



Quarterly Report

Comprehensive Performance Report

June 30, 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.

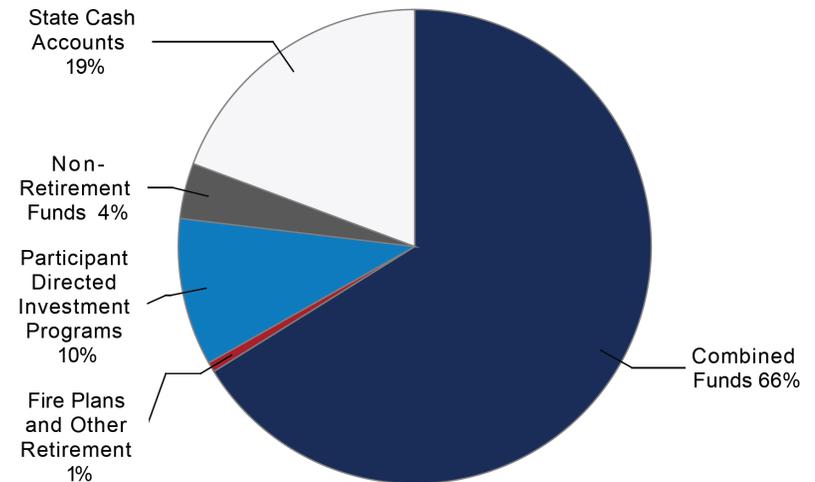
State Cash

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>
Combined Funds	\$81,320
Fire Plans + Other Retirement Plans	831
Participant Directed Investment Program	12,368
State Deferred Compensation Plan	8,481
Health Care Savings Plan	1,578
Unclassified Employees Retirement Plan	335
Hennepin County Supplemental Retirement Plan	156
PERA Defined Contribution Plan	83
Minnesota College Savings Plan	1,709
Minnesota Achieving a Better Life Experience Plan	27
Non-Retirement Funds	4,652
Assigned Risk Plan	255
Permanent School Fund	1,743
Environmental Trust Fund	1,448
Closed Landfill Investment Fund	116
Miscellaneous Trust Funds	317
Other Postemployment Benefits Accounts	773
State Cash	25,585
Invested Treasurer's Cash	25,494
Other State Cash Accounts	91
Total SBI AUM	124,756



Note: Differentials within column amounts may occur due to rounding



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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

June 30, 2022



Combined Funds Summary

Combined Funds Change in Market Value (\$Millions)

	<u>One Quarter</u>
Combined Funds	
Beginning Market Value	\$89,861
Net Contributions	-665
Investment Return	-7,877
Ending Market Value	81,320

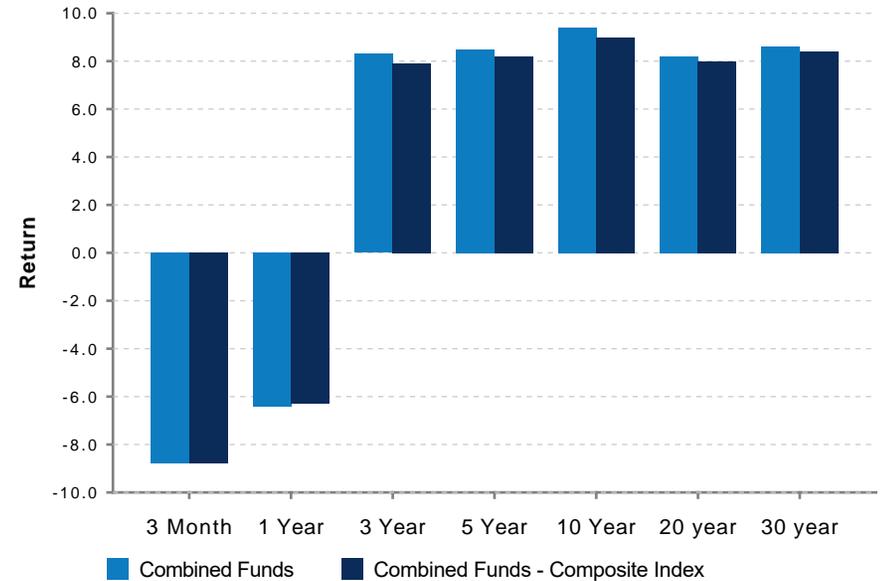
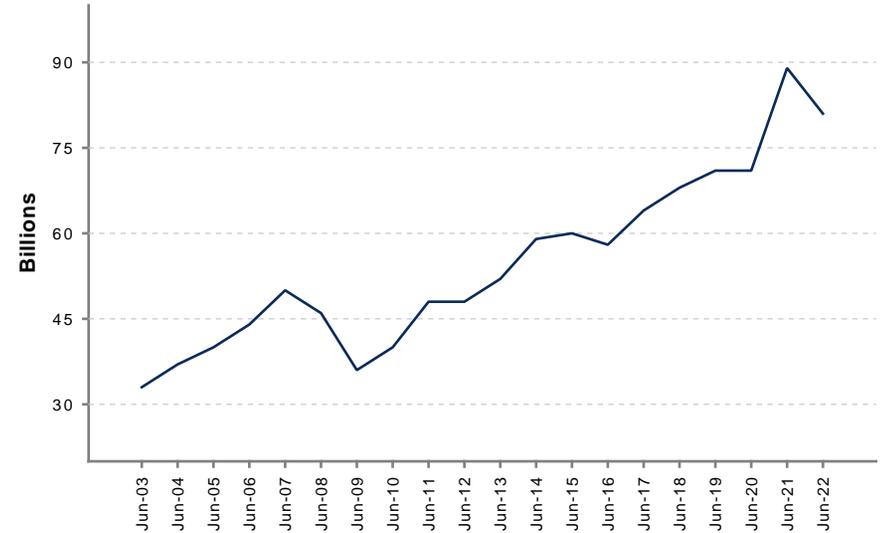
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

Performance (Net of Fees)

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

	<u>Qtr</u>	<u>FYTD</u>	<u>1 Yr</u>	<u>3 Yr</u>	<u>5 Yr</u>	<u>10 Yr</u>	<u>20 Yr</u>	<u>30 Yr</u>
Combined Funds	-8.8%	-6.4%	-6.4%	8.3%	8.5%	9.4%	8.2%	8.6%
Combined Funds - Composite Index	-8.8%	-6.3%	-6.3%	7.9%	8.2%	9.0%	8.0%	8.4%
Excess	0.0%	-0.1%	-0.1%	0.5%	0.3%	0.3%	0.2%	0.2%

Asset Growth



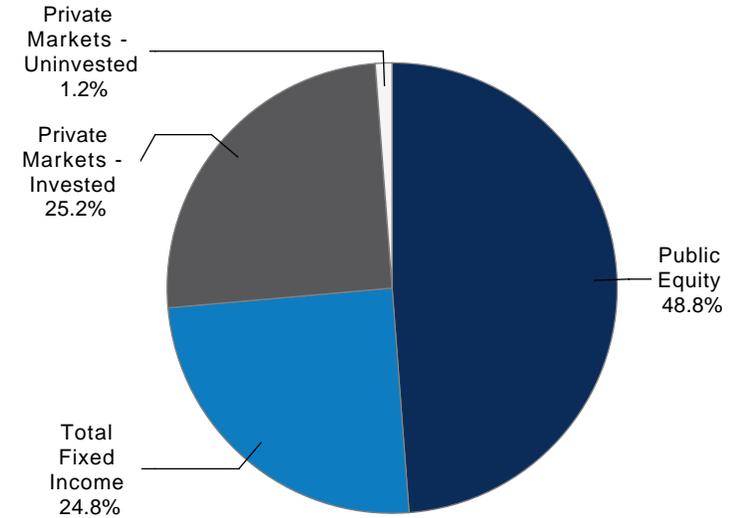


Combined Funds Summary

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.

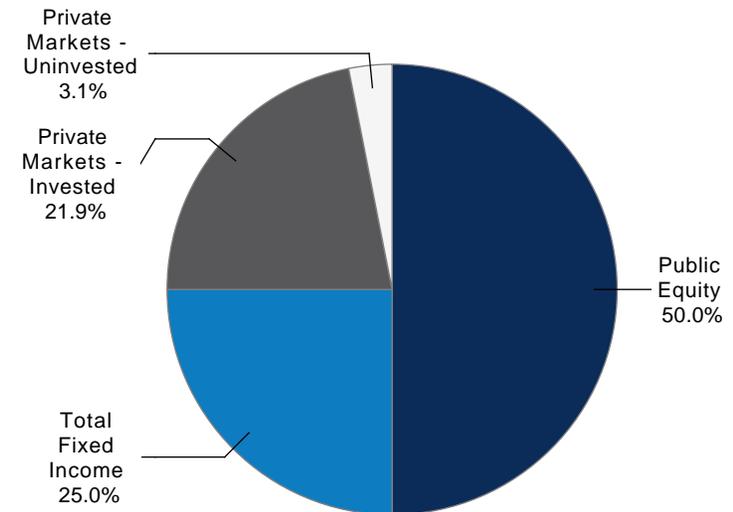
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$39,693	48.8%	50.0%
Total Fixed Income	20,183	24.8	25.0
Private Markets - Total	21,444	26.4	25.0
Private Markets - Invested	20,455	25.2	
Private Markets - Uninvested	989	1.2	
TOTAL	81,320	100.0	



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	21.9	Private Markets
Private Markets - Uninvested	3.1	S&P 500





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	\$39.7	48.8%	50.0%	-15.4%	-15.5%	-15.5%	7.3%	8.1%	10.5%	8.2%	8.8%
Public Equity Benchmark				-15.7	-15.7	-15.7	6.9	7.9			
Excess				0.4	0.1	0.1	0.4	0.2			
Domestic Equity	26.8	33.0	33.5	-16.8	-14.2	-14.2	9.8	10.6	12.6	9.0	9.5
Domestic Equity Benchmark				-16.7	-13.9	-13.9	9.7	10.5	12.5	9.1	9.7
Excess				-0.1	-0.3	-0.3	0.1	0.1	0.0	-0.1	-0.1
International Equity	12.0	14.8	16.5	-11.9	-17.4	-17.4	2.6	3.3	5.6	6.1	
International Equity Benchmark				-13.7	-19.4	-19.4	1.3	2.5	4.8	5.8	
Excess				1.8	2.0	2.0	1.3	0.8	0.8	0.3	
Global Equity	0.8	1.0	0.0	-17.1	-27.9	-27.9					
MSCI AC World Index Net				-15.7	-15.8	-15.8					
Excess				-1.5	-12.1	-12.1					

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	\$20.2	24.8%	25.0%	-5.7%	-10.5%	-10.5%	-0.1%	1.8%	2.4%	4.1%	5.3%
Total Fixed Income Benchmark				-4.8%	-9.6%	-9.6%	-0.2%				
Excess				-0.9%	-1.0%	-1.0%	0.2%				
Core/Core Plus	\$4.3	5.3%	5.0	-5.7%	-11.7%	-11.7%	-0.5%	1.3%	2.1%	4.0%	5.2%
Core Bonds Benchmark				-4.7%	-10.3%	-10.3%	-0.9%	0.9%	1.5%	3.6%	4.8%
Excess				-1.0%	-1.4%	-1.4%	0.4%	0.4%	0.6%	0.4%	0.4%
Return Seeking Fixed Income	\$3.9	4.8%	5.0	-7.6%	-12.3%	-12.3%					
Bloomberg U.S. Aggregate				-4.7%	-10.3%	-10.3%					
Excess				-2.9%	-2.1%	-2.1%					
Treasury Protection	\$7.7	9.5%	10.0	-7.3%	-13.5%	-13.5%	-1.8%				
Bloomberg Treasury 5+ Year				-7.2%	-13.5%	-13.5%	-1.8%				
Excess				-0.1%	-0.0%	-0.0%	0.0%				
Laddered Bond + Cash	\$4.3	5.3%	5.0	-0.0%	-0.3%	-0.3%	0.5%	1.0%	0.7%	1.5%	3.1%
ICE BofA US 3-Month Treasury Bill				0.1%	0.2%	0.2%	0.6%	1.1%	0.6%	1.3%	2.4%
Excess				-0.1%	-0.5%	-0.5%	-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	4.0%	24.8%	24.8%	18.7%	16.3%	13.8%	14.0%	13.9%	13.3%
Private Markets -Uninvested (1)	-16.0%	-10.2%	-10.2%						
Private Equity	1.2%	22.1%	22.1%	23.6%	20.9%	17.5%	15.9%	15.3%	15.5%
Private Credit	6.7%	21.3%	21.3%	13.0%	12.3%	13.4%	12.6%	13.1%	
Resources	14.5%	33.8%	33.8%	5.3%	4.2%	2.9%	13.3%	12.8%	13.0%
Real Estate	13.7%	43.7%	43.7%	19.4%	15.8%	14.0%	10.3%	11.1%	9.6%

Private Markets

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

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

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

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

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

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

(1) The Uninvested portion of the Private Markets allocation is 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

June 30, 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.

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Domestic Equity

June 30, 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>
Total Domestic Equity										
ACTIVE DOMESTIC EQUITY AGGREGATE (1)	\$2,663,159,206	9.7%	-18.6%	-22.8%	-22.8%	6.7%	8.3%	11.4%	7.8%	06/1996
Active Domestic Equity Benchmark			-16.8	-19.5	-19.5	7.0	7.9	11.1	8.5	06/1996
Excess			-1.8	-3.4	-3.4	-0.3	0.5	0.3	-0.6	
SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)	2,676,013,773	9.8	-16.2	-11.9	-11.9	10.8	11.5	13.1	8.6	06/1996
Semi Passive Domestic Equity Benchmark			-16.7	-13.0	-13.0	10.2	11.0	12.8	8.5	06/1996
Excess			0.5	1.1	1.1	0.6	0.5	0.2	0.1	
PASSIVE DOMESTIC EQUITY AGGREGATE (3)	21,999,326,173	80.5	-16.7	-13.2	-13.2	10.1	10.9	12.7	8.8	06/1996
Passive Domestic Equity Benchmark			-16.7	-13.1	-13.1	10.1	10.9	12.7	8.9	06/1996
Excess			0.0	-0.1	-0.1	0.0	-0.0	-0.0	-0.1	
TRANSITION AGGREGATE DOMESTIC EQUITY (4)	28	0.0								
TOTAL DOMESTIC EQUITY (5)	27,338,499,179	100.0	-16.8	-14.2	-14.2	9.8	10.6	12.6	10.4	01/1984
Domestic Equity Benchmark			-16.7	-13.9	-13.9	9.7	10.5	12.5	10.6	01/1984
Excess			-0.1	-0.3	-0.3	0.1	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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Total Domestic Equity					
ACTIVE DOMESTIC EQUITY AGGREGATE (1)	18.5%	27.3%	27.6%	-6.5%	20.6%
Active Domestic Equity Benchmark	20.3	19.8	28.2	-8.0	18.3
Excess	-1.7	7.5	-0.6	1.4	2.3
SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)	28.8	21.0	30.9	-4.9	22.5
Semi Passive Domestic Equity Benchmark	26.5	21.0	31.4	-4.8	21.7
Excess	2.3	0.0	-0.5	-0.1	0.8
PASSIVE DOMESTIC EQUITY AGGREGATE (3)	26.5	20.8	31.3	-5.0	21.3
Passive Domestic Equity Benchmark	26.4	20.8	31.3	-5.0	21.5
Excess	0.1	0.0	0.0	-0.0	-0.2
TRANSITION AGGREGATE DOMESTIC EQUITY (4)					
TOTAL DOMESTIC EQUITY (5)	25.8	21.7	30.7	-5.3	21.4
Domestic Equity Benchmark	25.7	20.8	30.8	-5.2	21.1
Excess	0.1	0.9	-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>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Active Large Cap Growth										
SANDS	\$142,405,713	0.5%	-34.1%	-49.8%	-49.8%	-0.8%	8.1%	11.1%	9.3%	01/2005
Russell 1000 Growth			-20.9	-18.8	-18.8	12.6	14.3	14.8	10.4	01/2005
Excess			-13.2	-31.0	-31.0	-13.4	-6.2	-3.7	-1.1	
WINSLOW	146,310,546	0.5	-22.0	-24.8	-24.8	8.4	12.9	13.8	10.5	01/2005
Russell 1000 Growth			-20.9	-18.8	-18.8	12.6	14.3	14.8	10.4	01/2005
Excess			-1.1	-6.0	-6.0	-4.2	-1.4	-1.0	0.1	
RUSSELL 1000 GROWTH AGGREGATE (1)	288,716,259	1.1	-28.5	-39.7	-39.7	8.0	13.7	14.8	10.0	11/2003
Russell 1000 Growth			-20.9	-18.8	-18.8	12.6	14.3	14.8	10.4	11/2003
Excess			-7.6	-20.9	-20.9	-4.6	-0.6	-0.0	-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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Large Cap Growth					
SANDS	5.2%	71.0%	33.5%	7.0%	35.3%
Russell 1000 Growth	27.6	38.5	36.4	-1.5	30.2
Excess	-22.4	32.5	-2.8	8.6	5.1
WINSLOW	24.8	37.6	34.2	4.2	33.2
Russell 1000 Growth	27.6	38.5	36.4	-1.5	30.2
Excess	-2.8	-0.9	-2.2	5.7	3.0
RUSSELL 1000 GROWTH AGGREGATE (1)	12.8	81.3	37.3	4.7	33.4
Russell 1000 Growth	27.6	38.5	36.4	-1.5	30.2
Excess	-14.8	42.8	0.9	6.2	3.2

(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>
Semi-Passive Large Cap										
BLACKROCK	\$1,340,953,756	4.9%	-16.2%	-12.5%	-12.5%	10.2%	11.6%	13.4%	10.0%	01/1995
Semi Passive Domestic Equity Benchmark			-16.7	-13.0	-13.0	10.2	11.0	12.8	9.6	01/1995
Excess			0.5	0.5	0.5	0.0	0.6	0.6	0.4	
J.P. MORGAN	1,335,060,017	4.9	-16.2	-11.3	-11.3	11.4	11.6	13.4	10.0	01/1995
Semi Passive Domestic Equity Benchmark			-16.7	-13.0	-13.0	10.2	11.0	12.8	9.6	01/1995
Excess			0.5	1.7	1.7	1.2	0.6	0.6	0.4	
SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE	2,676,013,773	9.8	-16.2	-11.9	-11.9	10.8	11.5	13.1	8.6	06/1996
Semi Passive Domestic Equity Benchmark			-16.7	-13.0	-13.0	10.2	11.0	12.8	8.5	06/1996
Excess			0.5	1.1	1.1	0.6	0.5	0.2	0.1	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Semi-Passive Large Cap					
BLACKROCK	28.3%	20.7%	30.4%	-4.1%	24.6%
Semi Passive Domestic Equity Benchmark	26.5	21.0	31.4	-4.8	21.7
Excess	1.8	-0.3	-1.0	0.7	2.9
J.P. MORGAN					
J.P. MORGAN	29.3	21.2	31.3	-5.4	21.8
Semi Passive Domestic Equity Benchmark	26.5	21.0	31.4	-4.8	21.7
Excess	2.8	0.3	-0.1	-0.6	0.1
SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE					
SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE	28.8	21.0	30.9	-4.9	22.5
Semi Passive Domestic Equity Benchmark	26.5	21.0	31.4	-4.8	21.7
Excess	2.3	0.0	-0.5	-0.1	0.8



