



## Quarterly Report

---

# Comprehensive Performance Report

December 31, 2022



## 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.

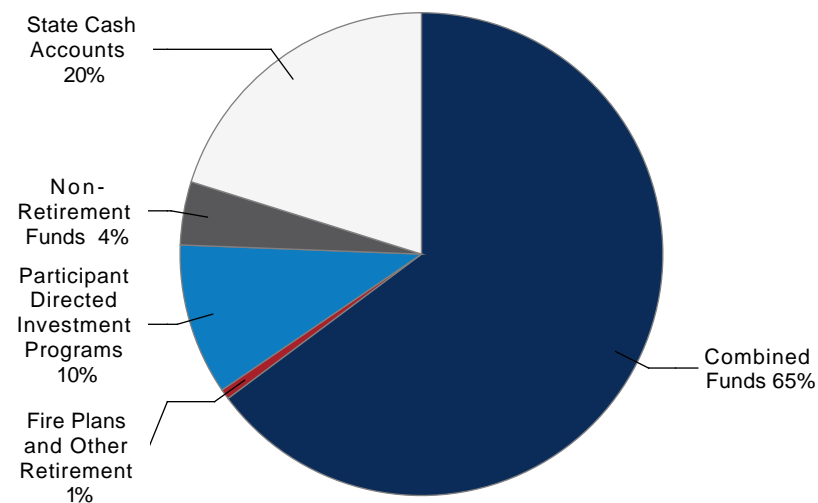
### State Cash

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>
<b>COMBINED FUNDS</b>	<b>\$80,120</b>
<b>Fire Plans + Other Retirement Plans</b>	<b>847</b>
<b>Participant Directed Investment Program</b>	<b>12,520</b>
State Deferred Compensation Plan	8,588
Health Care Savings Plan	1,642
Unclassified Employees Retirement Plan	329
Hennepin County Supplemental Retirement Plan	153
PERA Defined Contribution Plan	84
Minnesota College Savings Plan	1,693
Minnesota Achieving a Better Life Experience Plan	31
<b>Non-Retirement Funds</b>	<b>5,235</b>
Assigned Risk Plan	254
Permanent School Fund	1,736
Environmental Trust Fund	1,448
Closed Landfill Investment Fund	115
Miscellaneous Trust Funds	915
Other Postemployment Benefits Accounts	767
<b>State Cash</b>	<b>24,924</b>
Invested Treasurer's Cash	24,764
Other State Cash Accounts	159
<b>TOTAL SBI AUM</b>	<b>123,646</b>



Note: Differentials within column amounts may occur due to rounding



## Quarterly Report

### Table of Contents

<b>Combined Funds</b>	<b>5</b>
Domestic Equity	
International Equity	
Fixed Income	
Private Markets	
Treasuries	
 <b>Participant Directed Investment Program</b>	 <b>93</b>
Supplemental Investment Fund	
Deferred Compensation Program	
Minnesota College Savings Plan	
Minnesota Achieve a Better Life Experience	
 <b>Non-Retirement Funds</b>	 <b>109</b>
Assigned Risk Plan	
Permanent School Fund	
Environmental Trust Fund	
Closed Landfill Investment Fund	
Non-Retirement Managers	
 <b>State Cash Accounts</b>	 <b>117</b>
Invested Treasurer's Cash	
Other State Cash Accounts	
 <b>Addendum</b>	 <b>119</b>

### 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

## December 31, 2022



## Combined Funds Summary

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

	One Quarter
<b>Combined Funds</b>	
Beginning Market Value	\$77,122
Net Contributions	-669
Investment Return	3,667
Ending Market Value	80,120

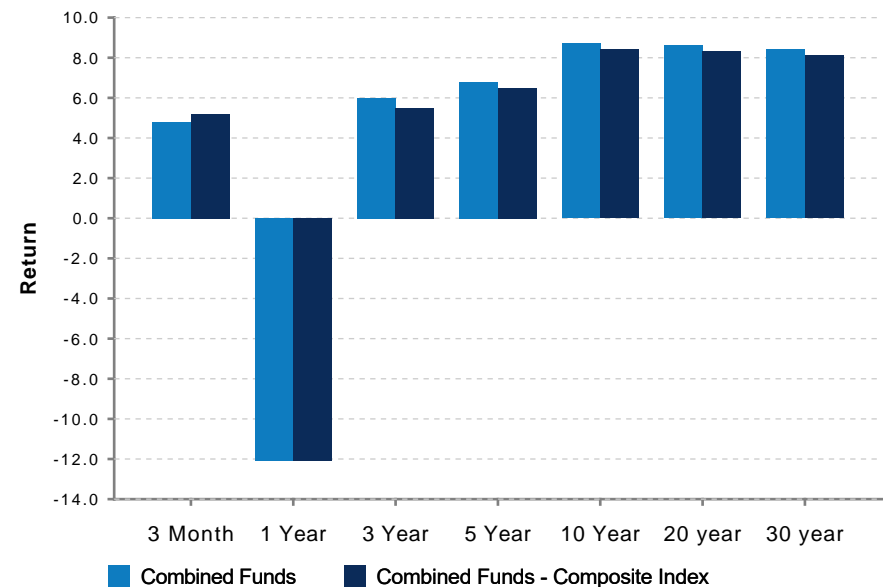
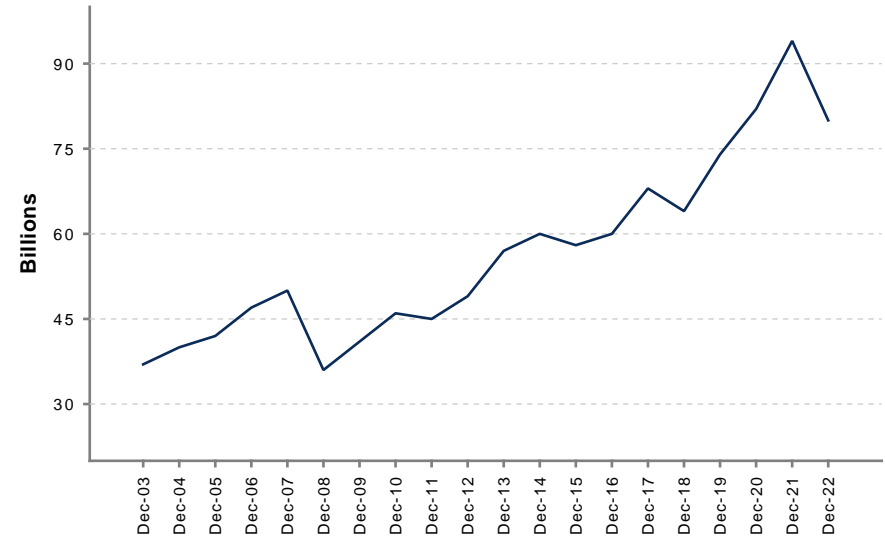
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

### 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	4.8%	0.2%	-12.1%	6.0%	6.8%	8.7%	8.6%	8.4%
Combined Funds - Composite Index	5.2%	0.1%	-12.1%	5.5%	6.5%	8.4%	8.3%	8.1%
Excess	-0.4%	0.1%	-0.0%	0.5%	0.3%	0.3%	0.2%	0.2%

### Asset Growth

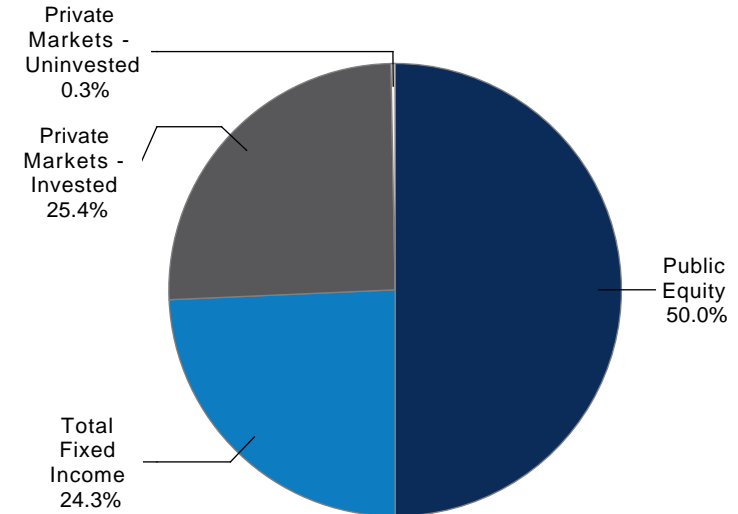


## Combined Funds Summary

### 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 Public Equity.

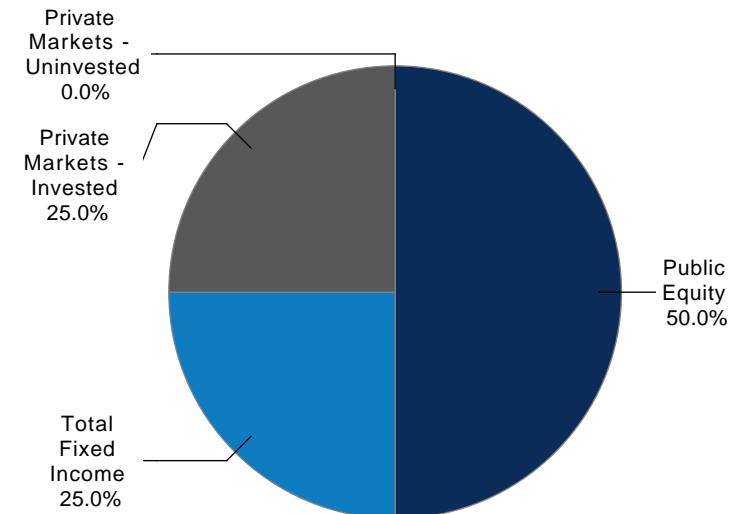
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$40,037	50.0%	50.0%
Total Fixed Income	19,464	24.3	25.0
Private Markets - Total	20,619	25.7	25.0
Private Markets - Invested	20,363	25.4	
Private Markets - Uninvested	256	0.3	
<b>TOTAL</b>	<b>80,120</b>	<b>100.0</b>	



### Composite Index Comparison

The Combined Funds Composite is set as the Strategic Asset Allocation Policy Target. Asset class weights for Private Markets - Invested and Private Markets - Uninvested are reset at the start of each month. 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	25.0	Private Markets
Private Markets - Uninvested	0.0	





## 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	\$40.0	50.0%	50.0%	8.8%	2.9%	-17.8%	5.3%	6.5%	10.0%	9.0%	8.5%
Public Equity Benchmark				9.6	2.7	-18.0	4.8	6.2			
Excess				-0.8	0.2	0.2	0.5	0.3			
Domestic Equity	26.7	33.3	33.5	7.3	2.6	-19.4	7.3	8.9	12.1	9.8	9.3
Domestic Equity Benchmark				7.2	2.4	-19.2	7.0	8.7	12.1	9.9	9.4
Excess				0.1	0.2	-0.2	0.3	0.1	0.0	-0.1	-0.1
International Equity	12.5	15.6	16.5	12.0	3.9	-13.7	1.5	1.8	4.7	7.1	6.4
International Equity Benchmark				14.3	3.0	-16.0	0.0	0.9	3.8	6.7	5.7
Excess				-2.3	1.0	2.3	1.5	1.0	0.9	0.4	0.7
Global Equity	0.8	1.0	0.0	8.6	-1.1	-27.7					
MSCI AC World Index Net				9.8	2.3	-18.4					
Excess				-1.2	-3.4	-9.4					

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	\$19.5	24.3%	25.0%	1.4%	-3.0%	-13.6%	-1.9%	0.9%	1.7%	3.7%	5.0%
Total Fixed Income Benchmark				1.1%	-3.5%	-13.3%	-2.2%				
Excess				0.3%	0.5%	-0.3%	0.3%				
Core/Core Plus	\$4.3	5.4%	5.0	2.1%	-2.6%	-14.1%	-2.3%	0.5%	1.5%	3.6%	4.9%
Core Bonds Benchmark				1.9%	-3.0%	-13.0%	-2.7%	0.0%	1.1%	3.1%	4.6%
Excess				0.3%	0.3%	-1.1%	0.4%	0.4%	0.5%	0.5%	0.4%
Return Seeking Fixed Income	\$4.0	5.0%	5.0	3.8%	1.1%	-11.4%					
Bloomberg U.S. Aggregate				1.9%	-3.0%	-13.0%					
Excess				1.9%	4.0%	1.6%					
Treasury Protection	\$7.4	9.2%	10.0	-0.1%	-7.1%	-20.6%	-4.9%	-0.8%			
Bloomberg Treasury 5+ Year				0.4%	-6.5%	-20.3%	-4.7%	-0.9%			
Excess				-0.6%	-0.5%	-0.3%	-0.1%	0.1%			
Laddered Bond + Cash	\$3.7	4.7%	5.0	0.9%	1.3%	1.1%	0.6%	1.2%	0.8%	1.5%	3.1%
ICE BofA US 3-Month Treasury Bill				0.8%	1.3%	1.5%	0.7%	1.3%	0.8%	1.3%	2.4%
Excess				0.1%	0.0%	-0.4%	-0.2%	-0.1%	0.1%	0.2%	0.7%

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	0.3%	-2.1%	4.9%	16.3%	14.2%	13.1%	14.1%	12.7%	13.4%
Private Markets - Uninvested (1)	7.4%	2.6%	-17.6%						
Private Equity	0.1%	-4.0%	0.3%	18.9%	17.5%	16.5%	16.2%	14.5%	15.8%
Private Credit	4.3%	5.5%	12.8%	13.2%	12.3%	13.5%	13.0%	12.9%	
Resources	0.2%	3.4%	21.8%	9.2%	5.0%	3.3%	13.8%	10.6%	13.0%
Real Estate	-0.9%	0.5%	19.7%	17.4%	14.6%	13.6%	10.3%	9.8%	9.7%

### 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 Private Markets Uninvested 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

## December 31, 2022

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.

---

This page intentionally left blank.



## Domestic Equity

### December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Domestic Equity</b>										
<b>ACTIVE DOMESTIC EQUITY AGGREGATE (1)</b>	<b>\$2,778,766,255</b>	<b>10.2%</b>	<b>7.6%</b>	<b>4.4%</b>	<b>-21.3%</b>	<b>5.9%</b>	<b>7.2%</b>	<b>11.2%</b>	<b>7.9%</b>	<b>06/1996</b>
Active Domestic Equity Benchmark			7.1	3.5	-19.4	5.1	6.5	10.8	8.5	06/1996
Excess			0.4	0.8	-1.9	0.8	0.7	0.4	-0.6	
<b>SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>2,745,141,950</b>	<b>10.1</b>	<b>7.5</b>	<b>2.6</b>	<b>-18.7</b>	<b>8.2</b>	<b>9.5</b>	<b>12.6</b>	<b>8.6</b>	<b>06/1996</b>
Semi Passive Domestic Equity Benchmark			7.2	2.3	-19.1	7.3	9.1	12.4	8.5	06/1996
Excess			0.3	0.3	0.4	0.8	0.4	0.2	0.1	
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (3)</b>	<b>21,705,173,493</b>	<b>79.7</b>	<b>7.2</b>	<b>2.3</b>	<b>-19.2</b>	<b>7.3</b>	<b>9.0</b>	<b>12.3</b>	<b>8.7</b>	<b>06/1996</b>
Passive Domestic Equity Benchmark			7.2	2.3	-19.1	7.3	9.0	12.3	8.8	06/1996
Excess			0.0	0.0	-0.0	0.0	0.0	-0.0	-0.1	
TRANSITION AGGREGATE DOMESTIC EQUITY (4)	60	0.0								
<b>TOTAL DOMESTIC EQUITY (5)</b>	<b>27,229,081,758</b>	<b>100.0</b>	<b>7.3</b>	<b>2.6</b>	<b>-19.4</b>	<b>7.3</b>	<b>8.9</b>	<b>12.2</b>	<b>10.3</b>	<b>01/1984</b>
Domestic Equity Benchmark			7.2	2.4	-19.2	7.0	8.7	12.1	10.5	01/1984
Excess			0.1	0.2	-0.2	0.3	0.1	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>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Total Domestic Equity</b>					
<b>ACTIVE DOMESTIC EQUITY AGGREGATE (1)</b>	<b>-21.3%</b>	<b>18.5%</b>	<b>27.3%</b>	<b>27.6%</b>	<b>-6.5%</b>
Active Domestic Equity Benchmark	-19.4	20.3	19.8	28.2	-8.0
Excess	-1.9	-1.7	7.5	-0.6	1.4
<b>SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>-18.7</b>	<b>28.8</b>	<b>21.0</b>	<b>30.9</b>	<b>-4.9</b>
Semi Passive Domestic Equity Benchmark	-19.1	26.5	21.0	31.4	-4.8
Excess	0.4	2.3	0.0	-0.5	-0.1
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (3)</b>	<b>-19.2</b>	<b>26.5</b>	<b>20.8</b>	<b>31.3</b>	<b>-5.0</b>
Passive Domestic Equity Benchmark	-19.1	26.4	20.8	31.3	-5.0
Excess	-0.0	0.1	0.0	0.0	-0.0
TRANSITION AGGREGATE DOMESTIC EQUITY (4)					
<b>TOTAL DOMESTIC EQUITY (5)</b>	<b>-19.4</b>	<b>25.8</b>	<b>21.7</b>	<b>30.7</b>	<b>-5.3</b>
Domestic Equity Benchmark	-19.2	25.7	20.8	30.8	-5.2
Excess	-0.2	0.1	0.9	-0.1	-0.0

(1) The Active Domestic Equity Benchmark is a weighted composite each of the individual active domestic equity manager's benchmarks.

(2) The current Semi-Passive Domestic Equity Benchmark is the Russell 1000 index.

(3) The current Passive Domestic Equity Benchmark is a weighted average of the Russell 1000, Russell 2000 and Russell 3000.

(4) The Transition Domestic Equity Aggregate will periodically contain residual Domestic Equity securities from transitions.

(5) The current Domestic Equity Benchmark is the Russell 3000.

Note: All aggregates include the performance of terminated managers. For historical benchmark details please refer to the addendum of this report.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Large Cap Growth</b>										
<b>SANDS</b>	<b>\$139,753,961</b>	<b>0.5%</b>	<b>1.7%</b>	<b>-1.9%</b>	<b>-49.3%</b>	<b>-3.0%</b>	<b>5.4%</b>	<b>10.1%</b>	<b>9.0%</b>	<b>01/2005</b>
Russell 1000 Growth			2.2	-1.5	-29.1	7.8	11.0	14.1	10.0	01/2005
Excess			-0.5	-0.4	-20.2	-10.8	-5.5	-4.0	-1.1	
<b>WINSLOW</b>	<b>148,507,890</b>	<b>0.5</b>	<b>7.5</b>	<b>1.5</b>	<b>-31.0</b>	<b>5.8</b>	<b>10.6</b>	<b>13.4</b>	<b>10.3</b>	<b>01/2005</b>
Russell 1000 Growth			2.2	-1.5	-29.1	7.8	11.0	14.1	10.0	01/2005
Excess			5.3	3.0	-1.8	-1.9	-0.3	-0.7	0.2	
<b>RUSSELL 1000 GROWTH AGGREGATE (1)</b>	<b>288,261,851</b>	<b>1.1</b>	<b>4.6</b>	<b>-0.2</b>	<b>-41.3</b>	<b>6.3</b>	<b>11.5</b>	<b>14.2</b>	<b>9.7</b>	<b>11/2003</b>
Russell 1000 Growth			2.2	-1.5	-29.1	7.8	11.0	14.1	10.0	11/2003
Excess			2.4	1.3	-12.1	-1.5	0.6	0.1	-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>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Large Cap Growth</b>					
<b>SANDS</b>	<b>-49.3%</b>	<b>5.2%</b>	<b>71.0%</b>	<b>33.5%</b>	<b>7.0%</b>
Russell 1000 Growth	-29.1	27.6	38.5	36.4	-1.5
Excess	-20.2	-22.4	32.5	-2.8	8.6
<b>WINSLOW</b>	<b>-31.0</b>	<b>24.8</b>	<b>37.6</b>	<b>34.2</b>	<b>4.2</b>
Russell 1000 Growth	-29.1	27.6	38.5	36.4	-1.5
Excess	-1.8	-2.8	-0.9	-2.2	5.7
<b>RUSSELL 1000 GROWTH AGGREGATE (1)</b>	<b>-41.3</b>	<b>12.8</b>	<b>81.3</b>	<b>37.3</b>	<b>4.7</b>
Russell 1000 Growth	-29.1	27.6	38.5	36.4	-1.5
Excess	-12.1	-14.8	42.8	0.9	6.2

(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>
<b>Semi-Passive Large Cap</b>										
<b>BLACKROCK</b>	<b>\$1,371,123,756</b>	<b>5.0%</b>	<b>7.6%</b>	<b>2.2%</b>	<b>-19.2%</b>	<b>7.7%</b>	<b>9.4%</b>	<b>12.9%</b>	<b>9.9%</b>	<b>01/1995</b>
Semi Passive Domestic Equity Benchmark			7.2	2.3	-19.1	7.3	9.1	12.4	9.5	01/1995
Excess			0.4	-0.0	-0.1	0.4	0.2	0.5	0.4	
<b>J.P. MORGAN</b>	<b>1,374,018,194</b>	<b>5.0</b>	<b>7.4</b>	<b>2.9</b>	<b>-18.1</b>	<b>8.7</b>	<b>9.8</b>	<b>13.0</b>	<b>9.9</b>	<b>01/1995</b>
Semi Passive Domestic Equity Benchmark			7.2	2.3	-19.1	7.3	9.1	12.4	9.5	01/1995
Excess			0.1	0.6	1.0	1.3	0.6	0.6	0.4	
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>	<b>2,745,141,950</b>	<b>10.1</b>	<b>7.5</b>	<b>2.6</b>	<b>-18.7</b>	<b>8.2</b>	<b>9.5</b>	<b>12.6</b>	<b>8.6</b>	<b>06/1996</b>
Semi Passive Domestic Equity Benchmark			7.2	2.3	-19.1	7.3	9.1	12.4	8.5	06/1996
Excess			0.3	0.3	0.4	0.8	0.4	0.2	0.1	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Semi-Passive Large Cap</b>					
<b>BLACKROCK</b>	<b>-19.2%</b>	<b>28.3%</b>	<b>20.7%</b>	<b>30.4%</b>	<b>-4.1%</b>
Semi Passive Domestic Equity Benchmark	-19.1	26.5	21.0	31.4	-4.8
Excess	-0.1	1.8	-0.3	-1.0	0.7
<b>J.P. MORGAN</b>					
<b>J.P. MORGAN</b>	<b>-18.1</b>	<b>29.3</b>	<b>21.2</b>	<b>31.3</b>	<b>-5.4</b>
Semi Passive Domestic Equity Benchmark	-19.1	26.5	21.0	31.4	-4.8
Excess	1.0	2.8	0.3	-0.1	-0.6
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>					
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>	<b>-18.7</b>	<b>28.8</b>	<b>21.0</b>	<b>30.9</b>	<b>-4.9</b>
Semi Passive Domestic Equity Benchmark	-19.1	26.5	21.0	31.4	-4.8
Excess	0.4	2.3	0.0	-0.5	-0.1



