Comprehensive Performance Report

September 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

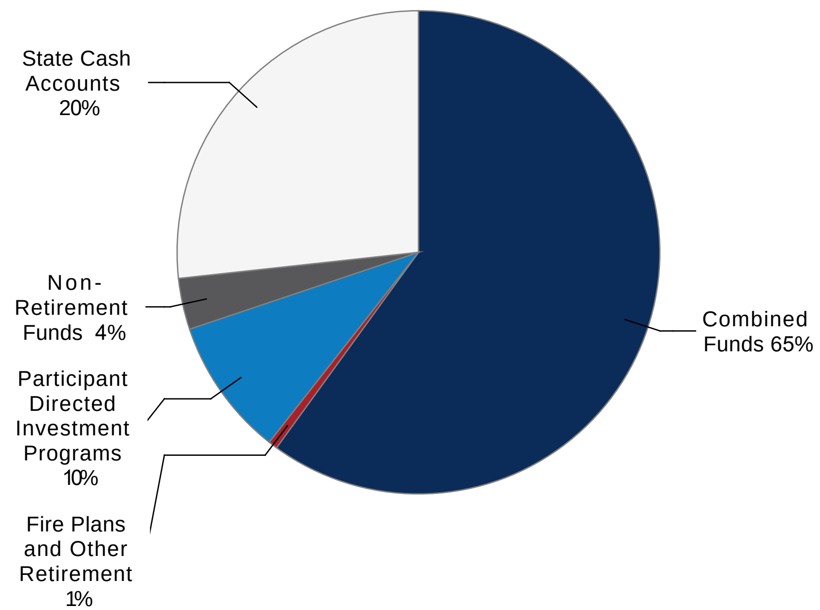
The Non-Retirement Funds are funds established by the State of Minnesota and other government entities for various purposes which include the benefit of public schools, the environment, other post-employment benefits, workers compensation insurance, and other purposes.

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

	$ Millions
Combined Funds	**$77,122**
Fire Plans + Other Retirement Plans	**781**
Participant Directed Investment Program	**11,872**
State Deferred Compensation Plan	8,138
Health Care Savings Plan	1,565
Unclassified Employees Retirement Plan	311
Hennepin County Supplemental Retirement Plan	147
PERA Defined Contribution Plan	79
Minnesota College Savings Plan	1,604
Minnesota Achieving a Better Life Experience Plan	28
Non-Retirement Funds	**4,412**
Assigned Risk Plan	232
Permanent School Fund	1,665
Environmental Trust Fund	1,374
Closed Landfill Investment Fund	109
Miscellaneous Trust Funds	306
Other Postemployment Benefits Accounts	727
State Cash	**23,747**
Invested Treasurer's Cash	23,584
Other State Cash Accounts	163
Total SBI AUM	**117,934**



Note: Differentials within column amounts may occur due to rounding

Quarterly Report

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Performance Reporting Legend

Manager Level Data
Aggregate Level Data
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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.

Combined Funds

September 30, 2022

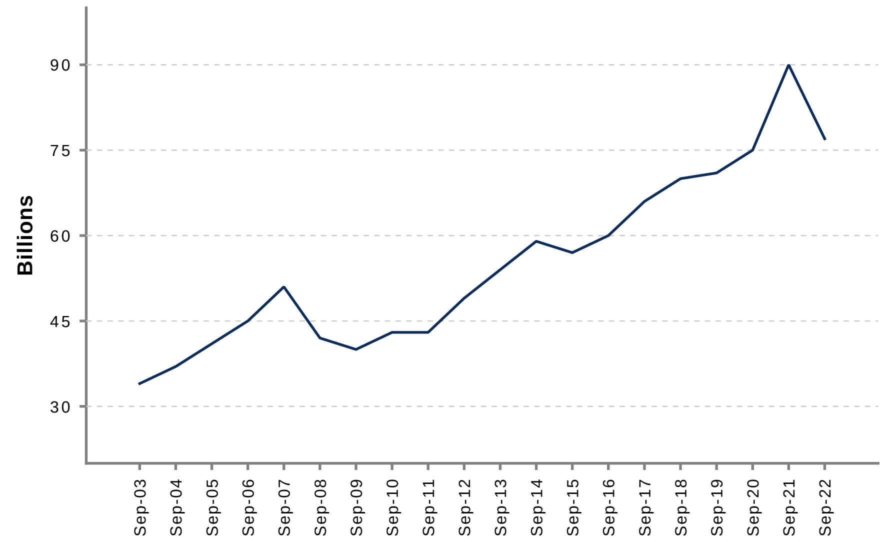
Combined Funds Summary

Combined Funds Change in Market Value ($Millions)

	One Quarter
Combined Funds	
Beginning Market Value	$81,320
Net Contributions	-710
Investment Return	-3,489
Ending Market Value	77,122

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

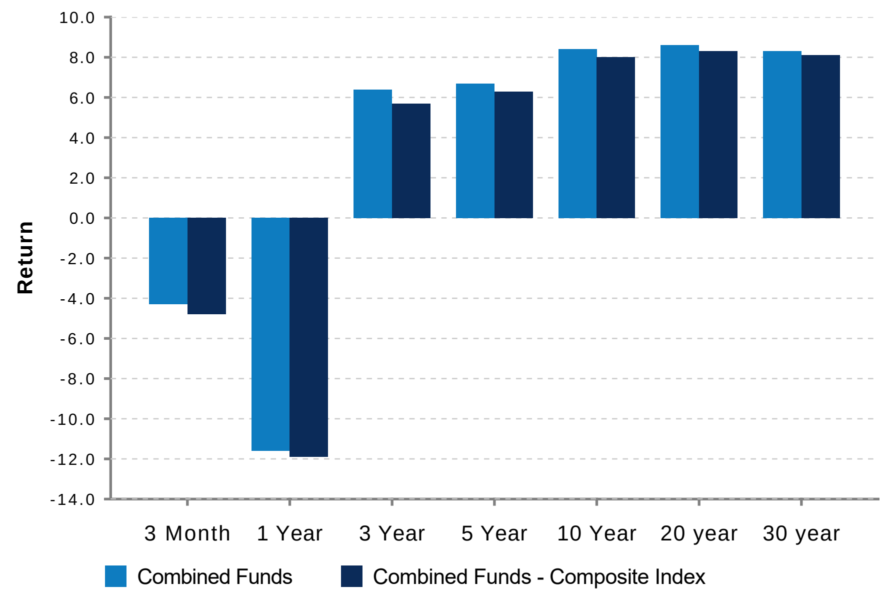
Asset Growth



Performance (Net of Fees)

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

	Qtr	FYTD	1 Yr	3 Yr	5 Yr	10 Yr	20 Yr	30 Yr
Combined Funds	-4.3%	-4.3%	-11.6%	6.4%	6.7%	8.4%	8.6%	8.3%
Combined Funds - Composite Index	-4.8%	-4.8%	-11.9%	5.7%	6.3%	8.0%	8.3%	8.1%
Excess	0.5%	0.5%	0.3%	0.7%	0.4%	0.4%	0.3%	0.3%

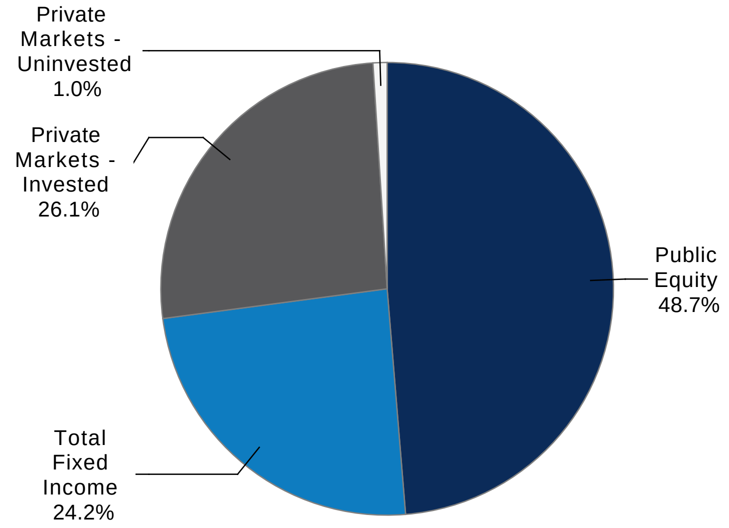


Combined Funds Summary

Asset Mix

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

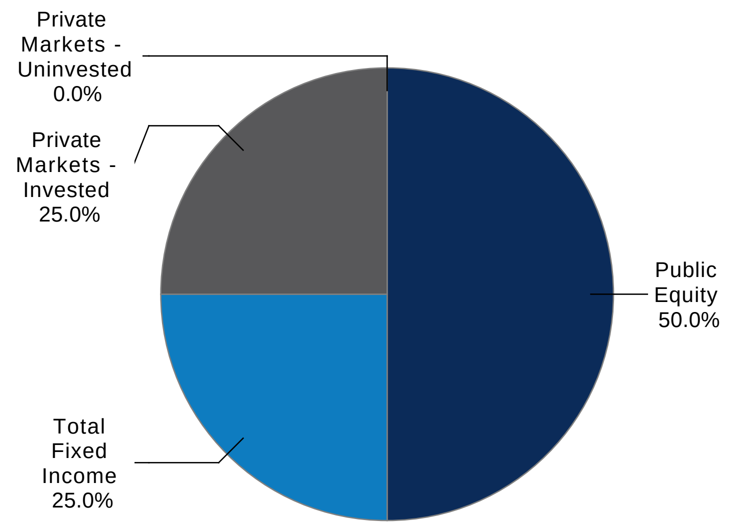
	(Millions)	Actual Mix	Policy Target
Public Equity	$37,572	48.7%	50.0%
Total Fixed Income	18,641	24.2	25.0
Private Markets - Total	20,908	27.1	25.0
Private Markets - Invested	20,155	26.1	
Private Markets - Uninvested	754	1.0	
TOTAL	77,122	100.0	



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.

	Policy Weight	Market Index
Public Equity	50.0%	Public Equity Benchmark
Total Fixed Income	25.0	Total Fixed Income Benchmark
Private Markets - Invested	25.0	Private Markets
Private Markets - Uninvested	0.0	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).

	Market Value	Actual Weight	Policy Weight	Last Qtr	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year
Public Equity	$37.6	48.7%	50.0%	-5.4%	-5.4%	-19.3%	5.3%	5.9%	9.2%	9.0%	8.5%
Public Equity Benchmark				-6.3	-6.3	-20.1	4.6	5.4			
Excess				0.9	0.9	0.8	0.7	0.4			
Domestic Equity	25.6	33.2	33.5	-4.4	-4.4	-18.0	7.9	8.6	11.4	9.8	9.3
Domestic Equity Benchmark				-4.5	-4.5	-17.6	7.7	8.6	11.4	9.9	9.4
Excess				0.0	0.0	-0.4	0.2	0.1	0.0	-0.1	-0.1
International Equity	11.2	14.5	16.5	-7.2	-7.2	-21.3	0.6	0.5	4.1	6.9	5.9
International Equity Benchmark				-9.9	-9.9	-25.2	-1.6	-0.8	3.0	6.3	5.1
Excess				2.7	2.7	3.9	2.2	1.3	1.1	0.5	0.8
Global Equity	0.8	1.0	0.0	-8.9	-8.9	-31.2					
MSCI AC World Index Net				-6.8	-6.8	-20.7					
Excess				-2.1	-2.1	-10.6					

Note:

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

Combined Funds Asset Class Performance Summary

Total Fixed Income

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

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

	Market Value	Actual Weight	Policy Weight	Last Qtr	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year	30 Year
Total Fixed Income	$18.6	24.2%	25.0%	-4.3%	-4.3%	-14.4%	-2.6%	0.7%	1.7%	3.7%	5.0%
Total Fixed Income Benchmark				-4.6%	-4.6%	-13.8%	-2.9%				
Excess				0.3%	0.3%	-0.7%	0.3%				
Core/Core Plus	$4.1	5.3%	5.0	-4.7%	-4.7%	-16.0%	-2.8%	0.1%	1.4%	3.6%	4.9%
Core Bonds Benchmark				-4.8%	-4.8%	-14.6%	-3.3%	-0.3%	0.9%	3.1%	4.5%
Excess				0.1%	0.1%	-1.4%	0.4%	0.4%	0.5%	0.5%	0.4%
Return Seeking Fixed Income	$3.8	5.0%	5.0	-2.6%	-2.6%	-14.5%					
Bloomberg U.S. Aggregate				-4.8%	-4.8%	-14.6%					
Excess				2.1%	2.1%	0.1%					
Treasury Protection	$7.2	9.3%	10.0	-6.9%	-6.9%	-19.7%	-5.5%				
Bloomberg Treasury 5+ Year				-6.9%	-6.9%	-19.6%	-5.6%				
Excess				-0.0%	-0.0%	-0.0%	0.1%				
Laddered Bond + Cash	$3.6	4.6%	5.0	0.4%	0.4%	0.1%	0.4%	1.1%	0.7%	1.5%	3.1%
ICE BofA US 3-Month Treasury Bill				0.5%	0.5%	0.6%	0.6%	1.1%	0.7%	1.3%	2.4%
Excess				-0.1%	-0.1%	-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.

STATE STREET

Combined Funds Asset Class Performance Summary

Private Markets

	Last Qtr	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year	25 Year	30 Year
Private Markets - Invested	-2.5%	-2.5%	11.3%	17.1%	15.0%	13.4%	14.0%	13.2%	13.3%
Private Markets - Uninvested (1)	-4.5%	-4.5%	-14.8%						
Private Equity	-4.1%	-4.1%	6.1%	20.5%	18.8%	16.9%	15.8%	14.6%	15.6%
Private Credit	1.1%	1.1%	16.0%	12.9%	12.7%	13.2%	12.8%	12.8%	
Resources	3.3%	3.3%	29.5%	7.7%	5.1%	3.5%	13.4%	11.4%	13.0%
Real Estate	1.4%	1.4%	32.2%	18.7%	15.5%	14.0%	10.4%	10.7%	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

Asset Class & Manager Performance

September 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

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Total Domestic Equity										
ACTIVE DOMESTIC EQUITY AGGREGATE (1)	**$2,583,514,602**	**9.9%**	**-3.0%**	**-3.0%**	**-24.5%**	**6.5%**	**6.6%**	**10.4%**	**7.6%**	**06/1996**
Active Domestic Equity Benchmark			-3.4	-3.4	-20.5	5.9	6.1	10.1	8.3	06/1996
Excess			0.4	0.4	-4.1	0.7	0.5	0.3	-0.6	
SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)	**2,553,432,038**	**9.8**	**-4.6**	**-4.6**	**-16.0**	**8.6**	**9.4**	**11.8**	**8.4**	**06/1996**
Semi Passive Domestic Equity Benchmark			-4.6	-4.6	-17.2	7.9	9.0	11.6	8.3	06/1996
Excess			0.0	0.0	1.2	0.7	0.4	0.2	0.1	
PASSIVE DOMESTIC EQUITY AGGREGATE (3)	**20,993,923,038**	**80.3**	**-4.6**	**-4.6**	**-17.3**	**7.9**	**8.9**	**11.5**	**8.5**	**06/1996**
Passive Domestic Equity Benchmark			-4.6	-4.6	-17.3	7.9	8.9	11.5	8.6	06/1996
Excess			0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.1	
TRANSITION AGGREGATE DOMESTIC EQUITY (4)	10	0.0								
TOTAL DOMESTIC EQUITY (5)	**26,130,869,688**	**100.0**	**-4.4**	**-4.4**	**-18.0**	**7.9**	**8.6**	**11.4**	**10.2**	**01/1984**
Domestic Equity Benchmark			-4.5	-4.5	-17.6	7.7	8.6	11.4	10.4	01/1984
Excess			0.0	0.0	-0.4	0.2	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.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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.

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Large Cap Growth										
SANDS	**$137,408,851**	**0.5%**	**-3.5%**	**-3.5%**	**-53.4%**	**-0.3%**	**5.9%**	**9.9%**	**9.0%**	**01/2005**
Russell 1000 Growth			-3.6	-3.6	-22.6	10.7	12.2	13.7	10.1	01/2005
Excess			0.1	0.1	-30.9	-11.0	-6.3	-3.8	-1.1	
WINSLOW	**138,143,111**	**0.5**	**-5.6**	**-5.6**	**-30.7**	**6.4**	**10.3**	**12.4**	**10.0**	**01/2005**
Russell 1000 Growth			-3.6	-3.6	-22.6	10.7	12.2	13.7	10.1	01/2005
Excess			-2.0	-2.0	-8.1	-4.3	-1.9	-1.3	-0.1	
RUSSELL 1000 GROWTH AGGREGATE (1)	**275,551,963**	**1.1**	**-4.6**	**-4.6**	**-44.3**	**8.7**	**11.5**	**13.6**	**9.6**	**11/2003**
Russell 1000 Growth			-3.6	-3.6	-22.6	10.7	12.2	13.7	10.0	11/2003
Excess			-1.0	-1.0	-21.8	-2.0	-0.7	-0.1	-0.4	

(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.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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.