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Active Large Cap Value										
BARROW HANLEY	\$334,237,835	1.2%	-9.9%	-0.6%	-0.6%	9.7%	9.2%	11.6%	8.3%	04/2004
Russell 1000 Value			-12.2	-6.8	-6.8	6.9	7.2	10.5	7.6	04/2004
Excess			2.3	6.2	6.2	2.8	2.1	1.1	0.7	
LSV	322,894,526	1.2	-11.0	-8.2	-8.2	7.7	7.4	11.9	8.6	04/2004
Russell 1000 Value			-12.2	-6.8	-6.8	6.9	7.2	10.5	7.6	04/2004
Excess			1.2	-1.3	-1.3	0.8	0.2	1.4	0.9	
RUSSELL 1000 VALUE AGGREGATE	657,132,361	2.4	-10.5	-4.5	-4.5	9.0	8.8	11.6	8.6	10/2003
Russell 1000 Value			-12.2	-6.8	-6.8	6.9	7.2	10.5	8.3	10/2003
Excess			1.7	2.3	2.3	2.2	1.7	1.1	0.2	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Large Cap Value					
BARROW HANLEY	27.7%	2.4%	26.9%	-5.9%	14.6%
Russell 1000 Value	25.2	2.8	26.5	-8.3	13.7
Excess	2.5	-0.4	0.4	2.4	0.9
LSV					
LSV	29.7	-1.3	26.9	-11.8	18.6
Russell 1000 Value	25.2	2.8	26.5	-8.3	13.7
Excess	4.5	-4.1	0.4	-3.6	4.9
RUSSELL 1000 VALUE AGGREGATE					
RUSSELL 1000 VALUE AGGREGATE	28.8	1.6	27.4	-8.7	17.3
Russell 1000 Value	25.2	2.8	26.5	-8.3	13.7
Excess	3.7	-1.2	0.9	-0.4	3.7



	<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>
Active Small Cap Growth										
ARROWMARK	\$153,096,450	0.6%	-20.0%	-31.1%	-31.1%	0.7%	5.1%		8.4%	11/2016
Russell 2000 Growth			-19.3	-33.4	-33.4	1.4	4.8		7.9	11/2016
Excess			-0.8	2.4	2.4	-0.7	0.3		0.5	
HOOD RIVER	199,707,710	0.7	-21.6	-28.4	-28.4	11.9	11.3		14.2	11/2016
Russell 2000 Growth			-19.3	-33.4	-33.4	1.4	4.8		7.9	11/2016
Excess			-2.4	5.0	5.0	10.5	6.5		6.4	
RICE HALL JAMES	177,325,306	0.6	-13.1	-21.9	-21.9	4.7	6.3		10.2	11/2016
Russell 2000 Growth			-19.3	-33.4	-33.4	1.4	4.8		7.9	11/2016
Excess			6.2	11.5	11.5	3.3	1.5		2.3	
WELLINGTON	213,914,046	0.8	-19.5	-31.3	-31.3	1.8	4.7		8.2	11/2016
Russell 2000 Growth			-19.3	-33.4	-33.4	1.4	4.8		7.9	11/2016
Excess			-0.2	2.1	2.1	0.4	-0.1		0.3	
RUSSELL 2000 GROWTH AGGREGATE	744,043,512	2.7	-18.8	-28.4	-28.4	4.9	6.9	9.2%	7.1	11/2003
Russell 2000 Growth			-19.3	-33.4	-33.4	1.4	4.8	9.3	7.9	11/2003
Excess			0.5	5.0	5.0	3.5	2.1	-0.1	-0.7	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Small Cap Growth					
ARROWMARK	6.1%	21.9%	20.1%	0.9%	26.2%
Russell 2000 Growth	2.8	34.6	28.5	-9.3	22.2
Excess	3.2	-12.8	-8.4	10.3	4.1
HOOD RIVER	24.2	61.7	24.3	-7.0	21.3
Russell 2000 Growth	2.8	34.6	28.5	-9.3	22.2
Excess	21.4	27.0	-4.2	2.3	-0.9
RICE HALL JAMES	15.6	23.8	18.0	-6.9	27.9
Russell 2000 Growth	2.8	34.6	28.5	-9.3	22.2
Excess	12.8	-10.8	-10.5	2.4	5.8
WELLINGTON	4.3	33.1	35.6	-11.6	22.6
Russell 2000 Growth	2.8	34.6	28.5	-9.3	22.2
Excess	1.4	-1.5	7.1	-2.3	0.4
RUSSELL 2000 GROWTH AGGREGATE	12.4	35.4	24.6	-6.2	22.0
Russell 2000 Growth	2.8	34.6	28.5	-9.3	22.2
Excess	9.5	0.8	-3.9	3.2	-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>
Active Small Cap Value										
GOLDMAN SACHS	\$258,767,673	0.9%	-15.0%	-13.1%	-13.1%	4.3%	4.7%	9.5%	8.4%	01/2004
Russell 2000 Value			-15.3	-16.3	-16.3	6.2	4.9	9.1	7.3	01/2004
Excess			0.2	3.2	3.2	-1.9	-0.2	0.4	1.1	
HOTCHKIS AND WILEY	165,838,118	0.6	-16.5	-3.5	-3.5	9.7	6.4	10.6	8.1	01/2004
Russell 2000 Value			-15.3	-16.3	-16.3	6.2	4.9	9.1	7.3	01/2004
Excess			-1.2	12.8	12.8	3.5	1.5	1.5	0.7	
MARTINGALE	153,976,148	0.6	-11.8	-6.6	-6.6	7.7	5.2	10.7	7.5	01/2004
Russell 2000 Value			-15.3	-16.3	-16.3	6.2	4.9	9.1	7.3	01/2004
Excess			3.5	9.6	9.6	1.5	0.3	1.7	0.1	
PEREGRINE	246,011,463	0.9	-14.0	-11.5	-11.5	7.5	5.6	9.4	9.4	07/2000
Russell 2000 Value			-15.3	-16.3	-16.3	6.2	4.9	9.1	8.8	07/2000
Excess			1.2	4.8	4.8	1.3	0.7	0.4	0.6	
RUSSELL 2000 VALUE AGGREGATE	824,593,402	3.0	-14.4	-9.6	-9.6	6.8	5.2	9.8	8.5	10/2003
Russell 2000 Value			-15.3	-16.3	-16.3	6.2	4.9	9.1	8.1	10/2003
Excess			0.8	6.7	6.7	0.6	0.3	0.8	0.4	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Small Cap Value					
GOLDMAN SACHS	27.0%	2.4%	23.2%	-13.3%	12.6%
Russell 2000 Value	28.3	4.6	22.4	-12.9	7.8
Excess	-1.3	-2.3	0.8	-0.5	4.7
HOTCHKIS AND WILEY	36.5	-0.2	19.7	-14.4	7.9
Russell 2000 Value	28.3	4.6	22.4	-12.9	7.8
Excess	8.2	-4.8	-2.7	-1.5	0.0
MARTINGALE	41.3	-4.6	21.1	-15.0	6.9
Russell 2000 Value	28.3	4.6	22.4	-12.9	7.8
Excess	13.0	-9.2	-1.3	-2.1	-0.9
PEREGRINE	28.6	7.3	21.1	-16.1	12.5
Russell 2000 Value	28.3	4.6	22.4	-12.9	7.8
Excess	0.3	2.7	-1.3	-3.3	4.7
RUSSELL 2000 VALUE AGGREGATE	31.8	1.5	21.3	-14.7	10.2
Russell 2000 Value	28.3	4.6	22.4	-12.9	7.8
Excess	3.5	-3.1	-1.1	-1.8	2.3



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Active All Cap										
ZEVENBERGEN (1)	\$148,673,671	0.5%	-41.4%	-57.5%	-57.5%	-0.6%	8.7%	12.9%	10.0%	04/1994
Zevenbergen Custom Benchmark			-20.8	-19.8	-19.8	13.9	15.1	15.2		04/1994
Excess			-20.6	-37.7	-37.7	-14.4	-6.4	-2.3		
ACTIVE RUSSELL 3000 GROWTH (2)										
ACTIVE RUSSELL 3000 GROWTH (2)	148,673,671	0.5	-41.4	-57.5	-57.5				-43.5	01/2021
Russell 3000 Growth TR			-20.8	-19.8	-19.8				-6.5	01/2021
Excess			-20.6	-37.7	-37.7				-37.0	

(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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active All Cap					
ZEVENBERGEN (1)	-9.7%	126.2%	43.0%	2.3%	35.1%
Zevenbergen Custom Benchmark	32.3	38.5	36.4	-1.5	30.2
Excess	-42.0	87.7	6.7	3.8	4.9
ACTIVE RUSSELL 3000 GROWTH (2)					
ACTIVE RUSSELL 3000 GROWTH (2)	-9.7				
Russell 3000 Growth TR	25.8				
Excess	-35.6				

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

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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Total Passive Domestic Equity										
BLACKROCK RUSSELL 1000	\$20,922,341,857	76.5%	-16.7%	-13.1%	-13.1%	10.1%	11.0%		12.5%	11/2016
RUSSELL 1000 (DAILY)			-16.7	-13.0	-13.0	10.2	11.0		12.5	11/2016
Excess			0.0	-0.1	-0.1	-0.0	-0.0		-0.0	
BLACKROCK RUSSELL 2000	162,991,281	0.6	-17.2	-24.5	-24.5	5.1			5.5	11/2018
RUSSELL 2000 (DAILY)			-17.2	-25.2	-25.2	4.2			4.7	11/2018
Excess			0.0	0.7	0.7	0.9			0.8	
BLACKROCK RUSSELL 3000 (1)	913,993,034	3.3	-16.7	-13.7	-13.7	10.0	10.8	12.7%	9.4	07/1995
Passive Manager Benchmark			-16.7	-13.9	-13.9	9.8	10.6	12.6	9.3	07/1995
Excess			0.0	0.1	0.1	0.3	0.2	0.1	0.1	
PASSIVE DOMESTIC EQUITY AGGREGATE (2)	21,999,326,173	80.5	-16.7	-13.2	-13.2	10.1	10.9	12.7	8.8	06/1996
Passive Domestic Equity Benchmark			-16.7	-13.1	-13.1	10.1	10.9	12.7	8.9	06/1996
Excess			0.0	-0.1	-0.1	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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Total Passive Domestic Equity					
BLACKROCK RUSSELL 1000	26.5%	20.9%	31.4%	-4.8%	21.7%
RUSSELL 1000 (DAILY)	26.5	21.0	31.4	-4.8	21.7
Excess	0.1	-0.0	0.0	-0.0	-0.0
BLACKROCK RUSSELL 2000	16.0	20.8	25.2		
RUSSELL 2000 (DAILY)	14.8	20.0	25.5		
Excess	1.2	0.8	-0.3		
BLACKROCK RUSSELL 3000 (1)	26.2	21.2	31.1	-5.2	21.1
Passive Manager Benchmark	25.7	20.9	31.0	-5.2	21.1
Excess	0.5	0.3	0.0	-0.0	0.0
PASSIVE DOMESTIC EQUITY AGGREGATE (2)	26.5	20.8	31.3	-5.0	21.3
Passive Domestic Equity Benchmark	26.4	20.8	31.3	-5.0	21.5
Excess	0.1	0.0	0.0	-0.0	-0.2

(1) The current Passive Manager Benchmark is the Russell 3000. For historical benchmark details please refer to the addendum of this report.

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

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International Equity

June 30, 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>
Total International Equity										
DEVELOPED MARKETS (1)	\$8,298,147,179	68.1%	-14.5%	-16.7%	-16.7%	2.3%	3.1%	6.1%	4.8%	01/1997
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	1.9	01/1997
Excess			0.2	0.1	0.1	0.6	0.5	0.7	2.9	
EMERGING MARKETS (2)	3,129,118,020	25.7	-12.6	-26.9	-26.9	0.3	1.8	3.0	5.1	11/1996
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2	3.1	5.5	11/1996
Excess			-1.1	-1.6	-1.6	-0.2	-0.4	-0.1	-0.3	
ACWI EX-US AGGREGATE	339,116,156	2.8	-13.4	-15.0	-15.0				-3.2	01/2021
MSCI AC WORLD ex US (NET) - DAILY			-13.7	-19.4	-19.4				-8.2	01/2021
Excess			0.4	4.4	4.4				5.0	
CHINA ONLY AGGREGATE	171,492,926	1.4	3.5	-17.3	-17.3				-12.7	01/2021
MSCI China A			1.7	-14.3	-14.3				-7.0	01/2021
Excess			1.8	-3.0	-3.0				-5.6	
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)	474,459	0.0								
TOTAL INTERNATIONAL EQUITY (4)	12,182,252,484	100.0	-12.0	-17.5	-17.5	2.6	3.3	5.6	6.0	10/1992
International Equity Benchmark			-13.7	-19.4	-19.4	1.3	2.5	4.8	5.5	10/1992
Excess			1.8	2.0	2.0	1.3	0.8	0.8	0.5	

(1) The current benchmark for Developed Markets, Benchmark DM, is the Standard (large + mid) MSCI World ex USA (net). Excludes impact of Record Currency. Impact of Record Currency will be shown beginning of 9/30/2022.

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

(3) The Transition Aggregate International Equity contains International Equity securities that are being transitioned to a different manager.

(4) The current International Equity Benchmark is the MSCI ACWI ex USA (net). Does not includes impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio.

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



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Total International Equity					
DEVELOPED MARKETS (1)	12.9%	9.1%	23.3%	-14.2%	24.9%
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.3	1.5	0.8	-0.1	0.7
EMERGING MARKETS (2)	-1.5	17.9	20.3	-15.4	37.7
BENCHMARK EM	-2.5	18.3	18.4	-14.6	37.3
Excess	1.1	-0.4	1.9	-0.8	0.4
ACWI EX-US AGGREGATE	12.8				
MSCI AC WORLD ex US (NET) - DAILY	7.8				
Excess	4.9				
CHINA ONLY AGGREGATE	-2.9				
MSCI China A	3.2				
Excess	-6.1				
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)					
TOTAL INTERNATIONAL EQUITY (4)	8.9	11.4	22.4	-14.5	27.6
International Equity Benchmark	7.8	10.5	21.5	-14.2	27.2
Excess	1.1	0.8	0.9	-0.3	0.4

(1) The current benchmark for Developed Markets, Benchmark DM, is the Standard (large + mid) MSCI World ex USA (net). Excludes impact of Record Currency. Impact of Record Currency will be shown beginning of 9/30/2022.

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

(3) The Transition Aggregate International Equity contains International Equity securities that are being transitioned to a different manager.

(4) The current International Equity Benchmark is the MSCI ACWI ex USA (net). Does not includes impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio.

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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Active Developed Markets										
ACADIAN	\$329,917,349	2.7%	-14.6%	-16.8%	-16.8%	3.4%	4.0%	8.7%	5.9%	07/2005
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	4.3	07/2005
Excess			0.0	-0.1	-0.1	1.7	1.3	3.4	1.6	
COLUMBIA	336,891,543	2.8	-14.7	-18.2	-18.2	3.5	5.2	7.1	3.1	03/2000
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	3.1	03/2000
Excess			-0.0	-1.4	-1.4	1.8	2.6	1.7	-0.0	
FIDELITY	335,859,949	2.8	-15.0	-18.1	-18.1	3.5	4.4	7.0	5.9	07/2005
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	4.3	07/2005
Excess			-0.3	-1.4	-1.4	1.8	1.8	1.6	1.6	
JP MORGAN	289,419,044	2.4	-15.4	-19.7	-19.7	1.8	3.4	5.7	4.5	07/2005
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	4.3	07/2005
Excess			-0.7	-2.9	-2.9	0.1	0.8	0.3	0.3	
MARATHON	324,202,484	2.7	-14.1	-16.6	-16.6	2.8	3.0	6.8	7.4	11/1993
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	4.7	11/1993
Excess			0.5	0.2	0.2	1.1	0.3	1.4	2.7	
MCKINLEY	241,645,715	2.0	-14.9	-17.1	-17.1	2.7	4.0	6.2	4.3	07/2005
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	4.3	07/2005
Excess			-0.3	-0.4	-0.4	1.0	1.4	0.9	0.1	
AQR CAPITAL MANAGEMENT	312,094,562	2.6	-13.0	-17.7	-17.7	0.5	0.8	5.4	4.2	07/2005
BENCHMARK DM			-14.7	-16.8	-16.8	1.7	2.7	5.4	4.3	07/2005
Excess			1.7	-0.9	-0.9	-1.2	-1.8	0.0	-0.1	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Developed Markets					
ACADIAN	13.6%	11.7%	19.1%	-13.5%	37.0%
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.9	4.2	-3.4	0.6	12.8
COLUMBIA	14.2	15.0	28.9	-14.9	32.7
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	1.6	7.4	6.4	-0.8	8.5
FIDELITY	13.0	15.4	27.1	-14.6	25.9
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.4	7.8	4.6	-0.5	1.7
JP MORGAN	13.3	14.2	28.5	-17.3	28.3
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.7	6.6	6.0	-3.3	4.1
MARATHON	12.8	7.6	23.5	-13.4	23.1
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.2	0.1	1.0	0.7	-1.1
MCKINLEY	11.6	16.4	25.6	-15.9	28.5
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	-1.0	8.8	3.1	-1.9	4.3
AQR CAPITAL MANAGEMENT	8.1	6.5	20.8	-18.2	25.1
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	-4.5	-1.1	-1.7	-4.1	0.9



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>1 Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Total Developed Markets										
Active Developed Markets Aggregate (1)	\$2,170,030,647	17.8%	-14.5%	-17.8%	-17.8%	2.7%	3.4%	6.5%	5.1%	06/1996
BENCHMARK DM			-14.7%	-16.8%	-16.8%	1.7%	2.7%	5.4%	1.9%	06/1996
Excess			0.1%	-1.0%	-1.0%	1.0%	0.7%	1.2%	3.2%	
SSgA DEVELOPED MARKETS PASSIVE										
SSgA DEVELOPED MARKETS PASSIVE	\$6,128,116,532	50.3%	-14.4%	-16.3%	-16.3%	2.2%	3.1%	5.8%		
BENCHMARK DM			-14.7%	-16.8%	-16.8%	1.7%	2.7%	5.4%		
Excess			0.2%	0.5%	0.5%	0.5%	0.4%	0.4%		
RECORD CURRENCY (2)	\$243,903,744	2.0%	2.8%	3.7%	3.7%					10/2020
DEVELOPED MARKETS TOTAL (3)										
DEVELOPED MARKETS TOTAL (3)	\$8,298,147,179	68.1%	-14.5%	-16.7%	-16.7%	2.3%	3.1%	6.1%	4.8%	01/1997
BENCHMARK DM			-14.7%	-16.8%	-16.8%	1.7%	2.7%	5.4%	1.9%	01/1997
Excess			0.2%	0.1%	0.1%	0.6%	0.5%	0.7%	2.9%	

(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.

(3) Excludes impact of Record Currency. Impact of Record Currency will be shown beginning of 9/30/2022.



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Total Developed Markets					
Active Developed Markets Aggregate (1)	12.5%	12.2%	24.4%	-15.1%	26.8%
BENCHMARK DM	12.6%	7.6%	22.5%	-14.1%	24.2%
Excess	-0.1%	4.6%	1.9%	-1.0%	2.6%
SSgA DEVELOPED MARKETS PASSIVE					
SSgA DEVELOPED MARKETS PASSIVE	13.0%	8.2%	23.0%	-13.9%	24.7%
BENCHMARK DM	12.6%	7.6%	22.5%	-14.1%	24.2%
Excess	0.4%	0.6%	0.5%	0.2%	0.5%
DEVELOPED MARKETS TOTAL (2)					
DEVELOPED MARKETS TOTAL (2)	12.9%	9.1%	23.3%	-14.2%	24.9%
BENCHMARK DM	12.6%	7.6%	22.5%	-14.1%	24.2%
Excess	0.3%	1.5%	0.8%	-0.1%	0.7%

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

(2) Excludes impact of Record Currency. Impact of Record Currency will be shown beginning of 9/30/2022.