	<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>
<b>Active Large Cap Value</b>										
<b>BARROW HANLEY</b>	<b>\$366,821,838</b>	<b>1.3%</b>	<b>15.2%</b>	<b>9.7%</b>	<b>1.1%</b>	<b>9.7%</b>	<b>9.5%</b>	<b>11.8%</b>	<b>8.6%</b>	<b>04/2004</b>
Russell 1000 Value			12.4	6.1	-7.5	6.0	6.7	10.3	7.7	04/2004
Excess			2.8	3.6	8.6	3.8	2.9	1.5	0.9	
<b>LSV</b>	<b>344,553,649</b>	<b>1.3</b>	<b>14.4</b>	<b>6.7</b>	<b>-6.3</b>	<b>6.2</b>	<b>6.1</b>	<b>11.4</b>	<b>8.7</b>	<b>04/2004</b>
Russell 1000 Value			12.4	6.1	-7.5	6.0	6.7	10.3	7.7	04/2004
Excess			2.0	0.6	1.3	0.3	-0.6	1.1	0.9	
<b>RUSSELL 1000 VALUE AGGREGATE</b>	<b>711,375,487</b>	<b>2.6</b>	<b>14.8</b>	<b>8.3</b>	<b>-2.6</b>	<b>8.4</b>	<b>8.2</b>	<b>11.6</b>	<b>8.8</b>	<b>10/2003</b>
Russell 1000 Value			12.4	6.1	-7.5	6.0	6.7	10.3	8.4	10/2003
Excess			2.4	2.1	4.9	2.5	1.5	1.3	0.3	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Large Cap Value</b>					
<b>BARROW HANLEY</b>	<b>1.1%</b>	<b>27.7%</b>	<b>2.4%</b>	<b>26.9%</b>	<b>-5.9%</b>
Russell 1000 Value	-7.5	25.2	2.8	26.5	-8.3
Excess	8.6	2.5	-0.4	0.4	2.4
<b>LSV</b>					
<b>LSV</b>	<b>-6.3</b>	<b>29.7</b>	<b>-1.3</b>	<b>26.9</b>	<b>-11.8</b>
Russell 1000 Value	-7.5	25.2	2.8	26.5	-8.3
Excess	1.3	4.5	-4.1	0.4	-3.6
<b>RUSSELL 1000 VALUE AGGREGATE</b>					
<b>RUSSELL 1000 VALUE AGGREGATE</b>	<b>-2.6</b>	<b>28.8</b>	<b>1.6</b>	<b>27.4</b>	<b>-8.7</b>
Russell 1000 Value	-7.5	25.2	2.8	26.5	-8.3
Excess	4.9	3.7	-1.2	0.9	-0.4



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Small Cap Growth</b>										
<b>ARROWMARK</b>	<b>\$160,333,381</b>	<b>0.6%</b>	<b>8.0%</b>	<b>4.7%</b>	<b>-23.3%</b>	<b>-0.3%</b>	<b>3.8%</b>		<b>8.5%</b>	<b>11/2016</b>
Russell 2000 Growth			4.1	4.4	-26.4	0.6	3.5		8.0	11/2016
Excess			3.9	0.3	3.1	-0.9	0.2		0.6	
<b>HOOD RIVER</b>	<b>207,466,566</b>	<b>0.8</b>	<b>-0.3</b>	<b>3.9</b>	<b>-27.7</b>	<b>13.2</b>	<b>10.9</b>		<b>13.7</b>	<b>11/2016</b>
Russell 2000 Growth			4.1	4.4	-26.4	0.6	3.5		8.0	11/2016
Excess			-4.4	-0.5	-1.4	12.6	7.4		5.8	
<b>RICE HALL JAMES</b>	<b>174,745,131</b>	<b>0.6</b>	<b>3.1</b>	<b>-1.5</b>	<b>-24.4</b>	<b>2.7</b>	<b>3.5</b>		<b>9.0</b>	<b>11/2016</b>
Russell 2000 Growth			4.1	4.4	-26.4	0.6	3.5		8.0	11/2016
Excess			-1.0	-5.8	2.0	2.0	0.0		1.1	
<b>WELLINGTON</b>	<b>220,822,279</b>	<b>0.8</b>	<b>4.6</b>	<b>3.2</b>	<b>-28.5</b>	<b>-0.3</b>	<b>3.5</b>		<b>8.0</b>	<b>11/2016</b>
Russell 2000 Growth			4.1	4.4	-26.4	0.6	3.5		8.0	11/2016
Excess			0.4	-1.2	-2.1	-0.9	0.0		0.1	
<b>RUSSELL 2000 GROWTH AGGREGATE</b>	<b>763,367,357</b>	<b>2.8</b>	<b>3.6</b>	<b>2.6</b>	<b>-26.3</b>	<b>3.9</b>	<b>5.6</b>	<b>9.2%</b>	<b>7.1</b>	<b>11/2003</b>
Russell 2000 Growth			4.1	4.4	-26.4	0.6	3.5	9.2	7.9	11/2003
Excess			-0.6	-1.8	0.0	3.3	2.1	-0.0	-0.8	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Small Cap Growth</b>					
<b>ARROWMARK</b>	<b>-23.3%</b>	<b>6.1%</b>	<b>21.9%</b>	<b>20.1%</b>	<b>0.9%</b>
Russell 2000 Growth	-26.4	2.8	34.6	28.5	-9.3
Excess	3.1	3.2	-12.8	-8.4	10.3
<b>HOOD RIVER</b>	<b>-27.7</b>	<b>24.2</b>	<b>61.7</b>	<b>24.3</b>	<b>-7.0</b>
Russell 2000 Growth	-26.4	2.8	34.6	28.5	-9.3
Excess	-1.4	21.4	27.0	-4.2	2.3
<b>RICE HALL JAMES</b>	<b>-24.4</b>	<b>15.6</b>	<b>23.8</b>	<b>18.0</b>	<b>-6.9</b>
Russell 2000 Growth	-26.4	2.8	34.6	28.5	-9.3
Excess	2.0	12.8	-10.8	-10.5	2.4
<b>WELLINGTON</b>	<b>-28.5</b>	<b>4.3</b>	<b>33.1</b>	<b>35.6</b>	<b>-11.6</b>
Russell 2000 Growth	-26.4	2.8	34.6	28.5	-9.3
Excess	-2.1	1.4	-1.5	7.1	-2.3
<b>RUSSELL 2000 GROWTH AGGREGATE</b>	<b>-26.3</b>	<b>12.4</b>	<b>35.4</b>	<b>24.6</b>	<b>-6.2</b>
Russell 2000 Growth	-26.4	2.8	34.6	28.5	-9.3
Excess	0.0	9.5	0.8	-3.9	3.2



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Small Cap Value</b>										
<b>GOLDMAN SACHS</b>	<b>\$269,316,292</b>	<b>1.0%</b>	<b>9.8%</b>	<b>4.1%</b>	<b>-14.4%</b>	<b>3.6%</b>	<b>3.5%</b>	<b>9.0%</b>	<b>8.4%</b>	<b>01/2004</b>
Russell 2000 Value			8.4	3.4	-14.5	4.7	4.1	8.5	7.3	01/2004
Excess			1.4	0.7	0.1	-1.1	-0.6	0.5	1.1	
<b>HOTCHKIS AND WILEY</b>	<b>187,602,300</b>	<b>0.7</b>	<b>13.9</b>	<b>13.1</b>	<b>3.1</b>	<b>12.0</b>	<b>7.6</b>	<b>10.9</b>	<b>8.6</b>	<b>01/2004</b>
Russell 2000 Value			8.4	3.4	-14.5	4.7	4.1	8.5	7.3	01/2004
Excess			5.5	9.7	17.6	7.3	3.4	2.4	1.2	
<b>MARTINGALE</b>	<b>164,644,449</b>	<b>0.6</b>	<b>11.3</b>	<b>7.1</b>	<b>-8.0</b>	<b>7.4</b>	<b>5.0</b>	<b>10.3</b>	<b>7.6</b>	<b>01/2004</b>
Russell 2000 Value			8.4	3.4	-14.5	4.7	4.1	8.5	7.3	01/2004
Excess			2.8	3.7	6.4	2.7	0.9	1.8	0.3	
<b>PEREGRINE</b>	<b>254,472,702</b>	<b>0.9</b>	<b>9.5</b>	<b>3.4</b>	<b>-12.5</b>	<b>6.5</b>	<b>4.2</b>	<b>8.9</b>	<b>9.3</b>	<b>07/2000</b>
Russell 2000 Value			8.4	3.4	-14.5	4.7	4.1	8.5	8.7	07/2000
Excess			1.0	0.0	2.0	1.8	0.0	0.4	0.6	
<b>RUSSELL 2000 VALUE AGGREGATE</b>	<b>876,035,742</b>	<b>3.2</b>	<b>10.8</b>	<b>6.3</b>	<b>-9.4</b>	<b>6.6</b>	<b>4.7</b>	<b>9.5</b>	<b>8.6</b>	<b>10/2003</b>
Russell 2000 Value			8.4	3.4	-14.5	4.7	4.1	8.5	8.1	10/2003
Excess			2.4	2.9	5.1	1.9	0.5	1.0	0.5	





	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Small Cap Value</b>					
<b>GOLDMAN SACHS</b>	<b>-14.4%</b>	<b>27.0%</b>	<b>2.4%</b>	<b>23.2%</b>	<b>-13.3%</b>
Russell 2000 Value	-14.5	28.3	4.6	22.4	-12.9
Excess	0.1	-1.3	-2.3	0.8	-0.5
<b>HOTCHKIS AND WILEY</b>	<b>3.1</b>	<b>36.5</b>	<b>-0.2</b>	<b>19.7</b>	<b>-14.4</b>
Russell 2000 Value	-14.5	28.3	4.6	22.4	-12.9
Excess	17.6	8.2	-4.8	-2.7	-1.5
<b>MARTINGALE</b>	<b>-8.0</b>	<b>41.3</b>	<b>-4.6</b>	<b>21.1</b>	<b>-15.0</b>
Russell 2000 Value	-14.5	28.3	4.6	22.4	-12.9
Excess	6.4	13.0	-9.2	-1.3	-2.1
<b>PEREGRINE</b>	<b>-12.5</b>	<b>28.6</b>	<b>7.3</b>	<b>21.1</b>	<b>-16.1</b>
Russell 2000 Value	-14.5	28.3	4.6	22.4	-12.9
Excess	2.0	0.3	2.7	-1.3	-3.3
<b>RUSSELL 2000 VALUE AGGREGATE</b>	<b>-9.4</b>	<b>31.8</b>	<b>1.5</b>	<b>21.3</b>	<b>-14.7</b>
Russell 2000 Value	-14.5	28.3	4.6	22.4	-12.9
Excess	5.1	3.5	-3.1	-1.1	-1.8



	<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>
<b>Active All Cap</b>										
<b>ZEVENBERGEN (1)</b>	<b>\$139,725,818</b>	<b>0.5%</b>	<b>-13.0%</b>	<b>-6.0%</b>	<b>-55.7%</b>	<b>-3.3%</b>	<b>5.8%</b>	<b>11.9%</b>	<b>9.6%</b>	<b>04/1994</b>
Zevenbergen Custom Benchmark			2.3	-1.1	-29.0	9.2	11.8	14.5		04/1994
Excess			-15.3	-4.9	-26.8	-12.5	-6.1	-2.7		
<b>ACTIVE RUSSELL 3000 GROWTH (2)</b>	<b>139,725,818</b>	<b>0.5</b>	<b>-13.0</b>	<b>-6.0</b>	<b>-55.7</b>				<b>-36.8</b>	<b>01/2021</b>
Russell 3000 Growth TR			2.3	-1.1	-29.0				-5.5	01/2021
Excess			-15.3	-4.9	-26.8				-31.3	

(1) Effective 1/1/2021, the SBI changed the Zevenbergen Benchmark to the Russell 3000 Growth. Prior to this date it was the Russell 1000 Growth.

(2) Prior to 1/1/2021, Zevenbergen returns were reported as part of the Russell 1000 Growth Aggregate.



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active All Cap</b>					
<b>ZEVENBERGEN (1)</b>	<b>-55.7%</b>	<b>-9.7%</b>	<b>126.2%</b>	<b>43.0%</b>	<b>2.3%</b>
Zevenbergen Custom Benchmark	-29.0	32.3	38.5	36.4	-1.5
Excess	-26.8	-42.0	87.7	6.7	3.8
<b>ACTIVE RUSSELL 3000 GROWTH (2)</b>					
ACTIVE RUSSELL 3000 GROWTH (2)	<b>-55.7</b>	<b>-9.7</b>			
Russell 3000 Growth TR	-29.0	25.8			
Excess	-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>
<b>Total Passive Domestic Equity</b>										
<b>BLACKROCK RUSSELL 1000</b>	<b>\$20,646,951,584</b>	<b>75.8%</b>	<b>7.3%</b>	<b>2.3%</b>	<b>-19.2%</b>	<b>7.3%</b>	<b>9.1%</b>		<b>11.8%</b>	<b>11/2016</b>
RUSSELL 1000 (DAILY)			7.2	2.3	-19.1	7.3	9.1		11.8	11/2016
Excess			0.0	0.0	-0.0	-0.0	-0.0		-0.0	
<b>BLACKROCK RUSSELL 2000</b>	<b>122,084,248</b>	<b>0.4</b>	<b>5.9</b>	<b>3.6</b>	<b>-19.9</b>	<b>3.9</b>			<b>5.7</b>	<b>11/2018</b>
RUSSELL 2000 (DAILY)			6.2	3.9	-20.4	3.1			5.1	11/2018
Excess			-0.3	-0.3	0.6	0.8			0.6	
<b>BLACKROCK RUSSELL 3000 (1)</b>	<b>936,137,661</b>	<b>3.4</b>	<b>7.2</b>	<b>2.4</b>	<b>-19.2</b>	<b>7.3</b>	<b>9.0</b>	<b>12.2%</b>	<b>9.3</b>	<b>07/1995</b>
Passive Manager Benchmark			7.2	2.4	-19.2	7.1	8.8	12.1	9.2	07/1995
Excess			0.0	0.0	0.0	0.3	0.2	0.1	0.1	
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>21,705,173,493</b>	<b>79.7</b>	<b>7.2</b>	<b>2.3</b>	<b>-19.2</b>	<b>7.3</b>	<b>9.0</b>	<b>12.3</b>	<b>8.7</b>	<b>06/1996</b>
Passive Domestic Equity Benchmark			7.2	2.3	-19.1	7.3	9.0	12.3	8.8	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>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Total Passive Domestic Equity</b>					
<b>BLACKROCK RUSSELL 1000</b>	<b>-19.2%</b>	<b>26.5%</b>	<b>20.9%</b>	<b>31.4%</b>	<b>-4.8%</b>
RUSSELL 1000 (DAILY)	-19.1	26.5	21.0	31.4	-4.8
Excess	-0.0	0.1	-0.0	0.0	-0.0
<b>BLACKROCK RUSSELL 2000</b>	<b>-19.9</b>	<b>16.0</b>	<b>20.8</b>	<b>25.2</b>	
RUSSELL 2000 (DAILY)	-20.4	14.8	20.0	25.5	
Excess	0.6	1.2	0.8	-0.3	
<b>BLACKROCK RUSSELL 3000 (1)</b>	<b>-19.2</b>	<b>26.2</b>	<b>21.2</b>	<b>31.1</b>	<b>-5.2</b>
Passive Manager Benchmark	-19.2	25.7	20.9	31.0	-5.2
Excess	0.0	0.5	0.3	0.0	-0.0
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>-19.2</b>	<b>26.5</b>	<b>20.8</b>	<b>31.3</b>	<b>-5.0</b>
Passive Domestic Equity Benchmark	-19.1	26.4	20.8	31.3	-5.0
Excess	-0.0	0.1	0.0	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.

---

This page intentionally left blank.



# International Equity

## December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total International Equity</b>										
<b>DEVELOPED MARKETS (1)</b>	<b>\$9,074,663,677</b>	<b>71.6%</b>	<b>12.7%</b>	<b>6.2%</b>	<b>-10.7%</b>	<b>3.3%</b>	<b>3.2%</b>	<b>5.7%</b>	<b>5.7%</b>	<b>01/1997</b>
BENCHMARK DM			16.2%	5.5%	-14.3%	1.3%	1.8%	4.6%	4.5%	01/1997
Excess			-3.5%	0.7%	3.6%	2.0%	1.4%	1.1%	1.2%	
<b>EMERGING MARKETS (2)</b>	<b>3,081,497,594</b>	<b>24.3%</b>	<b>9.8</b>	<b>-1.6</b>	<b>-21.1</b>	<b>-2.8%</b>	<b>-1.4%</b>	<b>1.5%</b>	<b>5.0</b>	<b>11/1996</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4	1.4	5.2	11/1996
Excess			0.1	1.4	-1.0	-0.2	0.0	0.0	-0.3	
<b>ACWI EX-US AGGREGATE</b>	<b>351,173,133</b>	<b>2.8</b>	<b>14.2</b>	<b>3.6</b>	<b>-12.6</b>				<b>-0.7</b>	<b>01/2021</b>
MSCI AC WORLD ex US (NET) - DAILY			14.3	3.0	-16.0				-4.8	01/2021
Excess			-0.1	0.6	3.4				4.1	
<b>CHINA ONLY AGGREGATE</b>	<b>154,077,114</b>	<b>1.2</b>	<b>11.3</b>	<b>-10.2</b>	<b>-24.5</b>				<b>-14.3</b>	<b>01/2021</b>
MSCI China A			4.3	-14.7	-25.9				-12.6	01/2021
Excess			7.0	4.6	1.4				-1.8	
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)	4,084,462	0.0								
<b>TOTAL INTERNATIONAL EQUITY (4)</b>	<b>12,665,495,979</b>	<b>100.0</b>	<b>12.0</b>	<b>4.0</b>	<b>-13.7</b>	<b>1.5</b>	<b>1.8</b>	<b>4.6</b>	<b>6.1</b>	<b>10/1992</b>
International Equity Benchmark			14.3	3.0	-16.0	0.0	0.9	3.8	5.5	10/1992
Excess			-2.3	1.0	2.3	1.5	1.0	0.9	0.6	

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

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

(3) The Transition Aggregate International Equity 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.





	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Total International Equity</b>					
<b>DEVELOPED MARKETS (1)</b>	<b>-10.7%</b>	<b>13.5%</b>	<b>8.9%</b>	<b>23.3%</b>	<b>-14.2%</b>
BENCHMARK DM	-14.3%	12.6%	7.6%	22.5%	-14.1%
Excess	3.6%	0.9%	1.3%	0.8%	-0.1%
<b>EMERGING MARKETS (2)</b>					
<b>EMERGING MARKETS (2)</b>	<b>-21.1</b>	<b>-1.5</b>	<b>17.9</b>	<b>20.3</b>	<b>-15.4</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-1.0	1.1	-0.4	1.9	-0.8
<b>ACWI EX-US AGGREGATE</b>					
<b>ACWI EX-US AGGREGATE</b>	<b>-12.6</b>	<b>12.8</b>			
MSCI AC WORLD ex US (NET) - DAILY	-16.0	7.8			
Excess	3.4	4.9			
<b>CHINA ONLY AGGREGATE</b>					
<b>CHINA ONLY AGGREGATE</b>	<b>-24.5</b>	<b>-2.9</b>			
MSCI China A	-25.9	3.2			
Excess	1.4	-6.1			
<b>TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)</b>					
<b>TOTAL INTERNATIONAL EQUITY (4)</b>	<b>-13.7</b>	<b>8.9</b>	<b>11.4</b>	<b>22.4</b>	<b>-14.5</b>
International Equity Benchmark	-16.0	7.8	10.5	21.5	-14.2
Excess	2.3	1.1	0.8	0.9	-0.3

(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.



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Developed Markets</b>										
<b>ACADIAN</b>	<b>\$350,031,956</b>	<b>2.8%</b>	<b>15.2%</b>	<b>6.1%</b>	<b>-12.5%</b>	<b>3.5%</b>	<b>2.7%</b>	<b>7.9%</b>	<b>6.1%</b>	<b>07/2005</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	4.5	07/2005
Excess			-1.0	0.6	1.8	2.3	0.9	3.4	1.6	
<b>COLUMBIA</b>	<b>365,297,486</b>	<b>2.9</b>	<b>17.8</b>	<b>8.4</b>	<b>-15.0</b>	<b>3.7</b>	<b>4.1</b>	<b>6.7</b>	<b>3.4</b>	<b>03/2000</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	3.3	03/2000
Excess			1.6	2.9	-0.7	2.5	2.3	2.1	0.1	
<b>FIDELITY</b>	<b>350,279,126</b>	<b>2.8</b>	<b>16.2</b>	<b>4.3</b>	<b>-17.4</b>	<b>2.5</b>	<b>3.2</b>	<b>6.0</b>	<b>6.0</b>	<b>07/2005</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	4.5	07/2005
Excess			0.0	-1.2	-3.2	1.2	1.4	1.4	1.5	
<b>JP MORGAN</b>	<b>306,248,118</b>	<b>2.4</b>	<b>15.4</b>	<b>5.8</b>	<b>-19.0</b>	<b>1.5</b>	<b>2.2</b>	<b>4.8</b>	<b>4.7</b>	<b>07/2005</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	4.5	07/2005
Excess			-0.7	0.3	-4.7	0.3	0.4	0.3	0.3	
<b>MARATHON</b>	<b>345,642,440</b>	<b>2.7</b>	<b>16.9</b>	<b>6.6</b>	<b>-12.1</b>	<b>2.2</b>	<b>2.7</b>	<b>6.2</b>	<b>7.5</b>	<b>11/1993</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	4.8	11/1993
Excess			0.7	1.1	2.2	0.9	0.9	1.6	2.7	
<b>MCKINLEY</b>	<b>252,839,973</b>	<b>2.0</b>	<b>15.7</b>	<b>4.4</b>	<b>-18.0</b>	<b>2.1</b>	<b>2.4</b>	<b>5.6</b>	<b>4.5</b>	<b>07/2005</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	4.5	07/2005
Excess			-0.5	-1.1	-3.7	0.9	0.6	1.0	-0.0	
<b>AQR CAPITAL MANAGEMENT</b>	<b>326,974,293</b>	<b>2.6</b>	<b>16.9</b>	<b>4.8</b>	<b>-12.7</b>	<b>0.2</b>	<b>-0.1</b>	<b>4.1</b>	<b>4.4</b>	<b>07/2005</b>
BENCHMARK DM			16.2	5.5	-14.3	1.3	1.8	4.6	4.5	07/2005
Excess			0.7	-0.7	1.6	-1.1	-1.9	-0.5	-0.1	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Developed Markets</b>					
<b>ACADIAN</b>	<b>-12.5%</b>	<b>13.6%</b>	<b>11.7%</b>	<b>19.1%</b>	<b>-13.5%</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	1.8	0.9	4.2	-3.4	0.6
<b>COLUMBIA</b>	<b>-15.0</b>	<b>14.2</b>	<b>15.0</b>	<b>28.9</b>	<b>-14.9</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	-0.7	1.6	7.4	6.4	-0.8
<b>FIDELITY</b>	<b>-17.4</b>	<b>13.0</b>	<b>15.4</b>	<b>27.1</b>	<b>-14.6</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	-3.2	0.4	7.8	4.6	-0.5
<b>JP MORGAN</b>	<b>-19.0</b>	<b>13.3</b>	<b>14.2</b>	<b>28.5</b>	<b>-17.3</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	-4.7	0.7	6.6	6.0	-3.3
<b>MARATHON</b>	<b>-12.1</b>	<b>12.8</b>	<b>7.6</b>	<b>23.5</b>	<b>-13.4</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	2.2	0.2	0.1	1.0	0.7
<b>MCKINLEY</b>	<b>-18.0</b>	<b>11.6</b>	<b>16.4</b>	<b>25.6</b>	<b>-15.9</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	-3.7	-1.0	8.8	3.1	-1.9
<b>AQR CAPITAL MANAGEMENT</b>	<b>-12.7</b>	<b>8.1</b>	<b>6.5</b>	<b>20.8</b>	<b>-18.2</b>
BENCHMARK DM	-14.3	12.6	7.6	22.5	-14.1
Excess	1.6	-4.5	-1.1	-1.7	-4.1



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>1 Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Developed Markets</b>										
Active Developed Markets Aggregate (1)	\$2,297,313,392	18.1%	16.3%	5.8%	-15.2%	2.3%	2.5%	5.7%	5.2%	06/1996
BENCHMARK DM			16.2%	5.5%	-14.3%	1.3%	1.8%	4.6%	2.0%	06/1996
Excess			0.1%	0.3%	-0.9%	1.0%	0.7%	1.1%	3.2%	
SSgA DEVELOPED MARKETS PASSIVE	\$6,719,090,479	53.1%	16.3%	5.6%	-13.8%	1.8%	2.2%	5.0%		
BENCHMARK DM			16.2%	5.5%	-14.3%	1.3%	1.8%	4.6%		
Excess			0.1%	0.1%	0.5%	0.5%	0.4%	0.4%		
RECORD CURRENCY (2)	\$58,259,806	0.5%	-3.6%	0.6%	3.5%					10/2020
DEVELOPED MARKETS	\$9,074,663,677		12.7%	6.2%	-10.7%	3.3%	3.2%	5.7%	5.7%	01/1997
BENCHMARK DM			16.2%	5.5%	-14.3%	1.3%	1.8%	4.6%	4.5%	01/1997
Excess			-3.5%	0.7%	3.6%	2.0%	1.4%	1.1%	1.2%	

(1) Includes the historical returns of AQR and 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.