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Semi-Passive Large Cap										
BLACKROCK	**$1,273,778,487**	**4.9%**	**-5.0%**	**-5.0%**	**-16.9%**	**8.0%**	**9.2%**	**12.1%**	**9.7%**	**01/1995**
Semi Passive Domestic Equity Benchmark			-4.6	-4.6	-17.2	7.9	9.0	11.6	9.4	01/1995
Excess			-0.4	-0.4	0.3	0.0	0.2	0.5	0.4	
J.P. MORGAN	**1,279,653,551**	**4.9**	**-4.2**	**-4.2**	**-15.2**	**9.3**	**9.6**	**12.2**	**9.7**	**01/1995**
Semi Passive Domestic Equity Benchmark			-4.6	-4.6	-17.2	7.9	9.0	11.6	9.4	01/1995
Excess			0.5	0.5	2.0	1.4	0.6	0.6	0.4	
SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE	**2,553,432,038**	**9.8**	**-4.6**	**-4.6**	**-16.0**	**8.6**	**9.4**	**11.8**	**8.4**	**06/1996**
Semi Passive Domestic Equity Benchmark			-4.6	-4.6	-17.2	7.9	9.0	11.6	8.3	06/1996
Excess			0.0	0.0	1.2	0.7	0.4	0.2	0.1	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	**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	**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

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Large Cap Value										
BARROW HANLEY	**$318,476,697**	**1.2%**	**-4.7%**	**-4.7%**	**-4.2%**	**6.6%**	**7.7%**	**10.4%**	**7.9%**	**04/2004**
Russell 1000 Value			-5.6	-5.6	-11.4	4.4	5.3	9.2	7.2	04/2004
Excess			0.9	0.9	7.2	2.2	2.4	1.3	0.8	
LSV	**301,255,478**	**1.2**	**-6.7**	**-6.7**	**-12.4**	**4.7**	**4.7**	**10.3**	**8.0**	**04/2004**
Russell 1000 Value			-5.6	-5.6	-11.4	4.4	5.3	9.2	7.2	04/2004
Excess			-1.1	-1.1	-1.0	0.3	-0.6	1.1	0.8	
RUSSELL 1000 VALUE AGGREGATE	**619,732,175**	**2.4**	**-5.7**	**-5.7**	**-8.3**	**6.3**	**6.7**	**10.3**	**8.1**	**10/2003**
Russell 1000 Value			-5.6	-5.6	-11.4	4.4	5.3	9.2	7.9	10/2003
Excess			-0.1	-0.1	3.0	1.9	1.4	1.1	0.2	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	**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	**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

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Small Cap Growth										
ARROWMARK	**$148,399,301**	**0.6%**	**-3.1%**	**-3.1%**	**-32.5%**	**1.3%**	**3.0%**		**7.5%**	**11/2016**
Russell 2000 Growth			0.2	0.2	-29.3	2.9	3.6		7.6	11/2016
Excess			-3.3	-3.3	-3.2	-1.6	-0.6		-0.1	
HOOD RIVER	**208,083,901**	**0.8**	**4.2**	**4.2**	**-24.1**	**16.9**	**11.5**		**14.4**	**11/2016**
Russell 2000 Growth			0.2	0.2	-29.3	2.9	3.6		7.6	11/2016
Excess			4.0	4.0	5.2	14.0	7.9		6.8	
RICE HALL JAMES	**169,468,099**	**0.6**	**-4.4**	**-4.4**	**-23.4**	**4.8**	**4.6**		**8.9**	**11/2016**
Russell 2000 Growth			0.2	0.2	-29.3	2.9	3.6		7.6	11/2016
Excess			-4.7	-4.7	5.9	1.8	1.0		1.3	
WELLINGTON	**211,197,258**	**0.8**	**-1.3**	**-1.3**	**-31.3**	**2.4**	**3.4**		**7.6**	**11/2016**
Russell 2000 Growth			0.2	0.2	-29.3	2.9	3.6		7.6	11/2016
Excess			-1.5	-1.5	-2.0	-0.5	-0.2		0.0	
RUSSELL 2000 GROWTH AGGREGATE	**737,148,560**	**2.8**	**-0.9**	**-0.9**	**-27.9**	**6.5**	**5.6**	**8.7%**	**7.0**	**11/2003**
Russell 2000 Growth			0.2	0.2	-29.3	2.9	3.6	8.8	7.8	11/2003
Excess			-1.2	-1.2	1.4	3.6	2.0	-0.1	-0.8	

STATE STREET

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Small Cap Value										
GOLDMAN SACHS	**$245,235,319**	**0.9%**	**-5.2%**	**-5.2%**	**-16.7%**	**2.7%**	**2.4%**	**8.2%**	**8.0%**	**01/2004**
Russell 2000 Value			-4.6	-4.6	-17.7	4.7	2.9	7.9	7.0	01/2004
Excess			-0.6	-0.6	1.0	-2.0	-0.5	0.3	1.0	
HOTCHKIS AND WILEY	**164,721,367**	**0.6**	**-0.7**	**-0.7**	**-6.2**	**10.2**	**5.2**	**10.0**	**7.9**	**01/2004**
Russell 2000 Value			-4.6	-4.6	-17.7	4.7	2.9	7.9	7.0	01/2004
Excess			3.9	3.9	11.5	5.4	2.3	2.1	1.0	
MARTINGALE	**147,985,031**	**0.6**	**-3.7**	**-3.7**	**-10.3**	**6.4**	**3.2**	**9.6**	**7.1**	**01/2004**
Russell 2000 Value			-4.6	-4.6	-17.7	4.7	2.9	7.9	7.0	01/2004
Excess			0.9	0.9	7.4	1.7	0.3	1.7	0.2	
PEREGRINE	**232,478,629**	**0.9**	**-5.5**	**-5.5**	**-14.7**	**5.2**	**3.5**	**8.4**	**9.0**	**07/2000**
Russell 2000 Value			-4.6	-4.6	-17.7	4.7	2.9	7.9	8.4	07/2000
Excess			-0.9	-0.9	3.0	0.5	0.6	0.4	0.6	
RUSSELL 2000 VALUE AGGREGATE	**790,420,345**	**3.0**	**-4.1**	**-4.1**	**-12.9**	**5.5**	**3.2**	**8.8**	**8.1**	**10/2003**
Russell 2000 Value			-4.6	-4.6	-17.7	4.7	2.9	7.9	7.7	10/2003
Excess			0.5	0.5	4.8	0.7	0.4	0.9	0.4	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

Minnesota State Board of Investment
Quarter Ending September 30, 2022
Domestic Equity Managers

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active All Cap										
ZEVENBERGEN (1)	**$160,661,558**	**0.6%**	**8.1%**	**8.1%**	**-52.0%**	**6.1%**	**9.6%**	**13.4%**	**10.2%**	**04/1994**
Zevenbergen Custom Benchmark			-3.4	-3.4	-23.0	12.0	13.0	14.1		04/1994
Excess			11.4	11.4	-29.0	-5.9	-3.4	-0.7		
ACTIVE RUSSELL 3000 GROWTH (2)	**160,661,558**	**0.6**	**8.1**	**8.1**	**-52.0**				**-35.9**	**01/2021**
Russell 3000 Growth TR			-3.4	-3.4	-23.0				-7.4	01/2021
Excess			11.4	11.4	-29.0				-28.5	

(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.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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)	**-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.

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Total Passive Domestic Equity										
BLACKROCK RUSSELL 1000	**$19,961,191,388**	**76.4%**	**-4.6%**	**-4.6%**	**-17.3%**	**7.9%**	**9.0%**		**11.0%**	**11/2016**
RUSSELL 1000 (DAILY)			-4.6	-4.6	-17.2	7.9	9.0		11.1	11/2016
Excess			0.0	0.0	-0.1	-0.0	-0.0		-0.0	
BLACKROCK RUSSELL 2000	**159,395,389**	**0.6**	**-2.2**	**-2.2**	**-22.7**	**5.2**			**4.6**	**11/2018**
RUSSELL 2000 (DAILY)			-2.2	-2.2	-23.5	4.3			3.8	11/2018
Excess			-0.0	-0.0	0.8	0.9			0.7	
BLACKROCK RUSSELL 3000 (1)	**873,336,261**	**3.3**	**-4.4**	**-4.4**	**-17.6**	**8.0**	**8.8**	**11.5%**	**9.1**	**07/1995**
Passive Manager Benchmark			-4.5	-4.5	-17.6	7.7	8.6	11.4	9.0	07/1995
Excess			0.0	0.0	0.0	0.3	0.2	0.1	0.1	
PASSIVE DOMESTIC EQUITY AGGREGATE (2)	**20,993,923,038**	**80.3**	**-4.6**	**-4.6**	**-17.3**	**7.9**	**8.9**	**11.5**	**8.5**	**06/1996**
Passive Domestic Equity Benchmark			-4.6	-4.6	-17.3	7.9	8.9	11.5	8.6	06/1996
Excess			0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.1	

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

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

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Total International Equity										
DEVELOPED MARKETS (1)	**$8,055,539,170**	**71.2%**	**-5.7%**	**-5.7%**	**-18.2%**	**1.9%**	**1.5%**	**5.1%**	**4.7%**	**01/1997**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	1.5	01/1997
Excess			3.5	3.5	5.8	3.1	2.0	1.5	3.2	
EMERGING MARKETS (2)	**2,804,289,080**	**24.8**	**-10.4**	**-10.4**	**-28.9**	**-2.2**	**-2.0**	**1.1**	**4.6**	**11/1996**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8	1.0	4.9	11/1996
Excess			1.2	1.2	-0.8	-0.2	-0.2	0.0	-0.3	
ACWI EX-US AGGREGATE	**307,635,835**	**2.7**	**-9.3**	**-9.3**	**-22.1**				**-8.0**	**01/2021**
MSCI AC WORLD ex US (NET) - DAILY			-9.9	-9.9	-25.2				-12.5	01/2021
Excess			0.6	0.6	3.1				4.4	
CHINA ONLY AGGREGATE	**138,429,929**	**1.2**	**-19.3**	**-19.3**	**-28.7**				**-21.2**	**01/2021**
MSCI China A			-18.3	-18.3	-26.7				-16.3	01/2021
Excess			-1.0	-1.0	-2.0				-4.9	
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)	1,142,429	0.0								
TOTAL INTERNATIONAL EQUITY (4)	**11,307,036,443**	**100.0**	**-7.2**	**-7.2**	**-21.3**	**0.6**	**0.5**	**4.1**	**5.7**	**10/1992**
International Equity Benchmark			-9.9	-9.9	-25.2	-1.6	-0.8	3.0	5.1	10/1992
Excess			2.7	2.7	3.9	2.2	1.3	1.1	0.6	

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

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

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

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

STATE STREET.

Total International Equity

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
DEVELOPED MARKETS (1)	**13.5%**	**8.9%**	**23.3%**	**-14.2%**	**24.9%**
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.9	1.3	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).

(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.

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Developed Markets										
ACADIAN	**$303,885,376**	**2.7%**	**-7.9%**	**-7.9%**	**-20.9%**	**1.1%**	**0.9%**	**7.0%**	**5.3%**	**07/2005**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	3.6	07/2005
Excess			1.3	1.3	3.1	2.3	1.3	3.4	1.7	
COLUMBIA	**310,203,687**	**2.7**	**-7.9**	**-7.9**	**-25.4**	**0.9**	**2.1**	**5.3**	**2.7**	**03/2000**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	2.7	03/2000
Excess			1.3	1.3	-1.5	2.2	2.5	1.7	0.1	
FIDELITY	**301,385,654**	**2.7**	**-10.3**	**-10.3**	**-26.8**	**0.2**	**1.0**	**5.0**	**5.1**	**07/2005**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	3.6	07/2005
Excess			-1.1	-1.1	-2.8	1.5	1.4	1.4	1.5	
JP MORGAN	**265,271,763**	**2.3**	**-8.3**	**-8.3**	**-26.1**	**-0.7**	**0.3**	**4.0**	**4.0**	**07/2005**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	3.6	07/2005
Excess			0.9	0.9	-2.2	0.6	0.7	0.4	0.3	
MARATHON	**295,777,253**	**2.6**	**-8.8**	**-8.8**	**-23.8**	**-0.1**	**0.2**	**5.1**	**7.0**	**11/1993**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	4.3	11/1993
Excess			0.4	0.4	0.1	1.1	0.6	1.5	2.7	
MCKINLEY	**218,528,969**	**1.9**	**-9.8**	**-9.8**	**-27.1**	**-0.1**	**0.3**	**4.5**	**3.6**	**07/2005**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	3.6	07/2005
Excess			-0.6	-0.6	-3.2	1.1	0.7	0.8	0.0	
AQR CAPITAL MANAGEMENT	**279,757,691**	**2.5**	**-10.4**	**-10.4**	**-23.9**	**-2.1**	**-2.6**	**3.4**	**3.5**	**07/2005**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	3.6	07/2005
Excess			-1.2	-1.2	0.0	-0.9	-2.2	-0.3	-0.1	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

	Ending Market Value	Portfolio Weight	1 Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Total Developed Markets										
Active Developed Markets Aggregate (1)	**$1,974,810,392**	**17.5%**	**-9.0%**	**-9.0%**	**-24.8%**	**-0.1%**	**0.2%**	**4.8%**	**4.7%**	**06/1996**
BENCHMARK DM			-9.2%	-9.2%	-23.9%	-1.2%	-0.4%	3.6%	1.5%	06/1996
Excess			0.2%	0.2%	-0.9%	1.1%	0.6%	1.1%	3.2%	
SSgA DEVELOPED MARKETS PASSIVE	**$5,653,285,586**	**50.0%**	**-9.2%**	**-9.2%**	**-23.5%**	**-0.7%**	**0.0%**	**4.0%**		
BENCHMARK DM			-9.2%	-9.2%	-23.9%	-1.2%	-0.4%	3.6%		
Excess			-0.0%	-0.0%	0.4%	0.5%	0.4%	0.4%		
RECORD CURRENCY (2)	**$427,443,191**	**3.8%**	**3.5%**	**3.5%**	**5.7%**					**10/2020**
DEVELOPED MARKETS	**$8,055,539,170**	**71.2%**	**-5.7%**	**-5.7%**	**-18.2%**	**1.9%**	**1.5%**	**5.1%**	**4.7%**	**01/1997**
BENCHMARK DM			-9.2	-9.2	-23.9	-1.2	-0.4	3.6	1.5	01/1997
Excess			3.5	3.5	5.8	3.1	2.0	1.5	3.2	

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

(2) Return for Record Currency is the difference between the DM Equity with Currency Management and without.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	**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	**13.5%**	**8.9%**	**23.3%**	**-14.2%**	**24.9%**
BENCHMARK DM	12.6	7.6	22.5	-14.1	24.2
Excess	0.9	1.3	0.8	-0.1	0.7

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

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Emerging Markets										
MARTIN CURRIE	**$321,010,919**	**2.8%**	**-11.4%**	**-11.4%**	**-34.0%**	**-2.3%**	**-1.3%**		**2.4%**	**04/2017**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8		0.8	04/2017
Excess			0.2	0.2	-5.9	-0.2	0.5		1.6	
MACQUARIE	**302,149,489**	**2.7**	**-12.8**	**-12.8**	**-30.8**	**-2.1**	**-2.0**		**1.5**	**04/2017**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8		0.8	04/2017
Excess			-1.3	-1.3	-2.7	0.0	-0.2		0.6	
MORGAN STANLEY	**388,043,196**	**3.4**	**-6.9**	**-6.9**	**-30.8**	**-2.9**	**-2.7**	**1.2%**	**7.3**	**01/2001**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8	1.0	7.1	01/2001
Excess			4.7	4.7	-2.7	-0.8	-0.9	0.2	0.2	
NEUBERGER BERMAN	**286,590,009**	**2.5**	**-10.7**	**-10.7**	**-29.7**	**-5.7**	**-3.9**		**-0.7**	**04/2017**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8		0.8	04/2017
Excess			0.9	0.9	-1.6	-3.6	-2.1		-1.6	
PZENA	**306,009,678**	**2.7**	**-7.6**	**-7.6**	**-19.1**	**3.0**	**0.6**		**2.4**	**04/2017**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8		0.8	04/2017
Excess			4.0	4.0	9.0	5.1	2.4		1.6	
ROCK CREEK	**318,125,025**	**2.8**	**-9.7**	**-9.7**	**-28.0**	**-1.3**	**-1.7**		**0.6**	**04/2017**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8		0.8	04/2017
Excess			1.9	1.9	0.1	0.8	0.1		-0.2	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	

Total Emerging Markets

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
ACTIVE EMERGING MARKETS AGGREGATE	**$1,921,928,315**	**17.0%**	**-9.8%**	**-9.8%**	**-29.1%**	**-2.3%**	**-2.0%**	**0.9%**	**1.9%**	**01/2012**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8	1.0	2.0	01/2012
Excess			1.8	1.8	-1.0	-0.2	-0.2	-0.2	-0.2	
SSGA EMERGING MARKETS PASSIVE	**882,360,765**	**7.8**	**-11.7**	**-11.7**	**-28.3**	**-2.3**	**-2.0**	**1.1**	**2.0**	**01/2012**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8	1.0	2.0	01/2012
Excess			-0.1	-0.1	-0.2	-0.2	-0.2	0.0	-0.0	
EMERGING MARKETS TOTAL	**2,804,289,080**	**24.8**	**-10.4**	**-10.4**	**-28.9**	**-2.2**	**-2.0**	**1.1**	**4.6**	**11/1996**
BENCHMARK EM			-11.6	-11.6	-28.1	-2.1	-1.8	1.0	4.9	11/1996
Excess			1.2	1.2	-0.8	-0.2	-0.2	0.0	-0.3	

Total Emerging Markets

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	**-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	**-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

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active ACWI ex-US										
EARNEST PARTNERS ACWI EX US	**$307,635,835**	**2.7%**	**-9.3%**	**-9.3%**	**-22.1%**				**-8.0%**	**01/2021**
MSCI AC WORLD ex US (NET) - DAILY			-9.9%	-9.9%	-25.2%				-12.5%	01/2021
Excess			0.6%	0.6%	3.1%				4.4%	
TOTAL ACWI EX-US AGGREGATE	**$307,635,835**	**2.7%**	**-9.3%**	**-9.3%**	**-22.1%**				**-8.0%**	**01/2021**
MSCI AC WORLD ex US (NET) - DAILY			-9.9%	-9.9%	-25.2%				-12.5%	01/2021
Excess			0.6%	0.6%	3.1%				4.4%	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	**12.8**				
MSCI AC WORLD ex US (NET) - DAILY	7.8				
Excess	4.9				

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
China Only Managers										
EARNEST PARTNERS CHINA	**$138,429,929**	**1.2%**	**-19.3%**	**-19.3%**	**-28.7%**				**-21.2%**	**01/2021**
MSCI China A			-18.3	-18.3	-26.7				-16.3	01/2021
Excess			-1.0	-1.0	-2.0				-4.9	
CHINA ONLY AGGREGATE	**138,429,929**	**1.2**	**-19.3**	**-19.3**	**-28.7**				**-21.2**	**01/2021**
MSCI China A			-18.3	-18.3	-26.7				-16.3	01/2021
Excess			-1.0	-1.0	-2.0				-4.9	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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
September 30, 2022

Global Equity Managers

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
ARIEL INVESTMENTS	**$332,698,772**	**43.3%**	**-9.4%**	**-9.4%**	**-8.8%**				**-2.0%**	**01/2021**
MSCI AC WORLD NET USD DAILY			-6.8	-6.8	-20.7				-7.0	01/2021
Excess			-2.6	-2.6	11.9				5.0	
BAILLIE GIFFORD	**170,496,187**	**22.2**	**-5.1**	**-5.1**	**-49.1**				**-29.7**	**01/2021**
MSCI AC WORLD NET USD DAILY			-6.8	-6.8	-20.7				-7.0	01/2021
Excess			1.7	1.7	-28.4				-22.8	
MARTIN CURRIE INVESTMENTS - GLOBAL EQ	**265,711,599**	**34.6**	**-10.6**	**-10.6**	**-36.5**				**-20.1**	**01/2021**
MSCI AC WORLD NET USD DAILY			-6.8	-6.8	-20.7				-7.0	01/2021
Excess			-3.8	-3.8	-15.8				-13.1	
GLOBAL EQUITY	**768,906,558**	**100.0**	**-8.9**	**-8.9**	**-31.2**				**-16.5**	**01/2021**
MSCI AC WORLD NET USD DAILY			-6.8	-6.8	-20.7				-7.0	01/2021
Excess			-2.1	-2.1	-10.6				-9.5	

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

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Core/Core Plus Bonds

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Bonds										
CORE (1)	**$1,724,634,157**	**40.3%**	**-4.2%**	**-4.2%**	**-14.3%**				**-7.2%**	**11/2020**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6				-8.1	11/2020
Excess			0.5	0.5	0.3				0.9	
CORE PLUS (1)	**2,558,840,126**	**59.7**	**-5.0**	**-5.0**	**-17.1**				**-8.7**	**11/2020**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6				-8.1	11/2020
Excess			-0.2	-0.2	-2.5				-0.6	
TRANSITION AGGREGATE CORE BONDS (2)	19,085	0.0								
TOTAL CORE/CORE PLUS BONDS (3)	**4,283,493,368**	**100.0**	**-4.7**	**-4.7**	**-16.0**	**-2.8%**	**0.1%**	**1.4%**	**6.7**	**07/1984**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6	-3.3	-0.3	0.9	6.4	07/1984
Excess			0.1	0.1	-1.4	0.4	0.4	0.5	0.3	

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

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

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

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

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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.