	<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>
Active Emerging Markets										
MARTIN CURRIE	\$362,322,704	3.0%	-14.3%	-32.2%	-32.2%	1.1%	3.4%		4.9%	04/2017
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2		3.3	04/2017
Excess			-2.8	-6.9	-6.9	0.5	1.2		1.6	
MACQUARIE	346,681,748	2.8	-12.4	-28.9	-28.9	2.1	3.0		4.2	04/2017
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2		3.3	04/2017
Excess			-0.9	-3.6	-3.6	1.5	0.8		1.0	
MORGAN STANLEY	416,616,818	3.4	-16.5	-29.4	-29.4	-1.3	0.2	2.8%	7.7	01/2001
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2	3.1	7.8	01/2001
Excess			-5.1	-4.1	-4.1	-1.8	-2.0	-0.3	-0.1	
NEUBERGER BERMAN	320,818,238	2.6	-10.7	-28.5	-28.5	-2.9	0.1		1.4	04/2017
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2		3.3	04/2017
Excess			0.7	-3.2	-3.2	-3.5	-2.1		-1.9	
PZENA	331,171,766	2.7	-11.7	-15.4	-15.4	3.8	3.2		4.1	04/2017
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2		3.3	04/2017
Excess			-0.2	9.8	9.8	3.2	1.0		0.8	
ROCK CREEK	352,188,526	2.9	-12.2	-27.2	-27.2	1.4	1.7		2.6	04/2017
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2		3.3	04/2017
Excess			-0.7	-1.9	-1.9	0.9	-0.5		-0.7	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Emerging Markets					
MARTIN CURRIE	-3.5%	26.5%	27.3%	-16.6%	
BENCHMARK EM	-2.5	18.3	18.4	-14.6	
Excess	-1.0	8.2	8.8	-2.0	
MACQUARIE	-2.2	24.2	23.2	-13.3	
BENCHMARK EM	-2.5	18.3	18.4	-14.6	
Excess	0.3	5.9	4.7	1.3	
MORGAN STANLEY	3.5	15.7	20.4	-16.7	37.9%
BENCHMARK EM	-2.5	18.3	18.4	-14.6	37.3
Excess	6.0	-2.6	1.9	-2.2	0.6
NEUBERGER BERMAN	-5.6	14.2	19.7	-17.1	
BENCHMARK EM	-2.5	18.3	18.4	-14.6	
Excess	-3.1	-4.1	1.3	-2.6	
PZENA	9.3	7.7	13.4	-10.8	
BENCHMARK EM	-2.5	18.3	18.4	-14.6	
Excess	11.8	-10.6	-5.1	3.8	
ROCK CREEK	-5.2	22.0	22.3	-17.6	
BENCHMARK EM	-2.5	18.3	18.4	-14.6	
Excess	-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>
Total Emerging Markets										
ACTIVE EMERGING MARKETS AGGREGATE	\$2,129,799,799	17.5%	-13.2%	-27.5%	-27.5%	0.3%	1.7%	2.8%	2.9%	01/2012
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2	3.1	3.3	01/2012
Excess			-1.7	-2.2	-2.2	-0.3	-0.5	-0.3	-0.4	
SSGA EMERGING MARKETS PASSIVE	999,318,221	8.2	-11.3	-25.6	-25.6	0.4	2.0	3.1	3.3	01/2012
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2	3.1	3.3	01/2012
Excess			0.1	-0.3	-0.3	-0.2	-0.1	0.0	0.0	
EMERGING MARKETS TOTAL	3,129,118,020	25.7	-12.6	-26.9	-26.9	0.3	1.8	3.0	5.1	11/1996
BENCHMARK EM			-11.4	-25.3	-25.3	0.6	2.2	3.1	5.5	11/1996
Excess			-1.1	-1.6	-1.6	-0.2	-0.4	-0.1	-0.3	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Total Emerging Markets					
ACTIVE EMERGING MARKETS AGGREGATE	-0.9%	17.6%	21.4%	-15.6%	37.2%
BENCHMARK EM	-2.5	18.3	18.4	-14.6	37.3
Excess	1.6	-0.7	3.0	-1.0	-0.1
SSGA EMERGING MARKETS PASSIVE					
SSGA EMERGING MARKETS PASSIVE	-2.9	18.3	18.1	-14.7	37.4
BENCHMARK EM	-2.5	18.3	18.4	-14.6	37.3
Excess	-0.3	0.0	-0.3	-0.1	0.1
EMERGING MARKETS TOTAL					
EMERGING MARKETS TOTAL	-1.5	17.9	20.3	-15.4	37.7
BENCHMARK EM	-2.5	18.3	18.4	-14.6	37.3
Excess	1.1	-0.4	1.9	-0.8	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>
Active ACWI ex-US										
EARNEST PARTNERS ACWI EX US	\$339,116,156	2.8%	-13.4%	-15.0%	-15.0%				-3.2%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			-13.7%	-19.4%	-19.4%				-8.2%	01/2021
Excess			0.4%	4.4%	4.4%				5.0%	
TOTAL ACWI EX-US AGGREGATE										
TOTAL ACWI EX-US AGGREGATE	\$339,116,156	2.8%	-13.4%	-15.0%	-15.0%				-3.2%	01/2021
MSCI AC WORLD ex US (NET) - DAILY			-13.7%	-19.4%	-19.4%				-8.2%	01/2021
Excess			0.4%	4.4%	4.4%				5.0%	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active ACWI ex-US					
EARNEST PARTNERS ACWI EX US	12.8%				
MSCI AC WORLD ex US (NET) - DAILY	7.8				
Excess	4.9				
TOTAL ACWI EX-US AGGREGATE					
MSCI AC WORLD ex US (NET) - DAILY	7.8				
Excess	4.9				



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
China Only Managers										
EARNEST PARTNERS CHINA	\$171,492,926	1.4%	3.5%	-17.3%	-17.3%				-12.7%	01/2021
MSCI China A			1.7	-14.3	-14.3				-7.0	01/2021
Excess			1.8	-3.0	-3.0				-5.6	
CHINA ONLY AGGREGATE	171,492,926	1.4	3.5	-17.3	-17.3				-12.7	01/2021
MSCI China A			1.7	-14.3	-14.3				-7.0	01/2021
Excess			1.8	-3.0	-3.0				-5.6	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
China Only Managers					
EARNEST PARTNERS CHINA	-2.9%				
MSCI China A	3.2				
Excess	-6.1				
CHINA ONLY AGGREGATE	-2.9				
MSCI China A	3.2				
Excess	-6.1				

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Global Equity

June 30, 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>
Global Equity Managers										
ARIEL INVESTMENTS	\$367,295,376	43.5%	-5.9%	-2.7%	-2.7%				4.4%	01/2021
MSCI AC WORLD NET USD DAILY			-15.7	-15.8	-15.8				-3.6	01/2021
Excess			9.8	13.1	13.1				8.0	
BAILLIE GIFFORD	179,657,576	21.3	-29.2	-49.2	-49.2				-31.4	01/2021
MSCI AC WORLD NET USD DAILY			-15.7	-15.8	-15.8				-3.6	01/2021
Excess			-13.6	-33.4	-33.4				-27.8	
MARTIN CURRIE INVESTMENTS - GLOBAL EQ	297,270,411	35.2	-20.6	-32.3	-32.3				-17.1	01/2021
MSCI AC WORLD NET USD DAILY			-15.7	-15.8	-15.8				-3.6	01/2021
Excess			-4.9	-16.6	-16.6				-13.4	
GLOBAL EQUITY	844,223,363	100.0	-17.1	-27.9	-27.9				-13.8	01/2021
MSCI AC WORLD NET USD DAILY			-15.7	-15.8	-15.8				-3.6	01/2021
Excess			-1.5	-12.1	-12.1				-10.1	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Global Equity Managers					
ARIEL INVESTMENTS	12.1%				
MSCI AC WORLD NET USD DAILY	18.5				
Excess	-6.5				
BAILLIE GIFFORD					
BAILLIE GIFFORD	3.1				
MSCI AC WORLD NET USD DAILY	18.5				
Excess	-15.5				
MARTIN CURRIE INVESTMENTS - GLOBAL EQ					
MARTIN CURRIE INVESTMENTS - GLOBAL EQ	12.8				
MSCI AC WORLD NET USD DAILY	18.5				
Excess	-5.8				
GLOBAL EQUITY					
GLOBAL EQUITY	9.6				
MSCI AC WORLD NET USD DAILY	18.5				
Excess	-8.9				

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Core/Core Plus Bonds

June 30, 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>
Bonds										
CORE (1)	\$1,800,935,252	40.1%	-5.0%	-10.4%	-10.4%				-5.9%	11/2020
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3				-6.6	11/2020
Excess			-0.3	-0.1	-0.1				0.7	
CORE PLUS (1)	2,692,897,748	59.9	-6.1	-12.6	-12.6				-7.1	11/2020
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3				-6.6	11/2020
Excess			-1.4	-2.3	-2.3				-0.5	
TRANSITION AGGREGATE CORE BONDS (2)	18,984	0.0								
TOTAL CORE/CORE PLUS BONDS (3)	4,493,851,985	100.0	-5.7	-11.7	-11.7	-0.5%	1.3%	2.1%	6.9	07/1984
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3	-0.9	0.9	1.5	6.5	07/1984
Excess			-1.0	-1.4	-1.4	0.4	0.4	0.6	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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Bonds					
CORE (1)	-1.0%				
Bloomberg U.S. Aggregate	-1.5				
Excess	0.5				
CORE PLUS (1)	-1.1				
Bloomberg U.S. Aggregate	-1.5				
Excess	0.4				
TRANSITION AGGREGATE CORE BONDS (2)					
TOTAL CORE/CORE PLUS BONDS (3)	-1.1	9.7%	9.7%	-0.0%	4.2%
Bloomberg U.S. Aggregate	-1.5	7.5	8.7	0.0	3.5
Excess	0.5	2.2	1.0	-0.1	0.7

(1) Prior to 12/1/2020 the Core and Core Plus managers were categorized as Active or Semi-Passive. For historical performance of each manager, see the following pages in this report. For information on the historical performance of the previous groupings refer to the 9/30/2020 Comprehensive Performance Report.

(2) The Transition Aggregate Core Bonds includes core bonds securities that are being transition to a different manager.

(3) The current Core Bonds Benchmark is the Bloomberg U.S. Aggregate calculated daily. For historical benchmark details please refer to the addendum of this report.

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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Active Core										
DODGE & COX	\$957,584,084	21.3%	-4.8%	-10.1%	-10.1%	0.2%	1.7%	2.7%	5.2%	02/2000
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3	-0.9	0.9	1.5	4.2	02/2000
Excess			-0.1	0.2	0.2	1.1	0.8	1.1	1.0	
BLACKROCK	843,351,169	18.8	-5.2	-10.7	-10.7	-0.8	1.0	1.7	4.6	04/1996
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3	-0.9	0.9	1.5	4.5	04/1996
Excess			-0.5	-0.4	-0.4	0.2	0.2	0.2	0.1	
CORE	1,800,935,252	40.1	-5.0	-10.4	-10.4				-5.9	11/2020
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3				-6.6	11/2020
Excess			-0.3	-0.1	-0.1				0.7	

(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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Active Core					
DODGE & COX	-0.7%	9.4%	9.6%	-0.0%	4.2%
Bloomberg U.S. Aggregate	-1.5	7.5	8.7	0.0	3.5
Excess	0.8	1.8	0.9	-0.1	0.7
BLACKROCK	-1.3	8.3	9.3	-0.1	3.7
Bloomberg U.S. Aggregate	-1.5	7.5	8.7	0.0	3.5
Excess	0.2	0.8	0.6	-0.2	0.1
CORE	-1.0				
Bloomberg U.S. Aggregate	-1.5				
Excess	0.5				



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Core Plus Bonds										
GOLDMAN SACHS	\$847,734,347	18.9%	-5.4%	-10.8%	-10.8%	-0.6%	1.2%	1.9%	4.9%	07/1993
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3	-0.9	0.9	1.5	4.6	07/1993
Excess			-0.7	-0.5	-0.5	0.3	0.3	0.3	0.3	
NEUBERGER	876,507,889	19.5	-6.1	-11.4	-11.4	-0.3	1.3	1.9	5.8	07/1988
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3	-0.9	0.9	1.5	5.5	07/1988
Excess			-1.5	-1.1	-1.1	0.6	0.4	0.3	0.2	
WESTERN	968,655,513	21.6	-6.6	-15.0	-15.0	-1.1	1.1	2.4	7.6	07/1984
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3	-0.9	0.9	1.5	6.5	07/1984
Excess			-1.9	-4.7	-4.7	-0.2	0.2	0.8	1.0	
CORE PLUS (1)	2,692,897,748	59.9	-6.1	-12.6	-12.6				-7.1	11/2020
Bloomberg U.S. Aggregate			-4.7	-10.3	-10.3				-6.6	11/2020
Excess			-1.4	-2.3	-2.3				-0.5	

(1) Prior to 12/1/2020 the Core Plus 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>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Core Plus Bonds					
GOLDMAN SACHS	-1.5%	9.0%	9.6%	-0.0%	3.9%
Bloomberg U.S. Aggregate	-1.5	7.5	8.7	0.0	3.5
Excess	0.0	1.5	0.9	-0.0	0.4
NEUBERGER					
NEUBERGER	-0.6	9.9	9.0	-0.1	3.6
Bloomberg U.S. Aggregate	-1.5	7.5	8.7	0.0	3.5
Excess	1.0	2.4	0.3	-0.1	0.0
WESTERN					
WESTERN	-1.3	10.9	11.1	-0.2	5.6
Bloomberg U.S. Aggregate	-1.5	7.5	8.7	0.0	3.5
Excess	0.3	3.4	2.4	-0.3	2.1
CORE PLUS					
CORE PLUS	-1.1				
Bloomberg U.S. Aggregate	-1.5				
Excess	0.4				

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Return Seeking Bonds

June 30, 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>
Return Seeking Bonds Managers										
COLUMBIA CREDIT PLUS	\$849,190,492	21.7%	-8.4%	-14.2%	-14.2%				-8.0%	12/2020
Credit Plus Benchmark			-7.2	-13.0	-13.0				-8.5	12/2020
Excess			-1.3	-1.2	-1.2				0.5	
PIMCO CREDIT PLUS	802,002,795	20.5	-7.3	-12.7	-12.7				-7.6	12/2020
Credit Plus Benchmark			-7.2	-13.0	-13.0				-8.5	12/2020
Excess			-0.2	0.2	0.2				0.9	
CREDIT PLUS	1,651,193,286	42.2	-7.9	-13.5	-13.5				-7.8	12/2020
Credit Plus Benchmark			-7.2	-13.0	-13.0				-8.5	12/2020
Excess			-0.7	-0.5	-0.5				0.7	
BLACKROCK OPPORTUNISTIC	520,289,923	13.3	-3.7	-6.5	-6.5				-3.6	12/2020
ICE BofA US 3-Month Treasury Bill			0.1	0.2	0.2				0.1	12/2020
Excess			-3.8	-6.7	-6.7				-3.7	
ASHMORE EMERGING MARKET	264,015,730	6.7	-11.8	-25.8	-25.8				-19.1	01/2021
JPM JEMB Sovereign-only 50-50			-10.0	-20.2	-20.2				-15.2	01/2021
Excess			-1.7	-5.6	-5.6				-3.9	
TCW SECURITIZED CREDIT	342,352,869	8.7	-2.3	-2.1	-2.1				-2.1	07/2021
ICE BofA US 3-Month Treasury Bill			0.1	0.2	0.2				0.2	07/2021
Excess			-2.4	-2.3	-2.3				-2.3	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Return Seeking Bonds Managers					
COLUMBIA CREDIT PLUS	1.1%				
Credit Plus Benchmark	0.0				
Excess	1.1				
PIMCO CREDIT PLUS	0.8				
Credit Plus Benchmark	0.0				
Excess	0.7				
CREDIT PLUS	0.9				
Credit Plus Benchmark	0.0				
Excess	0.9				
BLACKROCK OPPORTUNISTIC	0.3				
ICE BofA US 3-Month Treasury Bill	0.0				
Excess	0.2				
ASHMORE EMERGING MARKET	-10.1				
JPM JEMB Sovereign-only 50-50	-5.3				
Excess	-4.8				
TCW SECURITIZED CREDIT					
ICE BofA US 3-Month Treasury Bill					
Excess					



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Return Seeking Bonds Managers										
PAYDEN RYGEL	\$267,829,470	6.8%	-8.9%	-12.7%	-12.7%				-7.4%	01/2021
Multi-Asset Credit Benchmark			-8.5	-12.3	-12.3				-7.3	01/2021
Excess			-0.5	-0.4	-0.4				-0.2	
PGIM	309,422,222	7.9	-9.5	-13.1	-13.1				-8.3	01/2021
Multi-Asset Credit Benchmark			-8.5	-12.3	-12.3				-7.3	01/2021
Excess			-1.1	-0.8	-0.8				-1.1	
MULTI-ASSET CREDIT	577,251,692	14.7	-9.3	-12.9	-12.9				-7.9	01/2021
Multi-Asset Credit Benchmark			-8.5	-12.3	-12.3				-7.3	01/2021
Excess			-0.8	-0.6	-0.6				-0.6	
KKR	280,757,327	7.2	-10.4	-12.5	-12.5				-6.8	01/2021
ICE BofA US Cash Pay HY Constrained			-9.9	-12.6	-12.6				-6.4	01/2021
Excess			-0.5	0.1	0.1				-0.4	
OAKTREE	280,159,163	7.2	-9.5	-11.6	-11.6				-6.2	01/2021
ICE BofA US Cash Pay HY Constrained			-9.9	-12.6	-12.6				-6.4	01/2021
Excess			0.4	0.9	0.9				0.2	
HIGH YIELD	560,916,490	14.3	-10.0	-12.1	-12.1				-6.6	01/2021
ICE BofA US Cash Pay HY Constrained			-9.9	-12.6	-12.6				-6.4	01/2021
Excess			-0.1	0.5	0.5				-0.1	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Return Seeking Bonds Managers					
PAYDEN RYGEL	2.6%				
Multi-Asset Credit Benchmark	2.7				
Excess	-0.1				
PGIM	3.2				
Multi-Asset Credit Benchmark	2.7				
Excess	0.5				
MULTI-ASSET CREDIT	2.9				
Multi-Asset Credit Benchmark	2.7				
Excess	0.2				
KKR	4.7				
ICE BofA US Cash Pay HY Constrained	5.3				
Excess	-0.6				
OAKTREE	4.5				
ICE BofA US Cash Pay HY Constrained	5.3				
Excess	-0.8				
HIGH YIELD	4.6				
ICE BofA US Cash Pay HY Constrained	5.3				
Excess	-0.7				



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
Return Seeking Bonds										
CREDIT PLUS	\$1,651,193,286	42.2%	-7.9%	-13.5%	-13.5%				-7.8%	12/2020
Credit Plus Benchmark			-7.2	-13.0	-13.0				-8.5	12/2020
Excess			-0.7	-0.5	-0.5				0.7	
OPPORTUNISTIC FI	520,289,923	13.3	-3.7	-6.5	-6.5				-3.6	12/2020
ICE BofA US 3-Month Treasury Bill			0.1	0.2	0.2				0.1	12/2020
Excess			-3.8	-6.7	-6.7				-3.7	
EMERGING MARKET DEBT	264,015,730	6.7	-11.8	-25.8	-25.8				-19.1	01/2021
JPM JEMB Sovereign-only 50-50			-10.0	-20.2	-20.2				-15.2	01/2021
Excess			-1.7	-5.6	-5.6				-3.9	
SECURITIZED CREDIT	342,352,869	8.7	-2.3	-2.1	-2.1				-2.0	06/2021
ICE BofA US 3-Month Treasury Bill			0.1	0.2	0.2				0.2	06/2021
Excess			-2.4	-2.3	-2.3				-2.2	
MULTI-ASSET CREDIT	577,251,692	14.7	-9.3	-12.9	-12.9				-7.9	01/2021
Multi-Asset Credit Benchmark			-8.5	-12.3	-12.3				-7.3	01/2021
Excess			-0.8	-0.6	-0.6				-0.6	
HIGH YIELD	560,916,490	14.3	-10.0	-12.1	-12.1				-6.6	01/2021
ICE BofA US Cash Pay HY Constrained			-9.9	-12.6	-12.6				-6.4	01/2021
Excess			-0.1	0.5	0.5				-0.1	
RETURN SEEKING BONDS (1)	3,920,443,138	100.0	-7.7	-12.4	-12.4				-7.0	12/2020
Return Seeking Fixed Income Benchmark			-6.4	-10.7	-10.7				-6.2	12/2020
Excess			-1.3	-1.7	-1.7				-0.8	

(1) Includes return seeking bonds transition account.