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Total Developed Markets</b>					
<b>Active Developed Markets Aggregate (1)</b>	<b>-15.2%</b>	<b>12.5%</b>	<b>12.2%</b>	<b>24.4%</b>	<b>-15.1%</b>
BENCHMARK DM	-14.3%	12.6%	7.6%	22.5%	-14.1%
Excess	-0.9%	-0.1%	4.6%	1.9%	-1.0%
<b>SSgA DEVELOPED MARKETS PASSIVE</b>	<b>-13.8%</b>	<b>13.0%</b>	<b>8.2%</b>	<b>23.0%</b>	<b>-13.9%</b>
BENCHMARK DM	-14.3%	12.6%	7.6%	22.5%	-14.1%
Excess	0.5%	0.4%	0.6%	0.5%	0.2%
<b>DEVELOPED MARKETS</b>	<b>-10.7%</b>	<b>13.5%</b>	<b>8.9%</b>	<b>23.3%</b>	<b>-14.2%</b>
BENCHMARK DM	-14.3%	12.6%	7.6%	22.5%	-14.1%
Excess	3.6%	0.9%	1.3%	0.8%	-0.1%

(1) Includes the historical returns of AQR and terminated managers previously classified as "Semi-Passive Developed Markets"



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Emerging Markets</b>										
<b>MARTIN CURRIE</b>	<b>\$356,083,603</b>	<b>2.8%</b>	<b>10.9%</b>	<b>-1.7%</b>	<b>-25.7%</b>	<b>-3.2%</b>	<b>-0.7%</b>		<b>4.1%</b>	<b>04/2017</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4		2.4	04/2017
Excess			1.2	1.3	-5.6	-0.5	0.6		1.7	
<b>MACQUARIE</b>	<b>327,273,885</b>	<b>2.6</b>	<b>8.3</b>	<b>-5.6</b>	<b>-26.5</b>	<b>-3.7</b>	<b>-1.0</b>		<b>2.8</b>	<b>04/2017</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4		2.4	04/2017
Excess			-1.4	-2.6	-6.4	-1.0	0.4		0.4	
<b>MORGAN STANLEY</b>	<b>429,420,220</b>	<b>3.4</b>	<b>10.7</b>	<b>3.1</b>	<b>-23.8</b>	<b>-3.0</b>	<b>-1.8</b>	<b>1.7%</b>	<b>7.7</b>	<b>01/2001</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4	1.4	7.5	01/2001
Excess			1.0	6.1	-3.7	-0.3	-0.4	0.3	0.2	
<b>NEUBERGER BERMAN</b>	<b>314,020,199</b>	<b>2.5</b>	<b>9.6</b>	<b>-2.1</b>	<b>-22.1</b>	<b>-5.6</b>	<b>-3.6</b>		<b>0.9</b>	<b>04/2017</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4		2.4	04/2017
Excess			-0.1	0.9	-2.0	-3.0	-2.2		-1.5	
<b>PZENA</b>	<b>342,372,902</b>	<b>2.7</b>	<b>11.9</b>	<b>3.4</b>	<b>-7.4</b>	<b>2.9</b>	<b>2.0</b>		<b>4.3</b>	<b>04/2017</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4		2.4	04/2017
Excess			2.2	6.4	12.7	5.6	3.4		1.9	
<b>ROCK CREEK</b>	<b>345,788,241</b>	<b>2.7</b>	<b>8.4</b>	<b>-2.1</b>	<b>-19.4</b>	<b>-2.3</b>	<b>-1.3</b>		<b>2.0</b>	<b>04/2017</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4		2.4	04/2017
Excess			-1.3	0.9	0.7	0.4	0.1		-0.5	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Emerging Markets</b>					
<b>MARTIN CURRIE</b>	<b>-25.7%</b>	<b>-3.5%</b>	<b>26.5%</b>	<b>27.3%</b>	<b>-16.6%</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-5.6	-1.0	8.2	8.8	-2.0
<b>MACQUARIE</b>	<b>-26.5</b>	<b>-2.2</b>	<b>24.2</b>	<b>23.2</b>	<b>-13.3</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-6.4	0.3	5.9	4.7	1.3
<b>MORGAN STANLEY</b>	<b>-23.8</b>	<b>3.5</b>	<b>15.7</b>	<b>20.4</b>	<b>-16.7</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-3.7	6.0	-2.6	1.9	-2.2
<b>NEUBERGER BERMAN</b>	<b>-22.1</b>	<b>-5.6</b>	<b>14.2</b>	<b>19.7</b>	<b>-17.1</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-2.0	-3.1	-4.1	1.3	-2.6
<b>PZENA</b>	<b>-7.4</b>	<b>9.3</b>	<b>7.7</b>	<b>13.4</b>	<b>-10.8</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	12.7	11.8	-10.6	-5.1	3.8
<b>ROCK CREEK</b>	<b>-19.4</b>	<b>-5.2</b>	<b>22.0</b>	<b>22.3</b>	<b>-17.6</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	0.7	-2.7	3.7	3.9	-3.1



	<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>
<b>Total Emerging Markets</b>										
<b>ACTIVE EMERGING MARKETS AGGREGATE</b>	<b>\$2,114,959,051</b>	<b>16.7%</b>	<b>10.0%</b>	<b>-0.7%</b>	<b>-21.4%</b>	<b>-2.9%</b>	<b>-1.2%</b>	<b>1.3%</b>	<b>2.7%</b>	<b>01/2012</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4	1.4	2.9	01/2012
Excess			0.3	2.2	-1.3	-0.2	0.2	-0.1	-0.2	
<b>SSGA EMERGING MARKETS PASSIVE</b>	<b>966,538,543</b>	<b>7.6</b>	<b>9.5</b>	<b>-3.3</b>	<b>-20.4</b>	<b>-2.9</b>	<b>-1.6</b>	<b>1.4</b>	<b>2.8</b>	<b>01/2012</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4	1.4	2.9	01/2012
Excess			-0.2	-0.3	-0.3	-0.2	-0.2	-0.1	-0.0	
<b>EMERGING MARKETS TOTAL</b>	<b>3,081,497,594</b>	<b>24.3</b>	<b>9.8</b>	<b>-1.6</b>	<b>-21.1</b>	<b>-2.8</b>	<b>-1.4</b>	<b>1.5</b>	<b>5.0</b>	<b>11/1996</b>
BENCHMARK EM			9.7	-3.0	-20.1	-2.7	-1.4	1.4	5.2	11/1996
Excess			0.1	1.4	-1.0	-0.2	0.0	0.0	-0.3	





	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Total Emerging Markets</b>					
<b>ACTIVE EMERGING MARKETS AGGREGATE</b>	<b>-21.4%</b>	<b>-0.9%</b>	<b>17.6%</b>	<b>21.4%</b>	<b>-15.6%</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-1.3	1.6	-0.7	3.0	-1.0
<b>SSGA EMERGING MARKETS PASSIVE</b>	<b>-20.4</b>	<b>-2.9</b>	<b>18.3</b>	<b>18.1</b>	<b>-14.7</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-0.3	-0.3	0.0	-0.3	-0.1
<b>EMERGING MARKETS TOTAL</b>	<b>-21.1</b>	<b>-1.5</b>	<b>17.9</b>	<b>20.3</b>	<b>-15.4</b>
BENCHMARK EM	-20.1	-2.5	18.3	18.4	-14.6
Excess	-1.0	1.1	-0.4	1.9	-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>
<b>Active ACWI ex-US</b>										
EARNEST PARTNERS ACWI EX US	\$351,173,133	2.8%	14.2%	3.6%	-12.6%				-0.7%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			14.3%	3.0%	-16.0%				-4.8%	01/2021
Excess			-0.1%	0.6%	3.4%				4.1%	
<b>TOTAL ACWI EX-US AGGREGATE</b>										
TOTAL ACWI EX-US AGGREGATE	\$351,173,133	2.8%	14.2%	3.6%	-12.6%				-0.7%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			14.3%	3.0%	-16.0%				-4.8%	01/2021
Excess			-0.1%	0.6%	3.4%				4.1%	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active ACWI ex-US</b>					
EARNEST PARTNERS ACWI EX US	-12.6%	12.8%			
MSCI AC WORLD ex US (NET) - DAILY	-16.0	7.8			
Excess	3.4	4.9			
<b>TOTAL ACWI EX-US AGGREGATE</b>					
MSCI AC WORLD ex US (NET) - DAILY	-16.0	7.8			
Excess	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>
<b>China Only Managers</b>										
<b>EARNEST PARTNERS CHINA</b>	<b>\$154,077,114</b>	<b>1.2%</b>	<b>11.3%</b>	<b>-10.2%</b>	<b>-24.5%</b>				<b>-14.3%</b>	<b>01/2021</b>
MSCI China A			4.3	-14.7	-25.9				-12.6	01/2021
Excess			7.0	4.6	1.4				-1.8	
<b>CHINA ONLY AGGREGATE</b>	<b>154,077,114</b>	<b>1.2</b>	<b>11.3</b>	<b>-10.2</b>	<b>-24.5</b>				<b>-14.3</b>	<b>01/2021</b>
MSCI China A			4.3	-14.7	-25.9				-12.6	01/2021
Excess			7.0	4.6	1.4				-1.8	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>China Only Managers</b>					
<b>EARNEST PARTNERS CHINA</b>	<b>-24.5%</b>	<b>-2.9%</b>			
MSCI China A	-25.9	3.2			
Excess	1.4	-6.1			
<b>CHINA ONLY AGGREGATE</b>					
MSCI China A	-25.9	3.2			
Excess	1.4	-6.1			

---

This page intentionally left blank.



## Global Equity

### December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Global Equity Managers</b>										
<b>ARIEL INVESTMENTS</b>	<b>\$364,395,952</b>	<b>43.6%</b>	<b>9.5%</b>	<b>-0.8%</b>	<b>-5.6%</b>				<b>2.9%</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			9.8	2.3	-18.4				-1.6	01/2021
Excess			-0.2	-3.1	12.8				4.5	
<b>BAILLIE GIFFORD</b>	<b>172,967,535</b>	<b>20.7</b>	<b>1.4</b>	<b>-3.7</b>	<b>-46.9</b>				<b>-26.0</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			9.8	2.3	-18.4				-1.6	01/2021
Excess			-8.3	-6.0	-28.5				-24.4	
<b>MARTIN CURRIE INVESTMENTS - GLOBAL EQ</b>	<b>297,536,322</b>	<b>35.6</b>	<b>12.0</b>	<b>0.1</b>	<b>-32.9</b>				<b>-13.0</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			9.8	2.3	-18.4				-1.6	01/2021
Excess			2.2	-2.2	-14.5				-11.4	
<b>GLOBAL EQUITY</b>	<b>834,899,810</b>	<b>100.0</b>	<b>8.6</b>	<b>-1.1</b>	<b>-27.7</b>				<b>-11.0</b>	<b>01/2021</b>
MSCI AC WORLD NET USD DAILY			9.8	2.3	-18.4				-1.6	01/2021
Excess			-1.2	-3.4	-9.4				-9.4	





	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Global Equity Managers</b>					
<b>ARIEL INVESTMENTS</b>	<b>-5.6%</b>	<b>12.1%</b>			
MSCI AC WORLD NET USD DAILY	-18.4	18.5			
Excess	12.8	-6.5			
<b>BAILLIE GIFFORD</b>	<b>-46.9</b>	<b>3.1</b>			
MSCI AC WORLD NET USD DAILY	-18.4	18.5			
Excess	-28.5	-15.5			
<b>MARTIN CURRIE INVESTMENTS - GLOBAL EQ</b>	<b>-32.9</b>	<b>12.8</b>			
MSCI AC WORLD NET USD DAILY	-18.4	18.5			
Excess	-14.5	-5.8			
<b>GLOBAL EQUITY</b>	<b>-27.7</b>	<b>9.6</b>			
MSCI AC WORLD NET USD DAILY	-18.4	18.5			
Excess	-9.4	-8.9			

---

This page intentionally left blank.



## Core/Core Plus Bonds

### December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Bonds</b>										
<b>CORE (1)</b>	<b>\$1,862,671,253</b>	<b>41.2%</b>	<b>2.2%</b>	<b>-2.1%</b>	<b>-12.3%</b>				<b>-5.5%</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0				-6.4	11/2020
Excess			0.3	0.8	0.7				0.9	
<b>CORE PLUS (1)</b>	<b>2,662,040,309</b>	<b>58.8</b>	<b>2.1</b>	<b>-3.0</b>	<b>-15.2</b>				<b>-6.8</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0				-6.4	11/2020
Excess			0.2	-0.0	-2.2				-0.4	
TRANSITION AGGREGATE CORE BONDS (2)	19,207	0.0								
<b>TOTAL CORE/CORE PLUS BONDS (3)</b>	<b>4,524,730,769</b>	<b>100.0</b>	<b>2.1</b>	<b>-2.6</b>	<b>-14.1</b>	<b>-2.3%</b>	<b>0.4%</b>	<b>1.5%</b>	<b>6.7</b>	<b>07/1984</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0	-2.7	0.0	1.1	6.4	07/1984
Excess			0.3	0.3	-1.1	0.4	0.4	0.5	0.3	

(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>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Bonds</b>					
<b>CORE (1)</b>	<b>-12.3%</b>	<b>-1.0%</b>			
Bloomberg U.S. Aggregate	-13.0	-1.5			
Excess	0.7	0.5			
<b>CORE PLUS (1)</b>	<b>-15.2</b>	<b>-1.1</b>			
Bloomberg U.S. Aggregate	-13.0	-1.5			
Excess	-2.2	0.4			
TRANSITION AGGREGATE CORE BONDS (2)					
<b>TOTAL CORE/CORE PLUS BONDS (3)</b>	<b>-14.1</b>	<b>-1.1</b>	<b>9.7%</b>	<b>9.7%</b>	<b>-0.0%</b>
Bloomberg U.S. Aggregate	-13.0	-1.5	7.5	8.7	0.0
Excess	-1.1	0.5	2.2	1.0	-0.1

(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>
<b>Active Core</b>										
<b>DODGE &amp; COX</b>	<b>\$993,659,661</b>	<b>22.0%</b>	<b>2.4%</b>	<b>-1.5%</b>	<b>-11.3%</b>	<b>-1.3%</b>	<b>1.1%</b>	<b>2.1%</b>	<b>5.0%</b>	<b>02/2000</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0	-2.7	0.0	1.1	4.0	02/2000
Excess			0.6	1.5	1.7	1.4	1.1	1.1	1.0	
<b>BLACKROCK</b>	<b>869,011,592</b>	<b>19.2</b>	<b>1.9</b>	<b>-2.9</b>	<b>-13.4</b>	<b>-2.5</b>	<b>0.2</b>	<b>1.2</b>	<b>4.4</b>	<b>04/1996</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0	-2.7	0.0	1.1	4.3	04/1996
Excess			0.0	0.1	-0.4	0.2	0.2	0.2	0.1	
<b>CORE</b>	<b>1,862,671,253</b>	<b>41.2</b>	<b>2.2</b>	<b>-2.1</b>	<b>-12.3</b>				<b>-5.5</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0				-6.4	11/2020
Excess			0.3	0.8	0.7				0.9	

(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>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Active Core</b>					
<b>DODGE &amp; COX</b>	<b>-11.3%</b>	<b>-0.7%</b>	<b>9.4%</b>	<b>9.6%</b>	<b>-0.0%</b>
Bloomberg U.S. Aggregate	-13.0	-1.5	7.5	8.7	0.0
Excess	1.7	0.8	1.8	0.9	-0.1
<b>BLACKROCK</b>					
<b>BLACKROCK</b>	<b>-13.4</b>	<b>-1.3</b>	<b>8.3</b>	<b>9.3</b>	<b>-0.1</b>
Bloomberg U.S. Aggregate	-13.0	-1.5	7.5	8.7	0.0
Excess	-0.4	0.2	0.8	0.6	-0.2
<b>CORE</b>					
<b>CORE</b>	<b>-12.3</b>	<b>-1.0</b>			
Bloomberg U.S. Aggregate	-13.0	-1.5			
Excess	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>
<b>Core Plus Bonds</b>										
<b>GOLDMAN SACHS</b>	<b>\$871,117,351</b>	<b>19.3%</b>	<b>2.0%</b>	<b>-3.1%</b>	<b>-13.9%</b>	<b>-2.6%</b>	<b>0.3%</b>	<b>1.3%</b>	<b>4.7%</b>	<b>07/1993</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0	-2.7	0.0	1.1	4.4	07/1993
Excess			0.1	-0.1	-0.9	0.1	0.2	0.3	0.3	
<b>NEUBERGER</b>	<b>854,474,948</b>	<b>18.9</b>	<b>2.0</b>	<b>-2.5</b>	<b>-13.8</b>	<b>-2.0</b>	<b>0.5</b>	<b>1.4</b>	<b>5.6</b>	<b>07/1988</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0	-2.7	0.0	1.1	5.4	07/1988
Excess			0.1	0.5	-0.8	0.7	0.5	0.3	0.3	
<b>WESTERN</b>	<b>936,448,010</b>	<b>20.7</b>	<b>2.3</b>	<b>-3.3</b>	<b>-17.6</b>	<b>-3.4</b>	<b>-0.0</b>	<b>1.6</b>	<b>7.4</b>	<b>07/1984</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0	-2.7	0.0	1.1	6.4	07/1984
Excess			0.5	-0.4	-4.6	-0.7	-0.0	0.6	1.0	
<b>CORE PLUS</b>	<b>2,662,040,309</b>	<b>58.8</b>	<b>2.1</b>	<b>-3.0</b>	<b>-15.2</b>				<b>-6.8</b>	<b>11/2020</b>
Bloomberg U.S. Aggregate			1.9	-3.0	-13.0				-6.4	11/2020
Excess			0.2	-0.0	-2.2				-0.4	

(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>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Core Plus Bonds</b>					
<b>GOLDMAN SACHS</b>	<b>-13.9%</b>	<b>-1.5%</b>	<b>9.0%</b>	<b>9.6%</b>	<b>-0.0%</b>
Bloomberg U.S. Aggregate	-13.0	-1.5	7.5	8.7	0.0
Excess	-0.9	0.0	1.5	0.9	-0.0
<b>NEUBERGER</b>	<b>-13.8</b>	<b>-0.6</b>	<b>9.9</b>	<b>9.0</b>	<b>-0.1</b>
Bloomberg U.S. Aggregate	-13.0	-1.5	7.5	8.7	0.0
Excess	-0.8	1.0	2.4	0.3	-0.1
<b>WESTERN</b>	<b>-17.6</b>	<b>-1.3</b>	<b>10.9</b>	<b>11.1</b>	<b>-0.2</b>
Bloomberg U.S. Aggregate	-13.0	-1.5	7.5	8.7	0.0
Excess	-4.6	0.3	3.4	2.4	-0.3
<b>CORE PLUS</b>	<b>-15.2</b>	<b>-1.1</b>			
Bloomberg U.S. Aggregate	-13.0	-1.5			
Excess	-2.2	0.4			

---

This page intentionally left blank.