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Active Core										
DODGE & COX	**$921,025,985**	**21.5%**	**-3.8%**	**-3.8%**	**-13.6%**	**-1.8%**	**0.7%**	**2.0%**	**5.0%**	**02/2000**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6	-3.3	-0.3	0.9	4.0	02/2000
Excess			0.9	0.9	1.0	1.5	1.0	1.1	1.0	
BLACKROCK	**803,608,172**	**18.8**	**-4.7**	**-4.7**	**-15.1**	**-3.1**	**-0.1**	**1.1**	**4.3**	**04/1996**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6	-3.3	-0.3	0.9	4.2	04/1996
Excess			0.0	0.0	-0.5	0.2	0.2	0.2	0.1	
CORE	**1,724,634,157**	**40.3**	**-4.2**	**-4.2**	**-14.3**				**-7.2**	**11/2020**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6				-8.1	11/2020
Excess			0.5	0.5	0.3				0.9	

(1) Prior to 12/1/2020 the Core managers were categorized as Active or Semi-Passive. For information on the historical performance of the previous groupings refer to the 9/30/2020 Comprehensive Performance Report.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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				

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Core Plus Bonds										
GOLDMAN SACHS	**$805,763,251**	**18.8%**	**-5.0%**	**-5.0%**	**-15.5%**	**-3.1%**	**-0.0%**	**1.1%**	**4.7%**	**07/1993**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6	-3.3	-0.3	0.9	4.4	07/1993
Excess			-0.2	-0.2	-0.9	0.1	0.2	0.3	0.3	
NEUBERGER	**838,095,857**	**19.6**	**-4.4**	**-4.4**	**-15.5**	**-2.5**	**0.2**	**1.2**	**5.6**	**07/1988**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6	-3.3	-0.3	0.9	5.3	07/1988
Excess			0.4	0.4	-0.9	0.7	0.5	0.3	0.3	
WESTERN	**914,981,018**	**21.4**	**-5.5**	**-5.5**	**-19.8**	**-3.8**	**-0.3**	**1.5**	**7.4**	**07/1984**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6	-3.3	-0.3	0.9	6.4	07/1984
Excess			-0.8	-0.8	-5.2	-0.6	-0.0	0.6	1.0	
CORE PLUS	**2,558,840,126**	**59.7**	**-5.0**	**-5.0**	**-17.1**				**-8.7**	**11/2020**
Bloomberg U.S. Aggregate			-4.8	-4.8	-14.6				-8.1	11/2020
Excess			-0.2	-0.2	-2.5				-0.6	

(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.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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	**-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	**-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	**-1.1**				
Bloomberg U.S. Aggregate	-1.5				
Excess	0.4				

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Return Seeking Bonds

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Return Seeking Bonds Managers										
COLUMBIA CREDIT PLUS	**$810,649,024**	**21.2%**	**-4.5%**	**-4.5%**	**-18.0%**				**-9.2%**	**12/2020**
Credit Plus Benchmark			-4.2	-4.2	-16.8				-9.5	12/2020
Excess			-0.3	-0.3	-1.2				0.3	
PIMCO CREDIT PLUS	**771,268,460**	**20.2**	**-3.8**	**-3.8**	**-16.3**				**-8.6**	**12/2020**
Credit Plus Benchmark			-4.2	-4.2	-16.8				-9.5	12/2020
Excess			0.4	0.4	0.4				1.0	
CREDIT PLUS	**1,581,917,483**	**41.4**	**-4.2**	**-4.2**	**-17.2**				**-8.9**	**12/2020**
Credit Plus Benchmark			-4.2	-4.2	-16.8				-9.5	12/2020
Excess			0.0	0.0	-0.4				0.6	
BLACKROCK OPPORTUNISTIC	**513,031,504**	**13.4**	**-1.4**	**-1.4**	**-7.9**				**-3.9**	**12/2020**
ICE BofA US 3-Month Treasury Bill			0.5	0.5	0.6				0.4	12/2020
Excess			-1.9	-1.9	-8.5				-4.2	
ASHMORE EMERGING MARKET	**248,269,489**	**6.5**	**-6.0**	**-6.0**	**-26.6**				**-19.5**	**01/2021**
JPM JEMB Sovereign-only 50-50			-4.6	-4.6	-22.5				-15.5	01/2021
Excess			-1.3	-1.3	-4.2				-4.0	
TCW SECURITIZED CREDIT	**338,564,449**	**8.9**	**-1.1**	**-1.1**	**-3.4**				**-2.6**	**07/2021**
ICE BofA US 3-Month Treasury Bill			0.5	0.5	0.6				0.5	07/2021
Excess			-1.6	-1.6	-4.0				-3.1	

Return Seeking Bonds Managers	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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					

Return Seeking Bonds Managers	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
PAYDEN RYGEL	**$262,654,494**	**6.9%**	**-1.9%**	**-1.9%**	**-14.7%**				**-7.4%**	**01/2021**
Multi-Asset Credit Benchmark			-1.4	-1.4	-13.9				-7.0	01/2021
Excess			-0.5	-0.5	-0.8				-0.4	
PGIM	**304,948,079**	**8.0**	**-1.4**	**-1.4**	**-14.8**				**-7.9**	**01/2021**
Multi-Asset Credit Benchmark			-1.4	-1.4	-13.9				-7.0	01/2021
Excess			-0.1	-0.1	-0.9				-0.9	
MULTI-ASSET CREDIT	**567,602,573**	**14.9**	**-1.7**	**-1.7**	**-14.8**				**-7.7**	**01/2021**
Multi-Asset Credit Benchmark			-1.4	-1.4	-13.9				-7.0	01/2021
Excess			-0.3	-0.3	-0.9				-0.7	
KKR	**280,420,895**	**7.3**	**-0.1**	**-0.1**	**-13.4**				**-6.0**	**01/2021**
ICE BofA US Cash Pay HY Constrained			-0.7	-0.7	-14.0				-5.9	01/2021
Excess			0.6	0.6	0.6				-0.1	
OAKTREE	**278,437,328**	**7.3**	**-0.6**	**-0.6**	**-12.9**				**-5.7**	**01/2021**
ICE BofA US Cash Pay HY Constrained			-0.7	-0.7	-14.0				-5.9	01/2021
Excess			0.1	0.1	1.1				0.2	
HIGH YIELD	**558,858,223**	**14.6**	**-0.4**	**-0.4**	**-13.2**				**-5.8**	**01/2021**
ICE BofA US Cash Pay HY Constrained			-0.7	-0.7	-14.0				-5.9	01/2021
Excess			0.3	0.3	0.8				0.0	

Return Seeking Bonds Managers	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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				

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Return Seeking Bonds										
CREDIT PLUS	**$1,581,917,483**	**41.4%**	**-4.2%**	**-4.2%**	**-17.2%**				**-8.9%**	**12/2020**
Credit Plus Benchmark			-4.2	-4.2	-16.8				-9.5	12/2020
Excess			0.0	0.0	-0.4				0.6	
OPPORTUNISTIC FI	**513,031,504**	**13.4**	**-1.4**	**-1.4**	**-7.9**				**-3.9**	**12/2020**
ICE BofA US 3-Month Treasury Bill			0.5	0.5	0.6				0.4	12/2020
Excess			-1.9	-1.9	-8.5				-4.2	
EMERGING MARKET DEBT	**248,269,489**	**6.5**	**-6.0**	**-6.0**	**-26.6**				**-19.5**	**01/2021**
JPM JEMB Sovereign-only 50-50			-4.6	-4.6	-22.5				-15.5	01/2021
Excess			-1.3	-1.3	-4.2				-4.0	
SECURITIZED CREDIT	**338,564,449**	**8.9**	**-1.1**	**-1.1**	**-3.4**				**-2.4**	**06/2021**
ICE BofA US 3-Month Treasury Bill			0.5	0.5	0.6				0.5	06/2021
Excess			-1.6	-1.6	-4.0				-2.9	
MULTI-ASSET CREDIT	**567,602,573**	**14.9**	**-1.7**	**-1.7**	**-14.8**				**-7.7**	**01/2021**
Multi-Asset Credit Benchmark			-1.4	-1.4	-13.9				-7.0	01/2021
Excess			-0.3	-0.3	-0.9				-0.7	
HIGH YIELD	**558,858,223**	**14.6**	**-0.4**	**-0.4**	**-13.2**				**-5.8**	**01/2021**
ICE BofA US Cash Pay HY Constrained			-0.7	-0.7	-14.0				-5.9	01/2021
Excess			0.3	0.3	0.8				0.0	
RETURN SEEKING BONDS (1)	**3,818,142,248**	**100.0**	**-2.6**	**-2.6**	**-14.5**				**-7.3**	**12/2020**
Return Seeking Fixed Income Benchmark			-2.3	-2.3	-12.8				-6.6	12/2020
Excess			-0.3	-0.3	-1.7				-0.8	

(1) Includes Return Seeking Bonds transition account.

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Treasuries Managers										
BLACKROCK	**$2,216,472,743**	**31.0%**	**-7.1%**	**-7.1%**	**-19.8%**	**-5.7%**			**-0.7%**	**02/2018**
Bloomberg Treasury 5+ Year			-6.9	-6.9	-19.6	-5.6			-0.6	02/2018
Excess			-0.1	-0.1	-0.2	-0.1			-0.1	
GOLDMAN SACHS	**2,376,269,903**	**33.2**	**-6.8**	**-6.8**	**-19.6**	**-5.5**			**-0.5**	**02/2018**
Bloomberg Treasury 5+ Year			-6.9	-6.9	-19.6	-5.6			-0.6	02/2018
Excess			0.1	0.1	-0.0	0.0			0.0	
NEUBERGER	**2,559,414,950**	**35.8**	**-7.0**	**-7.0**	**-19.5**	**-5.3**			**-0.4**	**02/2018**
Bloomberg Treasury 5+ Year			-6.9	-6.9	-19.6	-5.6			-0.6	02/2018
Excess			-0.0	-0.0	0.1	0.3			0.1	
TOTAL TREASURIES	**7,152,157,596**	**100.0**	**-6.9**	**-6.9**	**-19.7**	**-5.5**			**-0.6**	**02/2018**
Bloomberg Treasury 5+ Year			-6.9	-6.9	-19.6	-5.6			-0.6	02/2018
Excess			-0.0	-0.0	-0.0	0.1			-0.0	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Laddered Bond and Cash Managers									
Neuberger Berman Ladder Bond	**$1,048,416,620**	**29.3%**	**0.3%**	**-0.2%**				**-0.0%**	**11/2020**
ICE BofA US 3-Month Treasury Bill			0.5	0.6				0.4	11/2020
Excess			-0.2	-0.8				-0.4	
Goldman Sachs Ladder Bond	**1,049,532,214**	**29.4**	**0.3**	**-0.1**				**0.0**	**11/2020**
ICE BofA US 3-Month Treasury Bill			0.5	0.6				0.4	11/2020
Excess			-0.2	-0.7				-0.3	
Treasury Ladder Aggregate	**2,097,948,835**	**58.7**	**0.3**	**-0.1**				**0.0**	**11/2020**
ICE BofA US 3-Month Treasury Bill			0.5	0.6				0.4	11/2020
Excess			-0.2	-0.8				-0.3	
Combined Funds STIF	**1,447,351,649**	**40.5**	**0.6**	**0.8**	**0.6%**	**1.2%**	**0.7%**	**1.4**	**01/2004**
iMoneyNet Money Fund Average-All Taxable			0.4	0.5	0.4	0.9	0.5	1.1	01/2004
Excess			0.1	0.3	0.2	0.3	0.3	0.4	
TEACHERS RETIREMENT CD REPO	**29,747,027**	**0.8**	**0.5**	**0.7**	**0.8**	**1.3**	**0.9**	**0.9**	**02/2012**
ICE BofA US 3-Month Treasury Bill			0.5	0.6	0.6	1.1	0.7	0.6	02/2012
Excess			0.1	0.1	0.2	0.1	0.2	0.2	
Laddered Bond + Cash	**3,575,107,145**	**100.0**	**0.4**	**0.1**	**0.4**	**1.1**	**0.7**	**4.2**	**12/1977**
ICE BofA US 3-Month Treasury Bill			0.5	0.6	0.6	1.1	0.7	4.4	12/1977
Excess			-0.1	-0.5	-0.2	-0.1	0.1	-0.2	

	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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

September 30, 2022

	Ending Market Value	Portfolio Weight	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
Uninvested Private Markets Managers										
NISA PRIVATE MKT UNINV OVERLAY	**$209,614,501**	**27.8%**	**-3.3%**	**-3.3%**	**-13.5%**				**-0.2%**	**01/2021**
S&P 500 INDEX (DAILY)			-4.9	-4.9	-15.5				-1.2	01/2021
Excess			1.6	1.6	2.0				1.0	
BLACKROCK SP INDEX	**543,923,384**	**72.2**	**-4.9**	**-4.9**	**-15.2**				**-0.9**	**01/2021**
S&P 500 INDEX (DAILY)			-4.9	-4.9	-15.5				-1.2	01/2021
Excess			0.0	0.0	0.3				0.2	
UNINVESTED PRIVATE MARKETS	**753,537,885**	**100.0**	**-4.5**	**-4.5**	**-14.8**				**-0.7**	**01/2021**
S&P 500 INDEX (DAILY)			-4.9	-4.9	-15.5				-1.2	01/2021
Excess			0.4	0.4	0.7				0.4	

Uninvested Private Markets Managers	2021 Calendar Return	2020 Calendar Return	2019 Calendar Return	2018 Calendar Return	2017 Calendar Return
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
September 30, 2022

Combined Funds Asset Class Performance

Private Markets

	Last Qtr	FYTD	1 Year	3 Year	5 Year	10 Year	20 Year	25 Year	30 Year
Private Markets - Invested	-2.5%	-2.5%	11.3%	17.1%	15.0%	13.4%	14.0%	13.2%	13.3%
Private Markets - Uninvested (1)	-4.5%	-4.5%	-14.8%						
Private Equity	-4.1%	-4.1%	6.1%	20.5%	18.8%	16.9%	15.8%	14.6%	15.6%
Private Credit	1.1%	1.1%	16.0%	12.9%	12.7%	13.2%	12.8%	12.8%	
Resources	3.3%	3.3%	29.5%	7.7%	5.1%	3.5%	13.4%	11.4%	13.0%
Real Estate	1.4%	1.4%	32.2%	18.7%	15.5%	14.0%	10.4%	10.7%	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