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Return Seeking Bonds					
CREDIT PLUS	0.9%				
Credit Plus Benchmark	0.0				
Excess	0.9				
OPPORTUNISTIC FI	0.3				
ICE BofA US 3-Month Treasury Bill	0.0				
Excess	0.2				
EMERGING MARKET DEBT	-10.1				
JPM JEMB Sovereign-only 50-50	-5.3				
Excess	-4.8				
SECURITIZED CREDIT					
ICE BofA US 3-Month Treasury Bill					
Excess					
MULTI-ASSET CREDIT	2.9				
Multi-Asset Credit Benchmark	2.7				
Excess	0.2				
HIGH YIELD	4.6				
ICE BofA US Cash Pay HY Constrained	5.3				
Excess	-0.7				
RETURN SEEKING BONDS (1)	0.9				
Return Seeking Fixed Income Benchmark	0.8				
Excess	0.1				

(1) Includes return seeking bonds transition account.

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Treasuries

June 30, 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>
Treasuries Managers										
BLACKROCK	\$2,385,087,167	31.0%	-7.3%	-13.6%	-13.6%	-2.0%			0.9%	02/2018
Bloomberg Treasury 5+ Year			-7.2	-13.5	-13.5	-1.8			1.0	02/2018
Excess			-0.1	-0.1	-0.1	-0.1			-0.1	
GOLDMAN SACHS	2,549,568,530	33.2	-7.3	-13.6	-13.6	-1.8			1.0	02/2018
Bloomberg Treasury 5+ Year			-7.2	-13.5	-13.5	-1.8			1.0	02/2018
Excess			-0.1	-0.1	-0.1	-0.0			-0.0	
NEUBERGER	2,751,034,205	35.8	-7.3	-13.3	-13.3	-1.6			1.2	02/2018
Bloomberg Treasury 5+ Year			-7.2	-13.5	-13.5	-1.8			1.0	02/2018
Excess			-0.1	0.2	0.2	0.2			0.1	
TOTAL TREASURIES	7,685,689,902	100.0	-7.3	-13.5	-13.5	-1.8			1.1	02/2018
Bloomberg Treasury 5+ Year			-7.2	-13.5	-13.5	-1.8			1.0	02/2018
Excess			-0.1	-0.0	-0.0	0.0			0.0	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Treasuries Managers					
BLACKROCK	-4.0%	12.5%	10.4%		
Bloomberg Treasury 5+ Year	-3.8	12.8	10.4		
Excess	-0.2	-0.3	-0.1		
GOLDMAN SACHS	-3.9	12.7	10.6		
Bloomberg Treasury 5+ Year	-3.8	12.8	10.4		
Excess	-0.1	-0.1	0.1		
NEUBERGER	-3.4	12.8	10.4		
Bloomberg Treasury 5+ Year	-3.8	12.8	10.4		
Excess	0.4	-0.1	-0.0		
TOTAL TREASURIES	-3.7	12.7	10.4		
Bloomberg Treasury 5+ Year	-3.8	12.8	10.4		
Excess	0.0	-0.2	0.0		

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Laddered Bonds + Cash

June 30, 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>
Laddered Bond and Cash Managers									
Neuberger Berman Ladder Bond	\$1,374,878,304	32.1%	-0.1%	-0.5%				-0.2%	11/2020
ICE BofA US 3-Month Treasury Bill			0.1	0.2				0.1	11/2020
Excess			-0.2	-0.6				-0.3	
Goldman Sachs Ladder Bond	1,375,912,818	32.1	-0.0	-0.4				-0.1	11/2020
ICE BofA US 3-Month Treasury Bill			0.1	0.2				0.1	11/2020
Excess			-0.1	-0.5				-0.3	
Treasury Ladder Aggregate	2,750,791,122	64.3	-0.1	-0.4				-0.2	11/2020
ICE BofA US 3-Month Treasury Bill			0.1	0.2				0.1	11/2020
Excess			-0.2	-0.6				-0.3	
Combined Funds STIF	1,506,896,559	35.2	0.2	0.3	0.6%	1.1%	0.7%	1.4	01/2004
iMoneyNet Money Fund Average-All Taxable			0.1	0.1	0.4	0.8	0.4	1.0	01/2004
Excess			0.1	0.2	0.2	0.3	0.3	0.4	
TEACHERS RETIREMENT CD REPO	22,327,868	0.5	0.1	0.2	0.8	1.2	0.8	0.8	02/2012
ICE BofA US 3-Month Treasury Bill			0.1	0.2	0.6	1.1	0.6	0.6	02/2012
Excess			0.0	0.0	0.2	0.1	0.2	0.2	
Laddered Bond + Cash	4,280,026,156	100.0	-0.0	-0.3	0.5	1.0	0.7	4.2	12/1977
ICE BofA US 3-Month Treasury Bill			0.1	0.2	0.6	1.1	0.6	4.4	12/1977
Excess			-0.1	-0.5	-0.2	-0.1	0.1	-0.2	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Laddered Bond and Cash Managers					
Neuberger Berman Ladder Bond	0.0%				
ICE BofA US 3-Month Treasury Bill	0.0				
Excess	-0.0				
Goldman Sachs Ladder Bond	0.1				
ICE BofA US 3-Month Treasury Bill	0.0				
Excess	0.0				
Treasury Ladder Aggregate	0.0				
ICE BofA US 3-Month Treasury Bill	0.0				
Excess	-0.0				
Combined Funds STIF	0.1	0.5%	2.3%	2.0%	0.9%
iMoneyNet Money Fund Average-All Taxable	0.0	0.3	1.9	1.5	0.5
Excess	0.1	0.2	0.5	0.5	0.4
TEACHERS RETIREMENT CD REPO	0.1	1.0	2.5	1.8	1.3
ICE BofA US 3-Month Treasury Bill	0.0	0.7	2.3	1.9	0.9
Excess	0.0	0.4	0.2	-0.0	0.5
Laddered Bond + Cash	0.0	0.6	2.3	1.9	1.1
ICE BofA US 3-Month Treasury Bill	0.0	0.7	2.3	1.9	0.9
Excess	-0.0	-0.1	0.1	0.0	0.2

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Uninvested Private Markets

June 30, 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>
Uninvested Private Markets Managers										
NISA PRIVATE MKT UNINV OVERLAY	\$417,311,048	42.2%	-15.8%	-10.1%	-10.1%				2.0%	01/2021
S&P 500 INDEX (DAILY)			-16.1	-10.6	-10.6				2.0	01/2021
Excess			0.3	0.5	0.5				0.0	
BLACKROCK SP INDEX	571,743,537	57.8	-16.1	-10.3	-10.3				2.3	01/2021
S&P 500 INDEX (DAILY)			-16.1	-10.6	-10.6				2.0	01/2021
Excess			-0.0	0.3	0.3				0.3	
UNINVESTED PRIVATE MARKETS	989,054,584	100.0	-16.0	-10.2	-10.2				2.2	01/2021
S&P 500 INDEX (DAILY)			-16.1	-10.6	-10.6				2.0	01/2021
Excess			0.1	0.4	0.4				0.2	



	<u>2021 Calendar Return</u>	<u>2020 Calendar Return</u>	<u>2019 Calendar Return</u>	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>
Uninvested Private Markets Managers					
NISA PRIVATE MKT UNINV OVERLAY	28.1%				
S&P 500 INDEX (DAILY)	28.7				
Excess	-0.6				
BLACKROCK SP INDEX	28.9				
S&P 500 INDEX (DAILY)	28.7				
Excess	0.2				
UNINVESTED PRIVATE MARKETS	28.6				
S&P 500 INDEX (DAILY)	28.7				
Excess	-0.1				

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Private Markets

June 30, 2022



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	4.0%	24.8%	24.8%	18.7%	16.3%	13.8%	14.0%	13.9%	13.3%
Private Markets -Uninvested (1)	-16.0%	-10.2%	-10.2%						
Private Equity	1.2%	22.1%	22.1%	23.6%	20.9%	17.5%	15.9%	15.3%	15.5%
Private Credit	6.7%	21.3%	21.3%	13.0%	12.3%	13.4%	12.6%	13.1%	
Resources	14.5%	33.8%	33.8%	5.3%	4.2%	2.9%	13.3%	12.8%	13.0%
Real Estate	13.7%	43.7%	43.7%	19.4%	15.8%	14.0%	10.3%	11.1%	9.6%

Private Markets

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

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

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

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

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

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

(1) The Uninvested portion of the Private Markets allocation is 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
Private Markets Investments as of June 30, 2022

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Private Equity	24,615,873,195	18,283,427,823	15,295,386,547	8,068,484,547	14,756,296,696	1.64	13.85	
Adams Street Partners, LLC	285,445,000	167,226,742	109,349,746	118,218,258	150,627,408	1.55	13.84	
Adams Street Global Secondary Fund 5 LP	100,000,000	77,114,692	72,719,159	22,885,308	32,878,006	1.37	6.92	2012
Adams Street Global Secondary Fund 6	100,000,000	75,200,000	36,630,587	24,800,000	91,937,940	1.71	36.39	2017
Adams Street Global Secondary Fund 7	85,445,000	14,912,050	0	70,532,950	25,811,463	1.73		2021
Advent International Group	505,000,000	318,230,921	324,631,020	189,853,033	311,680,664	2.00	18.60	
Advent International GPE VI-A, L.P.	50,000,000	52,993,313	103,400,194	0	5,538,801	2.06	16.61	2008
Advent International GPE VII, L.P.	90,000,000	85,590,641	138,972,935	4,500,000	21,530,638	1.88	14.16	2012
Advent International GPE VIII-B	100,000,000	100,000,000	73,062,483	0	129,810,536	2.03	21.10	2016
Advent International GPE IX	115,000,000	79,646,967	9,195,408	35,353,033	154,800,689	2.06	57.21	2019
Advent International GPE X	150,000,000	0	0	150,000,000	0	0.00		2022
Affinity Ventures	9,000,000	9,000,000	3,590,011	0	857,493	0.49	-11.71	
Affinity Ventures IV, L.P.	4,000,000	4,000,000	1,541,970	0	3,279	0.39	-37.45	2004
Affinity Ventures V, L.P.	5,000,000	5,000,000	2,048,042	0	854,215	0.58	-8.37	2008
Apax Partners	600,000,000	465,906,422	489,606,104	209,397,504	361,123,939	1.83	18.77	
APAX VIII - USD	200,000,000	233,892,465	335,200,854	11,285,376	69,473,217	1.73	14.74	2013
Apax IX USD L.P.	150,000,000	155,305,183	147,113,643	17,529,295	204,601,152	2.26	29.14	2016
Apax X USD L.P.	150,000,000	76,708,774	7,291,608	80,582,833	87,049,569	1.23	26.32	2019
Apax XI	100,000,000	0	0	100,000,000	0	0.00		2022
Arsenal Capital Partners	175,000,000	82,514,407	2,579,409	94,937,757	97,283,685	1.21	12.59	
Arsenal Capital Partners V, L.P.	75,000,000	67,788,176	2,579,409	9,663,988	82,557,454	1.26	12.71	2019
Arsenal Capital Partners VI LP	100,000,000	14,726,231	0	85,273,769	14,726,231	1.00	0.00	2021
Asia Alternatives	399,000,000	117,977,506	13,108,459	291,176,134	126,591,779	1.18	11.04	
Asia Alternatives Capital Partners V	99,000,000	90,995,539	13,100,628	18,158,101	101,528,337	1.26	12.99	2017
MN Asia Investors	300,000,000	26,981,967	7,831	273,018,033	25,063,441	0.93	-10.80	2020
Banc Fund	276,801,387	285,710,477	246,820,430	0	223,401,491	1.65	10.87	
Banc Fund VIII, L.P.	98,250,000	98,250,000	211,093,311	0	33,216	2.15	12.73	2008
Banc Fund IX, L.P.	107,205,932	107,205,932	32,414,449	0	128,277,794	1.50	7.78	2014
Banc Fund X, L.P.	71,345,455	80,254,545	3,312,670	0	95,090,481	1.23	9.02	2018
BlackRock	951,774,870	956,392,392	4,457,327	0	1,210,109,142	1.27	28.88	
BlackRock Tempus Fund	1,774,870	1,774,870	1,796,583	0	180,592	1.11	5.63	2015
BlackRock Long Term Capital, SCSP	950,000,000	954,617,522	2,660,745	0	1,209,928,550	1.27	29.16	2019

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Blackstone Group L.P.	1,535,000,000	765,490,371	675,486,738	860,655,284	505,966,302	1.54	15.95	
Blackstone Capital Partners Asia II	270,000,000	0	0	270,000,000	0	0.00		2021
Blackstone Capital Partners IV, L.P.	70,000,000	84,459,884	200,562,452	1,832,302	1,028,076	2.39	37.02	2002
Blackstone Capital Partners V L.P.	140,000,000	152,406,707	245,675,051	7,027,560	870,191	1.62	8.02	2006
Blackstone Capital Partners VI, L.P.	100,000,000	106,536,126	144,395,601	11,175,309	44,408,772	1.77	12.52	2008
Blackstone Capital Partners VII	130,000,000	136,647,177	65,753,267	10,977,430	158,490,728	1.64	17.87	2015
Blackstone Capital Partners VIII, L.P.	150,000,000	60,649,186	2,658,588	95,195,845	73,102,750	1.25	29.40	2019
Blackstone Capital Partners IX, L.P.	150,000,000	0	0	150,000,000	0	0.00		2022
Blackstone Growth	250,000,000	183,041,291	16,441,778	81,196,838	184,618,689	1.10	13.59	2020
Blackstone Growth Equity II	150,000,000	0	0	150,000,000	0	0.00		2022
Blackstone Supplemental Account - M	125,000,000	41,750,000	0	83,250,000	43,447,096	1.04	5.73	2021
Blackstone Strategic Partners	915,500,000	671,888,725	797,591,164	330,837,616	293,396,262	1.62	12.24	
Strategic Partners III VC, L.P.	25,000,000	25,059,678	33,874,990	115,168	272,077	1.36	5.98	2004
Strategic Partners III-B, L.P.	100,000,000	79,629,077	118,509,586	12,304,709	205,488	1.49	6.35	2004
Strategic Partners IV VC, L.P.	40,500,000	42,142,465	61,953,059	2,280,277	3,133,887	1.54	9.28	2008
Strategic Partners IV-B	100,000,000	99,356,038	152,338,242	11,669,115	3,905,141	1.57	12.21	2008
Strategic Partners V, LP	100,000,000	87,076,150	133,611,131	15,952,561	10,198,223	1.65	18.68	2011
Strategic Partners VI, L.P.	150,000,000	103,206,952	125,203,876	53,465,124	36,105,859	1.56	15.43	2014
Strategic Partners VII, L.P.	150,000,000	113,380,474	108,026,963	52,709,596	97,077,735	1.81	22.16	2016
Strategic Partners VIII	150,000,000	106,675,490	63,771,177	97,524,399	127,616,658	1.79	55.65	2018
Strategic Partners IX	100,000,000	15,362,402	302,140	84,816,667	14,881,193	0.99	-1.24	2022
Bridgepoint	167,542,238	135,728,894	13,311,036	31,813,344	156,389,122	1.25	16.60	
Bridgepoint Europe VI L.P.	167,542,238	135,728,894	13,311,036	31,813,344	156,389,122	1.25	16.60	2018
Brookfield Asset Management Inc.	500,000,000	318,431,297	188,146,050	219,665,575	357,713,360	1.71	38.99	
Brookfield Capital Partners Fund IV	100,000,000	107,053,430	168,651,562	13,303,704	110,315,643	2.61	47.89	2015
Brookfield Capital Partners V L.P.	250,000,000	211,377,867	19,494,488	56,361,871	247,397,718	1.26	17.85	2018
Brookfield Capital Partners Fund VI	150,000,000	0	0	150,000,000	0	0.00		2022
CVC Capital Partners	389,955,421	435,638,955	540,973,576	24,698,842	315,021,684	1.96	17.28	
CVC Capital Partners VI	256,146,007	281,754,857	246,086,929	23,205,690	309,391,552	1.97	17.91	2013
CVC European Equity Partners V, L.P.	133,809,414	153,884,098	294,886,647	1,493,152	5,630,132	1.95	16.79	2008
Canyon Partners	125,000,000	97,826,145	21,475,843	48,649,698	97,534,190	1.22	17.48	
Canyon Distressed Opportunity Fund III	125,000,000	97,826,145	21,475,843	48,649,698	97,534,190	1.22	17.48	2020

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CarVal Investors	900,000,000	772,741,005	893,403,426	137,558,380	276,467,722	1.51	10.63	
CarVal Credit Value Fund I	100,000,000	95,025,281	213,808,779	5,000,000	0	2.25	18.71	2010
CVI Credit Value Fund A II	150,000,000	142,500,000	199,242,174	7,500,000	3,971,331	1.43	8.30	2012
CVI Credit Value Fund A III	150,000,000	142,500,000	149,290,605	7,500,000	42,727,808	1.35	8.55	2015
CVI Credit Value Fund IV	150,000,000	135,203,333	10,058,440	25,058,380	159,033,915	1.25	7.33	2017
CVI Credit Value Fund V	150,000,000	67,500,000	154,566	82,500,000	70,734,668	1.05	6.15	2020
CVI Global Value Fund, L.P.	200,000,000	190,012,391	320,848,863	10,000,000	0	1.69	9.53	2007
Cardinal Partners	10,000,000	10,000,000	39,196,082	0	30,380	3.92	10.61	
DSV Partners IV	10,000,000	10,000,000	39,196,082	0	30,380	3.92	10.61	1985
Carlyle Group	400,000,000	264,275,015	57,102,334	192,769,488	245,381,111	1.14	9.05	
Carlyle Partners VII, L.P.	150,000,000	146,080,022	4,889,664	8,809,642	168,301,293	1.19	10.51	2017
Carlyle Partners VIII, L.P.	150,000,000	4,860,867	0	145,139,133	4,196,173	0.86	-13.67	2021
Carlyle Strategic Partners IV, L.P.	100,000,000	113,334,126	52,212,670	38,820,713	72,883,645	1.10	7.29	2016
Chicago Growth Partners	60,000,000	58,347,626	123,371,040	1,652,374	624,099	2.13	19.54	
Chicago Growth Partners II, L.P.	60,000,000	58,347,626	123,371,040	1,652,374	624,099	2.13	19.54	2008
Clearlake Capital	100,000,000	31,282,144	2,434	68,717,856	30,248,707	0.97	-5.11	
Clearlake Capital Partners VII, L.P.	100,000,000	31,282,144	2,434	68,717,856	30,248,707	0.97	-5.11	2022
Court Square	489,419,132	462,662,121	561,831,134	79,246,408	272,577,835	1.80	14.92	
Court Square Capital Partners II, L.P.	164,419,132	170,029,204	295,744,454	6,176,873	6,253,288	1.78	12.43	2006
Court Square Capital Partners III, L.P.	175,000,000	187,850,200	225,585,707	8,334,834	163,609,361	2.07	20.15	2012
Court Square Capital Partners IV, L.P.	150,000,000	104,782,717	40,500,973	64,734,701	102,715,186	1.37	25.95	2018
Crescendo	101,500,000	103,101,226	57,982,654	0	290,742	0.57	-4.60	
Crescendo Ventures IV	101,500,000	103,101,226	57,982,654	0	290,742	0.57	-4.60	2000
GTCR	210,000,000	211,677,127	424,264,809	16,665,460	223,217,875	3.06	28.05	
GTCR Fund X	100,000,000	105,821,208	214,751,215	6,751,396	559,932	2.03	21.36	2010
GTCR XI	110,000,000	105,855,919	209,513,594	9,914,064	222,657,944	4.08	39.37	2013
Goldman, Sachs & Co.	549,800,000	436,529,223	492,011,762	175,138,330	263,157,783	1.73	15.40	
GS Capital Partners V, L.P.	100,000,000	74,319,006	191,435,136	1,041,099	436,736	2.58	18.23	2005
GS Capital Partners VI, L.P.	100,000,000	110,260,752	141,234,290	2,551,356	4,162,371	1.32	7.17	2007
GS China-US Cooperation Fund	99,800,000	30,613,445	0	69,361,000	43,091,123	1.41	18.75	2018
GS Vintage VII	100,000,000	83,536,746	52,317,848	61,310,863	92,600,201	1.73	20.15	2016
West Street Capital Partners VII, L.P.	150,000,000	137,799,274	107,024,488	40,874,012	122,867,353	1.67	21.90	2016