# Return Seeking Bonds

## December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Return Seeking Bonds Managers</b>										
<b>COLUMBIA CREDIT PLUS</b>	<b>\$837,964,823</b>	<b>20.9%</b>	<b>3.4%</b>	<b>-1.3%</b>	<b>-15.3%</b>				<b>-6.7%</b>	<b>12/2020</b>
Credit Plus Benchmark			3.8	-0.6	-13.7				-6.8	12/2020
Excess			-0.4	-0.7	-1.6				0.1	
<b>PIMCO CREDIT PLUS</b>	<b>798,212,549</b>	<b>19.9</b>	<b>3.5</b>	<b>-0.5</b>	<b>-13.6</b>				<b>-6.0</b>	<b>12/2020</b>
Credit Plus Benchmark			3.8	-0.6	-13.7				-6.8	12/2020
Excess			-0.3	0.1	0.1				0.7	
<b>CREDIT PLUS</b>	<b>1,636,177,373</b>	<b>40.8</b>	<b>3.4</b>	<b>-0.9</b>	<b>-14.5</b>				<b>-6.4</b>	<b>12/2020</b>
Credit Plus Benchmark			3.8	-0.6	-13.7				-6.8	12/2020
Excess			-0.3	-0.3	-0.7				0.4	
<b>BLACKROCK OPPORTUNISTIC</b>	<b>526,810,755</b>	<b>13.1</b>	<b>2.7</b>	<b>1.3</b>	<b>-5.4</b>				<b>-2.2</b>	<b>12/2020</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.3	1.5				0.7	12/2020
Excess			1.8	-0.1	-6.8				-2.9	
<b>ASHMORE EMERGING MARKET</b>	<b>278,244,352</b>	<b>6.9</b>	<b>8.8</b>	<b>2.3</b>	<b>-17.2</b>				<b>-13.7</b>	<b>01/2021</b>
JPM JEMB Sovereign-only 50-50			8.3	3.3	-14.8				-10.2	01/2021
Excess			0.5	-1.0	-2.4				-3.5	
<b>TCW SECURITIZED CREDIT</b>	<b>386,053,534</b>	<b>9.6</b>	<b>-0.6</b>	<b>-1.7</b>	<b>-4.6</b>				<b>-2.5</b>	<b>07/2021</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.3	1.5				1.0	07/2021
Excess			-1.5	-3.0	-6.1				-3.5	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Return Seeking Bonds Managers</b>					
<b>COLUMBIA CREDIT PLUS</b>	<b>-15.3%</b>	<b>1.1%</b>			
Credit Plus Benchmark	-13.7	0.0			
Excess	-1.6	1.1			
<b>PIMCO CREDIT PLUS</b>	<b>-13.6</b>	<b>0.8</b>			
Credit Plus Benchmark	-13.7	0.0			
Excess	0.1	0.7			
<b>CREDIT PLUS</b>	<b>-14.5</b>	<b>0.9</b>			
Credit Plus Benchmark	-13.7	0.0			
Excess	-0.7	0.9			
<b>BLACKROCK OPPORTUNISTIC</b>	<b>-5.4</b>	<b>0.3</b>			
ICE BofA US 3-Month Treasury Bill	1.5	0.0			
Excess	-6.8	0.2			
<b>ASHMORE EMERGING MARKET</b>	<b>-17.2</b>	<b>-10.1</b>			
JPM JEMB Sovereign-only 50-50	-14.8	-5.3			
Excess	-2.4	-4.8			
<b>TCW SECURITIZED CREDIT</b>	<b>-4.6</b>				
ICE BofA US 3-Month Treasury Bill	1.5				
Excess	-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>
<b>Return Seeking Bonds Managers</b>										
<b>PAYDEN RYGEL</b>	<b>\$278,546,545</b>	<b>6.9%</b>	<b>6.1%</b>	<b>4.0%</b>	<b>-9.6%</b>				<b>-3.7%</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			4.9	3.5	-10.0				-3.9	01/2021
Excess			1.1	0.5	0.4				0.1	
<b>PGIM</b>	<b>321,787,387</b>	<b>8.0</b>	<b>5.5</b>	<b>4.0</b>	<b>-11.5</b>				<b>-4.4</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			4.9	3.5	-10.0				-3.9	01/2021
Excess			0.6	0.5	-1.5				-0.6	
<b>MULTI-ASSET CREDIT</b>	<b>600,333,932</b>	<b>15.0</b>	<b>5.8</b>	<b>4.0</b>	<b>-10.6</b>				<b>-4.1</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			4.9	3.5	-10.0				-3.9	01/2021
Excess			0.9	0.5	-0.6				-0.2	
<b>KKR</b>	<b>290,653,743</b>	<b>7.2</b>	<b>3.6</b>	<b>3.5</b>	<b>-11.0</b>				<b>-3.5</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			4.1	3.4	-11.1				-3.3	01/2021
Excess			-0.4	0.2	0.1				-0.3	
<b>OAKTREE</b>	<b>291,820,583</b>	<b>7.3</b>	<b>4.8</b>	<b>4.2</b>	<b>-9.5</b>				<b>-2.7</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			4.1	3.4	-11.1				-3.3	01/2021
Excess			0.7	0.8	1.6				0.5	
<b>HIGH YIELD</b>	<b>582,474,326</b>	<b>14.5</b>	<b>4.2</b>	<b>3.8</b>	<b>-10.3</b>				<b>-3.1</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			4.1	3.4	-11.1				-3.3	01/2021
Excess			0.2	0.5	0.8				0.1	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Return Seeking Bonds Managers</b>					
<b>PAYDEN RYSEL</b>	<b>-9.6%</b>	<b>2.6%</b>			
Multi-Asset Credit Benchmark	-10.0	2.7			
Excess	0.4	-0.1			
<b>PGIM</b>	<b>-11.5</b>	<b>3.2</b>			
Multi-Asset Credit Benchmark	-10.0	2.7			
Excess	-1.5	0.5			
<b>MULTI-ASSET CREDIT</b>	<b>-10.6</b>	<b>2.9</b>			
Multi-Asset Credit Benchmark	-10.0	2.7			
Excess	-0.6	0.2			
<b>KKR</b>	<b>-11.0</b>	<b>4.7</b>			
ICE BofA US Cash Pay HY Constrained	-11.1	5.3			
Excess	0.1	-0.6			
<b>OAKTREE</b>	<b>-9.5</b>	<b>4.5</b>			
ICE BofA US Cash Pay HY Constrained	-11.1	5.3			
Excess	1.6	-0.8			
<b>HIGH YIELD</b>	<b>-10.3</b>	<b>4.6</b>			
ICE BofA US Cash Pay HY Constrained	-11.1	5.3			
Excess	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>
<b>Return Seeking Bonds</b>										
<b>CREDIT PLUS</b>	<b>\$1,636,177,373</b>	<b>40.8%</b>	<b>3.4%</b>	<b>-0.9%</b>	<b>-14.5%</b>				<b>-6.4%</b>	<b>12/2020</b>
Credit Plus Benchmark			3.8	-0.6	-13.7				-6.8	12/2020
Excess			-0.3	-0.3	-0.7				0.4	
<b>OPPORTUNISTIC FI</b>	<b>526,810,755</b>	<b>13.1</b>	<b>2.7</b>	<b>1.3</b>	<b>-5.4</b>				<b>-2.2</b>	<b>12/2020</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.3	1.5				0.7	12/2020
Excess			1.8	-0.1	-6.8				-2.9	
<b>EMERGING MARKET DEBT</b>	<b>278,244,352</b>	<b>6.9</b>	<b>8.8</b>	<b>2.3</b>	<b>-17.2</b>				<b>-13.7</b>	<b>01/2021</b>
JPM JEMB Sovereign-only 50-50			8.3	3.3	-14.8				-10.2	01/2021
Excess			0.5	-1.0	-2.4				-3.5	
<b>SECURITIZED CREDIT</b>	<b>386,053,534</b>	<b>9.6</b>	<b>-0.6</b>	<b>-1.7</b>	<b>-4.6</b>				<b>-2.4</b>	<b>06/2021</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.3	1.5				0.9	06/2021
Excess			-1.5	-3.0	-6.1				-3.4	
<b>MULTI-ASSET CREDIT</b>	<b>600,333,932</b>	<b>15.0</b>	<b>5.8</b>	<b>4.0</b>	<b>-10.6</b>				<b>-4.1</b>	<b>01/2021</b>
Multi-Asset Credit Benchmark			4.9	3.5	-10.0				-3.9	01/2021
Excess			0.9	0.5	-0.6				-0.2	
<b>HIGH YIELD</b>	<b>582,474,326</b>	<b>14.5</b>	<b>4.2</b>	<b>3.8</b>	<b>-10.3</b>				<b>-3.1</b>	<b>01/2021</b>
ICE BofA US Cash Pay HY Constrained			4.1	3.4	-11.1				-3.3	01/2021
Excess			0.2	0.5	0.8				0.1	
<b>RETURN SEEKING BONDS (1)</b>	<b>4,011,979,318</b>	<b>100.0</b>	<b>3.8</b>	<b>1.1</b>	<b>-11.3</b>				<b>-4.8</b>	<b>12/2020</b>
Return Seeking Fixed Income Benchmark			3.6	1.3	-9.8				-4.2	12/2020
Excess			0.2	-0.2	-1.6				-0.6	

(1) Includes Return Seeking Bonds transition account.





	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Return Seeking Bonds</b>					
<b>CREDIT PLUS</b>	<b>-14.5%</b>	<b>0.9%</b>			
Credit Plus Benchmark	-13.7	0.0			
Excess	-0.7	0.9			
<b>OPPORTUNISTIC FI</b>	<b>-5.4</b>	<b>0.3</b>			
ICE BofA US 3-Month Treasury Bill	1.5	0.0			
Excess	-6.8	0.2			
<b>EMERGING MARKET DEBT</b>	<b>-17.2</b>	<b>-10.1</b>			
JPM JEMB Sovereign-only 50-50	-14.8	-5.3			
Excess	-2.4	-4.8			
<b>SECURITIZED CREDIT</b>	<b>-4.6</b>				
ICE BofA US 3-Month Treasury Bill	1.5				
Excess	-6.1				
<b>MULTI-ASSET CREDIT</b>	<b>-10.6</b>	<b>2.9</b>			
Multi-Asset Credit Benchmark	-10.0	2.7			
Excess	-0.6	0.2			
<b>HIGH YIELD</b>	<b>-10.3</b>	<b>4.6</b>			
ICE BofA US Cash Pay HY Constrained	-11.1	5.3			
Excess	0.8	-0.7			
<b>RETURN SEEKING BONDS (1)</b>	<b>-11.3</b>	<b>0.9</b>			
Return Seeking Fixed Income Benchmark	-9.8	0.8			
Excess	-1.6	0.1			

(1) Includes Return Seeking Bonds transition account.

---

This page intentionally left blank.



# Treasuries

## December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Treasuries Managers</b>										
<b>BLACKROCK</b>	<b>\$2,217,742,738</b>	<b>30.0%</b>	<b>0.1%</b>	<b>-7.0%</b>	<b>-20.6%</b>	<b>-5.0%</b>			<b>-0.7%</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			0.4	-6.5	-20.3	-4.7			-0.4	02/2018
Excess			-0.4	-0.5	-0.3	-0.3			-0.2	
<b>GOLDMAN SACHS</b>	<b>2,471,087,165</b>	<b>33.4</b>	<b>-0.2</b>	<b>-7.0</b>	<b>-20.6</b>	<b>-4.9</b>			<b>-0.5</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			0.4	-6.5	-20.3	-4.7			-0.4	02/2018
Excess			-0.6	-0.4	-0.3	-0.2			-0.1	
<b>NEUBERGER</b>	<b>2,698,930,834</b>	<b>36.5</b>	<b>-0.2</b>	<b>-7.2</b>	<b>-20.5</b>	<b>-4.7</b>			<b>-0.5</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			0.4	-6.5	-20.3	-4.7			-0.4	02/2018
Excess			-0.7	-0.7	-0.2	0.0			-0.0	
<b>TOTAL TREASURIES</b>	<b>7,387,760,736</b>	<b>100.0</b>	<b>-0.1</b>	<b>-7.1</b>	<b>-20.6</b>	<b>-4.9</b>			<b>-0.5</b>	<b>02/2018</b>
Bloomberg Treasury 5+ Year			0.4	-6.5	-20.3	-4.7			-0.4	02/2018
Excess			-0.6	-0.5	-0.3	-0.1			-0.1	



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Treasuries Managers</b>					
<b>BLACKROCK</b>	<b>-20.6%</b>	<b>-4.0%</b>	<b>12.5%</b>	<b>10.4%</b>	
Bloomberg Treasury 5+ Year	-20.3	-3.8	12.8	10.4	
Excess	-0.3	-0.2	-0.3	-0.1	
<b>GOLDMAN SACHS</b>	<b>-20.6</b>	<b>-3.9</b>	<b>12.7</b>	<b>10.6</b>	
Bloomberg Treasury 5+ Year	-20.3	-3.8	12.8	10.4	
Excess	-0.3	-0.1	-0.1	0.1	
<b>NEUBERGER</b>	<b>-20.5</b>	<b>-3.4</b>	<b>12.8</b>	<b>10.4</b>	
Bloomberg Treasury 5+ Year	-20.3	-3.8	12.8	10.4	
Excess	-0.2	0.4	-0.1	-0.0	
<b>TOTAL TREASURIES</b>	<b>-20.6</b>	<b>-3.7</b>	<b>12.7</b>	<b>10.4</b>	
Bloomberg Treasury 5+ Year	-20.3	-3.8	12.8	10.4	
Excess	-0.3	0.0	-0.2	0.0	

---

This page intentionally left blank.



## Laddered Bonds + Cash

### December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Laddered Bond and Cash Managers</b>									
<b>Neuberger Berman Ladder Bond</b>	<b>\$1,107,234,700</b>	<b>29.6%</b>	<b>0.9%</b>	<b>0.8%</b>				<b>0.4%</b>	<b>11/2020</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.5				0.7	11/2020
Excess			0.1	-0.6				-0.3	
<b>Goldman Sachs Ladder Bond</b>	<b>1,108,677,597</b>	<b>29.7</b>	<b>0.9</b>	<b>0.9</b>				<b>0.5</b>	<b>11/2020</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.5				0.7	11/2020
Excess			0.1	-0.5				-0.2	
<b>Treasury Ladder Aggregate</b>	<b>2,215,912,297</b>	<b>59.3</b>	<b>0.9</b>	<b>0.9</b>				<b>0.4</b>	<b>11/2020</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.5				0.7	11/2020
Excess			0.1	-0.6				-0.3	
<b>Combined Funds STIF</b>	<b>1,477,241,072</b>	<b>39.5</b>	<b>0.9</b>	<b>1.7</b>	<b>0.8%</b>	<b>1.3%</b>	<b>0.8%</b>	<b>1.5</b>	<b>01/2004</b>
iMoneyNet Money Fund Average-All Taxable			0.8	1.4	0.6	1.0	0.6	1.1	01/2004
Excess			0.1	0.4	0.2	0.3	0.3	0.4	
<b>TEACHERS RETIREMENT CD REPO</b>	<b>43,920,338</b>	<b>1.2</b>	<b>0.8</b>	<b>1.5</b>	<b>0.9</b>	<b>1.4</b>	<b>1.0</b>	<b>0.9</b>	<b>02/2012</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.5	0.7	1.3	0.8	0.7	02/2012
Excess			-0.0	0.1	0.2	0.1	0.2	0.2	
<b>Laddered Bond + Cash</b>	<b>3,737,204,933</b>	<b>100.0</b>	<b>0.9</b>	<b>1.1</b>	<b>0.6</b>	<b>1.2</b>	<b>0.8</b>	<b>4.2</b>	<b>12/1977</b>
ICE BofA US 3-Month Treasury Bill			0.8	1.5	0.7	1.3	0.8	4.4	12/1977
Excess			0.1	-0.4	-0.2	-0.1	0.1	-0.2	





	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Laddered Bond and Cash Managers</b>					
<b>Neuberger Berman Ladder Bond</b>	<b>0.8%</b>	<b>0.0%</b>			
ICE BofA US 3-Month Treasury Bill	1.5	0.0			
Excess	-0.6	-0.0			
<b>Goldman Sachs Ladder Bond</b>	<b>0.9</b>	<b>0.1</b>			
ICE BofA US 3-Month Treasury Bill	1.5	0.0			
Excess	-0.5	0.0			
<b>Treasury Ladder Aggregate</b>	<b>0.9</b>	<b>0.0</b>			
ICE BofA US 3-Month Treasury Bill	1.5	0.0			
Excess	-0.6	-0.0			
<b>Combined Funds STIF</b>	<b>1.7</b>	<b>0.1</b>	<b>0.5%</b>	<b>2.3%</b>	<b>2.0%</b>
iMoneyNet Money Fund Average-All Taxable	1.4	0.0	0.3	1.9	1.5
Excess	0.4	0.1	0.2	0.5	0.5
<b>TEACHERS RETIREMENT CD REPO</b>	<b>1.5</b>	<b>0.1</b>	<b>1.0</b>	<b>2.5</b>	<b>1.8</b>
ICE BofA US 3-Month Treasury Bill	1.5	0.0	0.7	2.3	1.9
Excess	0.1	0.0	0.4	0.2	-0.0
<b>Laddered Bond + Cash</b>	<b>1.1</b>	<b>0.0</b>	<b>0.6</b>	<b>2.3</b>	<b>1.9</b>
ICE BofA US 3-Month Treasury Bill	1.5	0.0	0.7	2.3	1.9
Excess	-0.4	-0.0	-0.1	0.1	0.0



# Uninvested Private Markets

## December 31, 2022



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Uninvested Private Markets Managers</b>										
<b>NISA PRIVATE MKT UNINV OVERLAY (1)</b>	<b>\$255,790,050</b>	<b>99.9%</b>	<b>8.7%</b>	<b>5.2%</b>	<b>-15.4%</b>				<b>4.1%</b>	<b>01/2021</b>
S&P 500 INDEX (DAILY)			8.4	3.1	-17.5				3.1	01/2021
Excess			0.3	2.1	2.1				1.0	
<b>BLACKROCK SP INDEX (2)</b>	<b>342,116</b>	<b>0.1</b>	<b>2.3</b>	<b>-2.6</b>	<b>-21.9</b>				<b>0.3</b>	<b>01/2021</b>
S&P 500 INDEX (DAILY)			3.4	-1.6	-21.2				0.7	01/2021
Excess			-1.1	-1.0	-0.6				-0.4	
<b>UNINVESTED PRIVATE MARKETS (3)</b>	<b>256,132,165</b>	<b>100.0</b>	<b>7.4</b>	<b>2.6</b>	<b>-17.6</b>				<b>3.0</b>	<b>01/2021</b>
S&P 500 INDEX (DAILY)			8.4	3.1	-17.5				3.1	01/2021
Excess			-1.0	-0.5	-0.1				-0.1	

(1) NISA Private Market Uninv Overlay is currently cash. Prior to 11/02/2022. NISA Private Market Uninv Overlay 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.

(2) Blackrock SP Index is currently cash. Prior to 10/17/2022. Blackrock SP Index was invested a passively managed S&P 500 Index strategy .

(3) 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.



	<u>2022 Calendar Return</u>	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>
<b>Uninvested Private Markets Managers</b>					
<b>NISA PRIVATE MKT UNINV OVERLAY</b>	<b>-15.4%</b>	<b>28.1%</b>			
S&P 500 INDEX (DAILY)	-17.5	28.7			
Excess	2.1	-0.6			
<b>BLACKROCK SP INDEX</b>					
<b>BLACKROCK SP INDEX</b>	<b>-21.9</b>	<b>28.9</b>			
S&P 500 INDEX (DAILY)	-21.2	28.7			
Excess	-0.6	0.2			
<b>UNINVESTED PRIVATE MARKETS</b>					
<b>UNINVESTED PRIVATE MARKETS</b>	<b>-17.6</b>	<b>28.6</b>			
S&P 500 INDEX (DAILY)	-17.5	28.7			
Excess	-0.1	-0.1			



# Private Markets

## December 31, 2022



## 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	0.3%	-2.1%	4.9%	16.3%	14.2%	13.1%	14.1%	12.7%	13.4%
Private Markets - Uninvested (1)	7.4%	2.6%	-17.6%						
Private Equity	0.1%	-4.0%	0.3%	18.9%	17.5%	16.5%	16.2%	14.5%	15.8%
Private Credit	4.3%	5.5%	12.8%	13.2%	12.3%	13.5%	13.0%	12.9%	
Resources	0.2%	3.4%	21.8%	9.2%	5.0%	3.3%	13.8%	10.6%	13.0%
Real Estate	-0.9%	0.5%	19.7%	17.4%	14.6%	13.6%	10.3%	9.8%	9.7%

### 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 Private Markets Uninvested 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.

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
<b>Private Equity</b>	<b>24,459,107,173</b>	<b>18,638,203,537</b>	<b>14,659,740,266</b>	<b>7,702,932,575</b>	<b>14,500,597,097</b>	<b>1.56</b>	<b>13.81</b>	
Adams Street Partners, LLC	398,191,000	184,935,511	117,846,307	213,351,400	146,638,477	1.43	11.62	
Adams Street Global Secondary Fund 5 LP	100,000,000	77,114,692	75,128,710	22,885,308	28,191,298	1.34	6.31	2012
Adams Street Global Secondary Fund 6	100,000,000	80,400,008	42,717,597	19,599,992	81,808,886	1.55	25.98	2017
Adams Street Global Secondary Fund 7	198,191,000	27,420,811	0	170,866,100	36,638,293	1.34	49.93	2021
Advent International Group	505,000,000	344,792,247	324,631,020	163,291,707	289,953,676	1.78	16.54	
Advent International GPE VI-A, L.P.	50,000,000	52,993,313	103,400,194	0	4,273,767	2.03	16.47	2008
Advent International GPE VII, L.P.	90,000,000	86,490,641	138,972,935	3,600,000	18,536,033	1.82	13.62	2012
Advent International GPE VIII-B	100,000,000	100,000,000	73,062,483	0	117,493,043	1.91	17.79	2016
Advent International GPE IX	115,000,000	100,058,293	9,195,408	14,941,707	145,293,397	1.54	29.29	2019
Advent International GPE X	150,000,000	5,250,000	0	144,750,000	4,357,437	0.83	-17.00	2022
Affinity Ventures	9,000,000	9,000,000	3,590,011	0	826,375	0.49	-11.57	
Affinity Ventures IV, L.P.	4,000,000	4,000,000	1,541,970	0	3,279	0.39	-36.39	2004
Affinity Ventures V, L.P.	5,000,000	5,000,000	2,048,042	0	823,096	0.57	-8.33	2008
Apax Partners	600,000,000	523,062,755	538,261,900	161,066,025	320,260,210	1.64	16.55	
APAX VIII - USD	200,000,000	240,451,261	348,098,981	7,966,190	47,610,862	1.65	13.78	2013
Apax IX USD L.P.	150,000,000	162,024,715	180,896,534	14,420,230	146,642,292	2.02	23.93	2016
Apax X USD L.P.	150,000,000	120,586,779	9,266,385	38,679,605	126,007,057	1.12	13.08	2019
Apax XI	100,000,000	0	0	100,000,000	0	0.00		2022
Arsenal Capital Partners	175,000,000	90,583,003	3,024,099	87,134,668	97,048,924	1.10	5.38	
Arsenal Capital Partners V, L.P.	75,000,000	71,375,568	2,739,855	6,076,596	81,153,215	1.18	7.38	2019
Arsenal Capital Partners VI LP	100,000,000	19,207,435	284,244	81,058,072	15,895,709	0.84	-18.57	2021
Asia Alternatives	399,000,000	137,015,949	16,651,370	274,550,616	136,516,485	1.12	6.35	
Asia Alternatives Capital Partners V	99,000,000	94,446,647	15,521,948	17,119,918	102,365,882	1.25	10.38	2017
MN Asia Investors	300,000,000	42,569,302	1,129,422	257,430,698	34,150,603	0.83	-19.89	2020
Banc Fund	178,551,387	187,460,477	42,688,009	0	205,190,757	1.32	6.32	
Banc Fund IX, L.P.	107,205,932	107,205,932	35,362,612	0	119,383,239	1.44	6.58	2014
Banc Fund X, L.P.	71,345,455	80,254,545	7,325,397	0	85,807,518	1.16	5.43	2018