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

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Private Equity	**24,571,785,758**	**18,329,183,255**	**14,620,582,659**	**8,065,128,900**	**14,367,159,093**	**1.58**	**13.41**	
Adams Street Partners, LLC	349,120,500	167,226,742	114,158,737	181,893,758	136,057,633	1.50	12.39	
Adams Street Global Secondary Fund 5 L.P.	100,000,000	77,114,692	75,128,710	22,885,308	29,228,761	1.35	6.59	2012
Adams Street Global Secondary Fund 6 L.P.	100,000,000	75,200,000	39,030,027	24,800,000	82,333,428	1.61	29.39	2017
Adams Street Global Secondary Fund 7 L.P.	149,120,500	14,912,050	0	134,208,450	24,495,445	1.64	64.27	2021
Advent International Group	505,000,000	344,792,247	324,631,020	163,291,707	309,160,662	1.84	17.44	
Advent International GPE VI-A, L.P.	50,000,000	52,993,313	103,400,194	0	4,564,779	2.04	16.51	2008
Advent International GPE VII, L.P.	90,000,000	86,490,641	138,972,935	3,600,000	19,462,331	1.83	13.78	2012
Advent International GPE VIII-B L.P.	100,000,000	100,000,000	73,062,483	0	119,627,001	1.93	18.80	2016
Advent International GPE IX L.P.	115,000,000	100,058,293	9,195,408	14,941,707	160,256,552	1.69	41.69	2019
Advent International GPE X L.P.	150,000,000	5,250,000	0	144,750,000	5,250,000	1.00		2022
Affinity Ventures	9,000,000	9,000,000	3,590,011	0	826,375	0.49	-11.74	
Affinity Ventures IV, L.P.	4,000,000	4,000,000	1,541,970	0	3,279	0.39	-36.91	2004
Affinity Ventures V, L.P.	5,000,000	5,000,000	2,048,042	0	823,096	0.57	-8.46	2008
Apax Partners	600,000,000	480,494,877	495,261,954	200,394,294	336,825,570	1.73	17.41	
APAX VIII - USD	200,000,000	233,892,465	335,200,854	11,285,376	64,269,105	1.71	14.38	2013
Apax IX USD L.P.	150,000,000	162,024,715	150,794,715	14,420,230	178,791,406	2.03	25.07	2016
Apax X USD L.P.	150,000,000	84,577,697	9,266,385	74,688,688	93,765,059	1.22	21.27	2019
Apax XI	100,000,000	0	0	100,000,000	0	0.00		2022
Arsenal Capital Partners	175,000,000	83,300,653	2,579,409	94,151,511	91,878,261	1.13	7.20	
Arsenal Capital Partners V, L.P.	75,000,000	68,574,422	2,579,409	8,877,742	77,152,030	1.16	7.43	2019
Arsenal Capital Partners VI LP	100,000,000	14,726,231	0	85,273,769	14,726,231	1.00		2021
Asia Alternatives	399,000,000	133,564,841	14,230,050	275,588,799	140,318,034	1.16	9.27	
Asia Alternatives Capital Partners V	99,000,000	90,995,539	13,100,628	18,158,101	102,944,737	1.28	12.22	2017
MN Asia Investors	300,000,000	42,569,302	1,129,422	257,430,698	37,373,297	0.90	-15.19	2020
Banc Fund	178,551,387	187,460,477	40,882,282	0	209,348,056	1.33	6.84	
Banc Fund IX, L.P.	107,205,932	107,205,932	35,362,612	0	120,678,180	1.46	6.96	2014
Banc Fund X, L.P.	71,345,455	80,254,545	5,519,670	0	88,669,877	1.17	6.39	2018
BlackRock	951,774,870	956,392,392	4,487,465	0	1,218,749,684	1.28	23.37	
BlackRock Long Term Capital, SCSP	950,000,000	954,617,522	2,660,745	0	1,218,613,450	1.28	23.51	2019
BlackRock Tempus Fund*	1,774,870	1,774,870	1,826,720	0	136,234	1.11	5.27	2015

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Blackstone Group L.P.	1,535,000,000	810,766,101	679,547,837	817,069,670	510,914,776	1.47	15.27	
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	1,014,899	2.39	37.02	2002
Blackstone Capital Partners V L.P.	140,000,000	152,406,707	245,675,051	7,027,560	882,780	1.62	8.02	2006
Blackstone Capital Partners VI, L.P.	100,000,000	106,536,126	146,006,935	11,175,309	40,030,012	1.75	12.16	2008
Blackstone Capital Partners VII	130,000,000	136,931,901	67,474,338	10,977,430	141,856,051	1.53	14.53	2015
Blackstone Capital Partners VIII LP	150,000,000	68,141,811	2,843,116	88,450,212	77,115,269	1.17	17.35	2019
Blackstone Capital Partners IX	150,000,000	0	0	150,000,000	0	0.00		2022
Blackstone Growth	250,000,000	199,032,081	16,985,944	65,706,856	186,736,497	1.02	2.63	2020
Blackstone Growth Equity II	150,000,000	0	0	150,000,000	0	0.00		2022
Blackstone Supplemental Account - M	125,000,000	63,257,591	0	61,900,000	63,279,267	1.00	0.05	2021
Blackstone Strategic Partners	915,500,000	681,773,427	814,525,354	322,846,753	272,009,679	1.59	11.95	
Strategic Partners III VC, L.P.	25,000,000	25,059,678	33,874,990	115,168	273,106	1.36	5.97	2004
Strategic Partners III-B, L.P.	100,000,000	79,629,077	118,509,586	12,304,709	226,553	1.49	6.35	2004
Strategic Partners IV VC, L.P.	40,500,000	42,142,465	61,953,059	2,280,277	2,914,555	1.54	9.22	2008
Strategic Partners IV-B	100,000,000	99,369,278	152,721,770	11,657,975	3,237,649	1.57	12.18	2008
Strategic Partners V, LP	100,000,000	87,094,418	134,154,655	15,934,286	9,468,041	1.65	18.61	2011
Strategic Partners VI, L.P.	150,000,000	103,469,306	126,170,186	53,202,770	33,011,506	1.54	14.88	2014
Strategic Partners VII, L.P.	150,000,000	116,175,419	114,306,781	50,685,502	86,545,403	1.73	20.27	2016
Strategic Partners VIII	150,000,000	112,971,385	72,021,177	92,349,399	116,224,186	1.67	45.33	2018
Strategic Partners IX	100,000,000	15,862,402	813,150	84,316,667	20,108,680	1.32	34.39	2022
Bridgepoint	253,708,396	135,728,894	13,311,036	117,979,502	167,412,864	1.33	18.39	
Bridgepoint Europe VI L.P.	165,539,921	135,728,894	13,311,036	29,811,026	167,412,864	1.33	18.39	2018
Bridgepoint Europe VII	88,168,475	0	0	88,168,475	0	0.00		2022
Brookfield Asset Management Inc.	500,000,000	334,908,062	189,061,751	204,104,511	358,282,166	1.63	35.19	
Brookfield Capital Partners Fund IV	100,000,000	107,053,430	168,651,562	13,303,704	96,006,340	2.47	45.72	2015
Brookfield Capital Partners V L.P.	250,000,000	227,854,632	20,410,189	40,800,807	262,275,826	1.24	15.08	2018
Brookfield Capital Partners Fund VI	150,000,000	0	0	150,000,000	0	0.00		2022
CVC Capital Partners	388,400,887	435,638,955	567,695,326	23,144,308	275,340,819	1.94	16.82	
CVC Capital Partners VI	254,685,451	281,754,857	272,281,201	21,745,134	271,360,590	1.93	16.92	2013
CVC European Equity Partners V, L.P.	133,715,436	153,884,098	295,414,125	1,399,174	3,980,230	1.95	16.75	2008
Canyon Partners	125,000,000	115,269,703	21,475,843	31,206,140	112,857,747	1.17	13.24	
Canyon Distressed Opportunity Fund III	125,000,000	115,269,703	21,475,843	31,206,140	112,857,747	1.17	13.24	2020

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
CarVal Investors	600,000,000	487,703,333	376,367,163	140,179,759	259,949,793	1.30	7.96	
CVI Credit Value Fund A II	150,000,000	142,500,000	199,242,174	7,500,000	4,111,097	1.43	8.30	2012
CVI Credit Value Fund A III	150,000,000	142,500,000	149,290,605	7,500,000	42,540,586	1.35	8.41	2015
CVI Credit Value Fund IV	150,000,000	135,203,333	27,679,818	42,679,759	144,567,585	1.27	7.42	2017
CVI Credit Value Fund V	150,000,000	67,500,000	154,566	82,500,000	68,730,525	1.02	1.93	2020
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	296,145,335	63,674,055	167,454,513	272,474,591	1.14	8.31	
Carlyle Strategic Partners IV, L.P.	100,000,000	119,316,692	52,212,670	32,838,147	80,111,166	1.11	7.22	2016
Carlyle Partners VII, L.P.	150,000,000	154,442,314	11,445,009	7,002,695	171,178,548	1.18	9.49	2017
Carlyle Partners VIII	150,000,000	22,386,329	16,376	127,613,671	21,184,877	0.95	-16.90	2021
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	34,482,593	2,434	65,517,407	33,449,184	0.97	-3.64	
Clearlake Capital Partners VII	100,000,000	34,482,593	2,434	65,517,407	33,449,184	0.97	-3.64	2022
Court Square	489,419,132	470,839,925	595,262,817	71,133,749	260,832,354	1.82	14.98	
Court Square Capital Partners II, L.P.	164,419,132	170,029,204	295,744,454	6,176,873	6,247,839	1.78	12.42	2006
Court Square Capital Partners III, L.P.	175,000,000	188,280,408	259,017,390	7,909,729	142,949,611	2.13	20.41	2012
Court Square Capital Partners IV, L.P.	150,000,000	112,530,313	40,500,973	57,047,147	111,634,904	1.35	23.37	2018
Crescendo	101,500,000	103,101,226	57,982,654	0	305,374	0.57	-4.60	
Crescendo Ventures IV	101,500,000	103,101,226	57,982,654	0	305,374	0.57	-4.60	2000
GTCR	210,000,000	211,677,127	424,264,809	16,665,460	196,161,532	2.93	27.25	
GTCR Fund X	100,000,000	105,821,208	214,751,215	6,751,396	546,249	2.03	21.36	2010
GTCR XI	110,000,000	105,855,919	209,513,594	9,914,064	195,615,283	3.83	37.32	2013
Goldman, Sachs & Co.	549,800,000	440,661,231	513,095,460	173,148,295	235,846,002	1.70	15.10	
GS Capital Partners V, L.P.	100,000,000	74,319,006	191,435,136	1,041,099	430,862	2.58	18.23	2005
GS Capital Partners VI, L.P.	100,000,000	110,260,752	141,316,354	2,551,356	3,511,088	1.31	7.10	2007
GS China-US Cooperation Fund	99,800,000	30,613,445	0	69,361,000	42,866,026	1.40	16.33	2018
GS Vintage VII	100,000,000	86,023,145	63,054,247	59,320,828	76,118,739	1.62	17.22	2016
West Street Capital Partners VII, L.P.	150,000,000	139,444,883	117,289,723	40,874,012	112,919,286	1.65	20.68	2016
Goldner Hawn Johnson & Morrison	77,755,138	57,009,055	51,364,283	20,918,050	65,416,570	2.05	21.39	
GHJM TrailHead Fund	20,000,000	16,652,130	51,364,283	3,354,486	6,606,331	3.48	20.37	2012
Goldner Hawn Fund VII, L.P.	57,755,138	40,356,924	0	17,563,564	58,810,239	1.46	28.27	2018

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Green Equity Investors	325,000,000	333,548,416	234,641,442	28,263,703	340,844,555	1.73	14.59	
Green Equity Investors VI, L.P.	200,000,000	224,611,333	234,504,568	12,063,912	225,221,388	2.05	14.99	2012
Green Equity Investors VIII	125,000,000	108,937,083	136,874	16,199,791	115,623,167	1.06	5.76	2020
HarbourVest	21,601,643	20,932,406	25,785,301	756,599	6,268,607	1.53	12.48	
Dover Street VII Cayman Fund L.P.*	2,198,112	2,074,235	1,818,289	132,416	48,183	0.90	-4.41	2014
HarbourVest Intl PE Partners V-Cayman US*	3,497,349	3,346,005	4,413,905	156,744	116,636	1.35	13.56	2014
Harbourvest Intl PE Partners VI-Cayman*	4,208,573	4,039,458	5,299,990	171,439	2,305,160	1.88	15.04	2014
HarbourVest Partners VIII Cayman Buyout*	4,506,711	4,387,189	5,782,540	156,000	545,337	1.44	13.70	2014
HarbourVest Partners VIII-Cayman Venture*	7,190,898	7,085,519	8,470,577	140,000	3,253,292	1.65	12.59	2014
Hellman & Friedman	475,000,000	364,060,123	165,276,173	123,661,024	340,689,254	1.39	20.17	
Hellman & Friedman Capital Partners VII, L.P.	50,000,000	49,896,546	153,705,841	2,202,044	9,503,556	3.27	24.89	2009
Hellman & Friedman Investors IX, L.P.	175,000,000	171,414,924	4,158,129	6,795,430	205,769,545	1.22	12.50	2018
Hellman & Friedman Capital Partners X	250,000,000	142,748,653	7,412,203	114,663,550	125,416,153	0.93	-8.60	2021
IK Limited	495,892,068	451,391,705	448,476,352	65,583,059	274,330,463	1.60	14.70	
IK Fund VII	179,138,425	179,315,195	295,129,855	7,429,930	42,136,703	1.88	14.43	2013
IK Fund VIII	169,579,989	175,535,613	153,346,498	7,520,749	142,801,538	1.69	17.81	2016
IK Fund IX	147,173,654	96,540,897	0	50,632,380	89,392,222	0.93	-7.05	2019
Kohlberg, Kravis, Roberts & Co.	1,647,000,000	1,008,560,544	924,861,973	701,029,568	680,183,277	1.59	13.41	
KKR 2006 Fund L.P.	200,000,000	218,137,965	379,638,388	3,300,979	11,455,830	1.79	9.07	2006
KKR Americas Fund XII L.P.	150,000,000	145,210,855	50,557,068	17,494,569	201,958,726	1.74	23.45	2016
KKR Asian Fund III	100,000,000	91,981,007	48,897,408	17,930,332	119,743,889	1.83	28.15	2017
KKR Asian Fund IV	150,000,000	48,213,535	415,503	105,723,413	43,434,633	0.91	-12.09	2020
KKR Core Investments Partnership	97,000,000	82,904,883	3,598,448	19,309,407	88,934,950	1.12	11.80	2021
KKR Core Investments Fund II	100,000,000	0	0	100,000,000	0	0.00		2022
KKR Europe V	100,000,000	87,571,598	16,809,130	16,643,999	86,571,058	1.18	12.05	2018
KKR European Fund VI (USD) SCSp	100,000,000	0	0	100,000,000	0	0.00		2022
KKR Millennium Fund	200,000,000	205,167,570	424,946,028	0	161,924	2.07	16.37	2002
KKR MN Partnership L.P.	150,000,000	62,923,770	0	87,076,230	63,769,528	1.01	2.15	2021
KKR North America Fund XIII	300,000,000	66,449,361	0	233,550,639	64,152,738	0.97	-4.28	2021

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Lexington Partners	1,345,000,000	965,473,522	707,737,528	443,669,866	793,663,344	1.56	14.30	
Lexington Capital Partners VI-B, L.P.	100,000,000	98,374,022	145,572,539	1,634,703	967,171	1.49	7.91	2005
Lexington Capital Partners VII, L.P.	200,000,000	172,937,068	261,232,851	31,031,298	30,208,880	1.69	14.66	2009
Lexington Capital Partners VIII, L.P.	150,000,000	136,386,669	129,077,425	32,663,555	103,660,595	1.71	18.27	2014
Lexington Capital Partners IX, L.P.	150,000,000	101,383,471	27,468,456	60,529,544	140,570,991	1.66	49.12	2018
Lexington Capital Partners X	100,000,000	0	0	100,000,000	0	0.00		2021
Lexington Co-Investment Partners IV	200,000,000	213,209,165	111,670,988	7,565,919	241,341,236	1.66	18.57	2017
Lexington Co-Investment Partners V	300,000,000	150,757,999	7,588,884	156,830,885	168,397,661	1.17	23.75	2020
Lexington Co-Investment Partners V Overage	45,000,000	23,463,000	839,090	22,376,090	24,751,327	1.09	11.74	2021
Lexington Middle Market Investors IV	100,000,000	68,962,128	24,287,295	31,037,872	83,765,484	1.57	29.96	2016
MHR Institutional Partners	75,000,000	78,934,392	21,072,878	15,823,636	84,880,198	1.34	9.47	
MHR Institutional Partners IV LP	75,000,000	78,934,392	21,072,878	15,823,636	84,880,198	1.34	9.47	2014
Madison Dearborn Capital Partners LLC	200,000,000	155,940,244	55,621,857	67,308,990	173,341,822	1.47	14.82	
Madison Dearborn Capital Partners VII, L.P.	100,000,000	99,217,693	47,919,636	16,470,133	116,110,357	1.65	14.67	2015
Madison Dearborn Capital Partners VIII-A, L.P	100,000,000	56,722,551	7,702,221	50,838,857	57,231,465	1.14	16.54	2019
Marathon	200,000,000	149,906,171	6,185,200	56,000,000	162,686,016	1.13	12.12	
Marathon Distressed Credit Fund	200,000,000	149,906,171	6,185,200	56,000,000	162,686,016	1.13	12.12	2020
Merced Capital	278,737,500	288,144,755	274,839,922	0	74,190,848	1.21	4.16	
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	116,847,539	0	22,892,906	1.12	2.37	2013
Merced Partners V	53,737,500	59,297,897	24,168,787	0	50,231,992	1.25	5.18	2017
Neuberger Berman LLC	625,000,000	405,942,357	291,293,999	447,384,588	420,614,738	1.75	34.63	
Dyal Capital Partners III	175,000,000	204,704,818	195,810,158	108,834,364	147,383,936	1.68	26.57	2015
Dyal Capital Partners IV	250,000,000	166,237,540	94,769,114	173,550,224	223,163,792	1.91	61.02	2018
Dyal Capital Partners V	200,000,000	35,000,000	714,726	165,000,000	50,067,010	1.45	32.53	2020
Nordic Capital	569,804,749	459,529,281	321,629,558	186,824,956	390,916,197	1.55	16.26	
Nordic Capital Fund VIII	174,667,976	222,197,616	283,473,946	13,954,670	86,343,920	1.66	14.24	2013
Nordic Capital IX Beta, L.P.	167,523,058	165,466,149	38,155,612	17,122,087	221,549,102	1.57	23.47	2017
Nordic Capital Fund X	139,445,239	71,865,516	0	67,579,723	83,023,175	1.16	27.24	2020
Nordic Capital Fund XI	88,168,475	0	0	88,168,475	0	0.00		2022
North Sky Capital	2,454,339	1,998,089	2,491,492	456,250	131,173	1.31	10.59	
North Sky Capital LBO Fund III, LP*	1,070,259	720,259	1,026,684	350,000	56,613	1.50	14.07	2014
North Sky Capital Venture Fund III, LP*	1,384,080	1,277,830	1,464,808	106,250	74,560	1.20	7.98	2014