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Goldner Hawn Johnson & Morrison	77,755,138	57,009,055	51,364,283	20,918,050	58,498,274	1.93	20.67	
GHJM TrailHead Fund	20,000,000	16,652,130	51,364,283	3,354,486	6,623,935	3.48	20.44	2012
Goldner Hawn Fund VII, L.P.	57,755,138	40,356,924	0	17,563,564	51,874,339	1.29	22.46	2018
Green Equity Investors	325,000,000	320,957,978	234,641,442	40,854,141	352,900,234	1.83	15.93	
Green Equity Investors VI, L.P.	200,000,000	224,241,721	234,504,568	12,433,524	249,259,240	2.16	16.21	2012
Green Equity Investors VIII	125,000,000	96,716,257	136,874	28,420,617	103,640,994	1.07	7.70	2020
HarbourVest	21,623,686	20,932,251	25,369,551	778,642	7,294,542	1.56	13.04	
Dover Street VII Cayman Fund L.P.	2,198,112	2,074,080	1,787,970	132,416	83,989	0.90	-4.28	2014
HarbourVest Intl PE Partners V-Cayman US	3,507,877	3,346,005	4,413,905	167,272	154,221	1.37	13.81	2014
HarbourVest Intl PE Partners VI-Cayman	4,220,088	4,039,458	5,122,622	182,954	2,879,169	1.98	16.27	2014
HarbourVest Partners VIII Cayman Buyout	4,506,711	4,387,189	5,574,478	156,000	707,754	1.43	13.60	2014
HarbourVest Partners VIII-Cayman Venture	7,190,898	7,085,519	8,470,577	140,000	3,469,409	1.69	13.13	2014
Hellman & Friedman	650,000,000	534,604,235	480,509,178	129,164,463	368,635,707	1.59	14.89	
Hellman & Friedman Capital Partners VI, L.P.	175,000,000	171,037,755	315,233,005	5,009,796	3,174,994	1.86	12.90	2007
Hellman & Friedman Capital Partners VII, L.P.	50,000,000	49,892,204	153,705,841	2,206,386	10,471,748	3.29	25.00	2009
Hellman & Friedman Investors IX, L.P.	175,000,000	170,925,623	4,158,129	7,284,731	216,698,798	1.29	18.80	2018
Hellman & Friedman Capital Partners X. L.P.	250,000,000	142,748,653	7,412,203	114,663,550	138,290,168	1.02	2.80	2021
IK Limited	500,335,253	450,439,447	430,276,069	70,978,503	306,438,737	1.64	15.56	
IK Fund VII	179,637,471	179,315,195	295,129,855	7,928,976	45,298,555	1.90	14.67	2013
IK Fund VIII	170,085,135	175,535,613	135,146,215	8,025,896	166,734,107	1.72	19.18	2016
IK Fund IX	150,612,647	95,588,640	0	55,023,631	94,406,075	0.99	-1.52	2019
Kohlberg, Kravis, Roberts & Co.	1,647,000,000	934,817,158	905,763,634	769,418,084	676,517,750	1.69	13.91	
KKR Millennium Fund	200,000,000	205,167,570	424,946,028	0	161,924	2.07	16.37	2002
KKR 2006 Fund L.P.	200,000,000	218,137,965	372,893,706	3,300,979	20,029,959	1.80	9.12	2006
KKR Americas Fund XII L.P.	150,000,000	144,039,881	50,557,068	18,331,120	227,625,000	1.93	29.98	2016
KKR Asian Fund III	100,000,000	87,203,475	40,314,000	22,203,436	129,582,200	1.95	32.24	2017
KKR Asian Fund IV	150,000,000	35,267,786	415,503	115,147,717	35,520,480	1.02	2.62	2020
KKR Core Investments Fund II	100,000,000	0	0	100,000,000	0	0.00		2022
KKR Core Investments Partnership	97,000,000	67,729,650	3,014,541	33,742,631	74,630,004	1.15	15.99	2021
KKR Europe V	100,000,000	78,176,644	13,622,788	25,786,388	90,226,775	1.33	22.18	2018
KKR European Fund VI (USD) SCSp	100,000,000	0	0	100,000,000	0	0.00		2022
KKR MN Partnership L.P.	150,000,000	48,923,770	0	101,076,230	49,911,394	1.02	3.41	2021
KKR North America Fund XIII	300,000,000	50,170,417	0	249,829,583	48,830,014	0.97	-2.67	2021

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Lexington Partners	1,345,000,000	922,760,327	697,595,619	486,383,061	780,115,592	1.60	14.88	
Lexington Capital Partners VI-B, L.P.	100,000,000	98,374,022	145,572,539	1,634,703	1,006,329	1.49	7.91	2005
Lexington Capital Partners VII, L.P.	200,000,000	172,835,427	259,262,085	31,132,939	33,341,371	1.69	14.78	2009
Lexington Capital Partners VIII, L.P.	150,000,000	136,386,669	126,618,706	32,663,555	111,177,569	1.74	19.47	2014
Lexington Capital Partners IX, L.P.	150,000,000	93,876,748	27,468,456	68,036,267	134,684,381	1.73	60.47	2018
Lexington Capital Partners X, L.P.	100,000,000	0	0	100,000,000	0	0.00		2021
Lexington Co-Investment Partners IV	200,000,000	212,079,081	105,958,564	8,696,003	258,374,593	1.72	21.06	2017
Lexington Co-Investment Partners V	300,000,000	120,743,252	7,588,884	186,845,632	136,538,058	1.19	33.67	2020
Lexington Co-Investment Partners V Overage	45,000,000	19,503,000	839,090	26,336,090	20,904,755	1.11	17.60	2021
Lexington Middle Market Investors IV	100,000,000	68,962,128	24,287,295	31,037,872	84,088,535	1.57	34.12	2016
MHR Institutional Partners	75,000,000	75,934,392	20,350,497	18,823,636	80,732,330	1.33	9.48	
MHR Institutional Partners IV, L.P.	75,000,000	75,934,392	20,350,497	18,823,636	80,732,330	1.33	9.48	2014
Madison Dearborn Capital Partners LLC	200,000,000	138,423,539	49,451,476	84,078,910	167,815,200	1.57	16.81	
Madison Dearborn Capital Partners VII, L.P.	100,000,000	99,037,562	41,826,032	16,470,133	125,031,144	1.68	15.96	2015
Madison Dearborn Capital Partners VIII-A, L.P.	100,000,000	39,385,977	7,625,444	67,608,777	42,784,055	1.28	29.05	2019
Marathon	200,000,000	133,906,171	6,185,200	72,000,000	157,371,776	1.22	23.89	
Marathon Distressed Credit Fund	200,000,000	133,906,171	6,185,200	72,000,000	157,371,776	1.22	23.89	2020
Merced Capital	278,737,500	288,144,755	272,339,922	0	75,279,818	1.21	4.13	
Merced Partners III	100,000,000	103,878,468	133,823,596	0	1,065,950	1.30	5.50	2010
Merced Partners IV	125,000,000	124,968,390	114,347,539	0	24,765,811	1.11	2.30	2013
Merced Partners V	53,737,500	59,297,897	24,168,787	0	49,448,058	1.24	5.13	2017
Neuberger Berman LLC	625,000,000	383,519,176	268,466,382	450,185,746	420,934,492	1.80	36.83	
Dyal Capital Partners III	175,000,000	197,750,746	186,355,275	109,247,334	144,903,070	1.68	27.02	2015
Dyal Capital Partners IV	250,000,000	150,768,430	81,688,193	175,938,412	210,580,932	1.94	65.48	2018
Dyal Capital Partners V	200,000,000	35,000,000	422,914	165,000,000	65,450,490	1.88	78.53	2020
Nordic Capital	583,391,804	439,169,382	321,629,558	220,771,910	434,097,989	1.72	19.41	
Nordic Capital Fund VIII, L.P.	175,605,270	222,197,616	283,473,946	14,891,964	111,491,328	1.78	15.87	2013
Nordic Capital Fund X, L.P.	144,805,949	56,603,841	0	88,202,108	67,893,248	1.20	44.96	2020
Nordic Capital IX Beta, L.P.	168,890,098	160,367,925	38,155,612	23,587,351	254,713,413	1.83	34.74	2017
Nordic Capital Fund XI, L.P.	94,090,487	0	0	94,090,487	0	0.00		2022
North Sky Capital	2,454,339	1,998,089	2,491,492	456,250	223,916	1.36	11.56	
North Sky Capital LBO Fund III, L.P.	1,070,259	720,259	1,026,684	350,000	78,527	1.53	14.57	2014
North Sky Capital Venture Fund III, L.P.	1,384,080	1,277,830	1,464,808	106,250	145,389	1.26	9.39	2014

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Oak Hill Capital Management, Inc.	250,000,000	243,654,808	217,994,544	13,896,274	179,548,990	1.63	34.75	
Oak Hill Capital Partners IV Onshore, L.P.	150,000,000	153,245,546	217,959,501	4,305,536	70,764,587	1.88	35.67	2016
Oak Hill Capital Partners V, L.P.	100,000,000	90,409,262	35,043	9,590,738	108,784,402	1.20	26.57	2018
Oaktree Capital Management, LLC	400,000,000	161,308,614	50,714,692	280,568,839	171,329,101	1.38	12.14	
Oaktree Special Situations Fund, L.P.	100,000,000	101,617,427	20,335,451	10,241,294	93,292,028	1.12	3.15	2014
Oaktree Special Situations Fund II, L.P.	100,000,000	59,691,187	30,379,241	70,327,545	78,037,073	1.82	82.00	2018
Oaktree Special Situations Fund III, L.P.	200,000,000	0	0	200,000,000	0	0.00		2022
Paine & Partners, LLC	225,000,000	171,009,748	44,671,969	70,079,438	188,493,687	1.36	13.72	
Paine Schwartz Food Chain Fund IV, L.P.	75,000,000	65,619,119	35,397,971	18,239,502	58,548,789	1.43	9.32	2014
Paine Schwartz Food Chain Fund V, L.P.	150,000,000	105,390,629	9,273,998	51,839,936	129,944,898	1.32	29.50	2018
Permal PE	5,337,098	4,387,326	4,339,751	1,090,000	703,292	1.15	4.77	
Glouston Private Equity Opportunities IV	5,337,098	4,387,326	4,339,751	1,090,000	703,292	1.15	4.77	2014
Permira	620,791,469	428,099,891	433,777,494	233,597,849	442,889,303	2.05	21.28	
Permira V, L.P.	177,271,306	183,303,708	350,218,136	4,401,119	163,758,054	2.80	22.45	2013
Permira VI, L.P.	134,743,818	125,857,463	72,333,687	28,133,433	168,178,927	1.91	21.13	2016
Permira VII L.P.1	151,958,868	118,938,719	11,225,671	44,245,820	110,952,322	1.03	2.04	2019
Permira VIII	156,817,478	0	0	156,817,478	0	0.00		2022
Public Pension Capital Management	240,000,000	123,880,036	85,241,161	132,726,741	166,125,873	2.03	25.83	
Public Pension Capital, LLC	240,000,000	123,880,036	85,241,161	132,726,741	166,125,873	2.03	25.83	2014
Silver Lake Partners	335,000,000	339,395,609	350,566,768	33,733,506	392,781,259	2.19	20.76	
Silver Lake Partners III, L.P.	100,000,000	93,804,936	192,001,680	9,528,468	25,617,750	2.32	18.48	2007
Silver Lake Partners IV, L.P.	100,000,000	115,466,047	121,537,519	2,881,307	188,065,734	2.68	25.83	2012
Silver Lake Partners V, L.P.	135,000,000	130,124,626	37,027,569	21,323,731	179,097,774	1.66	22.02	2017
Split Rock	110,000,000	107,055,906	125,392,564	2,944,094	29,351,677	1.45	5.21	
Split Rock Partners II, L.P.	60,000,000	59,165,000	66,598,372	835,000	27,193,825	1.59	7.92	2008
Split Rock Partners, L.P.	50,000,000	47,890,906	58,794,192	2,109,094	2,157,852	1.27	2.96	2005
Summit Partners	600,000,000	380,158,626	393,824,982	423,239,289	370,427,003	2.01	29.73	
Summit Partners Growth Equity Fund VIII	100,000,000	116,727,192	230,283,579	23,129,320	68,806,167	2.56	27.55	2011
Summit Partners Growth Equity Fund IX	100,000,000	131,564,916	141,424,991	109,860,075	160,172,667	2.29	38.55	2015
Summit Partners Growth Equity Fund X-A	150,000,000	131,866,518	22,116,412	40,249,894	141,448,169	1.24	23.69	2019
Summit Partners Growth Equity Fund XI	250,000,000	0	0	250,000,000	0	0.00		2021

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TPG Capital	650,000,000	287,401,201	162,560,368	399,648,520	284,601,821	1.56	24.34	
TPG Growth V, L.P.	150,000,000	68,959,038	526,470	82,168,298	84,485,267	1.23	27.02	2021
TPG Partners VII, L.P.	100,000,000	100,557,107	135,130,268	17,331,746	69,204,324	2.03	21.98	2015
TPG Partners VIII, L.P.	150,000,000	98,053,550	26,903,303	69,979,982	112,324,002	1.42	39.43	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	19,831,506	327	130,168,494	18,588,229	0.94	-12.41	2021
Thoma Bravo LLC	425,000,000	448,523,134	242,710,395	49,136,635	470,503,053	1.59	23.44	
Thoma Bravo Fund XII, L.P.	75,000,000	81,455,833	47,157,550	18,945,315	109,860,883	1.93	17.18	2016
Thoma Bravo Fund XIII, L.P.	150,000,000	175,850,937	88,494,868	21,407,684	217,426,714	1.74	38.21	2018
Thoma Bravo Fund XIV, L.P.	150,000,000	141,216,364	37	8,783,636	142,788,667	1.01	1.30	2020
Thoma Cressey Fund VII, L.P.	50,000,000	50,000,000	107,057,940	0	426,789	2.15	23.58	2000
Thomas H. Lee Partners	400,000,000	258,480,851	226,553,389	171,051,430	287,010,443	1.99	34.58	
Thomas H. Lee Equity Fund VII, L.P.	100,000,000	99,416,381	137,123,365	10,745,776	53,598,781	1.92	23.59	2015
Thomas H. Lee Equity Fund VIII, L.P.	150,000,000	144,123,246	89,430,024	25,246,878	217,452,971	2.13	66.07	2018
Thomas H. Lee Equity Fund IX, L.P.	150,000,000	14,941,224	0	135,058,776	15,958,691	1.07	11.45	2021
Thomas, McNerney & Partners	80,000,000	78,125,000	125,613,281	1,875,000	93,746	1.61	8.13	
Thomas, McNerney & Partners I, L.P.	30,000,000	30,000,000	15,945,755	0	0	0.53	-10.86	2002
Thomas, McNerney & Partners II, L.P.	50,000,000	48,125,000	109,667,526	1,875,000	93,746	2.28	16.39	2006
Varde Fund	500,000,000	486,500,000	464,600,624	13,500,000	220,867,678	1.41	7.53	
Varde Fund X, L.P.	150,000,000	150,000,000	252,548,040	0	9,084,824	1.74	10.10	2010
Varde Fund XI, L.P.	200,000,000	200,000,000	212,032,546	0	56,928,654	1.34	4.91	2013
Varde Fund XIII, L.P.	150,000,000	136,500,000	20,038	13,500,000	154,854,200	1.13	8.85	2018
Vestar Capital Partners	380,000,000	333,277,631	352,742,923	56,542,081	188,638,580	1.62	11.72	
Vestar Capital Partners IV, L.P.	55,000,000	55,652,024	102,293,320	57,313	377,736	1.84	14.62	1999
Vestar Capital Partners V, L.P.	75,000,000	76,797,458	99,818,631	0	1,356,514	1.32	3.89	2005
Vestar Capital Partners VI, LP	100,000,000	106,955,659	150,510,164	357,259	58,535,394	1.95	23.92	2011
Vestar Capital Partners VII, L.P.	150,000,000	93,872,491	120,808	56,127,509	128,368,937	1.37	17.13	2017
Vista Equity Partners	200,000,000	147,617,149	77,223	53,595,754	157,216,492	1.07	4.26	
Vista Equity Partners Perennial	200,000,000	147,617,149	77,223	53,595,754	157,216,492	1.07	4.26	2020