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
BlackRock	951,774,870	956,392,392	4,487,465	0	1,271,402,561	1.33	22.51	
BlackRock Long Term Capital, SCSP	950,000,000	954,617,522	2,660,745	0	1,271,269,100	1.33	22.62	2019
BlackRock Tempus Fund	1,774,870	1,774,870	1,826,720	0	133,461	1.10	5.17	2015
Blackstone Group L.P.	1,535,000,000	841,927,722	695,255,307	788,708,659	513,202,512	1.44	14.86	
Blackstone Capital Partners Asia II	270,000,000	19,941,951	0	250,058,049	14,411,211	0.72	-27.73	2021
Blackstone Capital Partners IV, L.P.	70,000,000	84,459,884	201,361,236	1,832,302	197,857	2.39	37.02	2002
Blackstone Capital Partners V L.P.	140,000,000	152,406,707	245,675,051	7,027,560	904,611	1.62	8.02	2006
Blackstone Capital Partners VI, L.P.	100,000,000	106,536,526	151,074,729	11,175,309	38,441,195	1.78	12.37	2008
Blackstone Capital Partners VII	130,000,000	138,887,230	75,041,379	9,306,402	130,769,584	1.48	12.95	2015
Blackstone Capital Partners VIII LP	150,000,000	75,297,980	5,014,030	83,707,016	82,128,424	1.16	13.67	2019
Blackstone Capital Partners IX	150,000,000	0	0	150,000,000	0	0.00		2022
Blackstone Growth	250,000,000	201,139,854	17,088,881	63,702,019	185,251,858	1.01	0.54	2020
Blackstone Growth Equity II	150,000,000	0	0	150,000,000	0	0.00		2022
Blackstone Supplemental Account - M	125,000,000	63,257,591	0	61,900,000	61,097,774	0.97	-3.77	2021
Blackstone Strategic Partners	915,500,000	684,135,302	827,902,683	320,728,847	252,892,057	1.58	11.75	
Strategic Partners III VC, L.P.	25,000,000	25,059,678	33,874,990	115,168	264,285	1.36	5.97	2004
Strategic Partners III-B, L.P.	100,000,000	79,629,077	118,509,586	12,304,709	219,560	1.49	6.35	2004
Strategic Partners IV VC, L.P.	40,500,000	42,158,499	62,465,109	2,264,243	2,418,539	1.54	9.21	2008
Strategic Partners IV-B	100,000,000	99,369,278	152,721,770	11,657,975	3,221,654	1.57	12.17	2008
Strategic Partners V, LP	100,000,000	87,150,574	134,911,866	15,878,130	8,572,103	1.65	18.55	2011
Strategic Partners VI, L.P.	150,000,000	103,771,940	127,309,200	52,910,384	30,695,660	1.52	14.49	2014
Strategic Partners VII, L.P.	150,000,000	117,906,196	118,494,072	49,157,172	81,931,478	1.70	19.30	2016
Strategic Partners VIII	150,000,000	113,227,658	77,271,177	92,124,399	108,559,153	1.64	39.81	2018
Strategic Partners IX	100,000,000	15,862,402	2,344,913	84,316,667	17,009,625	1.22	23.63	2022
Bridgepoint	264,258,068	135,728,894	14,615,268	128,529,173	187,576,767	1.49	22.66	
Bridgepoint Europe VI L.P.	168,205,609	135,728,894	14,615,268	32,476,714	187,576,767	1.49	22.66	2018
Bridgepoint Europe VII	96,052,459	0	0	96,052,459	0	0.00		2022
Brookfield Asset Management Inc.	500,000,000	363,589,282	191,575,931	177,006,264	381,871,866	1.58	32.52	
Brookfield Capital Partners Fund IV	100,000,000	108,101,181	169,896,934	12,570,118	95,032,148	2.45	44.88	2015
Brookfield Capital Partners V L.P.	250,000,000	227,854,632	21,678,997	42,069,615	260,665,987	1.24	12.98	2018
Brookfield Capital Partners Fund VI	150,000,000	27,633,469	0	122,366,531	26,173,731	0.95	-6.14	2022
CVC Capital Partners	390,404,026	437,744,877	596,568,841	23,041,525	268,259,744	1.98	16.98	
CVC Capital Partners VI	256,563,477	283,860,779	301,154,716	21,517,238	263,923,604	1.99	17.26	2013
CVC European Equity Partners V, L.P.	133,840,549	153,884,098	295,414,125	1,524,287	4,336,140	1.95	16.75	2008



**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Canyon Partners	125,000,000	128,095,847	21,475,843	18,379,996	124,509,271	1.14	10.59	
Canyon Distressed Opportunity Fund III	125,000,000	128,095,847	21,475,843	18,379,996	124,509,271	1.14	10.59	2020
CarVal Investors	600,000,000	517,703,333	391,548,297	121,520,050	276,375,591	1.29	7.83	
CVI Credit Value Fund A II	150,000,000	142,500,000	199,242,174	7,500,000	3,569,788	1.42	8.25	2012
CVI Credit Value Fund A III	150,000,000	142,500,000	153,131,448	7,500,000	39,218,535	1.35	8.37	2015
CVI Credit Value Fund IV	150,000,000	135,203,333	39,020,110	54,020,050	135,357,480	1.29	7.36	2017
CVI Credit Value Fund V	150,000,000	97,500,000	154,566	52,500,000	98,229,788	1.01	0.96	2020
Cardinal Partners	10,000,000	10,000,000	39,196,082	0	30,303	3.92	10.61	
DSV Partners IV	10,000,000	10,000,000	39,196,082	0	30,303	3.92	10.61	1985
Carlyle Group	400,000,000	296,512,068	64,895,154	167,087,780	269,831,489	1.13	7.07	
Carlyle Strategic Partners IV, L.P.	100,000,000	119,848,374	53,429,269	32,306,465	81,058,809	1.12	7.32	2016
Carlyle Partners VII, L.P.	150,000,000	154,442,314	11,445,009	7,002,695	168,620,556	1.17	7.68	2017
Carlyle Partners VIII	150,000,000	22,221,380	20,876	127,778,620	20,152,125	0.91	-16.87	2021
Chicago Growth Partners	60,000,000	58,347,626	123,930,240	1,652,374	64,095	2.13	19.54	
Chicago Growth Partners II, L.P.	60,000,000	58,347,626	123,930,240	1,652,374	64,095	2.13	19.54	2008
Clearlake Capital	100,000,000	41,028,943	2,434	58,971,057	40,450,311	0.99	-1.88	
Clearlake Capital Partners VII	100,000,000	41,028,943	2,434	58,971,057	40,450,311	0.99	-1.88	2022
Court Square	489,419,132	479,871,704	613,283,355	64,524,555	250,963,995	1.80	14.83	
Court Square Capital Partners II, L.P.	164,419,132	170,029,204	295,744,454	6,176,873	3,198,779	1.76	12.33	2006
Court Square Capital Partners III, L.P.	175,000,000	188,471,515	276,934,903	7,718,622	129,029,428	2.15	20.28	2012
Court Square Capital Partners IV, L.P.	150,000,000	121,370,985	40,603,998	50,629,060	118,735,788	1.31	19.88	2018
GTCR	210,000,000	211,677,127	424,264,809	16,665,460	165,965,744	2.79	26.42	
GTCR Fund X	100,000,000	105,821,208	214,751,215	6,751,396	629,696	2.04	21.36	2010
GTCR XI	110,000,000	105,855,919	209,513,594	9,914,064	165,336,048	3.54	35.23	2013
Goldman, Sachs & Co.	449,800,000	374,323,424	333,811,784	165,185,992	231,792,285	1.51	11.76	
GS Capital Partners VI, L.P.	100,000,000	110,285,035	142,499,747	2,551,356	2,468,952	1.31	7.11	2007
GS China-US Cooperation Fund	99,800,000	35,438,412	523,330	64,536,033	49,202,015	1.40	16.66	2018
GS Vintage VII	100,000,000	86,360,775	65,391,877	59,320,828	72,173,840	1.59	16.05	2016
West Street Capital Partners VII, L.P.	150,000,000	142,239,202	125,396,830	38,777,775	107,947,478	1.64	19.90	2016

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Goldner Hawn Johnson & Morrison	77,755,138	55,556,950	71,964,283	22,370,155	50,293,486	2.20	22.08	
GHJM TrailHead Fund	20,000,000	16,652,130	51,364,283	3,354,486	6,532,145	3.48	20.29	2012
Goldner Hawn Fund VII, L.P.	57,755,138	38,904,820	20,600,000	19,015,669	43,761,341	1.65	32.73	2018
Green Equity Investors	325,000,000	333,548,416	237,861,791	29,139,575	318,701,449	1.67	13.48	
Green Equity Investors VI, L.P.	200,000,000	224,611,333	236,849,045	12,063,912	202,703,352	1.96	13.95	2012
Green Equity Investors VIII	125,000,000	108,937,083	1,012,746	17,075,663	115,998,097	1.07	5.50	2020
HarbourVest	21,630,989	20,940,752	26,321,096	785,945	5,515,834	1.52	12.21	
Dover Street VII Cayman Fund L.P.	2,198,112	2,074,235	1,839,926	132,416	24,915	0.90	-4.44	2014
HarbourVest Intl PE Partners V-Cayman US	3,511,365	3,346,199	4,467,690	170,760	84,175	1.36	13.66	2014
Harbourvest Intl PE Partners VI-Cayman	4,223,903	4,039,458	5,441,043	186,769	2,491,803	1.96	15.62	2014
HarbourVest Partners VIII Cayman Buyout	4,506,711	4,390,673	5,812,711	156,000	478,129	1.43	13.48	2014
HarbourVest Partners VIII-Cayman Venture	7,190,898	7,090,187	8,759,726	140,000	2,436,811	1.58	11.54	2014
Hellman & Friedman	475,000,000	365,615,011	165,276,173	122,106,136	332,305,414	1.36	18.28	
Hellman & Friedman Capital Partners VII, L.P.	50,000,000	49,896,546	153,705,841	2,202,044	9,635,420	3.27	24.87	2009
Hellman & Friedman Investors IX, L.P.	175,000,000	172,969,812	4,158,129	5,240,542	200,960,300	1.19	9.15	2018
Hellman & Friedman Capital Partners X	250,000,000	142,748,653	7,412,203	114,663,550	121,709,694	0.90	-10.35	2021
IK Limited	597,683,702	462,416,562	478,134,553	157,870,468	272,561,422	1.62	14.95	
IK Fund VII	179,802,806	179,315,195	295,129,855	8,094,311	43,576,311	1.89	14.43	2013
IK Fund VIII	170,252,491	177,056,244	183,004,699	8,193,251	123,539,776	1.73	18.19	2016
IK Fund IX	151,575,947	106,045,123	0	45,530,447	105,445,335	0.99	-0.47	2019
IK Fund X	96,052,459	0	0	96,052,459	0	0.00		2022
Kohlberg, Kravis, Roberts & Co.	1,647,000,000	1,053,336,914	943,685,336	656,994,780	692,309,102	1.55	13.16	
KKR 2006 Fund L.P.	200,000,000	218,137,965	391,703,450	3,300,979	1,305,125	1.80	9.11	2006
KKR Americas Fund XII L.P.	150,000,000	146,124,719	56,711,545	16,909,238	184,487,392	1.65	19.88	2016
KKR Asian Fund III	100,000,000	93,205,498	48,897,408	16,868,175	111,890,108	1.73	23.90	2017
KKR Asian Fund IV	150,000,000	55,326,357	415,503	98,610,591	57,036,276	1.04	4.26	2020
KKR Core Investments Partnership	97,000,000	92,524,782	4,092,567	9,689,508	99,780,399	1.12	10.97	2021
KKR Core Investments Fund II	100,000,000	0	0	100,000,000	0	0.00		2022
KKR Europe V	100,000,000	87,822,313	16,882,045	16,643,999	86,046,863	1.17	10.06	2018
KKR European Fund VI (USD) SCSp	100,000,000	0	0	100,000,000	0	0.00		2022
KKR Millennium Fund	200,000,000	205,167,570	424,946,028	0	161,924	2.07	16.36	2002
KKR MN Partnership L.P.	150,000,000	70,488,217	36,790	79,511,783	71,052,546	1.01	1.08	2021
KKR North America Fund XIII	300,000,000	84,539,493	0	215,460,507	80,548,468	0.95	-6.65	2021

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Lexington Partners	1,345,000,000	1,037,980,368	727,413,109	374,364,188	823,826,480	1.49	13.66	
Lexington Capital Partners VI-B, L.P.	100,000,000	98,374,022	145,572,539	1,634,703	937,945	1.49	7.91	2005
Lexington Capital Partners VII, L.P.	200,000,000	173,199,401	263,397,102	30,768,965	27,272,619	1.68	14.56	2009
Lexington Capital Partners VIII, L.P.	150,000,000	136,386,669	132,529,400	32,663,555	94,641,480	1.67	17.08	2014
Lexington Capital Partners IX, L.P.	150,000,000	119,415,468	29,436,142	43,256,225	149,352,928	1.50	37.08	2018
Lexington Capital Partners X	100,000,000	0	0	100,000,000	0	0.00		2021
Lexington Co-Investment Partners IV	200,000,000	213,618,715	119,813,557	7,156,369	228,759,860	1.63	17.10	2017
Lexington Co-Investment Partners V	300,000,000	185,467,198	10,031,374	124,564,176	199,831,111	1.13	16.44	2020
Lexington Co-Investment Partners V Overage	45,000,000	27,621,000	839,090	18,218,090	28,065,754	1.05	5.24	2021
Lexington Middle Market Investors IV	100,000,000	83,897,895	25,793,905	16,102,105	94,964,783	1.44	25.29	2016
MHR Institutional Partners	75,000,000	80,059,392	21,512,850	14,698,636	91,437,822	1.41	10.49	
MHR Institutional Partners IV LP	75,000,000	80,059,392	21,512,850	14,698,636	91,437,822	1.41	10.49	2014
Madison Dearborn Capital Partners LLC	200,000,000	155,829,638	67,829,581	67,852,936	159,922,945	1.46	13.76	
Madison Dearborn Capital Partners VII, L.P.	100,000,000	98,383,478	59,938,858	17,549,186	102,371,221	1.65	13.87	2015
Madison Dearborn Capital Partners VIII-A, L.P.	100,000,000	57,446,160	7,890,723	50,303,750	57,551,725	1.14	12.77	2019
Marathon	200,000,000	149,906,171	6,185,200	56,000,000	162,297,216	1.12	9.56	
Marathon Distressed Credit Fund	200,000,000	149,906,171	6,185,200	56,000,000	162,297,216	1.12	9.56	2020
Merced Capital	278,737,500	288,144,755	283,963,672	0	66,649,114	1.22	4.21	
Merced Partners III	100,000,000	103,878,468	133,823,596	0	1,061,332	1.30	5.50	2010
Merced Partners IV	125,000,000	124,968,390	120,597,539	0	20,974,774	1.13	2.61	2013
Merced Partners V	53,737,500	59,297,897	29,542,537	0	44,613,008	1.25	4.92	2017
Neuberger Berman LLC	625,000,000	421,129,806	302,570,458	440,178,206	422,806,852	1.72	32.55	
Dyal Capital Partners III	175,000,000	206,392,267	200,464,173	108,505,538	153,915,301	1.72	26.62	2015
Dyal Capital Partners IV	250,000,000	173,737,540	94,769,114	166,050,224	218,143,145	1.80	51.73	2018
Dyal Capital Partners V	200,000,000	41,000,000	7,337,170	165,622,444	50,748,406	1.42	29.17	2020
Nordic Capital	586,242,093	473,217,443	332,164,135	189,574,137	393,068,591	1.53	15.64	
Nordic Capital Fund VIII	175,818,953	224,335,867	294,008,523	12,967,395	74,805,392	1.64	13.90	2013
Nordic Capital IX Beta, L.P.	168,916,405	171,098,140	38,155,612	12,883,442	223,636,056	1.53	20.53	2017
Nordic Capital Fund X	145,454,277	77,783,435	0	67,670,841	94,627,143	1.22	27.98	2020
Nordic Capital Fund XI	96,052,459	0	0	96,052,459	0	0.00		2022
Oak Hill Capital Management, Inc.	250,000,000	246,395,110	219,208,755	11,155,972	182,994,973	1.63	31.45	
Oak Hill Capital Partners IV Onshore LP	150,000,000	153,245,546	219,173,712	4,305,536	65,509,900	1.86	33.52	2016
Oak Hill Capital Partners V	100,000,000	93,149,564	35,043	6,850,436	117,485,074	1.26	20.27	2018

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Oaktree Capital Management, LLC	387,000,000	193,606,596	56,914,692	241,268,839	204,364,293	1.35	11.59	
Oaktree Special Situations Fund, L.P.	100,000,000	103,995,409	20,335,451	7,741,294	98,324,565	1.14	3.40	2014
Oaktree Special Situations Fund II, L.P.	100,000,000	89,611,187	36,579,241	46,527,545	106,039,728	1.59	60.53	2018
Oaktree Special Situations Fund III	187,000,000	0	0	187,000,000	0	0.00		2022
Paine & Partners, LLC	225,000,000	190,603,098	52,218,491	57,682,420	212,995,623	1.39	13.71	
Paine Schwartz Food Chain Fund IV	75,000,000	66,115,658	35,397,971	17,742,963	60,407,268	1.45	9.00	2014
Paine Schwartz Food Chain Fund V, L.P.	150,000,000	124,487,440	16,820,520	39,939,457	152,588,354	1.36	26.06	2018
Permal PE	5,337,098	4,391,745	4,407,251	1,090,000	670,475	1.16	4.85	
Glouston Private Equity Opportunities IV	5,337,098	4,391,745	4,407,251	1,090,000	670,475	1.16	4.85	2014
Permira	624,951,601	446,484,892	456,660,047	220,606,913	412,814,055	1.95	19.55	
Permira V, L.P.	177,363,078	183,885,787	371,872,643	4,492,891	134,229,476	2.75	21.72	2013
Permira VI, L.P.	135,286,543	127,758,268	73,561,733	27,427,208	155,916,690	1.80	17.53	2016
Permira VII L.P.1	152,214,549	134,840,837	11,225,671	28,599,383	122,667,890	0.99	-0.43	2019
Permira VIII	160,087,431	0	0	160,087,431	0	0.00		2022
Public Pension Capital Management	240,000,000	148,405,288	86,272,572	109,557,219	194,689,902	1.89	24.23	
Public Pension Capital, LLC	240,000,000	148,405,288	86,272,572	109,557,219	194,689,902	1.89	24.23	2014
Silver Lake Partners	335,000,000	343,977,838	362,209,346	31,457,894	312,600,282	1.96	18.62	
Silver Lake Partners III, L.P.	100,000,000	93,833,966	192,153,178	9,528,468	21,439,325	2.28	18.26	2007
Silver Lake Partners IV	100,000,000	115,774,574	125,122,815	2,881,307	144,143,006	2.33	21.68	2012
Silver Lake Partners V, L.P.	135,000,000	134,369,298	44,933,353	19,048,119	147,017,951	1.43	13.55	2017
Siris Capital Group	67,875,000	0	0	67,875,000	0	0.00		
Siris V	67,875,000	0	0	67,875,000	0	0.00		2022
Split Rock	110,000,000	107,055,906	125,392,564	2,944,094	28,423,171	1.44	5.08	
Split Rock Partners LP	50,000,000	47,890,906	58,794,192	2,109,094	1,882,459	1.27	2.91	2005
Split Rock Partners II, LP	60,000,000	59,165,000	66,598,372	835,000	26,540,712	1.57	7.68	2008
Summit Partners	600,000,000	413,247,801	407,561,235	401,079,890	378,242,746	1.90	27.87	
Summit Partners Growth Equity Fund VIII	100,000,000	116,727,192	233,090,056	23,129,320	64,307,313	2.55	27.09	2011
Summit Partners Growth Equity Fund IX	100,000,000	132,014,916	141,424,991	109,410,075	150,727,597	2.21	34.04	2015
Summit Partners Growth Equity Fund X-A	150,000,000	136,186,520	33,046,188	46,859,668	136,147,451	1.24	16.82	2019
Summit Partners Growth Equity Fund XI	250,000,000	28,319,173	0	221,680,827	27,060,386	0.96	-5.56	2021

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
TPG Capital	650,000,000	377,803,107	193,953,829	316,280,792	353,814,474	1.45	22.01	
TPG Growth V	150,000,000	89,439,959	8,437,171	68,561,194	106,586,458	1.29	26.40	2021
TPG Partners VII, L.P.	100,000,000	100,744,944	155,978,885	17,143,909	44,815,655	1.99	20.62	2015
TPG Partners VIII	150,000,000	126,581,475	29,532,864	41,612,418	143,377,820	1.37	29.78	2018
TPG Partners IX, L.P.	100,000,000	0	0	100,000,000	0	0.00		2022
TPG Tech Adjacencies II, L.P.	150,000,000	61,036,729	4,909	88,963,271	59,034,541	0.97	-7.45	2021
Thoma Bravo LLC	525,000,000	517,799,418	284,137,643	79,925,772	468,090,063	1.45	22.08	
Thoma Bravo Fund XII, L.P.	75,000,000	81,949,004	84,992,456	18,452,144	74,308,212	1.94	16.33	2016
Thoma Bravo Fund XIII, L.P.	150,000,000	184,783,234	92,067,654	12,475,387	209,900,921	1.63	29.30	2018
Thoma Bravo Fund XIV	150,000,000	147,332,137	37	2,667,863	130,189,159	0.88	-9.08	2020
Thoma Bravo Fund XV LP	100,000,000	53,735,043	19,556	46,330,378	53,275,311	0.99	-1.13	2021
Thoma Cressey Fund VII, L.P.	50,000,000	50,000,000	107,057,940	0	416,460	2.15	23.58	2000
Thomas H. Lee Partners	400,000,000	279,184,218	255,827,915	150,348,063	210,324,469	1.67	26.39	
Thomas H. Lee Equity Fund VII, LP.	100,000,000	99,558,385	137,442,415	10,603,772	48,738,007	1.87	22.12	2015
Thomas H. Lee Equity Fund VIII, L.P.	150,000,000	146,552,354	118,385,500	22,817,770	130,883,623	1.70	38.33	2018
Thomas H. Lee Equity Fund IX	150,000,000	33,073,479	0	116,926,521	30,702,838	0.93	-16.20	2021
Varde Fund	631,286,710	598,625,551	691,417,756	32,661,159	232,573,520	1.54	9.80	
Varde Fund IX, L.P.	100,000,000	100,000,000	216,448,853	0	0	2.16	15.01	2008
Varde Fund X, LP	150,000,000	150,000,000	253,177,296	0	8,593,915	1.75	10.08	2010
Varde Fund XI, LP	200,000,000	200,000,000	221,771,569	0	54,662,694	1.38	5.24	2013
Varde Fund XIII, L.P.	150,000,000	144,000,000	20,038	6,000,000	164,691,360	1.14	7.33	2018
Varde Fund XIV	31,286,710	4,625,551	0	26,661,159	4,625,551	1.00	0.00	2022
Vestar Capital Partners	380,000,000	346,288,859	389,389,862	43,751,237	158,707,572	1.58	11.40	
Vestar Capital Partners IV, L.P.	55,000,000	55,668,688	102,656,956	57,313	32,650	1.84	14.62	1999
Vestar Capital Partners V, L.P.	75,000,000	76,797,458	100,961,586	0	105,895	1.32	3.88	2005
Vestar Capital Partners VI, LP	100,000,000	107,516,638	152,527,578	0	60,316,152	1.98	23.64	2011
Vestar Capital Partners VII, L.P.	150,000,000	106,306,076	33,243,742	43,693,924	98,252,875	1.24	10.71	2017
Vista Equity Partners	200,000,000	147,667,435	77,223	53,545,468	160,912,377	1.09	4.36	
Vista Equity Partners Perennial	200,000,000	147,667,435	77,223	53,545,468	160,912,377	1.09	4.36	2020

