 to 9/30/2003, it was the Wilshire 5000 Investable Index. From 11/1/1993 to 6/30/2000, the target was the Wilshire 5000 as reported with no adjustments. Prior to 11/1/1993, the Wilshire 5000 was adjusted to reflect SBI mandated restrictions, which included liquor and tobacco, American Home Products and South Africa.



Addendum

Public Equity Benchmark:

Since 12/1/2020 it is 67% Russell 3000 and 33% MSCI ACWI ex-US(net). From 1/1/2019 to 12/1/2020 it was 60.3% Russell 1000, 6.7% Russell 2000, 24.75% MSCI World Ex US (net), and 8.25% MSCI EM (net). From 7/1/2017 thru 12/31/2018 it was 67% Russell 3000 and 33% MSCI ACWI ex USA. Prior to 6/30/16 the returns of Domestic and International Equity were not reported as a total Public Equity return. From 6/30/16-6/30/17 the Public Equity benchmark adjusted by 2% each quarter from 75% Russell 3000 and 25% MSCI ACWI ex USA until it reached 67% and 33%.

Return Seeking BM:

A weighted composite of each individual return seeking fixed income managers' benchmarks. The calculation uses the average weight of the manager relative to the total group of active managers during the month.

Semi-Passive Domestic Equity Benchmark: Russell 1000 index effective 1/1/2004. Prior to 1/1/2004 it was the Completeness Fund benchmark.

Total Fixed Income Benchmark:

Since 7/1/2020 the Total Fixed Income benchmark is 40% Bloomberg U.S. Aggregate Index/ 40% Bloomberg Treasury 5+ Years Index/ 20% ICE BofA US 3-Month Treasury Bill. From 4/1/2019-6/30/2020 it was 50% Bloomberg Aggregate and 50% Bloomberg Treasury 5+ Years Index. From 2/1/2018-3/31/19 the weighting of this benchmark reflected the relative weights of the Core Bonds and Treasuries allocations in the Combined Funds Composite.

Zevenbergen Benchmark: Russell 3000 Growth index effective 1/1/2021. Prior to 1/1/2021 it was the Russell 1000 Growth Index.