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Warburg Pincus	1,416,000,000	1,072,824,491	995,165,574	349,498,500	808,287,690	1.68	11.57	
Warburg Pincus China-Southeast Asia II	50,000,000	17,200,000	3,300,000	32,800,000	18,304,908	1.26	18.88	2019
Warburg Pincus China, L.P.	45,000,000	45,585,000	16,711,200	1,350,000	58,182,947	1.64	15.33	2016
Warburg Pincus Financial Sector	90,000,000	80,736,630	15,357,600	13,455,000	130,902,252	1.81	24.79	2017
Warburg Pincus Global Growth 14, L.P.	300,000,000	29,876,507	0	270,000,000	30,789,930	1.03	4.87	2022
Warburg Pincus Global Growth, L.P.	250,000,000	219,852,402	2,625,000	30,125,000	293,395,462	1.35	20.68	2018
Warburg Pincus Equity Partners, L.P.	100,000,000	100,000,000	163,542,253	0	392,275	1.64	10.02	1998
Warburg Pincus Private Equity IX, L.P.	100,000,000	100,000,000	171,872,950	0	1,107,532	1.73	9.64	2005
Warburg Pincus Private Equity X, LP	150,000,000	150,000,000	266,203,541	0	3,264,714	1.80	9.52	2007
Warburg Pincus Private Equity XI, LP	200,000,000	200,342,452	262,255,748	0	94,471,254	1.78	12.86	2012
Warburg Pincus Private Equity XII, LP	131,000,000	129,231,500	93,297,283	1,768,500	177,476,416	2.10	20.77	2015
Wayzata Investment Partners	300,000,000	243,165,000	379,022,482	15,750,000	18,832,610	1.64	14.37	
Wayzata Opportunities Fund II, LLC	150,000,000	174,750,000	333,882,672	750,000	303,707	1.91	16.57	2007
Wayzata Opportunities Fund III	150,000,000	68,415,000	45,139,810	15,000,000	18,528,903	0.93	-1.67	2012
Wellspring Capital Partners	125,000,000	149,192,072	55,485,810	14,724,724	151,222,622	1.39	23.09	
Wellspring Capital Partners VI, L.P.	125,000,000	149,192,072	55,485,810	14,724,724	151,222,622	1.39	23.09	2016
Welsh, Carson, Anderson & Stowe	500,000,000	440,768,724	365,218,998	59,231,276	429,857,388	1.80	19.04	
Welsh, Carson, Anderson & Stowe XI, L.P.	100,000,000	100,000,000	161,464,441	0	7,179,043	1.69	11.75	2008
Welsh, Carson, Anderson & Stowe XII, L.P.	150,000,000	145,877,897	177,480,040	4,122,103	196,002,149	2.56	29.51	2014
Welsh, Carson, Anderson & Stowe XIII, L.P.	250,000,000	194,890,827	26,274,517	55,109,173	226,676,195	1.30	30.73	2018
Whitehorse Capital	300,000,000	200,324,098	118,551,353	148,287,298	145,009,515	1.32	27.77	
Whitehorse Liquidity Partners III	100,000,000	99,311,782	68,865,298	18,582,906	64,653,688	1.34	22.80	2019
Whitehorse Liquidity Partners IV	100,000,000	87,205,482	42,229,770	36,313,731	69,220,816	1.28	37.34	2020
Whitehorse Liquidity Partners V	100,000,000	13,806,834	7,456,285	93,390,661	11,135,011	1.35	28.30	2021
Wind Point Partners	100,000,000	76,531,864	1,912,585	25,385,324	90,114,606	1.20	19.02	
Wind Point Partners IX	100,000,000	76,531,864	1,912,585	25,385,324	90,114,606	1.20	19.02	2019
Windjammer Capital Investors	266,708,861	220,551,345	251,920,723	61,919,241	155,841,137	1.85	12.43	
Windjammer Mezzanine & Equity Fund II, L.P.	66,708,861	55,215,684	85,036,800	10,139,363	225,454	1.54	8.96	2000
Windjammer Senior Equity Fund IV, L.P.	100,000,000	94,740,728	165,677,026	21,167,914	61,480,126	2.40	17.76	2012
Windjammer Senior Equity Fund V, L.P.	100,000,000	70,594,933	1,206,897	30,611,964	94,135,557	1.35	21.23	2017

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Private Credit	4,122,141,781	3,030,409,622	2,422,760,369	1,598,612,939	1,590,234,043	1.32	10.18	
Audax Group	350,000,000	194,883,140	206,818,431	176,802,249	41,793,755	1.28	10.37	
Audax Mezzanine Fund III, L.P.	100,000,000	105,207,316	133,977,984	0	5,019,606	1.32	9.80	2010
Audax Mezzanine Fund IV-A, L.P.	100,000,000	84,788,842	72,840,448	31,689,231	30,239,177	1.22	11.41	2015
Audax Mezzanine Fund V, L.P.	150,000,000	4,886,982	0	145,113,018	6,534,971	1.34	33.72	2020
Avenue Capital Partners	200,000,000	200,977,328	142,601,103	0	167,099,847	1.54	9.06	
Avenue Energy Opportunities Fund, L.P.	100,000,000	100,977,328	76,484,671	0	64,838,757	1.40	5.94	2014
Avenue Energy Opportunities Fund II, L.P.	100,000,000	100,000,000	66,116,432	0	102,261,090	1.68	14.03	2017
BlackRock	97,500,000	92,646,829	11,145,751	4,853,171	98,570,389	1.18	7.86	
BlackRock Middle Market Senior Fund	97,500,000	92,646,829	11,145,751	4,853,171	98,570,389	1.18	7.86	2018
Brookfield Asset Management Inc.	200,000,000	34,157,840	0	165,842,160	35,392,816	1.04	4.43	
Brookfield Real Estate Finance Fund VI	200,000,000	34,157,840	0	165,842,160	35,392,816	1.04	4.43	2021
Energy Capital Partners	28,087,500	24,139,611	9,769,268	13,717,157	15,189,235	1.03	3.60	
Energy Capital Credit Solutions II-A	28,087,500	24,139,611	9,769,268	13,717,157	15,189,235	1.03	3.60	2018
Gold Hill	65,852,584	65,852,584	113,654,899	0	3,463,533	1.78	11.84	
Gold Hill 2008	25,852,584	25,852,584	48,393,297	0	3,112,627	1.99	14.57	2008
Gold Hill Venture Lending	40,000,000	40,000,000	65,261,602	0	350,906	1.64	10.70	2004
Goldman, Sachs & Co.	227,500,000	261,176,828	315,988,287	24,922,591	1,195,785	1.21	6.79	
GS Mezzanine Partners 2006 Institutional	100,000,000	113,458,168	135,137,487	9,858,563	584,683	1.20	5.00	2006
GS Mezzanine Partners V, L.P.	127,500,000	147,718,660	180,850,800	15,064,028	611,102	1.23	9.08	2007
HPS Investment Partners	100,000,000	93,355,090	13,757,452	15,817,865	96,441,495	1.18	13.64	
HPS Mezzanine Partners 2019, L.P.	100,000,000	93,355,090	13,757,452	15,817,865	96,441,495	1.18	13.64	2019
Kohlberg, Kravis, Roberts & Co.	274,000,000	349,821,572	291,014,366	109,388,462	116,018,947	1.16	9.85	
KKR Lending Partner II, L.P.	75,000,000	86,884,685	82,467,685	8,802,924	7,530,584	1.04	1.79	2015
KKR Lending Partners III, L.P.	199,000,000	262,936,887	208,546,681	100,585,538	108,488,363	1.21	14.85	2017
LBC Credit Partners	200,000,000	185,535,000	130,941,951	78,481,711	84,838,741	1.16	10.16	
LBC Credit Partners IV, L.P.	100,000,000	110,960,534	104,845,762	36,220,071	25,495,082	1.17	8.32	2016
LBC Credit Partners V, L.P.	100,000,000	74,574,466	26,096,189	42,261,640	59,343,659	1.15	19.53	2019
Marathon	200,000,000	96,022,008	858,534	105,000,000	123,146,125	1.29	16.31	
Marathon Secured Private Strategies Fund II	100,000,000	96,022,008	858,534	5,000,000	123,146,125	1.29	16.31	2019
Marathon Secured Private Strategies Fund III	100,000,000	0	0	100,000,000	0	0.00		2022

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Merit Capital Partners	350,000,000	233,926,126	296,017,759	116,007,074	97,094,200	1.68	11.55	
Merit Mezzanine Fund IV, L.P.	75,000,000	70,178,571	139,120,463	4,821,429	787,345	1.99	11.58	2004
Merit Mezzanine Fund V, LP	75,000,000	71,902,041	79,877,706	3,097,959	33,522,199	1.58	9.39	2009
Merit Mezzanine Fund VI, L.P.	100,000,000	91,845,514	77,019,590	8,087,687	62,784,656	1.52	16.42	2016
Merit Mezzanine Fund VII, L.P.	100,000,000	0	0	100,000,000	0	0.00		2020
Oaktree Capital Management, LLC	650,000,000	284,040,920	45,746,760	372,500,000	325,377,259	1.31	14.74	
Oaktree Opportunities Fund X, L.P.	50,000,000	46,500,021	32,044,660	8,500,000	34,297,931	1.43	9.50	2015
Oaktree Opportunities Fund Xb, L.P.	100,000,000	60,000,000	0	40,000,000	88,994,160	1.48	16.89	2015
Oaktree Opportunities Fund XI, L.P.	300,000,000	135,000,000	1,222,794	165,000,000	159,178,286	1.19	22.76	2020
Oaktree Real Estate Debt III, L.P.	200,000,000	42,540,899	12,479,306	159,000,000	42,906,881	1.30	17.06	2020
PIMCO BRAVO	9,201,697	8,673,551	9,384,185	7,735,883	787,745	1.17	4.96	
PIMCO BRAVO Fund Onshore Feeder I	3,958,027	3,958,027	4,016,443	2,385,880	6,495	1.02	1.60	2014
PIMCO BRAVO Fund OnShore Feeder II	5,243,670	4,715,524	5,367,742	5,350,003	781,250	1.30	5.53	2014
Prudential Global Investment Mgmt	600,000,000	482,578,112	531,214,884	168,071,852	147,146,851	1.41	10.40	
Prudential Capital Partners II, L.P.	100,000,000	97,930,132	145,671,152	11,049,052	492,778	1.49	9.02	2005
Prudential Capital Partners III, L.P.	100,000,000	102,823,075	174,159,760	13,634,935	3,233,482	1.73	14.13	2009
Prudential Capital Partners IV, L.P.	100,000,000	112,819,414	119,011,951	1,948,707	31,051,292	1.33	8.47	2012
Prudential Capital Partners V, L.P.	150,000,000	149,798,262	91,962,979	10,646,386	90,880,328	1.22	8.20	2016
PGIM Capital Partners VI, L.P.	150,000,000	19,207,228	409,042	130,792,772	21,488,970	1.14	26.97	2020
Summit Partners	95,000,000	100,002,497	133,679,035	22,177,023	4,941,586	1.39	9.03	
Summit Subordinated Debt Fund III, L.P.	45,000,000	44,088,494	60,443,093	2,250,000	2,665,969	1.43	8.58	2004
Summit Subordinated Debt Fund IV, L.P.	50,000,000	55,914,003	73,235,942	19,927,023	2,275,617	1.35	9.74	2008
TCW	200,000,000	174,519,135	135,645,751	61,935,134	81,098,443	1.24	8.95	
TCW Direct Lending LLC	100,000,000	83,599,652	87,717,684	25,329,409	19,000,467	1.28	8.32	2014
TCW Direct Lending VII	100,000,000	90,919,484	47,928,067	36,605,725	62,097,976	1.21	10.10	2018
TSSP	275,000,000	148,101,451	34,521,953	155,360,606	150,637,291	1.25	15.24	
Sixth Street Opportunities Partners V	75,000,000	12,818,018	0	62,181,982	12,818,018	1.00		2021
Sixth Street TAO Partners (B), L.P.	50,000,000	42,787,998	17,262,393	24,474,395	39,841,420	1.33	13.17	2018
Sixth Street TAO Partners (D), L.P.	100,000,000	52,449,486	11,437,722	55,030,492	53,582,728	1.24	19.70	2018
TSSP Opportunities Partners IV (A), L.P.	50,000,000	40,045,949	5,821,838	13,673,737	44,395,125	1.25	14.86	2018

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Real Assets	4,247,571,518	3,908,367,836	2,619,478,562	636,200,551	2,284,606,570	1.25	5.57	
BlackRock	198,500,000	123,002,996	56,955,086	86,695,319	80,013,796	1.11	4.21	
BlackRock Global Renewable Power Fund II	98,500,000	97,789,849	55,490,848	10,625,197	55,465,418	1.13	4.29	2017
BlackRock Global Renewable Power Infrastructure III	100,000,000	25,213,148	1,464,238	76,070,122	24,548,379	1.03	3.14	2019
EIG Global Energy Partners	450,000,000	469,824,847	377,207,705	77,704,481	145,469,056	1.11	2.63	
EIG Energy Fund XIV	100,000,000	113,459,470	95,309,310	2,761,129	3,840,512	0.87	-4.99	2007
EIG Energy Fund XV	150,000,000	161,871,503	154,367,874	22,871,323	24,375,000	1.10	2.37	2010
EIG Energy Fund XVI	200,000,000	194,493,874	127,530,520	52,072,029	117,253,544	1.26	5.95	2013
Encap Energy	400,000,000	425,447,503	388,645,322	9,625,251	196,827,118	1.38	9.37	
EnCap Energy Capital Fund VII, L.P.	100,000,000	105,420,704	141,245,195	0	452,145	1.34	14.51	2007
EnCap Energy Capital Fund VIII, L.P.	100,000,000	103,335,766	60,931,531	470,044	44,953,093	1.02	0.50	2010
Encap Energy Fund IX	100,000,000	113,593,325	111,036,911	4,021,975	45,739,984	1.38	9.67	2012
EnCap Energy Capital Fund X, L.P.	100,000,000	103,097,708	75,431,685	5,133,231	105,681,896	1.76	15.69	2015
Energy & Minerals Group	680,000,000	671,442,857	385,493,399	57,517,566	560,993,701	1.41	7.84	
NGP Midstream & Resources, L.P.	100,000,000	103,565,615	179,560,149	17,857	5,769,259	1.79	13.31	2007
The Energy & Minerals Group Fund II, L.P.	100,000,000	108,534,480	107,280,051	170,365	108,701,955	1.99	12.99	2011
The Energy & Minerals Group Fund III, L.P.	200,000,000	205,909,034	29,560,105	1,226,830	115,886,961	0.71	-5.47	2014
The Energy & Minerals Group Fund IV, LP	150,000,000	161,569,139	64,613,529	14,023,899	178,313,832	1.50	10.69	2015
The Energy & Minerals Group Fund V, L.P.	112,500,000	77,017,651	3,658,916	38,514,704	127,927,910	1.71	20.93	2019
The Energy & Minerals Group Fund V Accordion	17,500,000	14,846,938	820,649	3,563,911	24,393,784	1.70	21.81	2019
Energy Capital Partners	450,000,000	430,008,136	353,299,267	111,761,226	246,739,015	1.40	10.60	
Energy Capital Partners II-A, L.P.	100,000,000	85,856,131	117,653,952	29,749,110	151,918	1.37	8.94	2010
Energy Capital Partners III, L.P.	200,000,000	232,678,193	208,991,750	30,058,269	121,907,471	1.42	10.23	2013
Energy Capital Partners IV-A, LP	150,000,000	111,473,812	26,653,565	51,953,847	124,679,626	1.36	17.25	2017
Enervest Management Partners	100,000,000	98,748,934	89,138,179	9,344,764	60,540,026	1.52	9.99	
EnerVest Energy Institutional Fund XIV-A, L.P.	100,000,000	98,748,934	89,138,179	9,344,764	60,540,026	1.52	9.99	2015
First Reserve	500,000,000	549,147,616	271,884,084	3,692,077	149,391,750	0.77	-6.22	
First Reserve Fund XI, L.P.	150,000,000	150,292,121	100,059,903	0	152,670	0.67	-8.73	2006
First Reserve Fund XII, L.P.	150,000,000	165,617,044	84,745,180	0	5,387,555	0.54	-14.46	2008
First Reserve Fund XIII, L.P.	200,000,000	233,238,451	87,079,001	3,692,077	143,851,524	0.99	-0.36	2013

**Minnesota State Board of Investment
Private Markets Investments as of June 30, 2022**

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Kohlberg, Kravis, Roberts & Co.	249,850,000	141,935,167	26,509,443	118,148,473	132,609,880	1.12	8.12	
KKR Global Infrastructure Investors III	149,850,000	124,810,350	26,509,443	35,273,290	115,608,430	1.14	8.28	2018
KKR Global Infrastructure Investors IV	100,000,000	17,124,817	0	82,875,183	17,001,450	0.99	-0.72	2021
Merit Energy Partners	519,721,518	384,644,480	166,171,321	94,599,899	396,342,667	1.46	6.47	
Merit Energy Partners F-II, L.P.	100,000,000	59,522,861	32,929,385	0	9,209,656	0.71	-4.78	2006
Merit Energy Partners H, L.P.	100,000,000	100,000,000	29,668,582	0	61,902,048	0.92	-1.30	2011
Merit Energy Partners I, L.P.	169,721,518	169,721,518	89,039,059	0	230,036,683	1.88	13.67	2014
Merit Energy Partners K, L.P.	150,000,000	55,400,101	14,534,295	94,599,899	95,194,280	1.98	40.58	2019
NGP	599,500,000	579,812,294	477,724,756	53,611,496	276,885,557	1.30	8.16	
Natural Gas Partners IX, L.P.	150,000,000	173,962,921	249,243,688	605,481	774,555	1.44	12.07	2007
NGP Natural Resources X, L.P.	150,000,000	148,935,849	126,358,808	1,064,151	20,243,732	0.98	-0.44	2011
NGP Natural Resources XI, L.P.	150,000,000	153,405,370	84,127,723	6,290,493	131,093,523	1.40	8.86	2014
NGP Natural Resources XII, L.P.	149,500,000	103,508,154	17,994,537	45,651,371	124,773,747	1.38	11.99	2017
Sheridan	100,000,000	34,353,005	26,450,000	13,500,000	38,794,002	1.90	16.30	
Sheridan Production Partners III-B, L.P.	100,000,000	34,353,005	26,450,000	13,500,000	38,794,002	1.90	16.30	2014

**Minnesota State Board of Investment
Private Markets Investments as of June 30, 2022**

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Real Estate	4,173,147,868	2,495,671,659	1,868,886,721	1,917,557,858	1,784,338,236	1.46	10.67	
Angelo, Gordon & Co.	550,000,000	440,098,769	195,782,407	140,905,000	395,097,021	1.34	12.53	
AG Asia Realty Fund III, L.P.	50,000,000	47,587,261	47,125,000	6,196,250	18,755,721	1.38	12.20	2016
AG Asia Realty Fund IV, L.P.	100,000,000	73,298,760	17,500,000	35,522,500	71,820,649	1.22	13.14	2018
AG Europe Realty Fund II, L.P.	75,000,000	68,779,896	26,644,976	12,768,750	72,642,988	1.44	12.69	2018
AG Europe Realty Fund III, L.P.	75,000,000	36,687,885	0	36,937,500	40,455,527	1.10	9.53	2020
AG Realty Fund IX, L.P.	100,000,000	92,141,126	73,000,000	11,650,000	60,724,792	1.45	9.40	2014
AG Realty Fund X, L.P.	150,000,000	121,603,841	31,512,431	37,830,000	130,697,343	1.33	22.28	2018
Blackstone	1,124,500,000	786,041,368	875,196,061	494,718,957	504,727,652	1.76	14.14	
Blackstone Real Estate Partners Asia II	74,500,000	62,432,965	7,342,747	21,066,561	69,918,786	1.24	11.46	2017
Blackstone Real Estate Partners Asia III	100,000,000	0	0	100,000,000	0	0.00		2021
Blackstone Real Estate Partners V, L.P.	100,000,000	104,213,007	208,932,593	4,174,052	122,149	2.01	10.83	2006
Blackstone Real Estate Partners VI, L.P.	100,000,000	109,477,567	217,880,533	4,907,906	2,828,566	2.02	13.10	2007
Blackstone Real Estate Partners VII, LP	100,000,000	112,064,035	177,634,974	11,131,179	25,368,829	1.81	15.36	2011
Blackstone Real Estate VIII.TE.1, L.P.	150,000,000	172,057,391	173,157,085	21,961,064	127,227,354	1.75	18.26	2015
Blackstone Real Estate Partners IX, L.P.	300,000,000	225,796,404	90,248,128	131,478,195	279,261,967	1.64	41.41	2018
Blackstone Real Estate Partners X, L.P.	200,000,000	0	0	200,000,000	0	0.00		2022
Blackstone Strategic Partners	75,000,000	77,560,049	66,018,792	994,740	1,245,716	0.87	-2.08	
Strategic Partners III RE, L.P.	25,000,000	25,987,864	15,252,523	9,006	93,065	0.59	-6.46	2005
Strategic Partners IV RE, L.P.	50,000,000	51,572,185	50,766,269	985,734	1,152,651	1.01	0.11	2008
Brookfield Asset Management Inc.	300,000,000	0	0	300,000,000	0	0.00		
Brookfield Strategic Real Estate Partners IV	300,000,000	0	0	300,000,000	0	0.00		2021
Carlyle Group	450,000,000	109,319,068	83,493,461	397,442,484	82,766,259	1.52	32.90	
Carlyle Realty Partners VIII, L.P.	150,000,000	109,319,068	83,493,461	97,442,484	82,766,259	1.52	32.90	2017
Carlyle Realty Partners IX, L.P.	300,000,000	0	0	300,000,000	0	0.00		2021
Kohlberg, Kravis, Roberts & Co.	125,000,000	65,080,194	2,694,165	60,682,336	69,465,586	1.11	16.73	
KKR Real Estate Partners Americas III	125,000,000	65,080,194	2,694,165	60,682,336	69,465,586	1.11	16.73	2021
Landmark Partners	249,500,000	90,305,635	54,693,746	165,020,626	71,453,366	1.40	19.76	
Landmark Real Estate Partners VIII, L.P.	149,500,000	90,305,635	54,693,746	65,020,626	71,453,366	1.40	19.76	2016
Landmark Real Estate Partners IX, L.P.	100,000,000	0	0	100,000,000	0	0.00		2021
Lubert Adler	174,147,868	102,920,244	77,321,940	72,414,787	58,194,299	1.32	14.58	
Lubert-Adler Real Estate Fund VII-B, L.P.	74,147,868	67,585,213	77,321,940	7,414,787	23,283,024	1.49	15.67	2017
Lubert-Adler Recovery and Enhancement Capital Fund	100,000,000	35,335,030	0	65,000,000	34,911,275	0.99	-2.47	2021