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Warburg Pincus	1,416,000,000	1,119,561,182	1,030,212,257	302,448,500	797,077,610	1.63	11.16	
Warburg Pincus China-Southeast Asia II	50,000,000	23,000,000	4,097,500	27,000,000	21,281,930	1.10	7.46	2019
Warburg Pincus China, L.P.	45,000,000	46,935,000	17,602,200	0	54,962,643	1.55	12.40	2016
Warburg Pincus Financial Sector	90,000,000	90,599,482	34,617,600	3,555,000	128,103,579	1.80	22.77	2017
Warburg Pincus Global Growth, L.P.	250,000,000	219,726,241	2,625,000	30,125,000	292,085,996	1.34	15.24	2018
Warburg Pincus Global Growth 14, L.P.	300,000,000	59,726,507	0	240,000,000	57,973,140	0.97	-6.27	2022
Warburg, Pincus Equity Partners, L.P.	100,000,000	100,000,000	163,542,253	0	394,169	1.64	10.02	1998
Warburg Pincus Private Equity IX, L.P.	100,000,000	100,000,000	172,072,950	0	38,050	1.72	9.60	2005
Warburg Pincus Private Equity X, LP	150,000,000	150,000,000	266,203,541	0	3,321,978	1.80	9.52	2007
Warburg Pincus Private Equity XI, LP	200,000,000	200,342,452	262,255,748	0	73,532,725	1.68	11.58	2012
Warburg Pincus Private Equity XII, LP	131,000,000	129,231,500	107,195,466	1,768,500	165,383,400	2.11	19.43	2015
Wayzata Investment Partners	150,000,000	68,415,000	49,197,752	15,000,000	19,136,411	1.00	-0.03	
Wayzata Opportunities Fund III	150,000,000	68,415,000	49,197,752	15,000,000	19,136,411	1.00	-0.03	2012
Wellspring Capital Partners	125,000,000	150,553,509	55,485,810	13,363,287	162,424,603	1.45	21.32	
Wellspring Capital Partners VI, L.P.	125,000,000	150,553,509	55,485,810	13,363,287	162,424,603	1.45	21.32	2016
Welsh, Carson, Anderson & Stowe	650,000,000	464,481,208	450,125,847	185,518,792	373,223,633	1.77	18.28	
Welsh, Carson, Anderson & Stowe XI, L.P.	100,000,000	100,000,000	161,464,441	0	7,136,609	1.69	11.72	2008
Welsh, Carson, Anderson & Stowe XII, L.P.	150,000,000	145,877,897	208,326,095	4,122,103	144,934,370	2.42	26.74	2014
Welsh, Carson, Anderson & Stowe XIII, L.P.	250,000,000	213,945,620	80,335,311	36,054,380	216,494,963	1.39	28.34	2018
Welsh, Carson, Anderson & Stowe XIV	150,000,000	4,657,691	0	145,342,309	4,657,691	1.00		2022
Whitehorse Capital	300,000,000	238,256,423	141,337,733	120,685,964	152,516,675	1.23	19.88	
Whitehorse Liquidity Partners III	100,000,000	100,411,175	73,575,406	17,533,513	57,796,381	1.31	18.09	2019
Whitehorse Liquidity Partners IV	100,000,000	90,985,009	50,741,765	33,461,421	59,955,117	1.22	21.91	2020
Whitehorse Liquidity Partners V	100,000,000	46,860,240	17,020,562	69,691,030	34,765,177	1.11	30.96	2021
Wind Point Partners	200,000,000	101,102,677	2,667,492	101,569,418	126,330,747	1.28	21.16	
Wind Point Partners IX	100,000,000	89,435,693	2,667,492	13,236,402	112,234,440	1.28	19.64	2019
Wind Point Partners X	100,000,000	11,666,984	0	88,333,016	14,096,307	1.21	20.82	2022
Windjammer Capital Investors	266,708,861	222,686,013	290,675,748	59,784,573	134,350,202	1.91	12.57	
Windjammer Mezzanine & Equity Fund II	66,708,861	55,215,684	85,449,570	10,139,363	410,640	1.55	9.01	2000
Windjammer Senior Equity Fund IV, L.P.	100,000,000	94,740,728	165,677,026	21,167,914	69,240,831	2.48	17.93	2012
Windjammer Senior Equity Fund V, L.P.	100,000,000	72,729,601	39,549,152	28,477,296	64,698,731	1.43	20.22	2017

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
<b>Private Credit</b>	<b>4,218,183,754</b>	<b>3,237,878,317</b>	<b>2,603,759,485</b>	<b>1,512,993,136</b>	<b>1,693,120,337</b>	<b>1.33</b>	<b>10.16</b>	
Audax Group	350,000,000	214,463,928	212,205,499	157,495,661	60,027,546	1.27	10.56	
Audax Mezzanine Fund III, L.P.	100,000,000	105,207,316	133,977,984	0	5,663,391	1.33	9.87	2010
Audax Mezzanine Fund IV-A, L.P.	100,000,000	86,002,489	76,348,548	30,475,584	29,479,058	1.23	11.39	2015
Audax Mezzanine Fund V	150,000,000	23,254,123	1,878,967	127,020,077	24,885,097	1.15	36.67	2020
Avenue Capital Partners	200,000,000	200,977,328	166,846,046	0	170,177,657	1.68	10.27	
Avenue Energy Opportunities Fund, L.P.	100,000,000	100,977,328	79,573,855	0	73,703,244	1.52	7.06	2014
Avenue Energy Opportunities Fund II	100,000,000	100,000,000	87,272,191	0	96,474,413	1.84	15.34	2017
BlackRock	97,500,000	93,275,368	17,419,531	4,224,632	100,862,200	1.27	9.29	
BlackRock Middle Market Senior Fund	97,500,000	93,275,368	17,419,531	4,224,632	100,862,200	1.27	9.29	2018
Brookfield Asset Management Inc.	200,000,000	50,903,859	18,935,605	149,096,141	40,877,287	1.18	29.21	
Brookfield Real Estate Finance Fund VI	200,000,000	50,903,859	18,935,605	149,096,141	40,877,287	1.18	29.21	2021
Energy Capital Partners	28,087,500	29,002,111	9,769,268	8,854,657	20,241,878	1.03	3.10	
Energy Capital Credit Solutions II-A	28,087,500	29,002,111	9,769,268	8,854,657	20,241,878	1.03	3.10	2018
Gold Hill	65,852,584	65,852,584	113,654,899	0	3,056,927	1.77	11.80	
Gold Hill Venture Lending	40,000,000	40,000,000	65,261,602	0	325,647	1.64	10.69	2004
Gold Hill 2008	25,852,584	25,852,584	48,393,297	0	2,731,280	1.98	14.45	2008
Goldman, Sachs & Co.	227,500,000	261,181,928	316,656,514	24,922,591	527,063	1.21	6.79	
GS Mezzanine Partners 2006 Institutional	100,000,000	113,458,168	135,467,496	9,858,563	271,628	1.20	5.00	2006
GS Mezzanine Partners V, L.P.	127,500,000	147,723,760	181,189,018	15,064,028	255,435	1.23	9.07	2007
HPS Investment Partners	200,000,000	120,321,201	26,826,065	100,230,900	111,760,873	1.15	10.66	
HPS Mezzanine Partners 2019, L.P.	100,000,000	94,383,315	22,434,937	21,777,658	90,088,045	1.19	10.91	2019
HPS Strategic Investment Partners V	100,000,000	25,937,886	4,391,128	78,453,242	21,672,828	1.00	0.69	2022
Kohlberg, Kravis, Roberts & Co.	274,000,000	359,504,477	310,834,996	100,892,678	108,293,157	1.17	9.47	
KKR Lending Partner II L.P.	75,000,000	87,050,313	84,077,542	8,802,924	5,548,754	1.03	1.47	2015
KKR Lending Partners III L.P.	199,000,000	272,454,164	226,757,454	92,089,754	102,744,403	1.21	13.95	2017
LBC Credit Partners	200,000,000	200,303,239	146,142,733	70,791,967	86,415,322	1.16	9.64	
LBC Credit Partners IV, L.P.	100,000,000	110,929,258	108,591,417	36,220,071	21,967,266	1.18	8.09	2016
LBC Credit Partners V, L.P.	100,000,000	89,373,981	37,551,317	34,571,896	64,448,056	1.14	15.20	2019
Marathon	200,000,000	101,022,008	858,534	100,000,000	130,550,920	1.30	13.33	
Marathon Secured Private Strategies Fund II	100,000,000	96,022,008	858,534	5,000,000	125,606,340	1.32	13.45	2019
Marathon Secured Private Strategies Fund III	100,000,000	5,000,000	0	95,000,000	4,944,580	0.99	-1.11	2022



**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Merit Capital Partners	350,000,000	248,748,298	324,705,942	101,184,902	90,510,991	1.67	11.61	
Merit Mezzanine Fund IV, L.P.	75,000,000	70,178,571	139,120,463	4,821,429	787,300	1.99	11.58	2004
Merit Mezzanine Fund V, LP	75,000,000	72,122,449	108,565,889	2,877,551	12,247,352	1.68	10.14	2009
Merit Mezzanine Fund VI	100,000,000	92,629,096	77,019,590	7,304,104	65,695,053	1.54	15.75	2016
Merit Mezzanine Fund VII	100,000,000	13,818,182	0	86,181,818	11,781,285	0.85	-27.57	2020
Oaktree Capital Management, LLC	650,000,000	339,040,920	53,839,957	317,500,000	380,617,464	1.28	12.82	
Oaktree Opportunities Fund X, L.P.	50,000,000	46,500,021	35,544,660	8,500,000	32,075,205	1.45	9.41	2015
Oaktree Opportunities Fund Xb, L.P.	100,000,000	65,000,000	0	35,000,000	96,667,675	1.49	14.89	2015
Oaktree Opportunities Fund XI	300,000,000	150,000,000	1,682,144	150,000,000	177,020,327	1.19	15.01	2020
Oaktree Real Estate Debt III	200,000,000	77,540,899	16,613,153	124,000,000	74,854,257	1.18	13.95	2020
PIMCO BRAVO	5,243,670	4,729,123	5,606,388	5,350,003	367,178	1.26	4.90	
PIMCO Bravo Fund OnShore Feeder II	5,243,670	4,729,123	5,606,388	5,350,003	367,178	1.26	4.90	2014
Prudential Global Investment Mgmt	600,000,000	512,024,865	560,391,077	139,345,222	152,623,094	1.39	10.35	
Prudential Capital Partners II, L.P.	100,000,000	97,930,132	145,671,152	11,049,052	492,778	1.49	9.01	2005
Prudential Capital Partners III, L.P.	100,000,000	102,848,928	174,817,309	13,609,083	3,022,104	1.73	14.14	2009
Prudential Capital Partners IV	100,000,000	113,041,199	133,319,569	1,948,707	18,448,600	1.34	8.56	2012
Prudential Capital Partners V, L.P.	150,000,000	152,171,004	100,817,656	8,771,398	84,535,348	1.22	7.54	2016
PGIM Capital Partners VI, L.P.	150,000,000	46,033,602	5,765,390	103,966,983	46,124,264	1.13	28.97	2020
Summit Partners	95,000,000	100,002,497	136,746,526	22,177,023	1,986,037	1.39	9.03	
Summit Subordinated Debt Fund III, L.P.	45,000,000	44,088,494	62,804,226	2,250,000	295,847	1.43	8.57	2004
Summit Subordinated Debt Fund IV, L.P.	50,000,000	55,914,003	73,942,300	19,927,023	1,690,190	1.35	9.74	2008
TCW	200,000,000	174,519,135	145,912,466	67,578,060	74,292,233	1.26	8.97	
TCW Direct Lending LLC	100,000,000	83,599,652	88,264,004	25,329,409	19,210,680	1.29	8.31	2014
TCW Direct Lending VII	100,000,000	90,919,484	57,648,462	42,248,651	55,081,554	1.24	10.04	2018
TSSP	275,000,000	162,005,447	36,407,440	143,348,699	159,932,510	1.21	11.13	
Sixth Street TAO Partners (B), L.P.	50,000,000	45,066,204	19,138,671	24,088,278	39,645,821	1.30	10.99	2018
Sixth Street TAO Partners (D), L.P.	100,000,000	60,296,419	11,437,732	47,183,559	60,595,773	1.19	13.26	2018
TSSP Opportunities Partners IV (A), L.P.	50,000,000	40,355,923	5,821,838	13,363,763	44,507,095	1.25	11.39	2018
Sixth Street Opportunities Partners V	75,000,000	16,286,901	9,199	58,713,099	15,183,822	0.93	-6.95	2021



**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
<b>Real Assets</b>	<b>4,047,571,518</b>	<b>3,816,550,901</b>	<b>2,615,672,172</b>	<b>526,857,210</b>	<b>2,203,516,896</b>	<b>1.26</b>	<b>5.39</b>	
BlackRock	198,500,000	141,833,911	71,583,086	68,953,998	95,233,963	1.18	6.46	
BlackRock Global Renewable Power Fund II	98,500,000	101,030,503	68,717,826	7,963,383	56,851,347	1.24	7.01	2017
BlackRock Global Renewable Power Infrastructure III	100,000,000	40,803,408	2,865,259	60,990,616	38,382,616	1.01	1.11	2019
ElG Global Energy Partners	450,000,000	470,987,133	381,719,877	77,704,481	155,253,600	1.14	3.08	
ElG Energy Fund XIV	100,000,000	113,459,470	95,309,310	2,761,129	3,667,823	0.87	-5.04	2007
ElG Energy Fund XV	150,000,000	161,871,503	156,199,601	22,871,323	22,882,914	1.11	2.38	2010
ElG Energy Fund XVI	200,000,000	195,656,159	130,210,966	52,072,029	128,702,864	1.32	6.79	2013
Encap Energy	300,000,000	320,795,851	274,201,152	9,223,353	184,234,403	1.43	8.23	
EnCap Energy Capital Fund VIII, L.P.	100,000,000	103,335,766	64,549,894	470,044	44,027,775	1.05	0.96	2010
Encap Energy Fund IX	100,000,000	113,725,245	119,060,570	3,890,055	41,332,854	1.41	9.90	2012
EnCap Energy Capital Fund X, L.P.	100,000,000	103,734,839	90,590,688	4,863,253	98,873,773	1.83	15.74	2015
Energy & Minerals Group	680,000,000	689,824,966	400,586,767	40,962,715	554,547,139	1.38	7.23	
NGP Midstream & Resources, L.P.	100,000,000	103,565,615	179,560,149	17,857	5,084,486	1.78	13.26	2007
The Energy & Minerals Group Fund II, L.P.	100,000,000	108,534,480	108,598,045	170,365	107,726,494	1.99	12.57	2011
The Energy & Minerals Group Fund III, L.P.	200,000,000	206,781,398	34,146,626	1,219,725	111,468,094	0.70	-5.21	2014
The Energy & Minerals Group Fund IV, LP	150,000,000	162,424,343	73,420,064	14,023,899	162,560,798	1.45	9.08	2015
The Energy & Minerals Group Fund V	112,500,000	91,343,320	3,658,916	24,189,035	141,263,641	1.59	17.27	2019
The Energy & Minerals Group Fund V Accordion, LP	17,500,000	17,175,810	1,202,967	1,341,834	26,443,626	1.61	18.34	2019
Energy Capital Partners	350,000,000	350,697,256	319,929,715	77,132,284	195,190,172	1.47	12.27	
Energy Capital Partners III, L.P.	200,000,000	234,313,247	281,260,752	30,058,269	62,764,620	1.47	10.78	2013
Energy Capital Partners IV-A, LP	150,000,000	116,384,009	38,668,963	47,074,015	132,425,553	1.47	18.64	2017
Enervest Management Partners	100,000,000	99,031,763	99,964,623	9,061,935	48,138,821	1.50	9.33	
EnerVest Energy Institutional Fund XIV-A, L.P.	100,000,000	99,031,763	99,964,623	9,061,935	48,138,821	1.50	9.33	2015
First Reserve	500,000,000	564,086,967	278,557,281	0	139,588,789	0.74	-7.18	
First Reserve Fund XI, L.P.	150,000,000	150,292,121	100,059,903	0	71,821	0.67	-8.77	2006
First Reserve Fund XII, L.P.	150,000,000	165,617,044	85,669,271	0	245,885	0.52	-17.85	2008
First Reserve Fund XIII, L.P.	200,000,000	248,177,802	92,828,107	0	139,271,084	0.94	-2.33	2013
Kohlberg, Kravis, Roberts & Co.	249,850,000	175,155,777	34,521,445	85,920,201	158,683,404	1.10	6.53	
KKR Global Infrastructure Investors III	149,850,000	133,173,722	33,991,484	27,372,295	118,923,207	1.15	7.47	2018
KKR Global Infrastructure Investors IV	100,000,000	41,982,055	529,961	58,547,906	39,760,197	0.96	-7.62	2021

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Merit Energy Partners	519,721,518	384,644,480	183,288,900	94,599,899	357,632,082	1.41	5.56	
Merit Energy Partners F-II, L.P.	100,000,000	59,522,861	33,692,416	0	6,704,961	0.68	-5.44	2006
Merit Energy Partners H	100,000,000	100,000,000	29,668,582	0	51,733,953	0.81	-2.95	2011
Merit Energy Partners I, L.P.	169,721,518	169,721,518	99,039,059	0	191,659,884	1.71	10.92	2014
Merit Energy Partners K, L.P.	150,000,000	55,400,101	20,888,843	94,599,899	107,533,284	2.32	41.08	2019
NGP	599,500,000	585,139,792	540,519,326	49,798,344	278,044,521	1.40	9.46	
Natural Gas Partners IX, LP	150,000,000	173,962,921	249,243,688	605,481	518,173	1.44	12.05	2007
NGP Natural Resources X, L.P.	150,000,000	149,242,325	129,772,139	757,675	22,820,806	1.02	0.59	2011
NGP Natural Resources XI, L.P.	150,000,000	153,765,092	115,178,751	6,290,493	129,239,158	1.59	11.24	2014
NGP Natural Resources XII, L.P.	149,500,000	108,169,454	46,324,748	42,144,695	125,466,385	1.59	15.71	2017
Sheridan	100,000,000	34,353,005	30,800,000	13,500,000	36,970,001	1.97	16.19	
Sheridan Production Partners III-B, L.P.	100,000,000	34,353,005	30,800,000	13,500,000	36,970,001	1.97	16.19	2014

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
<b>Real Estate</b>	<b>4,173,147,868</b>	<b>2,784,594,290</b>	<b>2,016,869,018</b>	<b>1,681,200,842</b>	<b>1,933,815,139</b>	<b>1.42</b>	<b>10.23</b>	
Angelo, Gordon & Co.	550,000,000	454,740,052	253,032,407	145,060,000	375,978,349	1.38	12.55	
AG Asia Realty Fund III, L.P.	50,000,000	47,587,261	47,125,000	6,196,250	18,875,353	1.39	11.74	2016
AG Asia Realty Fund IV, L.P.	100,000,000	74,409,775	25,750,000	37,952,500	74,783,556	1.35	16.27	2018
AG Europe Realty Fund II, L.P.	75,000,000	68,779,896	30,019,976	12,768,750	70,212,416	1.46	11.64	2018
AG Europe Realty Fund III	75,000,000	40,686,731	3,000,000	34,687,500	44,359,391	1.16	11.13	2020
AG Realty Fund IX	100,000,000	92,141,126	83,000,000	11,650,000	48,435,222	1.43	8.59	2014
AG Realty Fund X, L.P.	150,000,000	131,135,263	64,137,431	41,805,000	119,312,411	1.40	21.69	2018
<b>Blackstone</b>	<b>1,124,500,000</b>	<b>882,295,369</b>	<b>892,879,767</b>	<b>406,027,044</b>	<b>569,524,075</b>	<b>1.66</b>	<b>13.65</b>	
Blackstone Real Estate Partners Asia II	74,500,000	67,867,196	9,322,917	16,202,923	70,586,572	1.18	7.58	2017
Blackstone Real Estate Partners Asia III	100,000,000	11,017,468	2,368	89,345,032	9,364,460	0.85	-15.58	2021
Blackstone Real Estate Partners V	100,000,000	104,217,981	209,112,174	4,174,052	0	2.01	10.84	2006
Blackstone Real Estate Partners VI, L.P.	100,000,000	109,500,200	218,432,792	4,907,906	1,880,386	2.01	13.07	2007
Blackstone Real Estate Partners VII, LP	100,000,000	112,093,301	180,597,195	11,131,179	22,031,003	1.81	15.20	2011
Blackstone Real Estate VIII.TE.1 L.P.	150,000,000	173,325,809	176,915,939	21,403,114	121,580,009	1.72	17.04	2015
Blackstone Real Estate Partners IX, L.P.	300,000,000	304,273,413	98,496,381	58,862,838	344,081,645	1.45	29.85	2018
Blackstone Real Estate Partners X	200,000,000	0	0	200,000,000	0	0.00		2022
<b>Blackstone Strategic Partners</b>	<b>75,000,000</b>	<b>77,559,576</b>	<b>66,169,437</b>	<b>990,056</b>	<b>1,088,373</b>	<b>0.87</b>	<b>-2.08</b>	
Strategic Partners III RE, L.P.	25,000,000	25,981,820	15,252,523	9,006	99,036	0.59	-6.45	2005
Strategic Partners IV RE, L.P.	50,000,000	51,577,756	50,916,914	981,050	989,337	1.01	0.10	2008
<b>Brookfield Asset Management Inc.</b>	<b>300,000,000</b>	<b>59,546,546</b>	<b>0</b>	<b>240,453,454</b>	<b>65,508,703</b>	<b>1.10</b>	<b>10.96</b>	
Brookfield Strategic Real Estate Partners IV	300,000,000	59,546,546	0	240,453,454	65,508,703	1.10	10.96	2021
<b>Carlyle Group</b>	<b>450,000,000</b>	<b>132,768,744</b>	<b>97,778,799</b>	<b>382,109,098</b>	<b>96,254,221</b>	<b>1.46</b>	<b>29.76</b>	
Carlyle Realty Partners VIII, L.P.	150,000,000	123,342,815	97,778,799	91,535,027	88,950,634	1.51	30.69	2017
Carlyle Realty Partners IX	300,000,000	9,425,929	0	290,574,071	7,303,587	0.77	-22.52	2021
<b>Kohlberg, Kravis, Roberts &amp; Co.</b>	<b>125,000,000</b>	<b>73,471,551</b>	<b>4,906,451</b>	<b>53,150,647</b>	<b>76,320,035</b>	<b>1.11</b>	<b>13.36</b>	
KKR Real Estate Partners Americas III	125,000,000	73,471,551	4,906,451	53,150,647	76,320,035	1.11	13.36	2021
<b>Landmark Partners</b>	<b>249,500,000</b>	<b>99,205,389</b>	<b>60,282,221</b>	<b>173,008,010</b>	<b>79,806,760</b>	<b>1.41</b>	<b>19.09</b>	
Landmark Real Estate Partners VIII, L.P.	149,500,000	99,205,389	60,282,221	73,008,010	79,806,760	1.41	19.09	2016
Landmark Real Estate Partners IX	100,000,000	0	0	100,000,000	0	0.00		2021
<b>Lubert Adler</b>	<b>174,147,868</b>	<b>112,795,244</b>	<b>86,217,291</b>	<b>62,414,787</b>	<b>69,856,159</b>	<b>1.38</b>	<b>16.51</b>	
Lubert-Adler Real Estate Fund VII-B, L.P.	74,147,868	67,585,213	82,515,205	7,414,787	19,021,551	1.50	15.43	2017
Lubert-Adler Recovery and Enhancement Capital Fund	100,000,000	45,210,030	3,702,087	55,000,000	50,834,608	1.21	25.33	2021

**Minnesota State Board of Investment**  
**Quarter Ending December 31, 2022**  
**Private Markets Investments**



Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Oaktree Capital Management, LLC	200,000,000	104,475,519	36,295,052	130,000,000	79,383,985	1.11	32.21	
Oaktree Real Estate Opportunities Fund VIII	200,000,000	104,475,519	36,295,052	130,000,000	79,383,985	1.11	32.21	2020
Rockpoint	200,000,000	178,865,629	69,882,159	41,172,282	154,026,381	1.25	8.74	
Rockpoint Real Estate Fund V, L.P.	100,000,000	99,528,281	58,755,434	17,327,032	67,292,604	1.27	6.74	2014
Rockpoint Real Estate Fund VI, L.P.	100,000,000	79,337,348	11,126,725	23,845,250	86,733,778	1.23	17.54	2019
Rockwood	200,000,000	164,861,297	61,784,022	39,319,406	144,479,815	1.25	8.94	
Rockwood Capital RE Partners X, L.P.	100,000,000	94,027,411	57,507,174	7,657,118	65,583,428	1.31	8.05	2015
Rockwood Capital RE Partners XI	100,000,000	70,833,887	4,276,848	31,662,288	78,896,387	1.17	12.87	2019
Silverpeak Real Estate Partners	225,000,000	144,009,375	109,295,624	7,496,058	3,728,425	0.78	-3.83	
Silverpeak Legacy Pension Partners II, L.P.	75,000,000	73,069,012	92,033,940	7,496,058	414,065	1.27	4.17	2005
Silverpeak Legacy Pension Partners III, L.P.	150,000,000	70,940,363	17,261,685	0	3,314,360	0.29	-12.03	2008
TA Associates Realty	300,000,000	300,000,000	278,345,788	0	217,859,857	1.65	14.53	
Realty Associates Fund X	100,000,000	100,000,000	161,064,353	0	116,633	1.61	12.56	2012
Realty Associates Fund XI	100,000,000	100,000,000	108,893,200	0	67,401,021	1.76	13.45	2015
Realty Associates Fund XII	100,000,000	100,000,000	8,388,235	0	150,342,203	1.59	28.38	2018
<b>Total</b>	<b>36,898,010,313</b>	<b>28,477,227,045</b>	<b>21,896,040,941</b>	<b>11,423,983,764</b>	<b>20,331,049,469</b>	<b>1.48</b>	<b>11.92</b>	
<i>Difference**</i>					31,936,824			
<b>Private Markets Total with Difference</b>					<b>20,362,986,293</b>			

<i>Private Markets Portfolio Status</i>	Managers	Funds
PRIVATE EQUITY	58	188
PRIVATE CREDIT	18	42
REAL ASSETS	11	31
REAL ESTATE	13	34
<b>Total</b>	<b>100</b>	<b>295</b>

**Notes**

None of the data presented herein has been reviewed or approved by either the general partner or investment manager. The performance and valuation data presented herein is not a guarantee or prediction of future results and may slightly differ from final fiscal year end report. Ultimately, the actual performance and value of any investment is not known until final liquidation. Because there is no industry-standardized method for valuation or reporting comparisons of performance and valuation data among different investments is difficult.