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Oak Hill Capital Management, Inc.	250,000,000	245,996,037	217,994,544	11,555,045	175,290,082	1.60	31.97	
Oak Hill Capital Partners IV Onshore LP	150,000,000	153,245,546	217,959,501	4,305,536	64,131,587	1.84	33.84	2016
Oak Hill Capital Partners V	100,000,000	92,750,491	35,043	7,249,509	111,158,495	1.20	19.64	2018
Oaktree Capital Management, LLC	295,000,000	171,207,605	50,714,692	165,568,839	186,246,798	1.38	12.10	
Oaktree Special Situations Fund, L.P.	100,000,000	101,556,418	20,335,451	10,241,294	94,450,569	1.13	3.26	2014
Oaktree Special Situations Fund II, L.P.	100,000,000	69,651,187	30,379,241	60,327,545	91,796,229	1.75	71.89	2018
Oaktree Special Situations Fund III, L.P.	95,000,000	0	0	95,000,000	0	0.00		2022
Paine & Partners, LLC	225,000,000	175,378,161	52,218,491	72,907,357	191,660,867	1.39	13.75	
Paine Schwartz Food Chain Fund IV	75,000,000	65,810,296	35,397,971	18,048,325	59,617,458	1.44	9.20	2014
Paine Schwartz Food Chain Fund V, L.P.	150,000,000	109,567,865	16,820,520	54,859,032	132,043,410	1.36	27.53	2018
Permal PE	5,337,098	4,387,326	4,339,751	1,090,000	765,140	1.16	5.08	
Glouston Private Equity Opportunities IV*	5,337,098	4,387,326	4,339,751	1,090,000	765,140	1.16	5.08	2014
Permira	606,844,191	445,526,506	453,870,823	202,499,503	387,832,494	1.89	19.31	
Permira V, L.P.	176,994,302	183,579,256	370,311,465	4,124,114	130,033,186	2.73	21.75	2013
Permira VI, L.P.	133,035,318	127,106,413	72,333,687	25,175,983	148,209,354	1.74	17.25	2016
Permira VII L.P.1	149,867,112	134,840,837	11,225,671	26,251,947	109,589,953	0.90	-7.73	2019
Permira VIII, L.P.	146,947,458	0	0	146,947,458	0	0.00		2022
Public Pension Capital Management	240,000,000	125,676,230	86,272,572	131,537,479	171,858,399	2.05	25.28	
Public Pension Capital, LLC	240,000,000	125,676,230	86,272,572	131,537,479	171,858,399	2.05	25.28	2014
Silver Lake Partners	335,000,000	343,238,591	354,127,678	30,570,834	336,001,447	2.01	19.27	
Silver Lake Partners III, L.P.	100,000,000	93,819,921	192,077,429	9,528,468	24,492,811	2.31	18.40	2007
Silver Lake Partners IV, L.P.	100,000,000	115,620,904	123,865,628	2,881,307	154,935,755	2.41	22.96	2012
Silver Lake Partners V, L.P.	135,000,000	133,797,766	38,184,621	18,161,059	156,572,880	1.46	15.30	2017
Siris Capital Group	67,875,000	0	0	67,875,000	0	0.00		
Siris V	67,875,000	0	0	67,875,000	0	0.00		2022
Split Rock	110,000,000	107,055,906	125,392,564	2,944,094	28,852,657	1.44	5.14	
Split Rock Partners, L.P.	50,000,000	47,890,906	58,794,192	2,109,094	1,686,379	1.26	2.87	2005
Split Rock Partners II, L.P.	60,000,000	59,165,000	66,598,372	835,000	27,166,278	1.58	7.84	2008
Summit Partners	600,000,000	380,278,627	395,684,665	423,119,288	353,092,799	1.97	28.48	
Summit Partners Growth Equity Fund VIII	100,000,000	116,727,192	232,143,262	23,129,320	62,185,298	2.52	27.13	2011
Summit Partners Growth Equity Fund IX	100,000,000	131,564,916	141,424,991	109,860,075	152,032,235	2.23	35.74	2015
Summit Partners Growth Equity Fund X-A	150,000,000	131,986,519	22,116,412	40,129,893	138,875,267	1.22	17.75	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	321,969,073	171,711,154	372,114,826	304,704,508	1.48	22.18	
TPG Growth V	150,000,000	80,865,259	8,437,171	77,135,894	88,952,428	1.20	22.02	2021
TPG Partners VII, L.P.	100,000,000	101,117,808	135,130,268	16,771,045	67,576,664	2.00	21.23	2015
TPG Partners VIII, L.P.	150,000,000	111,741,390	28,138,806	56,452,503	121,778,507	1.34	30.37	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	28,244,616	4,909	121,755,384	26,396,910	0.93	-11.00	2021
Thoma Bravo LLC	525,000,000	488,606,164	263,591,065	109,119,026	478,688,092	1.52	22.84	
Thoma Cressey Fund VII, L.P.	50,000,000	50,000,000	107,057,940	0	422,288	2.15	23.58	2000
Thoma Bravo Fund XII, L.P.	75,000,000	81,949,004	64,465,434	18,452,144	92,043,449	1.91	16.34	2016
Thoma Bravo Fund XIII, L.P.	150,000,000	184,783,234	92,067,654	12,475,387	218,967,371	1.68	33.89	2018
Thoma Bravo Fund XIV, L.P.	150,000,000	141,216,364	37	8,783,636	136,662,842	0.97	-2.92	2020
Thoma Bravo Fund XV, L.P.	100,000,000	30,657,562	0	69,407,859	30,592,141	1.00	-0.21	2021
Thomas H. Lee Partners	400,000,000	259,452,809	238,530,930	170,079,472	219,709,933	1.77	28.53	
Thomas H. Lee Equity Fund VII, LP.	100,000,000	99,558,385	137,442,415	10,603,772	49,307,193	1.88	22.57	2015
Thomas H. Lee Equity Fund VIII, L.P.	150,000,000	144,609,695	101,088,515	24,760,429	155,776,263	1.78	44.80	2018
Thomas H. Lee Equity Fund IX, L.P.	150,000,000	15,284,729	0	134,715,271	14,626,477	0.96	-5.81	2021
Thomas, McNerney & Partners	80,000,000	78,125,000	125,838,499	1,875,000	426,589	1.62	8.17	
Thomas, McNerney & Partners I, L.P.	30,000,000	30,000,000	16,170,973	0	30,599	0.54	-10.23	2002
Thomas, McNerney & Partners II, L.P.	50,000,000	48,125,000	109,667,526	1,875,000	395,990	2.29	16.41	2006
Varde Fund	600,000,000	494,000,000	464,600,624	106,000,000	226,144,076	1.40	7.38	
Varde Fund X, L.P.	150,000,000	150,000,000	252,548,040	0	8,690,928	1.74	10.07	2010
Varde Fund XI, L.P.	200,000,000	200,000,000	212,032,546	0	54,797,516	1.33	4.75	2013
Varde Fund XIII, L.P.	150,000,000	144,000,000	20,038	6,000,000	162,655,632	1.13	7.67	2018
Varde Fund XIV, L.P.	100,000,000	0	0	100,000,000	0	0.00		2022
Vestar Capital Partners	380,000,000	333,838,610	389,026,227	56,184,822	150,782,151	1.62	11.58	
Vestar Capital Partners IV, L.P.	55,000,000	55,652,024	102,293,320	57,313	381,043	1.84	14.62	1999
Vestar Capital Partners V, L.P.	75,000,000	76,797,458	100,961,586	0	105,795	1.32	3.88	2005
Vestar Capital Partners VI, L.P.	100,000,000	107,516,638	152,527,578	0	59,073,251	1.97	23.81	2011
Vestar Capital Partners VII, L.P.	150,000,000	93,872,491	33,243,742	56,127,509	91,222,063	1.33	13.86	2017
Vista Equity Partners	200,000,000	147,667,435	77,223	53,545,468	155,957,674	1.06	3.16	
Vista Equity Partners Perennial	200,000,000	147,667,435	77,223	53,545,468	155,957,674	1.06	3.16	2020

Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Warburg Pincus	1,416,000,000	1,088,366,066	1,029,214,757	333,798,500	766,196,212	1.65	11.29	
Warburg Pincus China, L.P.	45,000,000	45,585,000	17,602,200	1,350,000	55,297,118	1.60	13.73	2016
Warburg Pincus China-Southeast Asia II	50,000,000	23,000,000	3,300,000	27,000,000	23,201,375	1.15	12.80	2019
Warburg Pincus Financial Sector	90,000,000	90,616,765	34,617,600	3,555,000	117,893,865	1.68	21.73	2017
Warburg Pincus Global Growth, L.P.	250,000,000	219,788,842	2,625,000	30,125,000	287,224,511	1.32	16.40	2018
Warburg Pincus Global Growth 14, L.P.	300,000,000	29,801,507	0	270,000,000	29,231,850	0.98	-2.44	2022
Warburg Pincus Equity Partners, L.P.	100,000,000	100,000,000	163,542,253	0	392,595	1.64	10.02	1998
Warburg Pincus Private Equity IX, L.P.	100,000,000	100,000,000	171,872,950	0	237,414	1.72	9.60	2005
Warburg Pincus Private Equity X, L.P.	150,000,000	150,000,000	266,203,541	0	3,140,616	1.80	9.51	2007
Warburg Pincus Private Equity XI, L.P.	200,000,000	200,342,452	262,255,748	0	85,964,976	1.74	12.31	2012
Warburg Pincus Private Equity XII, L.P.	131,000,000	129,231,500	107,195,466	1,768,500	163,611,892	2.10	19.97	2015
Wayzata Investment Partners	300,000,000	243,165,000	379,322,944	15,750,000	19,632,433	1.64	14.38	
Wayzata Opportunities Fund II, LLC	150,000,000	174,750,000	334,183,134	750,000	0	1.91	16.57	2007
Wayzata Opportunities Fund III	150,000,000	68,415,000	45,139,810	15,000,000	19,632,433	0.95	-1.24	2012
Wellspring Capital Partners	125,000,000	149,192,072	55,485,810	14,724,724	155,951,545	1.42	22.10	
Wellspring Capital Partners VI, L.P.	125,000,000	149,192,072	55,485,810	14,724,724	155,951,545	1.42	22.10	2016
Welsh, Carson, Anderson & Stowe	650,000,000	459,823,517	365,218,998	190,176,483	426,616,274	1.72	18.03	
Welsh, Carson, Anderson & Stowe XI, L.P.	100,000,000	100,000,000	161,464,441	0	7,136,609	1.69	11.74	2008
Welsh, Carson, Anderson & Stowe XII, L.P.	150,000,000	145,877,897	177,480,040	4,122,103	175,780,424	2.42	27.37	2014
Welsh, Carson, Anderson & Stowe XIII, L.P.	250,000,000	213,945,620	26,274,517	36,054,380	243,699,241	1.26	23.84	2018
Welsh, Carson, Anderson & Stowe XIV, L.P.	150,000,000	0	0	150,000,000	0	0.00		2022
Whitehorse Capital	300,000,000	226,200,694	133,582,794	131,987,566	151,649,793	1.26	23.32	
Whitehorse Liquidity Partners III	100,000,000	99,860,190	70,528,418	18,084,498	63,276,535	1.34	20.95	2019
Whitehorse Liquidity Partners IV	100,000,000	89,088,701	46,792,821	35,204,706	64,164,225	1.25	28.09	2020
Whitehorse Liquidity Partners V	100,000,000	37,251,803	16,261,554	78,698,362	24,209,034	1.09	22.10	2021
Wind Point Partners	200,000,000	87,447,711	1,912,585	114,469,477	106,638,686	1.24	20.13	
Wind Point Partners IX	100,000,000	87,447,711	1,912,585	14,469,477	106,638,686	1.24	20.13	2019
Wind Point Partners X	100,000,000	0	0	100,000,000	0	0.00		2022
Windjammer Capital Investors	266,708,861	221,937,286	251,920,723	60,533,300	164,647,745	1.88	12.49	
Windjammer Mezzanine & Equity Fund II	66,708,861	55,215,684	85,036,800	10,139,363	342,959	1.55	8.97	2000
Windjammer Senior Equity Fund IV, L.P.	100,000,000	94,740,728	165,677,026	21,167,914	67,150,658	2.46	17.98	2012
Windjammer Senior Equity Fund V, L.P.	100,000,000	71,980,874	1,206,897	29,226,023	97,154,128	1.37	19.28	2017

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Private Credit	**4,222,141,781**	**3,133,299,562**	**2,509,027,378**	**1,612,034,570**	**1,616,841,746**	**1.32**	**10.01**	
Audax Group	350,000,000	201,298,458	210,748,006	170,386,931	46,073,836	1.28	10.45	
Audax Mezzanine Fund III, L.P.	100,000,000	105,207,316	133,977,984	0	4,991,064	1.32	9.78	2010
Audax Mezzanine Fund IV-A, L.P.	100,000,000	85,592,246	75,886,788	30,885,827	28,505,755	1.22	11.27	2015
Audax Mezzanine Fund V, L.P.	150,000,000	10,498,895	883,234	139,501,105	12,577,016	1.28	41.63	2020
Avenue Capital Partners	200,000,000	200,977,328	158,744,651	0	156,180,358	1.57	9.17	
Avenue Energy Opportunities Fund, L.P.	100,000,000	100,977,328	77,640,191	0	64,257,640	1.41	5.90	2014
Avenue Energy Opportunities Fund II, L.P.	100,000,000	100,000,000	81,104,460	0	91,922,718	1.73	14.25	2017
BlackRock	97,500,000	92,646,829	11,145,751	4,853,171	98,657,199	1.19	7.17	
BlackRock Middle Market Senior Fund	97,500,000	92,646,829	11,145,751	4,853,171	98,657,199	1.19	7.17	2018
Brookfield Asset Management Inc.	200,000,000	34,157,840	0	165,842,160	35,735,454	1.05	5.27	
Brookfield Real Estate Finance Fund VI	200,000,000	34,157,840	0	165,842,160	35,735,454	1.05	5.27	2021
Energy Capital Partners	28,087,500	29,002,111	9,769,268	8,854,657	20,069,318	1.03	3.04	
Energy Capital Credit Solutions II-A	28,087,500	29,002,111	9,769,268	8,854,657	20,069,318	1.03	3.04	2018
Gold Hill	65,852,584	65,852,584	113,654,899	0	3,103,152	1.77	11.81	
Gold Hill Venture Lending	40,000,000	40,000,000	65,261,602	0	330,531	1.64	10.69	2004
Gold Hill 2008	25,852,584	25,852,584	48,393,297	0	2,772,621	1.98	14.48	2008
Goldman, Sachs & Co.	227,500,000	261,176,828	316,186,144	24,922,591	967,476	1.21	6.79	
GS Mezzanine Partners 2006 Institutional	100,000,000	113,458,168	135,335,344	9,858,563	395,383	1.20	5.00	2006
GS Mezzanine Partners V, L.P.	127,500,000	147,718,660	180,850,800	15,064,028	572,093	1.23	9.07	2007
HPS Investment Partners	200,000,000	113,870,340	19,367,489	100,957,581	108,905,855	1.13	9.95	
HPS Mezzanine Partners 2019, L.P.	100,000,000	93,859,334	19,367,489	20,968,587	88,894,849	1.15	10.01	2019
HPS Strategic Investment Partners V, L.P.	100,000,000	20,011,006	0	79,988,994	20,011,006	1.00		2022
Kohlberg, Kravis, Roberts & Co.	274,000,000	358,961,070	304,858,382	100,892,678	112,100,957	1.16	9.59	
KKR Lending Partner II L.P.	75,000,000	87,050,313	82,467,685	8,802,924	7,089,379	1.03	1.45	2015
KKR Lending Partners III L.P.	199,000,000	271,910,757	222,390,697	92,089,754	105,011,577	1.20	14.35	2017
LBC Credit Partners	200,000,000	192,917,328	140,704,880	75,767,387	83,495,632	1.16	9.88	
LBC Credit Partners IV, L.P.	100,000,000	110,943,649	107,939,239	36,220,071	22,931,896	1.18	8.34	2016
LBC Credit Partners V, L.P.	100,000,000	81,973,679	32,765,641	39,547,316	60,563,736	1.14	16.33	2019
Marathon	200,000,000	101,022,008	858,534	100,000,000	129,425,490	1.29	14.69	
Marathon Secured Private Strategies Fund II	100,000,000	96,022,008	858,534	5,000,000	124,425,490	1.30	14.72	2019
Marathon Secured Private Strategies Fund III	100,000,000	5,000,000	0	95,000,000	5,000,000	1.00		2022