**Minnesota State Board of Investment
Private Markets Investments as of June 30, 2022**

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Oaktree Capital Management, LLC	200,000,000	64,475,519	34,370,464	170,000,000	42,236,372	1.19	80.96	
Oaktree Real Estate Opportunities Fund VIII	200,000,000	64,475,519	34,370,464	170,000,000	42,236,372	1.19	80.96	2020
Rockpoint	200,000,000	170,762,131	63,382,835	48,873,885	161,507,150	1.32	11.58	
Rockpoint Real Estate Fund V, L.P.	100,000,000	99,126,386	53,707,916	17,327,032	80,266,752	1.35	9.17	2014
Rockpoint Real Estate Fund VI, L.P.	100,000,000	71,635,745	9,674,919	31,546,853	81,240,398	1.27	27.62	2019
Rockwood	200,000,000	145,171,718	60,396,117	59,008,985	125,989,436	1.28	10.09	
Rockwood Capital RE Partners X, L.P.	100,000,000	94,027,411	56,119,269	7,657,118	68,616,639	1.33	9.13	2015
Rockwood Capital RE Partners XI, L.P.	100,000,000	51,144,308	4,276,848	51,351,866	57,372,797	1.21	15.82	2019
Silverpeak Real Estate Partners	225,000,000	143,936,964	106,379,672	7,496,058	6,877,761	0.79	-3.80	
Silverpeak Legacy Pension Partners II, L.P.	75,000,000	73,069,012	92,033,940	7,496,058	441,078	1.27	4.18	2005
Silverpeak Legacy Pension Partners III, L.P.	150,000,000	70,867,952	14,345,733	0	6,436,683	0.29	-12.12	2008
TA Associates Realty	300,000,000	300,000,000	249,157,062	0	264,777,622	1.71	16.10	
Realty Associates Fund X	100,000,000	100,000,000	161,064,353	0	95,612	1.61	12.56	2012
Realty Associates Fund XI	100,000,000	100,000,000	80,550,731	0	112,206,954	1.93	16.38	2015
Realty Associates Fund XII	100,000,000	100,000,000	7,541,978	0	152,475,056	1.60	40.40	2018
Total	37,158,734,362	27,717,876,939	22,206,512,199	12,220,855,896	20,415,475,546	1.54	12.27	
<i>Difference**</i>					39,338,554			
Private Markets Total with Difference					20,454,814,100			

Private Markets Portfolio Status	Managers	Funds
PRIVATE EQUITY	60	191
PRIVATE CREDIT	18	42
REAL ASSETS	11	33
REAL ESTATE	13	34
Total	102	300

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

June 30, 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	\$97,575,089	-12.3%	-12.4%	6.3%	7.3%	8.6%	01/1980
U.S. EQUITY ACTIVELY MANAGED FUND	75,900,118	-17.7	-17.3	9.6	11.1	12.8	07/1986
U.S. EQUITY INDEX FUND	351,754,996	-16.7	-13.7	10.0	10.8	12.7	07/1986
BROAD INTERNATIONAL EQUITY FUND	127,002,860	-11.9	-17.4	2.6	3.3	5.6	09/1994
BOND FUND	101,045,109	-5.7	-11.7	-0.5	1.3	2.1	07/1986
MONEY MARKET FUND	635,290,160	0.2	0.3	0.7	1.2	0.8	07/1986
STABLE VALUE FUND	1,745,008,223	0.5	1.8	2.2	2.3	2.2	11/1994
VOLUNTEER FIREFIGHTER ACCOUNT	132,255,201	-10.3	-12.7	4.1	5.2	6.5	01/2010

Note:

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



Supplemental Investment Fund Performance

Balanced Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
BALANCED FUND	\$97,575,089	-12.3%	-12.4%	6.3%	7.3%	8.6%
SIF BALANCED FUND BENCHMARK		-11.8%	-11.7%	5.9%	7.0%	8.2%
Excess		-0.5%	-0.6%	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>
U.S. EQUITY ACTIVELY MANAGED FUND	75,900,118	-17.7	-17.3	9.6	11.1	12.8
Russell 3000		-16.7	-13.9	9.8	10.6	12.6
Excess		-1.0	-3.4	-0.2	0.5	0.3



Supplemental Investment Fund Performance

U.S. Equity Index Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
U.S. EQUITY INDEX FUND	\$351,754,996	-16.7%	-13.7%	10.0%	10.8%	12.7%
Russell 3000		-16.7%	-13.9%	9.8%	10.6%	12.6%
Excess		0.0%	0.1%	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>
BROAD INTERNATIONAL EQUITY FUND	127,002,860	-11.9	-17.4	2.6	3.3	5.6
International Equity Benchmark		-13.7	-19.4	1.3	2.5	4.8
Excess		1.8	2.0	1.3	0.8	0.8



Supplemental Investment Fund Performance

Bond Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
BOND FUND	\$101,045,109	-5.7%	-11.7%	-0.5%	1.3%	2.1%
Bloomberg U.S. Aggregate		-4.7%	-10.3%	-0.9%	0.9%	1.5%
Excess		-1.0%	-1.4%	0.4%	0.4%	0.6%

Money Market Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
MONEY MARKET FUND	635,290,160	0.2	0.3	0.7	1.2	0.8
ICE BofA US 3-Month Treasury Bill		0.1	0.2	0.6	1.1	0.6
Excess		0.1	0.2	0.1	0.1	0.1



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>
STABLE VALUE FUND	\$1,745,008,223	0.5%	1.8%	2.2%	2.3%	2.2%
Fixed Interest Blended Benchmark		0.8%	1.9%	1.4%	1.9%	1.6%
Excess		-0.4%	-0.1%	0.9%	0.4%	0.6%

Volunteer Firefighter Account

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
VOLUNTEER FIREFIGHTER ACCOUNT	132,255,201	-10.3	-12.7	4.1	5.2	6.5
SIF Volunteer Firefighter Account BM		-10.1	-12.2	3.6	4.8	6.0
Excess		-0.2	-0.4	0.6	0.4	0.5



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	\$608,335,463	-16.8%	-14.2%	9.7%			07/2019
VANGUARD INSTITUTIONAL INDEX PLUS	1,532,803,355	-16.1	-10.6	10.6	11.3%	12.9%	07/1999
VANGUARD DIVIDEND GROWTH	897,507,934	-9.2	-0.0	10.4	12.1		10/2016
VANGUARD MID CAP INDEX	638,822,124	-17.0	-16.0	7.2	8.3	11.5	01/2004
T. ROWE PRICE SMALL-CAP STOCK	804,050,061	-15.2	-23.2	5.7	9.2	11.8	04/2000
FIDELITY DIVERSIFIED INTERNATIONAL	288,680,380	-17.0	-22.6	3.0	3.5	6.6	07/1999
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	308,995,114	-12.9	-18.9	2.0	2.8	5.2	07/2011
VANGUARD BALANCED INDEX	1,266,548,685	-12.1	-12.5	5.7	6.9	8.2	12/2003
DODGE & COX INCOME	287,691,122	-4.7	-10.0	0.3	1.7	2.6	07/1999
VANGUARD TOTAL BOND MARKET INDEX	322,254,514	-4.7	-10.5	-0.9	0.8	1.5	12/2003
2025 FUND	215,091,492	-8.7	-9.1	4.2	5.0	6.2	07/2011
2030 FUND	186,904,594	-10.7	-12.0	4.9	5.7	7.1	07/2011
2035 FUND	143,662,270	-12.5	-14.6	5.0	5.9	7.5	07/2011
2040 FUND	112,706,991	-13.3	-15.7	5.2	6.2	7.9	07/2011
2045 FUND	104,615,002	-13.9	-16.3	5.4	6.4	8.3	07/2011
2050 FUND	87,417,823	-14.5	-16.9	5.7	6.6	8.4	07/2011
2055 FUND	56,482,644	-15.0	-17.5	5.7	6.6	8.4	07/2011
2060 FUND	44,502,804	-15.0	-17.5	5.7	6.6	8.4	07/2011
2065 FUND	4,508,114	-15.0	-17.5				04/2020
INCOME FUND	217,065,195	-7.6	-8.1	3.4	4.0	4.1	07/2011
TD Ameritrade SDB	75,827,462						
TD Ameritrade SDB Roth	2,368,197						



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.

	<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>
Large Cap US Equity						
VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX PLUS	\$608,335,463	-16.8%	-14.2%	9.7%		07/2019
CRSP US Total Market Index		-16.8	-14.2	9.6		07/2019
Excess		0.0	-0.0	0.1		
VANGUARD INSTITUTIONAL INDEX PLUS	1,532,803,355	-16.1	-10.6	10.6	11.3%	07/1999
S&P 500		-16.1	-10.6	10.6	11.3	07/1999
Excess		-0.0	-0.0	-0.0	-0.0	
VANGUARD DIVIDEND GROWTH	897,507,934	-9.2	-0.0	10.4	12.1	10/2016
DIVIDEND GROWTH SPLICED INDEX		-11.1	-5.6	9.6	11.3	10/2016
Excess		1.9	5.5	0.8	0.9	
Mid Cap US Equity						
VANGUARD MID CAP INDEX	638,822,124	-17.0	-16.0	7.2	8.3	01/2004
CRSP US Mid Cap Index		-17.0	-16.0	7.2	8.3	01/2004
Excess		-0.0	-0.0	0.0	0.0	
Small Cap US Equity						
T. ROWE PRICE SMALL-CAP STOCK	804,050,061	-15.2	-23.2	5.7	9.2	04/2000
Russell 2000		-17.2	-25.2	4.2	5.2	04/2000
Excess		2.0	2.0	1.5	4.0	
International Equity						
FIDELITY DIVERSIFIED INTERNATIONAL	288,680,380	-17.0	-22.6	3.0	3.5	07/1999
MSCI EAFE FREE (NET)		-14.5	-17.8	1.1	2.2	07/1999
Excess		-2.5	-4.9	1.9	1.3	
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	308,995,114	-12.9	-18.9	2.0	2.8	07/2011
FTSE Global All Cap ex US Index Net		-14.1	-19.4	1.8	2.6	07/2011
Excess		1.3	0.5	0.3	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.

(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.

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

Balanced Funds

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
VANGUARD BALANCED INDEX	\$1,266,548,685	-12.1%	-12.5%	5.7%	6.9%	12/2003
Vanguard Balanced Fund Benchmark		-12.1	-12.5	5.7	7.0	12/2003
Excess		-0.0	-0.1	-0.0	-0.0	

Fixed Income

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
DODGE & COX INCOME	287,691,122	-4.7	-10.0	0.3	1.7	07/1999
Bloomberg U.S. Aggregate		-4.7	-10.3	-0.9	0.9	07/1999
Excess		-0.0	0.3	1.2	0.8	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
VANGUARD TOTAL BOND MARKET INDEX	322,254,514	-4.7	-10.5	-0.9	0.8	12/2003
Bloomberg U.S. Aggregate		-4.7	-10.3	-0.9	0.9	12/2003
Excess		-0.0	-0.2	-0.0	-0.0	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
MONEY MARKET FUND	635,290,160	0.2	0.3	0.7	1.2	07/1986
ICE BofA US 3-Month Treasury Bill		0.1	0.2	0.6	1.1	07/1986
Excess		0.1	0.2	0.1	0.1	

Stable Value

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
STABLE VALUE FUND	1,745,008,223	0.5	1.8	2.2	2.3	11/1994
Fixed Interest Blended Benchmark		0.8	1.9	1.4	1.9	11/1994
Excess		-0.4	-0.1	0.9	0.4	



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>
SSgA													
2025 FUND	\$215,091,492	-8.7%	-9.1%	4.2%	5.0%	07/2011	2050 FUND	\$87,417,823	-14.5%	-16.9%	5.7%	6.6%	07/2011
2025 FUND BENCHMARK		-8.8%	-9.1%	4.2%	5.0%	07/2011	2050 FUND BENCHMARK		-14.8%	-17.0%	5.6%	6.6%	07/2011
Excess		0.1%	-0.0%	0.0%	0.0%		Excess		0.2%	0.0%	0.0%	0.0%	
2030 FUND	\$186,904,594	-10.7%	-12.0%	4.9%	5.7%	07/2011	2055 FUND	\$56,482,644	-15.0%	-17.5%	5.7%	6.6%	07/2011
2030 FUND BENCHMARK		-10.8%	-12.0%	4.9%	5.7%	07/2011	2055 FUND BENCHMARK		-15.3%	-17.5%	5.7%	6.6%	07/2011
Excess		0.1%	0.0%	0.0%	0.0%		Excess		0.3%	0.0%	-0.0%	-0.0%	
2035 FUND	\$143,662,270	-12.5%	-14.6%	5.0%	5.9%	07/2011	2060 FUND	\$44,502,804	-15.0%	-17.5%	5.7%	6.6%	07/2011
2035 FUND BENCHMARK		-12.6%	-14.7%	4.9%	5.9%	07/2011	2060 FUND BENCHMARK		-15.3%	-17.5%	5.7%	6.6%	07/2011
Excess		0.2%	0.0%	0.0%	0.0%		Excess		0.2%	0.0%	-0.0%	-0.0%	
2040 FUND	\$112,706,991	-13.3%	-15.7%	5.2%	6.2%	07/2011	2065 FUND	\$4,508,114	-15.0%	-17.5%			04/2020
2040 FUND BENCHMARK		-13.5%	-15.7%	5.2%	6.2%	07/2011	2065 FUND BENCHMARK		-15.3%	-17.5%			04/2020
Excess		0.2%	0.0%	0.0%	0.0%		Excess		0.3%	0.0%			
2045 FUND	\$104,615,002	-13.9%	-16.3%	5.4%	6.4%	07/2011	INCOME FUND	\$217,065,195	-7.6%	-8.1%	3.4%	4.0%	07/2011
2045 FUND BENCHMARK		-14.1%	-16.3%	5.4%	6.4%	07/2011	INCOME FUND BENCHMARK		-7.7%	-8.1%	3.3%	4.0%	07/2011
Excess		0.2%	0.0%	0.0%	0.0%		Excess		0.1%	-0.0%	0.0%	0.0%	

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



MN College Savings Plan Options

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

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

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

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

ASSET CLASS BASED ALLOCATIONS

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

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

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

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

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

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

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

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



MINNESOTA COLLEGE SAVINGS PLAN
Performance Statistics for the Period Ending: June 30, 2022

Total = \$1.709 Million

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
2038/2039 Enrollment Option	\$8,541,408	-12.90%	-12.81%				-12.29%	6/11/2021
2038-2039 Custom Benchmark		-13.88%	-13.16%				-12.70%	
2036/2037 Enrollment Option	\$52,724,960	-12.71%	-12.71%				5.48%	10/28/2019
2036-2037 Custom Benchmark		-13.56%	-12.96%				5.13%	
2034/2035 Enrollment Option	\$44,640,728	-12.26%	-12.46%				5.18%	10/28/2019
2034-2035 Custom Benchmark		-13.10%	-12.71%				4.84%	
2032/2033 Enrollment Option	\$50,897,368	-11.77%	-12.18%				4.97%	10/28/2019
2032-2033 Custom Benchmark		-12.51%	-12.35%				4.66%	
2030/2031 Enrollment Option	\$61,871,843	-10.76%	-11.46%				4.59%	10/28/2019
2030-2031 Custom Benchmark		-11.45%	-11.64%				4.28%	
2028/2029 Enrollment Option	\$78,685,892	-9.39%	-10.41%				3.97%	10/28/2019
2028-2029 Custom Benchmark		-9.98%	-10.58%				3.58%	
2026/2027 Enrollment Option	\$110,018,445	-7.90%	-9.12%				3.48%	10/28/2019
2026-2027 Custom Benchmark		-8.49%	-9.42%				3.08%	
2024/2025 Enrollment Option	\$153,887,435	-6.03%	-7.16%				3.26%	10/28/2019
2024-2025 Custom Benchmark		-6.51%	-7.49%				2.74%	
2022/2023 Enrollment Option	\$181,291,909	-4.11%	-4.80%				2.63%	10/28/2019
2022-2023 Custom Benchmark		-4.47%	-5.31%				1.95%	
In School Option	\$266,329,039	-3.47%	-4.08%				2.12%	10/28/2019
In School Custom Benchmark		-3.79%	-4.61%				1.25%	



MINNESOTA COLLEGE SAVINGS PLAN
Performance Statistics for the Period Ending: June 30, 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	\$268,372,125	-15.23%	-14.36%	6.85%	7.82%	9.84%	7.02%	10/ 1/2001
BB: U.S. and International Equity Option		-15.93%	-14.44%	6.60%	7.62%	9.88%	7.69%	
Moderate Allocation Option	\$85,801,515	-10.96%	-11.84%	4.55%	5.54%	6.65%	5.20%	8/ 2/2007
BB: Moderate Allocation Option		-11.46%	-11.89%	4.31%	5.44%	6.75%	5.67%	
100% Fixed-Income Option	\$17,717,703	-4.44%	-8.34%	-0.11%	1.28%	1.37%	2.89%	8/16/2007
BB: 100% Fixed-Income Option		-4.52%	-8.41%	0.13%	1.54%	1.72%	3.45%	
International Equity Index Option	\$8,129,940	-12.31%	-18.06%	1.46%	2.41%		3.47%	6/18/2013
BB: International Equity Index Option		-13.90%	-19.27%	1.06%	2.27%		3.47%	
Money Market Option	\$14,197,292	0.09%	0.09%	0.47%	0.90%	0.48%	0.50%	11/ 1/2007
BB: Money Market Option		0.09%	0.11%	0.39%	0.78%	0.42%	0.45%	
Principal Plus Interest Option	\$128,400,523	0.31%	1.18%	1.61%	1.68%	1.52%	2.37%	10/10/2001
Citigroup 3-Month U.S. Treasury Bill		0.14%	0.19%	0.61%	1.09%	0.62%	1.22%	
Aggressive Allocation Option	\$67,187,117	-13.04%	-13.04%	5.71%	6.72%		6.65%	8/12/2014
BB: Aggressive Allocation Option		-13.71%	-13.14%	5.51%	6.57%		6.54%	
Conservative Allocation Option	\$16,255,164	-6.58%	-7.70%	2.69%	3.57%		3.46%	8/18/2014
BB: Conservative Allocation Option		-6.89%	-8.01%	2.48%	3.49%		3.45%	
Equity and Interest Accumulation Option	\$7,509,281	-8.36%	-6.33%	5.96%	6.25%		5.88%	8/18/2014
BB: Equity and Interest Accumulation Option		-8.48%	-6.74%	5.59%	6.15%		5.76%	
U.S. Large Cap Equity Option	\$84,084,151	-16.12%	-10.74%	10.44%	11.12%		10.79%	8/12/2014
BB: U.S. Large Cap Equity Option		-16.10%	-10.62%	10.60%	11.31%		10.90%	
Social Choice Equity Option	\$675,840	-16.02%	-14.53%				-12.87%	6/11/2021
BB: Social Choice Equity Option		-16.70%	-13.87%				-12.31%	
Matching Grant	\$1,457,645	0.31%	1.18%	1.61%	1.68%	1.52%	2.37%	3/22/2002
Citigroup 3-Month U.S. Treasury Bill		0.14%	0.19%	0.61%	1.09%	0.62%	1.22%	