Data presented in this report is made public pursuant to Minn. Stat. Chs. 13 and 13D, and Minn. Stat. § 11A.24, subd. 6(c). Additional information on private markets investments may be classified as non-public and not subject to disclosure.

\*Partnership interests transferred to the MSBI during 1Q2015. All data presented as of the transfer date.

\*\* Difference is from an in-kind stock distribution liquidating account, cash transactions posted to next day and distributions received in foreign currency during the month.



## Quarterly Report

---

# Participant Directed Investment Program

## December 31, 2022



## 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 Fund 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 Fund and a Money Market Fund. The second is a set of target date funds called Minnesota Target 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 Fund - 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	\$101,390,931	5.2%	-16.5%	4.1%	5.9%	8.2%	01/1980
U.S. EQUITY ACTIVELY MANAGED FUND	73,312,485	7.6	-20.7	7.7	9.4	12.5	07/1986
U.S. EQUITY INDEX FUND	359,382,668	7.2	-19.2	7.3	9.0	12.2	07/1986
BROAD INTERNATIONAL EQUITY FUND	126,533,512	12.0	-13.7	1.5	1.8	4.7	09/1994
BOND FUND	98,292,620	2.1	-14.1	-2.3	0.5	1.5	07/1986
MONEY MARKET FUND	666,504,678	1.0	1.9	0.9	1.4	0.9	07/1986
STABLE VALUE FUND	1,731,918,804	0.6	2.1	2.2	2.3	2.2	11/1994
VOLUNTEER FIREFIGHTER ACCOUNT	143,516,721	5.2	-15.2	2.2	4.0	5.9	01/2010

Note:

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



## Supplemental Investment Fund Performance

### Balanced Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BALANCED FUND</b>	<b>\$101,390,931</b>	<b>5.2%</b>	<b>-16.5%</b>	<b>4.1%</b>	<b>5.9%</b>	<b>8.2%</b>
SIF BALANCED FUND BENCHMARK		5.1%	-15.8%	3.7%	5.7%	7.8%
Excess		0.1%	-0.7%	0.4%	0.3%	0.3%

### U.S. Equity Actively Managed Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>U.S. EQUITY ACTIVELY MANAGED FUND</b>	<b>73,312,485</b>	<b>7.6</b>	<b>-20.7</b>	<b>7.7</b>	<b>9.4</b>	<b>12.5</b>
Russell 3000		7.2	-19.2	7.1	8.8	12.1
Excess		0.4	-1.5	0.6	0.6	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>
<b>U.S. EQUITY INDEX FUND</b>	<b>\$359,382,668</b>	<b>7.2%</b>	<b>-19.2%</b>	<b>7.3%</b>	<b>9.0%</b>	<b>12.2%</b>
Russell 3000		7.2%	-19.2%	7.1%	8.8%	12.1%
Excess		0.0%	0.0%	0.3%	0.2%	0.1%

### Broad International Equity Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BROAD INTERNATIONAL EQUITY FUND</b>	<b>126,533,512</b>	<b>12.0</b>	<b>-13.7</b>	<b>1.5</b>	<b>1.8</b>	<b>4.7</b>
International Equity Benchmark		14.3	-16.0	0.0	0.9	3.8
Excess		-2.3	2.3	1.5	1.0	0.9



## Supplemental Investment Fund Performance

### Bond Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BOND FUND</b>	<b>\$98,292,620</b>	<b>2.1%</b>	<b>-14.1%</b>	<b>-2.3%</b>	<b>0.5%</b>	<b>1.5%</b>
Bloomberg U.S. Aggregate		1.9%	-13.0%	-2.7%	0.0%	1.1%
Excess		0.3%	-1.1%	0.4%	0.4%	0.5%

### Money Market Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>MONEY MARKET FUND</b>	<b>666,504,678</b>	<b>1.0</b>	<b>1.9</b>	<b>0.9</b>	<b>1.4</b>	<b>0.9</b>
ICE BofA US 3-Month Treasury Bill		0.8	1.5	0.7	1.3	0.8
Excess		0.1	0.4	0.2	0.2	0.2



## Supplemental Investment Fund Performance

### Stable Value Fund

The investment objectives of the Stable Value Fund 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 Fund Benchmark is the 3-year Constant Maturity Treasury Bill +45 basis points. Please note that the Market Value for the Stable Value Fund reflects assets held through the Deferred Compensation Plan as well.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>STABLE VALUE FUND</b>	<b>\$1,731,918,804</b>	<b>0.6%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.2%</b>
Fixed Interest Blended Benchmark		1.2%	3.5%	1.8%	2.2%	1.8%
Excess		-0.6%	-1.4%	0.4%	0.2%	0.4%

### Volunteer Firefighter Account

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>VOLUNTEER FIREFIGHTER ACCOUNT</b>	<b>143,516,721</b>	<b>5.2</b>	<b>-15.2</b>	<b>2.2</b>	<b>4.0</b>	<b>5.9</b>
SIF Volunteer Firefighter Account BM		5.6	-14.7	1.7	3.6	5.5
Excess		-0.5	-0.5	0.5	0.3	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 Fund, 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 INSTITUTIONAL INDEX PLUS	\$624,403,023	7.2%	-19.5%	7.0%			07/2019
VANGUARD INSTITUTIONAL INDEX PLUS	1,548,446,629	7.6	-18.1	7.6	9.4%	12.6%	07/1999
VANGUARD DIVIDEND GROWTH	957,101,082	13.1	-4.9	10.0	11.8		10/2016
VANGUARD MID CAP INDEX	671,954,433	9.0	-18.7	6.2	7.3	11.1	01/2004
T. ROWE PRICE SMALL-CAP STOCK	802,728,979	4.2	-23.3	3.8	7.8	11.2	04/2000
FIDELITY DIVERSIFIED INTERNATIONAL	297,058,822	14.8	-23.4	1.3	2.7	5.8	07/1999
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	324,939,578	14.7	-16.0	0.5	1.1	4.1	07/2011
VANGUARD BALANCED INDEX	1,232,807,564	4.9	-16.9	3.4	5.5	7.8	12/2003
DODGE & COX INCOME	278,116,216	2.8	-10.9	-1.1	1.1	2.1	07/1999
VANGUARD TOTAL BOND MARKET INDEX	313,105,195	1.7	-13.1	-2.7	-0.0	1.0	12/2003
2025 FUND	211,429,134	4.7	-12.2	2.3	3.6	5.5	07/2011
2030 FUND	191,978,045	5.9	-14.9	2.8	4.1	6.4	07/2011
2035 FUND	151,480,381	7.2	-17.0	2.8	4.3	6.9	07/2011
2040 FUND	122,209,719	7.8	-17.9	3.0	4.5	7.2	07/2011
2045 FUND	115,385,227	8.3	-18.4	3.2	4.6	7.6	07/2011
2050 FUND	98,079,144	8.7	-18.8	3.4	4.8	7.7	07/2011
2055 FUND	64,518,697	9.0	-19.1	3.6	4.9	7.8	07/2011
2060 FUND	49,828,395	9.0	-19.1	3.6	4.9	7.8	07/2011
2065 FUND	6,590,959	9.0	-19.1				04/2020
INCOME FUND	207,751,247	4.1	-11.0	1.8	3.0	3.6	07/2011
TD Ameritrade SDB	76,844,484						
TD Ameritrade SDB Roth	2,650,513						



## Mutual Funds

### LARGE CAP EQUITY

#### **Vanguard Total Stock Market Institutional Index Plus (passive)**

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

#### **Vanguard Index Institutional Plus (passive)**

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

#### **Vanguard Dividend Growth (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 (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 (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 (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 (passive) (3)**

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>Large Cap US Equity</b>						
<b>VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX PLUS</b>	<b>\$624,403,023</b>	<b>7.2%</b>	<b>-19.5%</b>	<b>7.0%</b>		<b>07/2019</b>
CRSP US Total Market Index		7.1	-19.5	7.0		07/2019
Excess		0.0	-0.0	0.1		
<b>VANGUARD INSTITUTIONAL INDEX PLUS</b>	<b>1,548,446,629</b>	<b>7.6</b>	<b>-18.1</b>	<b>7.6</b>	<b>9.4%</b>	<b>07/1999</b>
S&P 500		7.6	-18.1	7.7	9.4	07/1999
Excess		-0.0	-0.0	-0.0	-0.0	
<b>VANGUARD DIVIDEND GROWTH</b>	<b>957,101,082</b>	<b>13.1</b>	<b>-4.9</b>	<b>10.0</b>	<b>11.8</b>	<b>10/2016</b>
VANGUARD DIVIDEND GROWERS INDEX		13.1	-9.7	8.9	10.4	10/2016
Excess		0.0	4.8	1.1	1.4	
<b>Mid Cap US Equity</b>						
<b>VANGUARD MID CAP INDEX</b>	<b>671,954,433</b>	<b>9.0</b>	<b>-18.7</b>	<b>6.2</b>	<b>7.3</b>	<b>01/2004</b>
CRSP US Mid Cap Index		9.0	-18.7	6.2	7.3	01/2004
Excess		-0.0	-0.0	0.0	0.0	
<b>Small Cap US Equity</b>						
<b>T. ROWE PRICE SMALL-CAP STOCK</b>	<b>802,728,979</b>	<b>4.2</b>	<b>-23.3</b>	<b>3.8</b>	<b>7.8</b>	<b>04/2000</b>
Russell 2000		6.2	-20.4	3.1	4.1	04/2000
Excess		-2.0	-2.9	0.7	3.6	
<b>International Equity</b>						
<b>FIDELITY DIVERSIFIED INTERNATIONAL</b>	<b>297,058,822</b>	<b>14.8</b>	<b>-23.4</b>	<b>1.3</b>	<b>2.7</b>	<b>07/1999</b>
MSCI EAFE FREE (NET)		17.3	-14.5	0.9	1.5	07/1999
Excess		-2.5	-8.9	0.4	1.2	
<b>VANGUARD TOTAL INTERNATIONAL STOCK INDEX</b>	<b>324,939,578</b>	<b>14.7</b>	<b>-16.0</b>	<b>0.5</b>	<b>1.1</b>	<b>07/2011</b>
FTSE Global All Cap ex US Index Net		14.1	-16.2	0.4	0.9	07/2011
Excess		0.6	0.3	0.2	0.2	



## Mutual Funds

### BALANCED

#### **Vanguard Balanced Index (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 (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 Fund (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**

<b>VANGUARD BALANCED INDEX</b>	<b>\$1,232,807,564</b>	<b>4.9%</b>	<b>-16.9%</b>	<b>3.4%</b>	<b>5.5%</b>	<b>12/2003</b>
Vanguard Balanced Fund Benchmark		5.1	-16.7	3.5	5.6	12/2003
Excess		-0.2	-0.2	-0.1	-0.1	

#### **Fixed Income**

<b>DODGE &amp; COX INCOME</b>	<b>278,116,216</b>	<b>2.8</b>	<b>-10.9</b>	<b>-1.1</b>	<b>1.1</b>	<b>07/1999</b>
Bloomberg U.S. Aggregate		1.9	-13.0	-2.7	0.0	07/1999
Excess		0.9	2.1	1.6	1.1	

<b>VANGUARD TOTAL BOND MARKET INDEX</b>	<b>313,105,195</b>	<b>1.7</b>	<b>-13.1</b>	<b>-2.7</b>	<b>-0.0</b>	<b>12/2003</b>
Bloomberg U.S. Aggregate		1.9	-13.0	-2.7	0.0	12/2003
Excess		-0.2	-0.1	-0.0	-0.0	

<b>MONEY MARKET FUND</b>	<b>666,504,678</b>	<b>1.0</b>	<b>1.9</b>	<b>0.9</b>	<b>1.4</b>	<b>07/1986</b>
ICE BofA US 3-Month Treasury Bill		0.8	1.5	0.7	1.3	07/1986
Excess		0.1	0.4	0.2	0.2	

#### **Stable Value**

<b>STABLE VALUE FUND</b>	<b>1,731,918,804</b>	<b>0.6</b>	<b>2.1</b>	<b>2.2</b>	<b>2.3</b>	<b>11/1994</b>
Fixed Interest Blended Benchmark		1.2	3.5	1.8	2.2	11/1994
Excess		-0.6	-1.4	0.4	0.2	

(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 RETIREMENT ACCOUNTS

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

#### Target Date Retirement Funds

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Option Since</u>		<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Option Since</u>
<b>SSgA</b>													
<b>2025 FUND</b>	<b>\$211,429,134</b>	<b>4.7%</b>	<b>-12.2%</b>	<b>2.3%</b>	<b>3.6%</b>	<b>07/2011</b>	<b>2050 FUND</b>	<b>\$98,079,144</b>	<b>8.7%</b>	<b>-18.8%</b>	<b>3.4%</b>	<b>4.8%</b>	<b>07/2011</b>
2025 FUND BENCHMARK		4.7%	-12.2%	2.3%	3.6%	07/2011	2050 FUND BENCHMARK		8.5%	-18.8%	3.5%	4.8%	07/2011
Excess		-0.0%	-0.0%	-0.0%	-0.0%		Excess		0.1%	-0.0%	-0.0%	-0.0%	
<b>2030 FUND</b>	<b>\$191,978,045</b>	<b>5.9%</b>	<b>-14.9%</b>	<b>2.8%</b>	<b>4.1%</b>	<b>07/2011</b>	<b>2055 FUND</b>	<b>\$64,518,697</b>	<b>9.0%</b>	<b>-19.1%</b>	<b>3.6%</b>	<b>4.9%</b>	<b>07/2011</b>
2030 FUND BENCHMARK		5.9%	-14.8%	2.8%	4.1%	07/2011	2055 FUND BENCHMARK		8.9%	-19.1%	3.6%	4.9%	07/2011
Excess		-0.0%	-0.0%	-0.0%	-0.0%		Excess		0.1%	-0.0%	-0.0%	-0.0%	
<b>2035 FUND</b>	<b>\$151,480,381</b>	<b>7.2%</b>	<b>-17.0%</b>	<b>2.8%</b>	<b>4.3%</b>	<b>07/2011</b>	<b>2060 FUND</b>	<b>\$49,828,395</b>	<b>9.0%</b>	<b>-19.1%</b>	<b>3.6%</b>	<b>4.9%</b>	<b>07/2011</b>
2035 FUND BENCHMARK		7.1%	-17.0%	2.8%	4.3%	07/2011	2060 FUND BENCHMARK		8.9%	-19.1%	3.6%	4.9%	07/2011
Excess		0.0%	-0.0%	-0.0%	-0.0%		Excess		0.1%	-0.0%	-0.0%	-0.0%	
<b>2040 FUND</b>	<b>\$122,209,719</b>	<b>7.8%</b>	<b>-17.9%</b>	<b>3.0%</b>	<b>4.5%</b>	<b>07/2011</b>	<b>2065 FUND</b>	<b>\$6,590,959</b>	<b>9.0%</b>	<b>-19.1%</b>			<b>04/2020</b>
2040 FUND BENCHMARK		7.7%	-17.9%	3.0%	4.5%	07/2011	2065 FUND BENCHMARK		8.9%	-19.1%			04/2020
Excess		0.1%	-0.0%	-0.0%	-0.0%		Excess		0.1%	-0.0%			
<b>2045 FUND</b>	<b>\$115,385,227</b>	<b>8.3%</b>	<b>-18.4%</b>	<b>3.2%</b>	<b>4.6%</b>	<b>07/2011</b>	<b>INCOME FUND</b>	<b>\$207,751,247</b>	<b>4.1%</b>	<b>-11.0%</b>	<b>1.8%</b>	<b>3.0%</b>	<b>07/2011</b>
2045 FUND BENCHMARK		8.2%	-18.4%	3.2%	4.7%	07/2011	INCOME FUND BENCHMARK		4.2%	-11.0%	1.8%	3.0%	07/2011
Excess		0.1%	-0.0%	-0.0%	-0.0%		Excess		-0.1%	-0.1%	-0.0%	-0.0%	

Note: Each SSgA Fund benchmark is the aggregate of the returns of the Fund's underlying index funds weighted by the Fund's asset allocation



## MN College Savings Plan Options

---

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

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

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

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

### **ASSET CLASS BASED ALLOCATIONS**

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

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

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

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

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

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

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

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



**MINNESOTA COLLEGE SAVINGS PLAN**

**Performance Statistics for the Period Ending: December 31, 2022**

**Total = \$1,693 Million**

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
2038/2039 Enrollment Option	\$15,878,837	7.83%	-16.65%				-7.84%	6/11/2021
2038-2039 Custom Benchmark		6.29%	-18.27%				-8.87%	
2036/2037 Enrollment Option	\$60,116,508	7.66%	-16.54%	3.62%			4.94%	10/28/2019
2036-2037 Custom Benchmark		6.12%	-18.01%	2.87%			4.22%	
2034/2035 Enrollment Option	\$49,699,242	7.34%	-16.18%	3.33%			4.63%	10/28/2019
2034-2035 Custom Benchmark		5.91%	-17.63%	2.63%			3.96%	
2032/2033 Enrollment Option	\$55,930,176	6.90%	-15.85%	3.15%			4.40%	10/28/2019
2032-2033 Custom Benchmark		5.60%	-17.15%	2.49%			3.77%	
2030/2031 Enrollment Option	\$66,065,873	6.09%	-15.02%	2.77%			3.97%	10/28/2019
2030-2031 Custom Benchmark		5.06%	-16.15%	2.20%			3.42%	
2028/2029 Enrollment Option	\$83,024,457	5.21%	-13.68%	2.26%			3.36%	10/28/2019
2028-2029 Custom Benchmark		4.45%	-14.57%	1.69%			2.83%	
2026/2027 Enrollment Option	\$114,851,628	4.29%	-12.13%	1.93%			2.86%	10/28/2019
2026-2027 Custom Benchmark		3.82%	-12.83%	1.45%			2.42%	
2024/2025 Enrollment Option	\$157,509,820	3.22%	-9.55%	1.94%			2.71%	10/28/2019
2024-2025 Custom Benchmark		3.00%	-9.98%	1.45%			2.25%	
2022/2023 Enrollment Option	\$168,533,244	2.39%	-6.45%	1.64%			2.24%	10/28/2019
2022-2023 Custom Benchmark		2.39%	-6.70%	1.05%			1.71%	
In School Option	\$220,996,434	2.22%	-5.36%	1.52%			1.85%	10/28/2019
In School Custom Benchmark		2.23%	-5.60%	0.77%			1.15%	

**MINNESOTA COLLEGE SAVINGS PLAN**

**Performance Statistics for the Period Ending: December 31, 2022**

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	\$264,041,108	9.47%	-18.50%	4.45%	6.15%	9.19%	6.94%	10/ 1/2001
BB: U.S. and International Equity Option		9.47%	-18.51%	4.37%	6.02%	9.25%	7.62%	
Moderate Allocation Option	\$85,949,441	6.32%	-15.34%	2.51%	4.25%	6.11%	5.05%	8/ 2/2007
BB: Moderate Allocation Option		6.51%	-15.28%	2.43%	4.25%	6.23%	5.54%	
100% Fixed-Income Option	\$16,410,926	1.84%	-10.85%	-1.51%	0.63%	0.98%	2.65%	8/16/2007
BB: 100% Fixed-Income Option		1.99%	-10.85%	-1.34%	0.87%	1.31%	3.20%	
International Equity Index Option	\$9,059,037	16.16%	-14.85%	0.57%	1.23%		3.72%	6/18/2013
BB: International Equity Index Option		15.85%	-15.50%	0.27%	1.04%		3.76%	
Money Market Option	\$13,661,686	0.83%	1.40%	0.59%	1.08%	0.61%	0.57%	11/ 1/2007
BB: Money Market Option		0.80%	1.33%	0.54%	0.96%	0.54%	0.51%	
Principal Plus Interest Option	\$120,600,755	0.49%	1.30%	1.51%	1.67%	1.51%	2.35%	10/10/2001
Citigroup 3-Month U.S. Treasury Bill		0.87%	1.50%	0.71%	1.25%	0.74%	1.26%	
Aggressive Allocation Option	\$73,127,461	7.90%	-16.83%	3.51%	5.20%		6.38%	8/12/2014
BB: Aggressive Allocation Option		8.00%	-16.87%	3.46%	5.18%		6.33%	
Conservative Allocation Option	\$16,239,242	3.81%	-10.05%	1.36%	2.77%		3.25%	8/18/2014
BB: Conservative Allocation Option		3.99%	-10.02%	1.25%	2.80%		3.28%	
Equity and Interest Accumulation Option	\$7,719,268	3.64%	-9.18%	4.60%	5.38%		5.72%	8/18/2014
BB: Equity and Interest Accumulation Option		4.14%	-8.84%	4.45%	5.44%		5.68%	
U.S. Large Cap Equity Option	\$91,176,995	7.50%	-18.22%	7.50%	9.24%		10.40%	8/12/2014
BB: U.S. Large Cap Equity Option		7.56%	-18.11%	7.66%	9.42%		10.52%	
Social Choice Equity Option	\$914,495	9.69%	-17.86%				-6.16%	6/11/2021
BB: Social Choice Equity Option		7.18%	-19.21%				-7.09%	
Matching Grant	\$1,370,536	0.49%	1.30%	1.51%	1.67%	1.51%	2.35%	3/22/2002
Citigroup 3-Month U.S. Treasury Bill		0.87%	1.50%	0.71%	1.25%	0.74%	1.26%	

# MINNESOTABLE<sup>plan</sup>

A member of The National ABLE Alliance

Performance as of  
12/31/2022

Total Market Value: **\$31,101,187**

<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	\$2,237,927	7.20%	(4.52)	7.48	(19.39)	(19.39)	2.99	4.72		6.70	12/15/16
ABLE Aggressive Custom Benchmark			(4.09)	7.64	(19.36)	(19.36)	3.23	5.01		7.11	
<b>Variance</b>			<b>(0.43)</b>	<b>(0.16)</b>	<b>(0.03)</b>	<b>(0.03)</b>	<b>(0.24)</b>	<b>(0.29)</b>		<b>(0.41)</b>	
Moderately Aggressive Option	\$2,487,498	8.00%	(3.80)	6.47	(17.39)	(17.39)	2.65	4.27		5.92	12/15/16
ABLE Moderately Aggressive Custom Benchmark			(3.48)	6.62	(17.39)	(17.39)	2.84	4.54		6.30	
<b>Variance</b>			<b>(0.32)</b>	<b>(0.15)</b>	<b>0.00</b>	<b>0.00</b>	<b>(0.19)</b>	<b>(0.27)</b>		<b>(0.38)</b>	
Growth Option	\$3,855,652	12.40%	(3.16)	5.39	(15.43)	(15.43)	2.17	3.74		5.07	12/15/16
ABLE Growth Custom Benchmark			(2.87)	5.58	(15.43)	(15.43)	2.36	4.00		5.43	
<b>Variance</b>			<b>(0.29)</b>	<b>(0.19)</b>	<b>0.00</b>	<b>0.00</b>	<b>(0.19)</b>	<b>(0.26)</b>		<b>(0.36)</b>	
Moderate Option	\$3,407,061	10.95%	(2.51)	4.32	(13.45)	(13.45)	1.64	3.13		4.18	12/15/16
ABLE Moderate Custom Benchmark			(2.26)	4.54	(13.49)	(13.49)	1.78	3.39		4.50	
<b>Variance</b>			<b>(0.25)</b>	<b>(0.22)</b>	<b>0.04</b>	<b>0.04</b>	<b>(0.14)</b>	<b>(0.26)</b>		<b>(0.32)</b>	
Moderately Conservative Option	\$3,332,132	10.71%	(1.70)	3.24	(9.36)	(9.36)	1.36	2.55		3.22	12/15/16
ABLE Moderately Conservative Custom Benchmark			(1.45)	3.37	(9.34)	(9.34)	1.46	2.76		3.48	
<b>Variance</b>			<b>(0.25)</b>	<b>(0.13)</b>	<b>(0.02)</b>	<b>(0.02)</b>	<b>(0.10)</b>	<b>(0.21)</b>		<b>(0.26)</b>	
Conservative Option	\$5,857,579	18.83%	(0.54)	1.55	(3.71)	(3.71)	0.79	1.60		1.82	12/15/16
ABLE Conservative Custom Benchmark			(0.35)	1.79	(3.55)	(3.55)	0.85	1.77		2.00	
<b>Variance</b>			<b>(0.19)</b>	<b>(0.24)</b>	<b>(0.16)</b>	<b>(0.16)</b>	<b>(0.06)</b>	<b>(0.17)</b>		<b>(0.18)</b>	
Checking Account Option	\$9,923,337	31.91%									03/30/17

## **MINNESOTA ACHIEVE A BETTER LIFE EXPERIENCE**

The Minnesota Achieve a Better Life Experience Plan (ABLE).  
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.