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Merit Capital Partners	350,000,000	235,618,799	301,890,077	114,314,401	93,384,234	1.68	11.48	
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	85,750,024	3,097,959	27,628,909	1.58	9.28	2009
Merit Mezzanine Fund VI, L.P.	100,000,000	92,629,096	77,019,590	7,304,104	64,967,980	1.53	16.16	2016
Merit Mezzanine Fund VII, L.P.	100,000,000	909,091	0	99,090,909	0	0.00		2020
Oaktree Capital Management, LLC	650,000,000	311,040,920	48,825,156	345,500,000	350,494,545	1.28	13.33	
Oaktree Opportunities Fund X, L.P.	50,000,000	46,500,021	33,294,660	8,500,000	34,042,832	1.45	9.58	2015
Oaktree Opportunities Fund Xb, L.P.	100,000,000	65,000,000	0	35,000,000	94,290,300	1.45	15.32	2015
Oaktree Opportunities Fund XI, L.P.	300,000,000	150,000,000	1,447,206	150,000,000	173,161,604	1.16	16.34	2020
Oaktree Real Estate Debt III, L.P.	200,000,000	49,540,899	14,083,290	152,000,000	48,999,809	1.27	15.73	2020
PIMCO BRAVO	9,201,697	8,673,551	9,384,185	7,735,883	717,418	1.16	4.75	
PIMCO BRAVO Fund Onshore Feeder I*	3,958,027	3,958,027	4,016,443	2,385,880	6,492	1.02	1.60	2014
PIMCO Bravo Fund OnShore Feeder II*	5,243,670	4,715,524	5,367,742	5,350,003	710,926	1.29	5.28	2014
Prudential Global Investment Mgmt	600,000,000	492,598,611	549,229,177	158,186,739	142,307,789	1.40	10.39	
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	102,848,928	174,817,309	13,609,083	2,911,175	1.73	14.14	2009
Prudential Capital Partners IV, L.P.	100,000,000	112,954,214	126,259,041	1,948,707	24,015,312	1.33	8.40	2012
Prudential Capital Partners V, L.P.	150,000,000	151,673,251	97,165,645	8,771,398	87,150,495	1.22	7.75	2016
PGIM Capital Partners VI, L.P.	150,000,000	27,192,086	5,316,029	122,808,500	27,738,028	1.22	46.79	2020
Summit Partners	95,000,000	100,002,497	136,040,168	22,177,023	3,137,688	1.39	9.07	
Summit Subordinated Debt Fund III, L.P.	45,000,000	44,088,494	62,804,226	2,250,000	795,707	1.44	8.66	2004
Summit Subordinated Debt Fund IV, L.P.	50,000,000	55,914,003	73,235,942	19,927,023	2,341,981	1.35	9.74	2008
TCW	200,000,000	174,519,135	141,229,309	65,284,484	77,923,032	1.26	9.06	
TCW Direct Lending LLC	100,000,000	83,599,652	88,204,406	25,329,409	20,423,214	1.30	8.71	2014
TCW Direct Lending VII	100,000,000	90,919,484	53,024,903	39,955,075	57,499,819	1.22	9.68	2018
TSSP	275,000,000	158,963,325	36,391,303	146,358,883	154,162,315	1.20	11.60	
Sixth Street TAO Partners (B), L.P.	50,000,000	44,875,278	19,122,544	24,247,266	38,809,129	1.29	11.27	2018
Sixth Street TAO Partners (D), L.P.	100,000,000	57,755,197	11,437,722	49,724,781	56,297,649	1.17	13.34	2018
TSSP Opportunities Partners IV (A), L.P.	50,000,000	40,045,949	5,821,838	13,673,737	43,522,312	1.23	12.01	2018
Sixth Street Opportunities Partners V	75,000,000	16,286,901	9,199	58,713,099	15,533,225	0.95	-4.87	2021

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Real Assets	**4,247,571,518**	**3,950,138,278**	**2,789,730,930**	**609,881,328**	**2,228,049,180**	**1.27**	**5.74**	
BlackRock	198,500,000	127,308,805	69,845,379	83,178,672	80,763,700	1.18	6.38	
BlackRock Global Renewable Power Fund II	98,500,000	98,312,626	67,224,489	10,625,197	54,335,669	1.24	6.91	2017
BlackRock Global Renewable Power Infrastructure III	100,000,000	28,996,179	2,620,889	72,553,475	26,428,031	1.00	0.17	2019
EIG Global Energy Partners	450,000,000	469,824,847	377,940,969	77,704,481	144,948,146	1.11	2.60	
EIG Energy Fund XIV	100,000,000	113,459,470	95,309,310	2,761,129	3,840,512	0.87	-4.97	2007
EIG Energy Fund XV	150,000,000	161,871,503	155,101,139	22,871,323	23,854,090	1.11	2.38	2010
EIG Energy Fund XVI	200,000,000	194,493,874	127,530,520	52,072,029	117,253,544	1.26	5.78	2013
Encap Energy	400,000,000	425,807,746	403,709,359	9,599,414	199,361,004	1.42	9.83	
EnCap Energy Capital Fund VII, L.P.	100,000,000	105,420,704	141,245,195	0	340,893	1.34	14.50	2007
EnCap Energy Capital Fund VIII, L.P.	100,000,000	103,335,766	61,441,166	470,044	44,723,548	1.03	0.54	2010
Encap Energy Fund IX, L.P.	100,000,000	113,725,245	116,232,152	3,890,055	46,201,192	1.43	10.34	2012
EnCap Energy Capital Fund X, L.P.	100,000,000	103,326,031	84,790,846	5,239,315	108,095,370	1.87	16.74	2015
Energy & Minerals Group	680,000,000	674,508,697	391,082,398	55,288,094	544,042,578	1.39	7.33	
NGP Midstream & Resources, L.P.	100,000,000	103,565,615	179,560,149	17,857	5,159,402	1.78	13.27	2007
The Energy & Minerals Group Fund II, L.P.	100,000,000	108,534,480	107,280,051	170,365	107,131,932	1.98	12.66	2011
The Energy & Minerals Group Fund III, L.P.	200,000,000	206,324,535	31,531,563	1,219,725	111,058,363	0.69	-5.65	2014
The Energy & Minerals Group Fund IV, LP	150,000,000	161,997,111	68,231,070	14,023,899	165,727,953	1.44	9.29	2015
The Energy & Minerals Group Fund V, L.P.	112,500,000	79,240,018	3,658,916	36,292,337	130,578,640	1.69	19.23	2019
The Energy & Minerals Group Fund V Accordion, L.P.	17,500,000	14,846,938	820,649	3,563,911	24,386,287	1.70	19.83	2019
Energy Capital Partners	450,000,000	431,289,179	423,031,175	111,761,226	193,126,878	1.43	10.97	
Energy Capital Partners II-A, L.P.	100,000,000	85,856,131	117,653,952	29,749,110	382,394	1.37	8.97	2010
Energy Capital Partners III, L.P.	200,000,000	233,928,871	269,236,271	30,058,269	73,297,401	1.46	10.84	2013
Energy Capital Partners IV-A, LP	150,000,000	111,504,177	36,140,952	51,953,847	119,447,083	1.40	17.07	2017
Enervest Management Partners	100,000,000	98,886,249	90,621,759	9,207,449	57,755,885	1.50	9.57	
EnerVest Energy Institutional Fund XIV-A, L.P.	100,000,000	98,886,249	90,621,759	9,207,449	57,755,885	1.50	9.57	2015
First Reserve	500,000,000	563,609,956	277,587,915	0	144,593,530	0.75	-7.03	
First Reserve Fund XI, L.P.	150,000,000	150,292,121	100,059,903	0	78,695	0.67	-8.76	2006
First Reserve Fund XII, L.P.	150,000,000	165,617,044	85,669,271	0	267,894	0.52	-17.84	2008
First Reserve Fund XIII, L.P.	200,000,000	247,700,791	91,858,741	0	144,246,941	0.95	-1.75	2013
Kohlberg, Kravis, Roberts & Co.	249,850,000	156,701,499	33,081,810	103,875,517	141,220,309	1.11	7.25	
KKR Global Infrastructure Investors III	149,850,000	130,608,003	32,723,340	29,610,543	115,199,353	1.13	7.36	2018
KKR Global Infrastructure Investors IV	100,000,000	26,093,496	358,470	74,264,974	26,020,956	1.01	1.56	2021

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Merit Energy Partners	519,721,518	384,644,480	174,023,812	94,599,899	404,963,919	1.51	6.74	
Merit Energy Partners F-II, L.P.	100,000,000	59,522,861	33,278,569	0	9,139,922	0.71	-4.62	2006
Merit Energy Partners H, L.P.	100,000,000	100,000,000	29,668,582	0	64,090,520	0.94	-0.93	2011
Merit Energy Partners I, L.P.	169,721,518	169,721,518	94,039,059	0	227,853,469	1.90	13.37	2014
Merit Energy Partners K, L.P.	150,000,000	55,400,101	17,037,602	94,599,899	103,880,008	2.18	41.92	2019
NGP	599,500,000	583,203,814	520,256,355	51,166,576	278,835,229	1.37	9.17	
Natural Gas Partners IX, L.P.	150,000,000	173,962,921	249,243,688	605,481	547,202	1.44	12.06	2007
NGP Natural Resources X, L.P.	150,000,000	148,935,849	126,358,808	1,064,151	22,173,919	1.00	-0.07	2011
NGP Natural Resources XI, L.P.	150,000,000	153,765,092	106,385,572	6,290,493	130,659,293	1.54	10.86	2014
NGP Natural Resources XII, L.P.	149,500,000	106,539,952	38,268,287	43,206,451	125,454,815	1.54	15.33	2017
Sheridan	100,000,000	34,353,005	28,550,000	13,500,000	38,438,003	1.95	16.39	
Sheridan Production Partners III-B, L.P.	100,000,000	34,353,005	28,550,000	13,500,000	38,438,003	1.95	16.39	2014

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Real Estate	**4,173,147,868**	**2,669,836,393**	**1,913,800,079**	**1,766,774,555**	**1,939,321,063**	**1.44**	**10.56**	
Angelo, Gordon & Co.	550,000,000	441,270,745	213,907,407	142,110,000	399,545,989	1.39	13.13	
AG Asia Realty Fund III, L.P.	50,000,000	47,587,261	47,125,000	6,196,250	18,917,254	1.39	12.01	2016
AG Asia Realty Fund IV, L.P.	100,000,000	74,470,736	22,250,000	36,727,500	78,687,010	1.36	18.26	2018
AG Europe Realty Fund II, L.P.	75,000,000	68,779,896	30,019,976	12,768,750	70,332,759	1.46	12.33	2018
AG Europe Realty Fund III, L.P.	75,000,000	36,687,885	0	36,937,500	41,460,073	1.13	9.66	2020
AG Realty Fund IX, L.P.	100,000,000	92,141,126	83,000,000	11,650,000	50,654,842	1.45	9.17	2014
AG Realty Fund X, L.P.	150,000,000	121,603,841	31,512,431	37,830,000	139,494,051	1.41	23.09	2018
Blackstone	1,124,500,000	873,254,152	883,946,123	410,557,733	574,056,397	1.67	13.87	
Blackstone Real Estate Partners Asia II	74,500,000	67,011,785	8,179,128	16,845,788	71,152,664	1.18	8.60	2017
Blackstone Real Estate Partners Asia III	100,000,000	10,395,941	0	89,604,059	10,395,941	1.00		2021
Blackstone Real Estate Partners V, L.P.	100,000,000	104,213,007	208,932,593	4,174,052	176,399	2.01	10.84	2006
Blackstone Real Estate Partners VI, L.P.	100,000,000	109,477,567	217,992,298	4,907,906	2,604,105	2.01	13.09	2007
Blackstone Real Estate Partners VII, LP	100,000,000	112,077,521	179,728,358	11,131,179	23,686,333	1.81	15.32	2011
Blackstone Real Estate VIII.TE.1 L.P.	150,000,000	172,415,817	175,271,994	21,918,437	122,802,294	1.73	17.53	2015
Blackstone Real Estate Partners IX, L.P.	300,000,000	297,662,514	93,841,752	61,976,312	343,238,661	1.47	34.67	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	77,559,576	66,169,437	990,056	1,110,239	0.87	-2.07	
Strategic Partners III RE, L.P.	25,000,000	25,981,820	15,252,523	9,006	102,375	0.59	-6.44	2005
Strategic Partners IV RE, L.P.	50,000,000	51,577,756	50,916,914	981,050	1,007,864	1.01	0.11	2008
Brookfield Asset Management Inc.	300,000,000	47,855,710	0	252,144,290	49,325,120	1.03	3.07	
Brookfield Strategic Real Estate Partners IV	300,000,000	47,855,710	0	252,144,290	49,325,120	1.03	3.07	2021
Carlyle Group	450,000,000	109,319,068	83,493,461	397,442,484	88,569,826	1.57	32.77	
Carlyle Realty Partners VIII, L.P.	150,000,000	109,319,068	83,493,461	97,442,484	88,569,826	1.57	32.77	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	70,568,370	4,811,467	56,053,828	73,025,303	1.10	15.15	
KKR Real Estate Partners Americas III	125,000,000	70,568,370	4,811,467	56,053,828	73,025,303	1.10	15.15	2021
Landmark Partners	249,500,000	93,382,274	59,445,883	178,829,556	71,378,651	1.40	19.04	
Landmark Real Estate Partners VIII, L.P.	149,500,000	93,382,274	59,445,883	78,829,556	71,378,651	1.40	19.04	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	102,857,744	78,860,685	72,414,787	60,244,801	1.35	15.12	
Lubert-Adler Real Estate Fund VII-B, L.P.	74,147,868	67,585,213	78,860,685	7,414,787	22,228,641	1.50	15.54	2017
Lubert-Adler Recovery and Enhancement Capital Fund	100,000,000	35,272,530	0	65,000,000	38,016,160	1.08	10.56	2021

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Investments	Commitments	Contributions	Distributions	Remaining Commitment	Market Value	Investment Multiple	IRR	Vintage Year
Oaktree Capital Management, LLC	200,000,000	84,475,519	36,062,552	150,000,000	59,790,702	1.13	50.91	
Oaktree Real Estate Opportunities Fund VIII	200,000,000	84,475,519	36,062,552	150,000,000	59,790,702	1.13	50.91	2020
Rockpoint	200,000,000	174,169,960	69,882,159	45,669,129	156,700,379	1.30	10.56	
Rockpoint Real Estate Fund V, L.P.	100,000,000	99,329,459	58,755,434	17,327,032	72,319,068	1.32	8.15	2014
Rockpoint Real Estate Fund VI, L.P.	100,000,000	74,840,501	11,126,725	28,342,097	84,381,311	1.28	23.51	2019
Rockwood	200,000,000	151,114,069	60,396,117	53,066,634	131,544,638	1.27	9.40	
Rockwood Capital RE Partners X, L.P.	100,000,000	94,027,411	56,119,269	7,657,118	67,312,051	1.31	8.45	2015
Rockwood Capital RE Partners XI, L.P.	100,000,000	57,086,658	4,276,848	45,409,516	64,232,587	1.20	14.26	2019
Silverpeak Real Estate Partners	225,000,000	144,009,207	106,451,402	7,496,058	6,737,281	0.79	-3.81	
Silverpeak Legacy Pension Partners II, L.P.	75,000,000	73,069,012	92,033,940	7,496,058	429,689	1.27	4.18	2005
Silverpeak Legacy Pension Partners III, L.P.	150,000,000	70,940,195	14,417,463	0	6,307,592	0.29	-12.07	2008
TA Associates Realty	300,000,000	300,000,000	250,373,386	0	267,291,737	1.73	15.83	
Realty Associates Fund X	100,000,000	100,000,000	161,064,353	0	99,304	1.61	12.56	2012
Realty Associates Fund XI	100,000,000	100,000,000	81,342,630	0	110,741,077	1.92	15.78	2015
Realty Associates Fund XII	100,000,000	100,000,000	7,966,403	0	156,451,356	1.64	35.91	2018
Total	**37,214,646,925**	**28,082,457,488**	**21,833,141,046**	**12,053,819,353**	**20,151,371,083**	**1.50**	**11.82**	
Difference**					3,306,404			
Private Markets Total with Difference					**20,154,677,487**			

Private Markets Portfolio Status	Managers	Funds
PRIVATE EQUITY	61	193
PRIVATE CREDIT	18	43
REAL ASSETS	11	33
REAL ESTATE	13	34
Total	**103**	**303**

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.

Participant Directed Investment Program

September 30, 2022

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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year	Option Since
BALANCED FUND	$96,098,406	-4.3%	-16.2%	4.2%	5.7%	7.6%	01/1980
U.S. EQUITY ACTIVELY MANAGED FUND	68,232,597	-4.2	-20.6	8.3	9.1	11.7	07/1986
U.S. EQUITY INDEX FUND	335,636,970	-4.4	-17.6	8.0	8.8	11.5	07/1986
BROAD INTERNATIONAL EQUITY FUND	112,934,733	-7.2	-21.3	0.6	0.5	4.1	09/1994
BOND FUND	95,982,913	-4.7	-16.0	-2.8	0.1	1.4	07/1986
MONEY MARKET FUND	658,371,801	0.6	0.9	0.7	1.3	0.8	07/1986
STABLE VALUE FUND	1,745,228,425	0.5	1.9	2.2	2.3	2.2	11/1994
VOLUNTEER FIREFIGHTER ACCOUNT	124,619,957	-4.7	-16.6	2.0	3.6	5.5	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.

STATE STREET.