MINNESOTABLE *plan*

A member of The National ABLE Alliance

Performance as of
06/30/22

Total Market Value: \$ **27,378,469**

<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>Inception Date</u>
Aggressive Option	\$ 1,996,331	7.29%	(7.45)	(14.92)	(20.21)	(17.04)	5.18	6.31		7.13	12/15/16
ABLE Aggressive Custom Benchmark			(7.77)	(15.40)	(20.54)	(17.16)	5.32	6.56		7.49	
Variance			0.32	0.48	0.33	0.12	(0.14)	(0.25)		(0.36)	
Moderately Aggressive Option	\$ 2,297,154	8.39%	(6.45)	(12.99)	(17.91)	(15.14)	4.64	5.65		6.35	12/15/16
ABLE Moderately Aggressive Custom Benchmark			(6.71)	(13.35)	(18.20)	(15.17)	4.77	5.91		6.70	
Variance			0.26	0.36	0.29	0.03	(0.13)	(0.26)		(0.35)	
Growth Option	\$ 3,441,612	12.57%	(5.41)	(10.92)	(15.56)	(13.16)	3.99	4.95		5.51	12/15/16
ABLE Growth Custom Benchmark			(5.66)	(11.27)	(15.82)	(13.18)	4.13	5.20		5.85	
Variance			0.25	0.35	0.26	0.02	(0.14)	(0.25)		(0.34)	
Moderate Option	\$ 3,080,821	11.25%	(4.39)	(8.86)	(13.11)	(11.13)	3.32	4.18		4.64	12/15/16
ABLE Moderate Custom Benchmark			(4.61)	(9.16)	(13.41)	(11.19)	3.41	4.42		4.94	
Variance			0.22	0.30	0.30	0.06	(0.09)	(0.24)		(0.30)	
Moderately Conservative Option	\$ 3,101,058	11.33%	(3.04)	(6.12)	(9.28)	(7.83)	2.54	3.23		3.53	12/15/16
ABLE Moderately Conservative Custom Benchmark			(3.18)	(6.35)	(9.53)	(7.90)	2.58	3.42		3.76	
Variance			0.14	0.23	0.25	0.07	(0.04)	(0.19)		(0.23)	
Conservative Option	\$ 4,986,381	18.21%	(1.15)	(2.37)	(3.89)	(3.30)	1.35	1.84		1.95	12/15/16
ABLE Conservative Custom Benchmark			(1.25)	(2.47)	(4.06)	(3.35)	1.32	1.98		2.09	
Variance			0.10	0.10	0.17	0.05	0.03	(0.14)		(0.14)	
Checking Option	\$ 8,475,113	30.96%									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 fixed risk level.

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Quarterly Report

Non-Retirement

June 30, 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

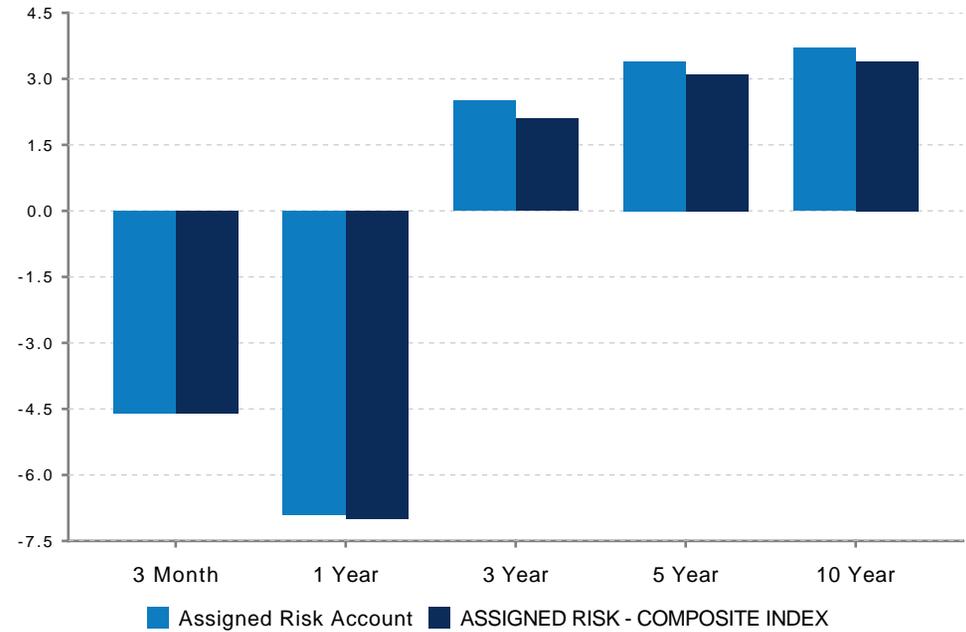
Assigned Risk Plan

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.

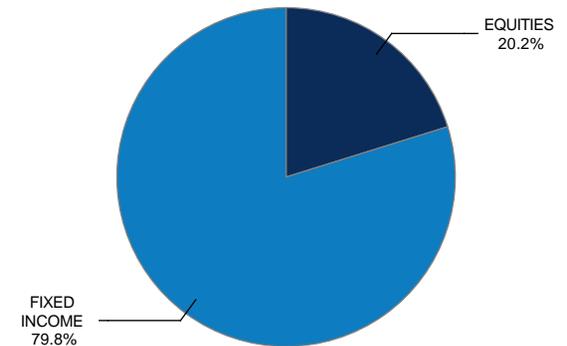
The Assigned Risk Plan is invested in a portfolio of common stocks and bonds

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.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
Assigned Risk Account	\$255,123,153	-4.6%	-6.9%	2.5%	3.4%	3.7%
EQUITIES	51,653,000	-16.1	-10.6	10.6	11.3	12.8
FIXED INCOME	203,470,152	-1.6	-6.3	-0.1	1.0	1.1
ASSIGNED RISK - COMPOSITE INDEX		-4.6	-7.0	2.1	3.1	3.4
Excess		0.1	0.1	0.4	0.3	0.2
S&P 500		-16.1	-10.6	10.6	11.3	13.0
Bloomberg U.S. Government: Intermediate		-1.7	-6.3	-0.3	0.9	1.0



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.



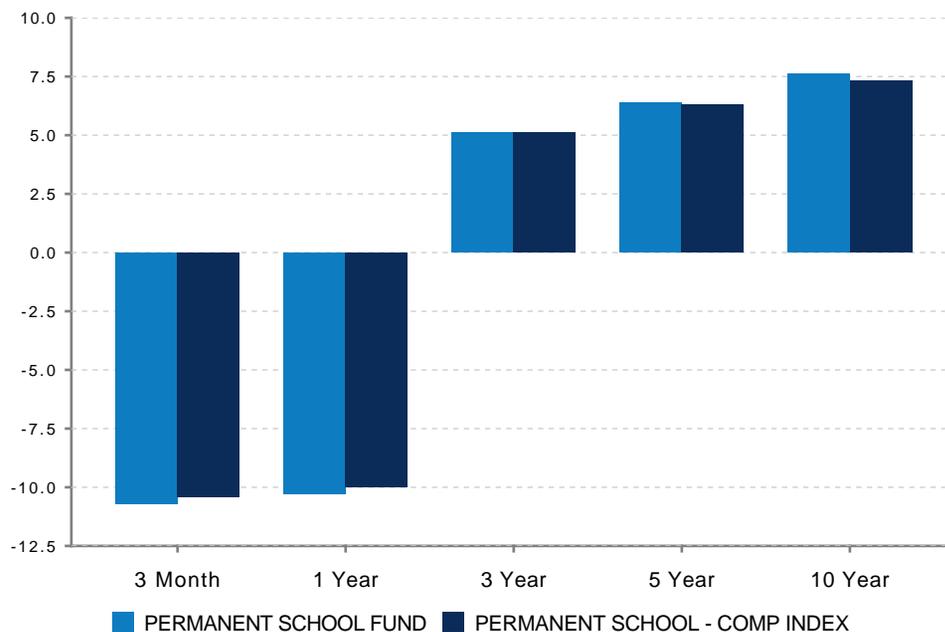
Non-Retirement

Permanent School Fund

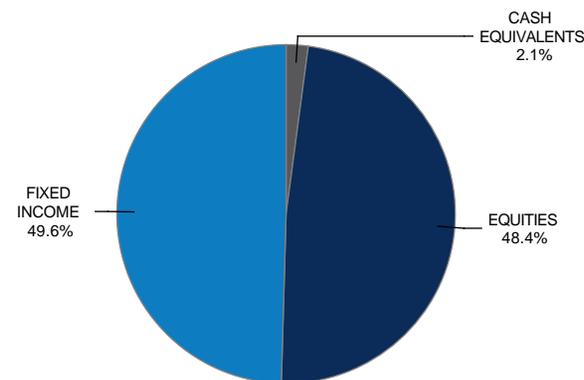
The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is transferred to the school endowment fund and distributed to Minnesota's public schools.

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	\$1,743,213,504	-10.7%	-10.3%	5.1%	6.4%	7.6%
CASH EQUIVALENTS	36,442,202	0.1	0.2	0.6	1.1	0.7
EQUITIES	842,966,690	-16.1	-10.6	10.6	11.3	12.9
FIXED INCOME	863,804,612	-5.2	-11.1	-0.9	1.0	2.0
PERMANENT SCHOOL - COMP INDEX		-10.4	-10.0	5.1	6.3	7.3
Excess		-0.3	-0.3	0.0	0.1	0.3
S&P 500		-16.1	-10.6	10.6	11.3	13.0
Bloomberg U.S. Aggregate		-4.7	-10.3	-0.9	0.9	1.5



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



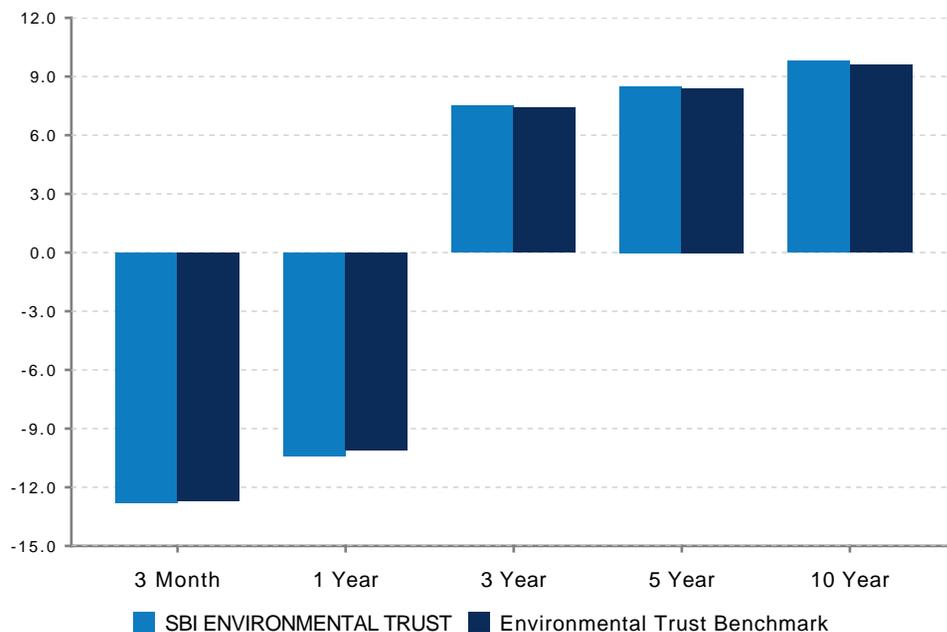
Non-Retirement

Environmental Trust Fund

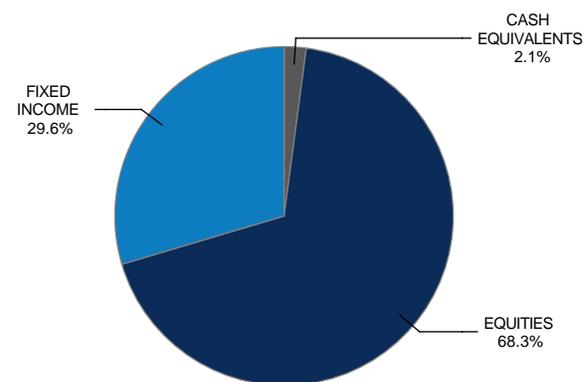
The objective of the Environmental Trust Fund is to increase the market value of the Fund over time in order to increase the annual amount made available for spending within the constraints of maintaining adequate portfolio quality and liquidity.

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

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



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
SBI ENVIRONMENTAL TRUST	\$1,448,074,771	-12.8%	-10.4%	7.5%	8.5%	9.8%
CASH EQUIVALENTS	30,570,937	0.1	0.2	0.6	1.1	0.7
EQUITIES	989,496,427	-16.1	-10.6	10.6	11.3	12.9
FIXED INCOME	428,007,407	-5.2	-11.1	-0.9	1.0	2.0
Environmental Trust Benchmark		-12.7	-10.1	7.4	8.4	9.6
Excess		-0.1	-0.3	0.1	0.1	0.2
S&P 500		-16.1	-10.6	10.6	11.3	13.0
Bloomberg U.S. Aggregate		-4.7	-10.3	-0.9	0.9	1.5



Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by Prudential. Prior to 12/1/2017 both segments were managed internally by SBI staff. From 7/1/94 to 7/1/99, the Fund's target allocation and benchmark was 50% fixed income and 50% stock. Prior to 7/1/94 the Fund was invested entirely in short-term instruments as part of the Invested Treasurer's Cash pool.

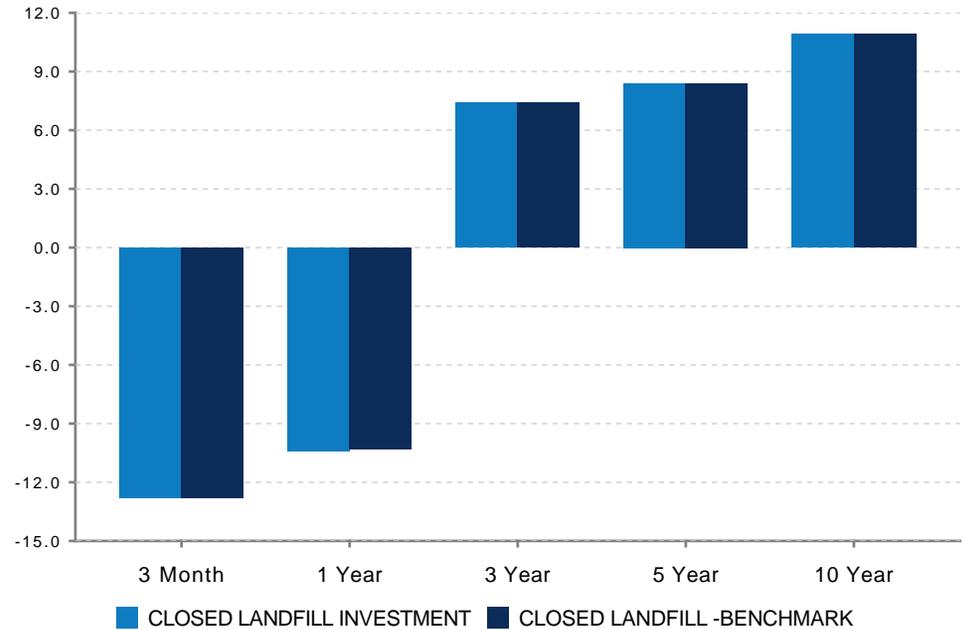


Non-Retirement

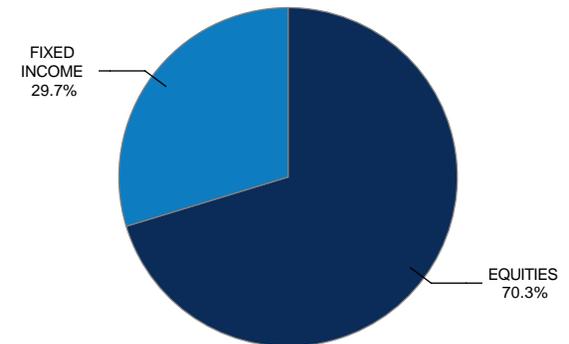
Closed Landfill Investment Fund

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

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



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
CLOSED LANDFILL INVESTMENT	\$116,113,735	-12.8%	-10.4%	7.4%	8.4%	10.9%
EQUITIES	81,683,167	-16.1	-10.6	10.6	11.3	12.9
FIXED INCOME	34,430,568	-5.2	-11.1	-0.9	1.0	
CLOSED LANDFILL -BENCHMARK		-12.8	-10.3	7.4	8.4	10.9
Excess		-0.1	-0.1	0.0	0.0	0.0
S&P 500		-16.1	-10.6	10.6	11.3	13.0
Bloomberg U.S. Aggregate		-4.7	-10.3	-0.9	0.9	1.5



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



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
NON RETIREMENT EQUITY INDEX - MELLON	2,721,896,425	-16.1	-10.7	-10.7	10.6	11.3	12.9	9.8	07/1993
S&P 500 INDEX (DAILY)		-16.1	-10.6	-10.6	10.6	11.3	13.0	9.7	07/1993
Excess		-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.1	
NON RETIREMENT FIXED INCOME - PRUDENTIAL	1,526,936,023	-5.2	-11.1	-11.1	-0.9	1.0	2.0	5.2	07/1994
Bloomberg U.S. Aggregate		-4.7	-10.3	-10.3	-0.9	0.9	1.5	4.8	07/1994
Excess		-0.5	-0.8	-0.8	0.1	0.1	0.5	0.4	
RBC	203,470,068	-1.6	-6.3	-6.3	-0.1	1.0	1.1	4.4	07/1991
RBC Custom Benchmark		-1.7	-6.3	-6.3	-0.3	0.9	1.0	4.5	07/1991
Excess		0.1	0.1	0.1	0.2	0.1	0.1	-0.1	
MET COUNCIL OPEB BOND POOL	97,060,180	-1.0	-4.8	-4.8	-0.2			1.1	02/2018
NON RETIREMENT CASH ACCOUNT	99,598,038	0.2	0.3	0.3	0.6			1.2	12/2017
ICE BofA US 3-Month Treasury Bill		0.1	0.2	0.2	0.6			1.1	12/2017
Excess		0.1	0.1	0.1	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.

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Quarterly Report

State Cash

June 30, 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	25,494,237,378	0.0	-1.1	0.4	0.9	0.6
iMoneyNet Money Fund Average-All Taxable		0.1	0.1	0.4	0.8	0.4

Other State Cash Accounts

Due to differing investment objectives, strategies, and time horizons, some State agencies' accounts are invested separately. These agencies direct the investments or provide the SBI with investment guidelines and the SBI executes on their behalf. Consequently, returns are shown for informational purposes only and there are no benchmarks for these accounts.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
Debt Service	89,537,554	-1.6	-4.2	0.7	1.6	



Addendum

Benchmark Definitions

Active Domestic Equity Benchmark:

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

Benchmark DM:

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

Benchmark EM:

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

Combined Funds Composite Index:

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

Core Bonds Benchmark:

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

Credit Plus Benchmark:

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



Addendum

Domestic Equity Benchmark:

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

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

International Equity Benchmark:

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

Multi-Asset Credit Benchmark:

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

Passive Domestic Equity Benchmark:

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

Passive Manager Benchmark:

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



Addendum

Public Equity Benchmark:

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

Return Seeking BM:

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

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

Total Fixed Income Benchmark:

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

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