## **RISK BASED ALLOCATIONS**

The plan offers seven different allocation investment options: Aggressive, Moderately Aggressive, Growth, Moderate, Moderately Conservative, Conservative, and Checking. Each allocation is based on a

---

This page intentionally left blank.



## Quarterly Report

---

# Non-Retirement

## December 31, 2022



## 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

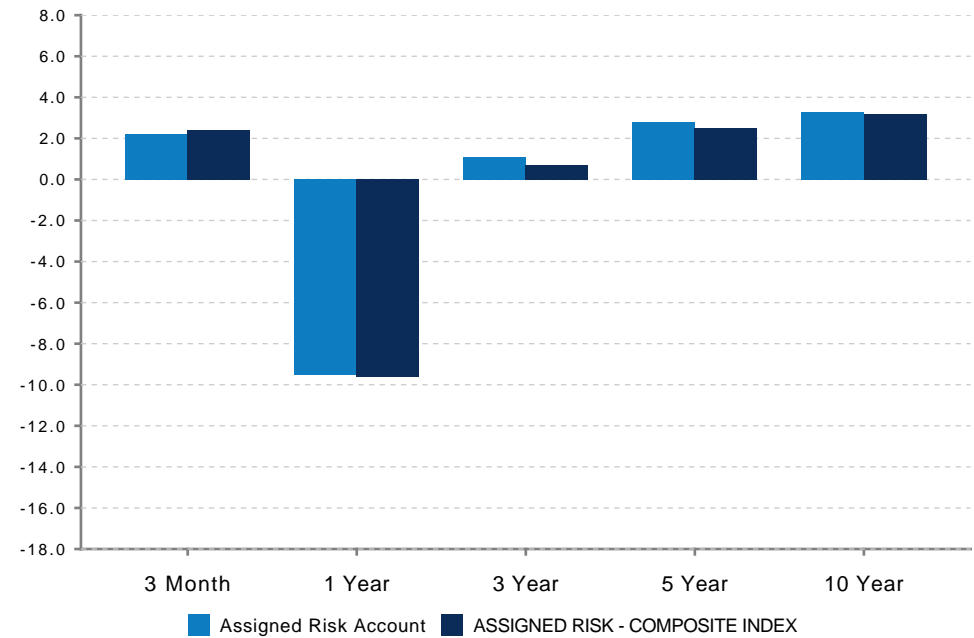
### Assigned Risk Plan

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.

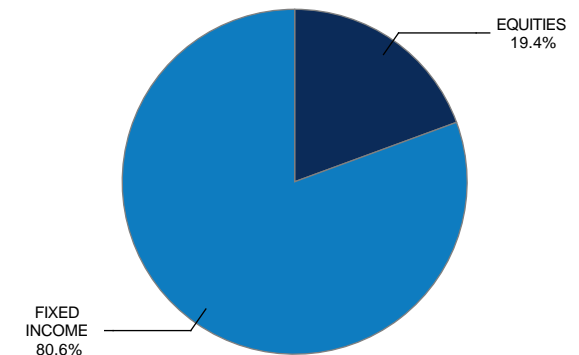
The Assigned Risk Plan is invested in a portfolio of common stocks and bonds

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	\$253,985,527	2.2%	-9.5%	1.1%	2.8%	3.3%
EQUITIES	\$49,171,473	7.6%	-18.1%	7.7%	9.4%	12.3%
FIXED INCOME	\$204,814,055	0.9%	-7.6%	-1.2%	0.5%	0.8%
ASSIGNED RISK - COMPOSITE INDEX		2.4%	-9.6%	0.7%	2.5%	3.2%
Excess		-0.2%	0.2%	0.4%	0.3%	0.2%
S&P 500		7.6%	-18.1%	7.7%	9.4%	12.6%
Bloomberg U.S. Government: Intermediate		1.0%	-7.7%	-1.4%	0.5%	0.7%



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.



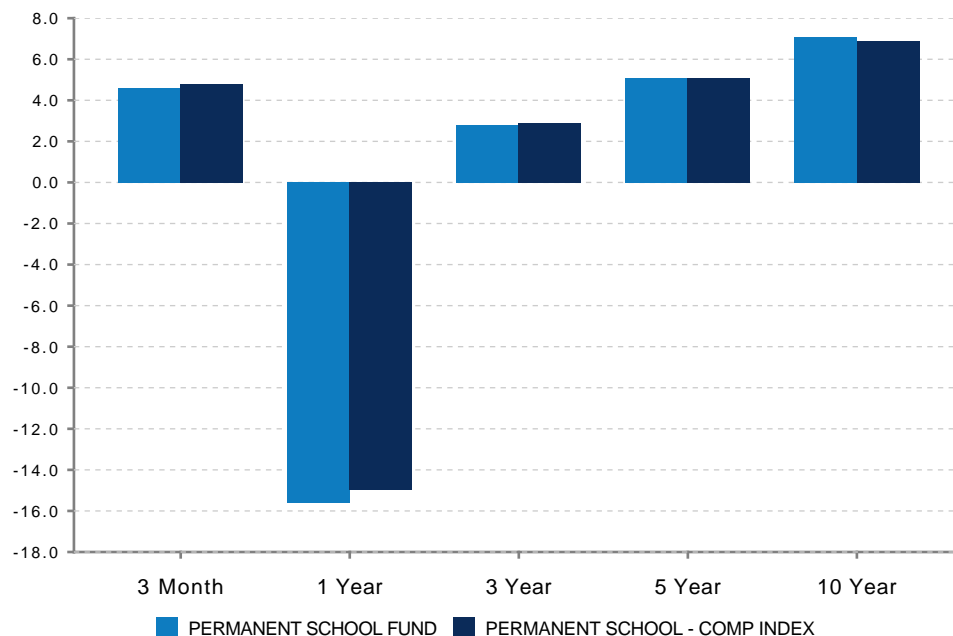
## Non-Retirement

### Permanent School Fund

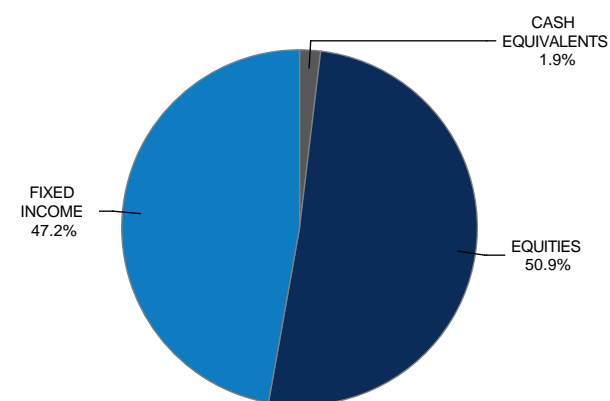
The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is transferred to the school endowment fund and distributed to Minnesota's public schools.

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	\$1,735,782,134	4.6%	-15.6%	2.8%	5.1%	7.1%
CASH EQUIVALENTS	33,292,907	0.9	1.7	0.8	1.3	0.8
EQUITIES	882,892,472	7.6	-18.1	7.7	9.4	12.6
FIXED INCOME	819,596,755	1.9	-13.6	-2.7	0.2	1.5
PERMANENT SCHOOL - COMP INDEX		4.8	-15.0	2.9	5.1	6.9
Excess		-0.2	-0.6	-0.1	0.0	0.2
S&P 500		7.6	-18.1	7.7	9.4	12.6
Bloomberg U.S. Aggregate		1.9	-13.0	-2.7	0.0	1.1



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.





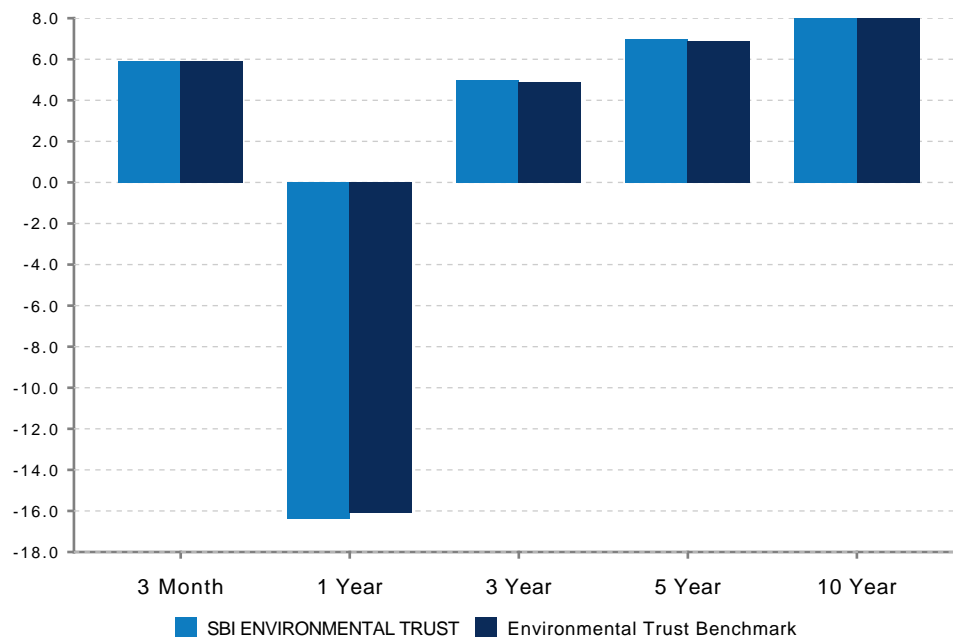
## Non-Retirement

### Environmental Trust Fund

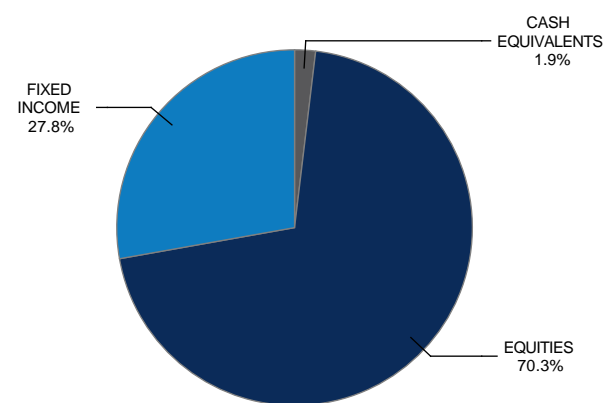
The objective of the Environmental Trust Fund is to increase the market value of the Fund over time in order to increase the annual amount made available for spending within the constraints of maintaining adequate portfolio quality and liquidity.

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	\$1,447,742,197	5.9%	-16.4%	5.0%	7.0%	9.4%
CASH EQUIVALENTS	27,628,104	0.9	1.7	0.8	1.3	0.8
EQUITIES	1,018,324,339	7.6	-18.1	7.7	9.4	12.6
FIXED INCOME	401,789,754	1.9	-13.6	-2.7	0.2	1.5
Environmental Trust Benchmark		5.9	-16.1	4.9	6.9	9.2
Excess		-0.1	-0.3	0.1	0.1	0.1
S&P 500		7.6	-18.1	7.7	9.4	12.6
Bloomberg U.S. Aggregate		1.9	-13.0	-2.7	0.0	1.1



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.

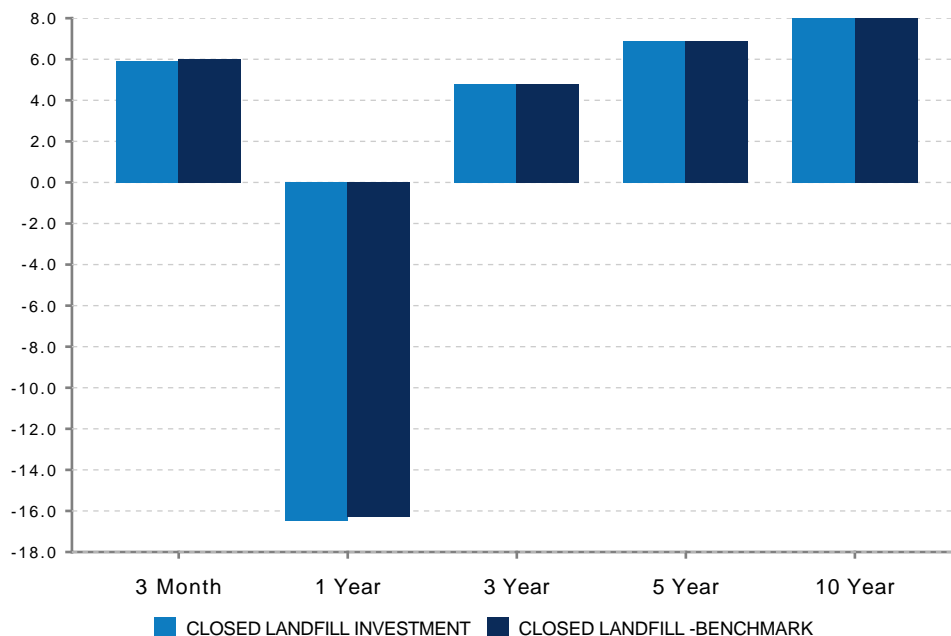


## Non-Retirement

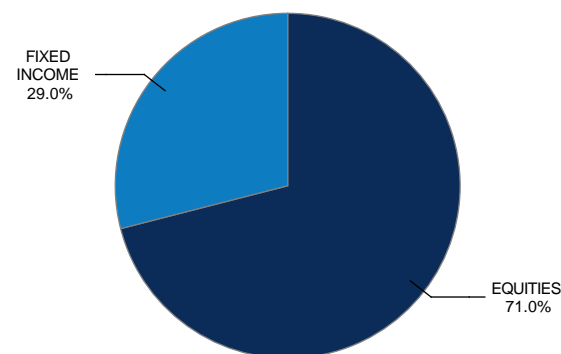
### Closed Landfill Investment Fund

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	\$115,205,505	5.9%	-16.5%	4.8%	6.9%	10.4%
EQUITIES	81,771,819	7.6	-18.1	7.7	9.4	12.6
FIXED INCOME	33,433,686	1.9	-13.6	-2.7	0.2	
CLOSED LANDFILL -BENCHMARK		6.0	-16.3	4.8	6.9	10.3
Excess		-0.1	-0.2	-0.1	-0.0	0.0
S&P 500		7.6	-18.1	7.7	9.4	12.6
Bloomberg U.S. Aggregate		1.9	-13.0	-2.7	0.0	1.1



Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by Prudential. Prior to 12/1/2017 both segments were managed internally by SBI staff. Prior to 9/10/14 the Fund's target allocation and benchmark was 100% domestic equity.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>NON RETIREMENT EQUITY INDEX - MELLON</b>	<b>2,779,378,685</b>	<b>7.5</b>	<b>2.3</b>	<b>-18.1</b>	<b>7.7</b>	<b>9.4</b>	<b>12.6</b>	<b>9.7</b>	<b>07/1993</b>
S&P 500 INDEX (DAILY)		7.6	2.3	-18.1	7.7	9.4	12.6	9.6	07/1993
Excess		-0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.1	
<b>NON RETIREMENT FIXED INCOME - PRUDENTIAL</b>	<b>1,442,921,095</b>	<b>1.9</b>	<b>-2.9</b>	<b>-13.6</b>	<b>-2.7</b>	<b>0.2</b>	<b>1.5</b>	<b>5.0</b>	<b>07/1994</b>
Bloomberg U.S. Aggregate		1.9	-3.0	-13.0	-2.7	0.0	1.1	4.6	07/1994
Excess		-0.0	0.1	-0.6	0.0	0.2	0.4	0.4	
<b>RBC</b>	<b>204,814,040</b>	<b>0.9</b>	<b>-2.1</b>	<b>-7.6</b>	<b>-1.2</b>	<b>0.5</b>	<b>0.8</b>	<b>4.2</b>	<b>07/1991</b>
RBC Custom Benchmark		1.0	-2.1	-7.7	-1.4	0.5	0.7	4.3	07/1991
Excess		-0.1	-0.1	0.1	0.2	0.1	0.1	-0.1	
MET COUNCIL OPEB BOND POOL	95,611,357	1.0	-1.5	-5.6	-1.1			0.7	02/2018
<b>NON RETIREMENT CASH ACCOUNT</b>	<b>704,362,759</b>	<b>0.9</b>	<b>1.4</b>	<b>1.7</b>	<b>0.8</b>	<b>1.3</b>		<b>1.3</b>	<b>12/2017</b>
ICE BofA US 3-Month Treasury Bill		0.8	1.3	1.5	0.7	1.3		1.3	12/2017
Excess		0.0	0.1	0.2	0.0	0.0		0.1	

Note:

RBC is the manager for the fixed income portion of the Assigned Risk Account. RBC changed its name from Voyager Asset Management on 1/1/2010. The current benchmark is the Bloomberg U.S. Government Intermediate Index. Prior to 7/1/11 the Voyager Custom Index was 10% 90 day T-Bill, 25% Merrill 1-3 Government, 15% Merrill 3-5 Government, 25% Merrill 5-10 Government, 25% Merrill Mortgage Master.

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

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

---

This page intentionally left blank.



## Quarterly Report

---

# State Cash

## December 31, 2022



## 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	24,764,443,720	0.9	0.2	0.4	1.1	0.7
iMoneyNet Money Fund Average-All Taxable		0.8	1.4	0.6	1.0	0.6

### 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	83,464,708	3.8	-3.8	0.4	1.6	
Housing Finance (1)	75,748,594	1.0				



## Addendum

### Benchmark Definitions

#### **Active Domestic Equity Benchmark:**

A weighted composite each of the individual active domestic equity managers' benchmarks. Effective 3/1/2017 the calculation uses the average weight of the manager relative to the total group of active managers during the month. Prior to 3/1/2017 the beginning of the month weight relative to the total group was used.

#### **Benchmark DM:**

Since 6/1/08 the developed markets managers' benchmark, "Benchmark DM," is the Standard (large + mid) MSCI World ex USA (net). From 10/1/07 through 5/31/08 the benchmark was the Provisional Standard MSCI World ex USA (net). From 10/1/03 to 9/30/07 the benchmark was the MSCI World ex USA (net). Prior to that date, it was the MSCI EAFE Free (net), including from 10/1/01 to 5/31/02 when it was the Provisional MSCI EAFE Free (net).

#### **Benchmark EM:**

Since 6/1/08 the emerging markets managers' benchmark, "Benchmark EM," is the Standard (large + mid) MSCI Emerging Markets Free (net). From 10/1/07 through 5/31/08 the benchmark was the Provisional Standard MSCI Emerging Markets Free (net). From 1/1/01 to 9/30/07 the benchmark was the MSCI Emerging Markets Free (net), including from 10/1/01 to 5/31/02 when it was the Provisional MSCI Emerging Markets Free (net). Prior to 1/1/01, it was the MSCI Emerging Markets Free (gross).

#### **Combined Funds Composite Index:**

The Composite Index performance is calculated by multiplying the beginning of month Composite weights by the monthly returns of the asset class benchmarks. Asset class weights for Private Markets - Invested and Private Markets - Uninvested are reset at the start of each month. From 1/1/2018-2/28/2019 the Transitional Policy Target was used to reflect the addition of Treasuries to the Fixed Income portfolio. From 7/1/2016-12/31/2016 the composite weights were set to match actual allocation as the portfolio was brought into line with the new Strategic Asset Allocation Policy Target. 7/1/2016 to 12/1/2020 the uninvested portion of Private Markets allocated to Public Equity. Prior to 7/1/2016 the uninvested portion of the Private Markets was invested in Fixed Income and the Composite Index was adjusted accordingly. When the Strategic Asset Allocation Policy Target changes, so does the Composite Index.

#### **Core Bonds Benchmark:**

The Core Bonds Benchmark is the Bloomberg U.S. Aggregate. Prior to 2016 this index was called the Barclays Agg. Prior to 9/18/2008 this index was called the Lehman Brothers Aggregate Bond Index. From 7/1/84-6/30/94 the asset class benchmark was the Salomon Brothers Broad Investment Grade Index. The SBI name for this benchmark changed from Fixed Income to Core Bonds on March 31, 2020.

#### **Credit Plus Benchmark:**

40% Bloomberg US Corporate Bond Index, 30% Bloomberg US Mortgage Backed Index, 20% BofA ML US High Yield BB-B Cash Pay Constrained Index, and 10% JPM EMBI Global Diversified Index.



## Addendum

---

### **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.