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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
BALANCED FUND	**$96,098,406**	**-4.3%**	**-16.2%**	**4.2%**	**5.7%**	**7.6%**
SIF BALANCED FUND BENCHMARK		-4.2%	-15.4%	3.8%	5.4%	7.3%
Excess		-0.0%	-0.7%	0.4%	0.3%	0.3%

U.S. Equity Actively Managed Fund

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
U.S. EQUITY ACTIVELY MANAGED FUND	**68,232,597**	**-4.2**	**-20.6**	**8.3**	**9.1**	**11.7**
Russell 3000		-4.5	-17.6	7.7	8.6	11.4
Excess		0.3	-3.0	0.6	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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
U.S. EQUITY INDEX FUND	**$335,636,970**	**-4.4%**	**-17.6%**	**8.0%**	**8.8%**	**11.5%**
Russell 3000		-4.5%	-17.6%	7.7%	8.6%	11.4%
Excess		0.0%	0.0%	0.3%	0.2%	0.1%

Broad International Equity Fund

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
BROAD INTERNATIONAL EQUITY FUND	**112,934,733**	**-7.2**	**-21.3**	**0.6**	**0.5**	**4.1**
International Equity Benchmark		-9.9	-25.2	-1.6	-0.8	3.0
Excess		2.7	3.9	2.2	1.3	1.1

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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
BOND FUND	**$95,982,913**	**-4.7%**	**-16.0%**	**-2.8%**	**0.1%**	**1.4%**
Bloomberg U.S. Aggregate		-4.8%	-14.6%	-3.3%	-0.3%	0.9%
Excess		0.1%	-1.4%	0.4%	0.4%	0.5%

Money Market Fund

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
MONEY MARKET FUND	**658,371,801**	**0.6**	**0.9**	**0.7**	**1.3**	**0.8**
ICE BofA US 3-Month Treasury Bill		0.5	0.6	0.6	1.1	0.7
Excess		0.1	0.3	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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
STABLE VALUE FUND	**$1,745,228,425**	**0.5%**	**1.9%**	**2.2%**	**2.3%**	**2.2%**
Fixed Interest Blended Benchmark		0.9%	2.6%	1.5%	2.0%	1.7%
Excess		-0.4%	-0.7%	0.7%	0.3%	0.5%

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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
VOLUNTEER FIREFIGHTER ACCOUNT	**124,619,957**	**-4.7**	**-16.6**	**2.0**	**3.6**	**5.5**
SIF Volunteer Firefighter Account BM		-5.1	-16.4	1.4	3.1	5.1
Excess		0.4	-0.2	0.7	0.4	0.4

Mutual Funds

The mutual fund investment line-up provides investment options to the Minnesota Deferred Compensation Plan (MNDCP), Unclassified Retirement Plan, Health Care Savings Plan, and the Hennepin County Retirement Plan. The MNDCP is a tax-sheltered retirement savings plan that is supplemental to public employees primary retirement plan. (In most cases, the primary plan is a defined benefit plan administered by TRA, PERA, or MSRS.) Participants can choose from active and passively managed stock and bond funds, a Stable Value Fund, a Money Market Fund, a set of 10 target date retirement fund options, and a brokerage window where participants can choose from hundreds of mutual funds.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year	Option Since
VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX PLUS	$582,376,038	-4.5%	-18.0%	7.7%			07/2019
VANGUARD INSTITUTIONAL INDEX PLUS	1,450,102,412	-4.9	-15.5	8.2	9.2%	11.7%	07/1999
VANGUARD DIVIDEND GROWTH	848,332,740	-5.5	-6.2	7.1	10.3		10/2016
VANGUARD MID CAP INDEX	616,513,864	-4.1	-19.5	5.5	6.7	10.5	01/2004
T. ROWE PRICE SMALL-CAP STOCK	780,878,559	-2.2	-23.9	4.9	7.6	11.0	04/2000
FIDELITY DIVERSIFIED INTERNATIONAL	262,769,989	-8.7	-30.6	-0.2	0.6	4.9	07/1999
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	282,267,156	-10.5	-25.2	-1.1	-0.7	3.4	07/2011
VANGUARD BALANCED INDEX	1,192,586,444	-4.5	-16.4	3.5	5.3	7.3	12/2003
DODGE & COX INCOME	269,285,575	-4.0	-13.6	-1.7	0.7	1.9	07/1999
VANGUARD TOTAL BOND MARKET INDEX	308,094,207	-4.6	-14.6	-3.3	-0.3	0.9	12/2003
2025 FUND	203,549,967	-4.9	-13.6	2.2	3.3	5.2	07/2011
2030 FUND	179,423,766	-5.6	-16.5	2.6	3.8	6.0	07/2011
2035 FUND	138,223,172	-6.1	-19.2	2.4	3.8	6.3	07/2011
2040 FUND	109,729,584	-6.4	-20.3	2.6	3.9	6.6	07/2011
2045 FUND	102,521,425	-6.7	-20.9	2.8	4.0	6.9	07/2011
2050 FUND	86,216,160	-6.7	-21.5	3.1	4.2	7.1	07/2011
2055 FUND	55,891,568	-6.8	-22.0	3.1	4.2	7.1	07/2011
2060 FUND	43,633,012	-6.8	-22.0	3.1	4.2	7.1	07/2011
2065 FUND	5,079,679	-6.8	-22.0				04/2020
INCOME FUND	203,941,653	-4.5	-12.5	1.5	2.6	3.3	07/2011
TD Ameritrade SDB	72,947,704						
TD Ameritrade SDB Roth	2,588,781						

Mutual Funds

LARGE CAP EQUITY

Vanguard Total Stock Market Institutional Index Plus (passive)

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

Vanguard Index Institutional Plus (passive)

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

Vanguard Dividend Growth (active) (1)

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

MID CAP EQUITY

Vanguard Mid Cap Index (passive) (2)

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

SMALL CAP EQUITY

T Rowe Price Small Cap (active)

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

INTERNATIONAL EQUITY

Fidelity Diversified International (active)

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

Vanguard Total International Stock Index (passive) (3)

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
Large Cap US Equity						
VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX PLUS	**$582,376,038**	**-4.5%**	**-18.0%**	**7.7%**		**07/2019**
CRSP US Total Market Index		-4.4	-18.0	7.6		07/2019
Excess		-0.0	-0.0	0.1		
VANGUARD INSTITUTIONAL INDEX PLUS	**1,450,102,412**	**-4.9**	**-15.5**	**8.2**	**9.2%**	**07/1999**
S&P 500		-4.9	-15.5	8.2	9.2	07/1999
Excess		-0.0	-0.0	-0.0	-0.0	
VANGUARD DIVIDEND GROWTH	**848,332,740**	**-5.5**	**-6.2**	**7.1**	**10.3**	**10/2016**
VANGUARD DIVIDEND GROWTH INDEX		-5.3	-10.3	6.2	9.4	10/2016
Excess		-0.2	4.1	0.9	0.8	
Mid Cap US Equity						
VANGUARD MID CAP INDEX	**616,513,864**	**-4.1**	**-19.5**	**5.5**	**6.7**	**01/2004**
CRSP US Mid Cap Index		-4.1	-19.5	5.5	6.7	01/2004
Excess		0.0	-0.0	0.0	0.0	
Small Cap US Equity						
T. ROWE PRICE SMALL-CAP STOCK	**780,878,559**	**-2.2**	**-23.9**	**4.9**	**7.6**	**04/2000**
Russell 2000		-2.2	-23.5	4.3	3.6	04/2000
Excess		0.0	-0.4	0.6	4.0	
International Equity						
FIDELITY DIVERSIFIED INTERNATIONAL	**262,769,989**	**-8.7**	**-30.6**	**-0.2**	**0.6**	**07/1999**
MSCI EAFE FREE (NET)		-9.4	-25.1	-1.8	-0.8	07/1999
Excess		0.6	-5.4	1.7	1.5	
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	**282,267,156**	**-10.5**	**-25.2**	**-1.1**	**-0.7**	**07/2011**
FTSE Global All Cap ex US Index Net		-9.7	-25.3	-1.1	-0.7	07/2011
Excess		-0.8	0.1	-0.1	-0.0	

Mutual Funds

BALANCED

Vanguard Balanced Index (passive) (4)

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

FIXED INCOME

Dodge & Cox Income Fund (active)

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

Vanguard Total Bond Market Index (passive)

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

Money Market Fund (5)

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

STABLE VALUE

Stable Value Fund (5)

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
Balanced Funds						
VANGUARD BALANCED INDEX	**$1,192,586,444**	**-4.5%**	**-16.4%**	**3.5%**	**5.3%**	**12/2003**
Vanguard Balanced Fund Benchmark		-4.5	-16.4	3.6	5.3	12/2003
Excess		-0.0	-0.0	-0.0	-0.0	
Fixed Income						
DODGE & COX INCOME	**269,285,575**	**-4.0**	**-13.6**	**-1.7**	**0.7**	**07/1999**
Bloomberg U.S. Aggregate		-4.8	-14.6	-3.3	-0.3	07/1999
Excess		0.8	1.0	1.5	0.9	
VANGUARD TOTAL BOND MARKET INDEX	**308,094,207**	**-4.6**	**-14.6**	**-3.3**	**-0.3**	**12/2003**
Bloomberg U.S. Aggregate		-4.8	-14.6	-3.3	-0.3	12/2003
Excess		0.1	-0.0	-0.0	0.0	
MONEY MARKET FUND	**658,371,801**	**0.6**	**0.9**	**0.7**	**1.3**	**07/1986**
ICE BofA US 3-Month Treasury Bill		0.5	0.6	0.6	1.1	07/1986
Excess		0.1	0.3	0.1	0.1	
Stable Value						
STABLE VALUE FUND	**1,745,228,425**	**0.5**	**1.9**	**2.2**	**2.3**	**11/1994**
Fixed Interest Blended Benchmark		0.9	2.6	1.5	2.0	11/1994
Excess		-0.4	-0.7	0.7	0.3	

(1) Prior to 09/20/2021 the benchmark was the NASDAQ US Dividend Achievers Select Index and S&P U.S. Dividend Growers Index thereafter.
(2) Prior to 02/01/2013 the benchmark was the MSCI US Mid-Cap 450 Index.
(3) Prior to 06/01/2013 the benchmark was MSCI ACWI ex USA IMI.
(4) Prior to 01/01/2013 the benchmark was 60% MSCI US Broad Market Index and 40% Bloomberg U.S. Aggregate.
(5) Money Market and Stable Value are Supplemental Investment Fund options which are also offered to eligible plans that invest through other plans.

Mutual Funds

MN TARGET RETIREMENT ACCOUNTS

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

Target Date Retirement Funds

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
SSgA						
2025 FUND	**$203,549,967**	**-4.9%**	**-13.6%**	**2.2%**	**3.3%**	**07/2011**
2025 FUND BENCHMARK		-4.8%	-13.6%	2.2%	3.3%	07/2011
Excess		-0.1%	0.0%	-0.0%	-0.0%	
2030 FUND	**$179,423,766**	**-5.6%**	**-16.5%**	**2.6%**	**3.8%**	**07/2011**
2030 FUND BENCHMARK		-5.5%	-16.6%	2.6%	3.8%	07/2011
Excess		-0.1%	0.0%	-0.0%	-0.0%	
2035 FUND	**$138,223,172**	**-6.1%**	**-19.2%**	**2.4%**	**3.8%**	**07/2011**
2035 FUND BENCHMARK		-6.0%	-19.2%	2.5%	3.8%	07/2011
Excess		-0.1%	0.0%	-0.0%	-0.0%	
2040 FUND	**$109,729,584**	**-6.4%**	**-20.3%**	**2.6%**	**3.9%**	**07/2011**
2040 FUND BENCHMARK		-6.3%	-20.3%	2.6%	3.9%	07/2011
Excess		-0.2%	0.0%	-0.0%	-0.0%	
2045 FUND	**$102,521,425**	**-6.7%**	**-20.9%**	**2.8%**	**4.0%**	**07/2011**
2045 FUND BENCHMARK		-6.5%	-21.0%	2.9%	4.1%	07/2011
Excess		-0.2%	0.0%	-0.1%	-0.0%	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
2050 FUND	**$86,216,160**	**-6.7%**	**-21.5%**	**3.1%**	**4.2%**	**07/2011**
2050 FUND BENCHMARK		-6.6%	-21.5%	3.1%	4.2%	07/2011
Excess		-0.2%	0.0%	-0.1%	-0.0%	
2055 FUND	**$55,891,568**	**-6.8%**	**-22.0%**	**3.1%**	**4.2%**	**07/2011**
2055 FUND BENCHMARK		-6.6%	-22.0%	3.2%	4.2%	07/2011
Excess		-0.2%	0.0%	-0.1%	-0.0%	
2060 FUND	**$43,633,012**	**-6.8%**	**-22.0%**	**3.1%**	**4.2%**	**07/2011**
2060 FUND BENCHMARK		-6.6%	-22.0%	3.2%	4.2%	07/2011
Excess		-0.2%	0.0%	-0.1%	-0.0%	
2065 FUND	**$5,079,679**	**-6.8%**	**-22.0%**			**04/2020**
2065 FUND BENCHMARK		-6.6%	-22.0%			04/2020
Excess		-0.2%	0.0%			
INCOME FUND	**$203,941,653**	**-4.5%**	**-12.5%**	**1.5%**	**2.6%**	**07/2011**
INCOME FUND BENCHMARK		-4.5%	-12.5%	1.5%	2.6%	07/2011
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 529 COLLEGE SAVINGS PLAN

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

Total = $1,604 Million

Fund Name	Ending Market	3 Months	1 Year	Annualized 3 Years	5 Years	10 Years	Since Inception	Inception Date
2038/2039 Enrollment Option	$10,554,386	-6.20%	-17.81%				-14.37%	6/11/2021
2038-2039 Custom Benchmark		-6.08%	-18.24%				-14.58%	
2036/2037 Enrollment Option	$52,096,735	-6.15%	-17.77%				2.76%	10/28/2019
2036-2037 Custom Benchmark		-5.98%	-17.99%				2.49%	
2034/2035 Enrollment Option	$43,651,185	-6.03%	-17.42%				2.53%	10/28/2019
2034-2035 Custom Benchmark		-5.87%	-17.68%				2.28%	
2032/2033 Enrollment Option	$49,649,857	-5.79%	-17.01%				2.43%	10/28/2019
2032-2033 Custom Benchmark		-5.70%	-17.22%				2.18%	
2030/2031 Enrollment Option	$60,145,777	-5.41%	-16.05%				2.24%	10/28/2019
2030-2031 Custom Benchmark		-5.30%	-16.25%				1.99%	
2028/2029 Enrollment Option	$76,340,881	-4.86%	-14.63%				1.88%	10/28/2019
2028-2029 Custom Benchmark		-4.79%	-14.85%				1.55%	
2026/2027 Enrollment Option	$107,072,197	-4.29%	-13.02%				1.64%	10/28/2019
2026-2027 Custom Benchmark		-4.17%	-13.23%				1.32%	
2024/2025 Enrollment Option	$150,631,753	-3.21%	-10.21%				1.84%	10/28/2019
2024-2025 Custom Benchmark		-3.05%	-10.41%				1.42%	
2022/2023 Enrollment Option	$167,727,211	-2.24%	-7.09%				1.61%	10/28/2019
2022-2023 Custom Benchmark		-2.12%	-7.40%				1.04%	
In School Option	$229,844,651	-1.98%	-6.15%				1.25%	10/28/2019
In School Custom Benchmark		-1.89%	-6.48%				0.49%	

mnsaves MINNESOTA 529 COLLEGE SAVINGS PLAN

TIAA

MINNESOTA COLLEGE SAVINGS PLAN

Performance Statistics for the Period Ending: September 30, 2022

Fund Name	Ending Market	3 Months	1 Year	Annualized 3 Years	Annualized 5 Years	Annualized 10 Years	Annualized Since Inception	Inception Date
U.S. and International Equity Option	$244,516,779	-6.88%	-19.72%	3.98%	5.35%	8.46%	6.57%	10/ 1/2001
BB: U.S. and International Equity Option		-6.55%	-19.71%	3.90%	5.22%	8.51%	7.25%	
Moderate Allocation Option	$79,749,441	-5.64%	-16.60%	2.06%	3.69%	5.62%	4.71%	8/ 2/2007
BB: Moderate Allocation Option		-5.41%	-16.59%	1.94%	3.63%	5.72%	5.19%	
100% Fixed-Income Option	$16,227,240	-3.86%	-12.25%	-2.00%	0.33%	0.81%	2.58%	8/16/2007
BB: 100% Fixed-Income Option		-3.86%	-12.29%	-1.79%	0.56%	1.15%	3.12%	
International Equity Index Option	$7,522,004	-10.43%	-24.94%	-1.67%	-0.93%		2.16%	6/18/2013
BB: International Equity Index Option		-9.76%	-25.68%	-1.78%	-0.95%		2.24%	
Money Market Option	$13,154,153	0.46%	0.56%	0.47%	0.95%	0.52%	0.52%	11/ 1/2007
BB: Money Market Option		0.42%	0.53%	0.38%	0.84%	0.46%	0.47%	
Principal Plus Interest Option	$123,193,575	0.25%	1.12%	1.52%	1.65%	1.50%	2.35%	10/10/2001
Citigroup 3-Month U.S. Treasury Bill		0.45%	0.63%	0.57%	1.13%	0.66%	1.23%	
Aggressive Allocation Option	$65,211,388	-6.26%	-18.10%	3.05%	4.54%		5.59%	8/12/2014
BB: Aggressive Allocation Option		-5.97%	-18.13%	2.97%	4.47%		5.53%	
Conservative Allocation Option	$15,398,673	-3.67%	-11.21%	0.97%	2.40%		2.88%	8/18/2014
BB: Conservative Allocation Option		-3.50%	-11.30%	0.84%	2.37%		2.89%	
Equity and Interest Accumulation Option	$7,512,664	-1.98%	-8.29%	4.97%	5.32%		5.44%	8/18/2014
BB: Equity and Interest Accumulation Option		-1.80%	-8.41%	4.64%	5.26%		5.34%	
U.S. Large Cap Equity Option	$81,469,686	-4.90%	-15.59%	8.01%	9.05%		9.76%	8/12/2014
BB: U.S. Large Cap Equity Option		-4.88%	-15.47%	8.16%	9.24%		9.87%	
Social Choice Equity Option	$727,194	-4.51%	-18.06%				-13.65%	6/11/2021
BB: Social Choice Equity Option		-4.46%	-17.63%				-13.15%	
Matching Grant	$1,382,084	0.25%	1.12%	1.52%	1.65%	1.50%	2.35%	3/22/2002
Citigroup 3-Month U.S. Treasury Bill		0.45%	0.63%	0.57%	1.13%	0.66%	1.23%	

MINNESOTABLE plan
A member of The National ABLE Alliance

Performance as of
09/30/22

Total Market Value: $ 28,229,835

Fund Name		Market Value	% of Plan	1 Month	3 Months	YTD	1 Year	3 Year	5 Year	10 Year	Inception	Inception Date
Aggressive Option	$	1,952,208	6.92%	(9.17)	(6.01)	(25.00)	(21.04)	2.87	4.14		5.68	12/15/16
ABLE Aggressive Custom Benchmark				(9.28)	(5.72)	(25.09)	(21.06)	3.12	4.44		6.07	
Variance				**0.11**	**(0.29)**	**0.09**	**0.02**	**(0.25)**	**(0.30)**		**(0.39)**	
Moderately Aggressive Option	$	2,228,226	7.89%	(8.15)	(5.47)	(22.40)	(18.95)	2.47	3.76		5.05	12/15/16
ABLE Moderately Aggressive Custom Benchmark				(8.27)	(5.28)	(22.52)	(19.00)	2.68	4.02		5.41	
Variance				**0.12**	**(0.19)**	**0.12**	**0.05**	**(0.21)**	**(0.26)**		**(0.36)**	
Growth Option	$	3,454,175	12.24%	(7.12)	(4.98)	(19.76)	(16.89)	1.98	3.29		4.34	12/15/16
ABLE Growth Custom Benchmark				(7.25)	(4.84)	(19.90)	(16.95)	2.16	3.54		4.68	
Variance				**0.13**	**(0.14)**	**0.14**	**0.06**	**(0.18)**	**(0.25)**		**(0.34)**	
Moderate Option	$	3,099,116	10.98%	(6.04)	(4.51)	(17.03)	(14.78)	1.42	2.75		3.61	12/15/16
ABLE Moderate Custom Benchmark				(6.24)	(4.43)	(17.25)	(14.90)	1.56	2.98		3.90	
Variance				**0.20**	**(0.08)**	**0.22**	**0.12**	**(0.14)**	**(0.23)**		**(0.29)**	
Moderately Conservative Option	$	3,093,618	10.96%	(4.32)	(3.22)	(12.20)	(10.59)	1.13	2.22		2.79	12/15/16
ABLE Moderately Conservative Custom Benchmark				(4.37)	(3.06)	(12.30)	(10.62)	1.23	2.43		3.04	
Variance				**0.05**	**(0.16)**	**0.10**	**0.03**	**(0.10)**	**(0.21)**		**(0.25)**	
Conservative Option	$	5,290,544	18.74%	(1.79)	(1.35)	(5.18)	(4.60)	0.65	1.43		1.63	12/15/16
ABLE Conservative Custom Benchmark				(1.82)	(1.24)	(5.25)	(4.60)	0.65	1.56		1.78	
Variance				**0.03**	**(0.11)**	**0.07**	**0.00**	**0.00**	**(0.13)**		**(0.15)**	
Checking Option	$	9,111,948	32.28%									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.

ascensus | college savings

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Non-Retirement

September 30, 2022

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 trusteed by the Public Employees Retirement Association.

- Miscellaneous Trust Accounts are other small funds managed by the SBI for a variety of purposes.

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

Non-Retirement

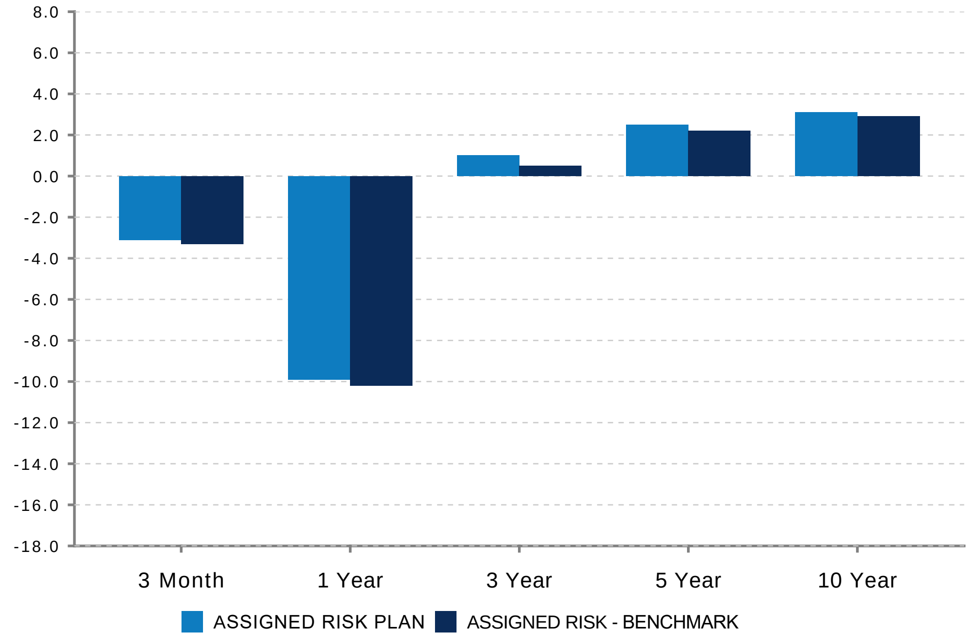
Assigned Risk Plan

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

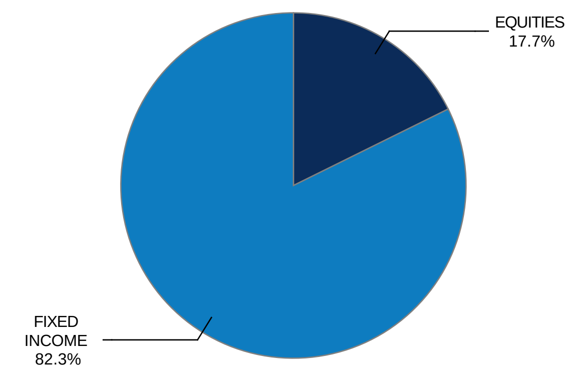
The Assigned Risk Plan is invested in a portfolio of common stocks and bonds

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

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



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
ASSIGNED RISK PLAN	$231,514,790	-3.1%	-9.9%	1.0%	2.5%	3.1%
EQUITIES	$40,954,372	-4.9%	-15.5%	8.2%	9.2%	11.4%
FIXED INCOME	$190,560,418	-3.0%	-9.1%	-1.5%	0.3%	0.7%
ASSIGNED RISK - BENCHMARK		-3.3%	-10.2%	0.5%	2.2%	2.9%
Excess		0.3%	0.3%	0.5%	0.3%	0.2%
S&P 500		-4.9%	-15.5%	8.2%	9.2%	11.7%
Bloomberg U.S. Government: Intermediate		-3.1%	-9.2%	-1.7%	0.2%	0.6%



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.

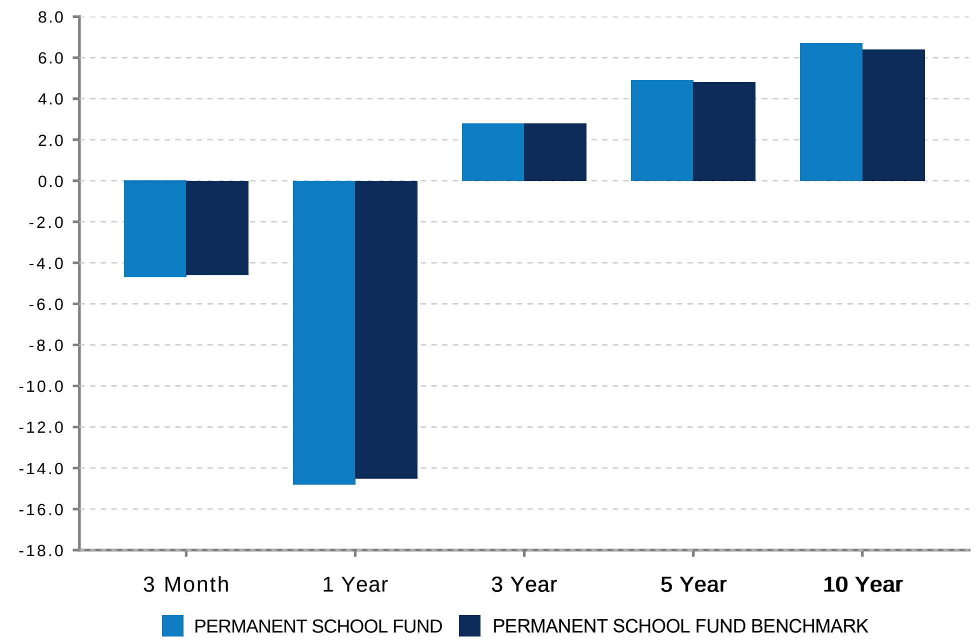
Non-Retirement

Permanent School Fund

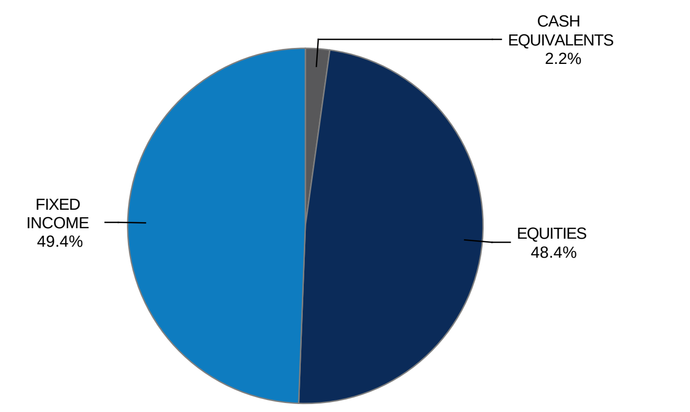
The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is transferred to the school endowment fund and distributed to Minnesota's public schools.

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	$1,664,884,547	-4.7%	-14.8%	2.8%	4.9%	6.7%
CASH EQUIVALENTS	37,177,782	0.6	0.7	0.6	1.2	0.7
EQUITIES	806,020,163	-4.9	-15.5	8.2	9.2	11.7
FIXED INCOME	821,686,602	-4.7	-15.4	-3.2	-0.1	1.4
PERMANENT SCHOOL - BENCHMARK		-4.6	-14.5	2.8	4.8	6.4
Excess		-0.0	-0.3	-0.0	0.1	0.2
S&P 500		-4.9	-15.5	8.2	9.2	11.7
Bloomberg U.S. Aggregate		-4.8	-14.6	-3.3	-0.3	0.9



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

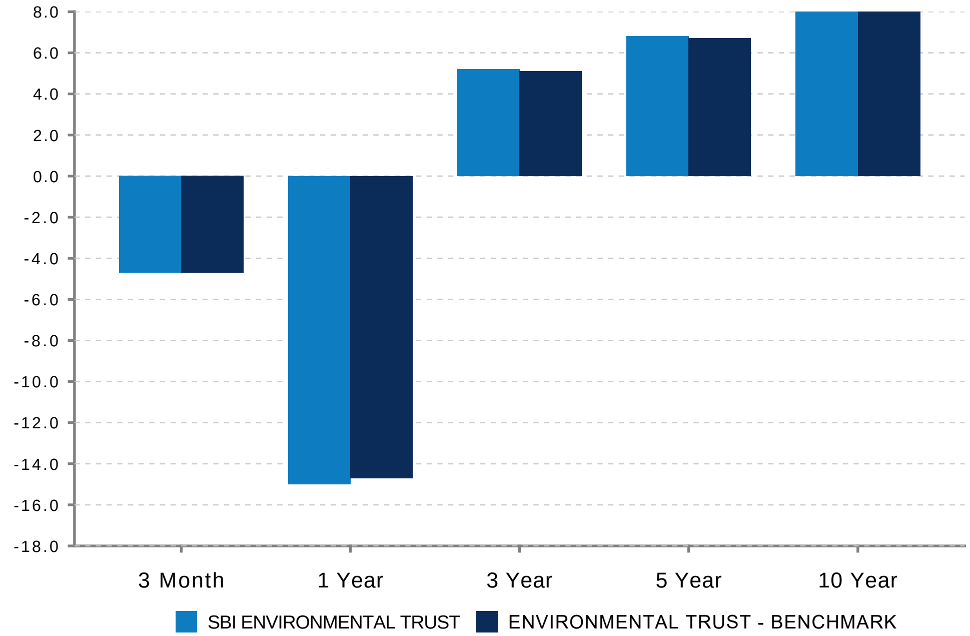
Non-Retirement

Environmental Trust Fund

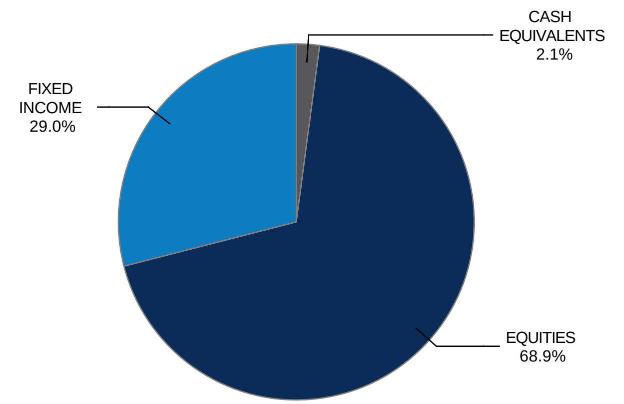
The objective of the Environmental Trust Fund is to increase the market value of the Fund over time in order to increase the annual amount made available for spending within the constraints of maintaining adequate portfolio quality and liquidity.

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

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



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
SBI ENVIRONMENTAL TRUST	$1,373,981,999	-4.7%	-15.0%	5.2%	6.8%	8.7%
CASH EQUIVALENTS	28,982,434	0.6	0.7	0.6	1.2	0.7
EQUITIES	946,522,290	-4.9	-15.5	8.2	9.2	11.7
FIXED INCOME	398,477,276	-4.7	-15.4	-3.2	-0.1	1.4
ENVIRONMENTAL TRUST - BENCHMARK		-4.7	-14.7	5.1	6.7	8.6
Excess		-0.0	-0.4	0.1	0.1	0.2
S&P 500		-4.9	-15.5	8.2	9.2	11.7
Bloomberg U.S. Aggregate		-4.8	-14.6	-3.3	-0.3	0.9



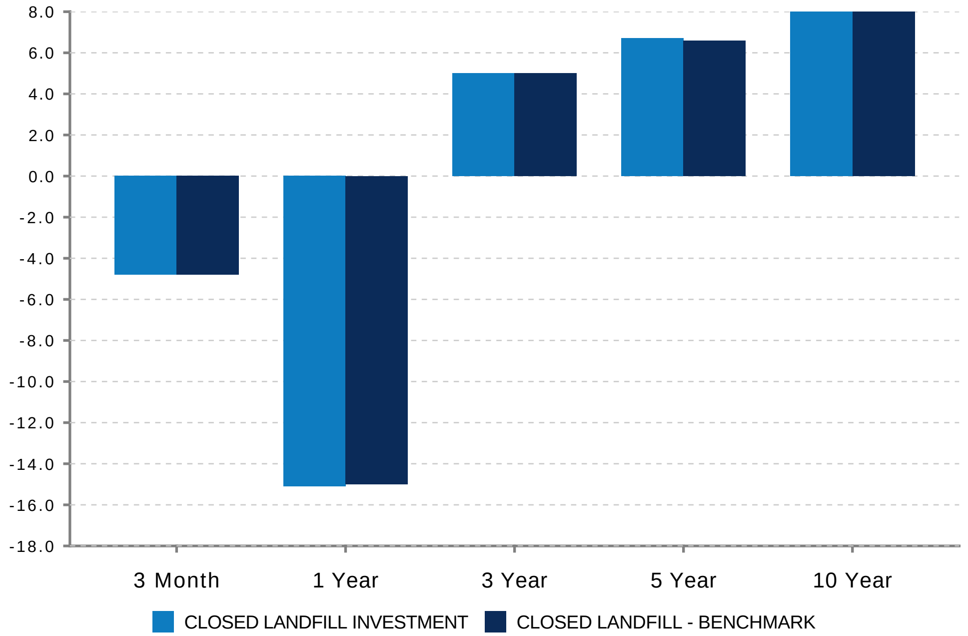
Note: Since 12/1/2017 the equity segment has been managed by Mellon and the fixed income segment by Prudential. Prior to 12/1/2017 both segments were managed internally by SBI staff. From 7/1/94 to 7/1/99, the Fund's target allocation and benchmark was 50% fixed income and 50% stock. Prior to 7/1/94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

Non-Retirement

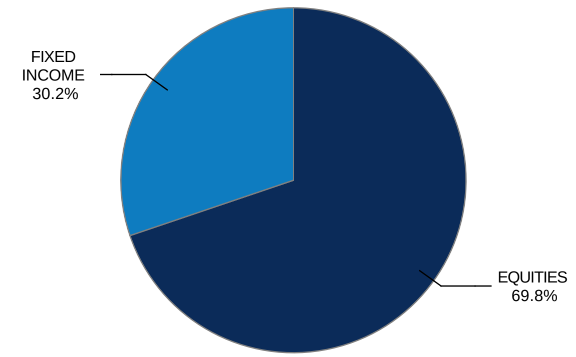
Closed Landfill Investment Fund

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

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



	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
CLOSED LANDFILL INVESTMENT	$108,800,490	-4.8%	-15.1%	5.0%	6.7%	9.7%
EQUITIES	75,980,632	-4.9	-15.5	8.2	9.2	11.7
FIXED INCOME	32,819,858	-4.7	-15.4	-3.2	-0.1	
CLOSED LANDFILL - BENCHMARK		-4.8	-15.0	5.0	6.6	9.7
Excess		0.0	-0.1	-0.0	0.0	0.0
S&P 500		-4.9	-15.5	8.2	9.2	11.7
Bloomberg U.S. Aggregate		-4.8	-14.6	-3.3	-0.3	0.9



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.

	Ending Market Value	Last Qtr	Fiscal YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date
NON RETIREMENT EQUITY INDEX - MELLON	**2,570,848,557**	**-4.9**	**-4.9**	**-15.5**	**8.2**	**9.2**	**11.7**	**9.5**	**07/1993**
S&P 500 INDEX (DAILY)		-4.9	-4.9	-15.5	8.2	9.2	11.7	9.5	07/1993
Excess		0.0	0.0	-0.0	-0.0	-0.0	-0.0	0.1	
NON RETIREMENT FIXED INCOME - PRUDENTIAL	**1,443,300,779**	**-4.7**	**-4.7**	**-15.4**	**-3.2**	**-0.1**	**1.4**	**5.0**	**07/1994**
Bloomberg U.S. Aggregate		-4.8	-4.8	-14.6	-3.3	-0.3	0.9	4.6	07/1994
Excess		0.1	0.1	-0.8	0.0	0.2	0.5	0.4	
RBC	**190,560,401**	**-3.0**	**-3.0**	**-9.1**	**-1.5**	**0.3**	**0.7**	**4.3**	**07/1991**
RBC Custom Benchmark		-3.1	-3.1	-9.2	-1.7	0.2	0.6	4.3	07/1991
Excess		0.0	0.0	0.1	0.2	0.1	0.1	-0.1	
MET COUNCIL OPEB BOND POOL	94,677,504	-2.5	-2.5	-7.1	-1.3				02/2009
NON RETIREMENT CASH ACCOUNT	**105,167,654**	**0.6**	**0.6**	**0.8**	**0.6**				**05/2009**
ICE BofA US 3-Month Treasury Bill		0.5	0.5	0.6	0.6				05/2009
Excess		0.1	0.1	0.2	0.0				

Note:

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

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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State Cash

September 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.

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
Treasurer's Cash	23,583,991,358	0.3	-0.9	0.3	0.9	0.6
iMoneyNet Money Fund Average-All Taxable		0.4	0.5	0.4	0.9	0.5

Other State Cash Accounts

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	10 Year
Debt Service	87,956,178	-3.0	-6.9	-0.7	0.9	
Housing Finance (1)	75,005,897					

(1) Housing Finance performance will be shown with first full quarter of performance.

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.

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