



# Comprehensive Performance Report

December 31, 2019



## Description of SBI Investment Programs

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The Minnesota State Board of Investment is responsible for the investment management of various retirement funds, trust funds and cash accounts.

### Combined Funds

The Combined Funds represent the assets for both the active and retired public employees in the statewide retirement systems, the biggest of which are the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the Minnesota State Retirement System (MSRS). The SBI commingles the assets of these plans into the Combined Funds to capture investment efficiencies. All assets in the Combined Funds are managed externally by investment management firms retained by contract.

### Fire Plans + Other Retirement Plans

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

### Participant Directed Investment Program

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

### Non-Retirement

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

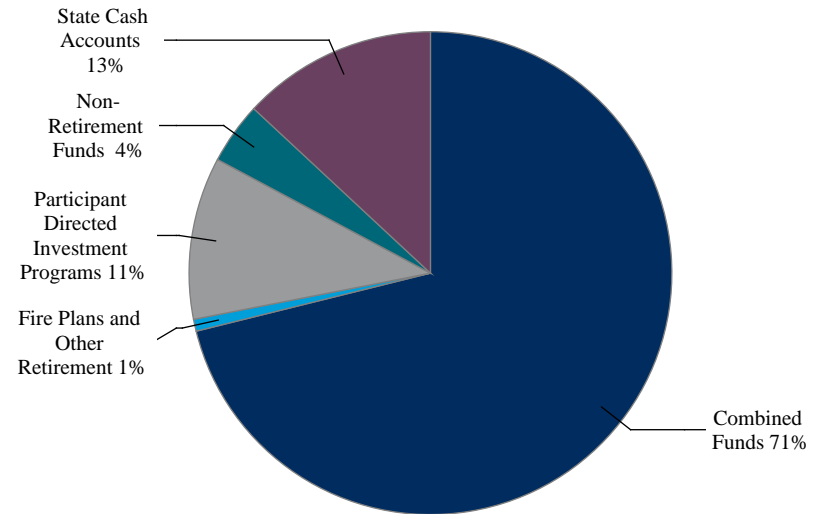
### State Cash

The State Cash accounts are cash balances of state government funds including the State General Fund. Most accounts are invested by SBI staff through a short-term pooled fund referred to as the Treasurer's Cash Pool. It contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and non-dedicated cash in the State Treasury. Because of special legal restrictions, a small number of cash accounts cannot be commingled.



## Funds Under Management

	<u>\$ Millions</u>
<b>COMBINED FUNDS</b>	<b>\$74,208</b>
<b>FIRE PLANS + OTHER RETIREMENT PLANS</b>	<b>836</b>
<b>PARTICIPANT DIRECTED INVESTMENT PROGRAM</b>	<b>11,340</b>
State Deferred Compensation Plan	7,905
Health Care Savings Plan	1,280
Unclassified Employees Retirement Plan	341
Hennepin County Supplemental Retirement Plan	167
PERA Defined Contribution Plan	78
Minnesota College Savings Plan	1,561
Minnesota Achieve a Better Life Experience	9
<b>NON-RETIREMENT FUNDS</b>	<b>4,305</b>
Assigned Risk Plan	293
Permanent School Fund	1,612
Environmental Trust Fund	1,303
Closed Landfill Investment Fund	104
Miscellaneous Trust Funds	281
Other Postemployment Benefits Accounts	712
<b>STATE CASH ACCOUNTS</b>	<b>13,636</b>
Invested Treasurer's Cash	13,410
Other State Cash Accounts	225
<b>TOTAL SBI AUM</b>	<b>104,325</b>



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

Sub-Asset Class Level Data

Asset Class Level Data

Note:

Throughout this report performance is calculated net of investment management 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. Inception to date return information is included for manager accounts and total asset class but not other aggregates because of portfolio management decisions to group managers in different aggregates over time.



# Combined Funds

December 31, 2019



## Combined Funds Summary

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

	<u>One Quarter</u>
COMBINED FUNDS	
Beginning Market Value	\$70,692
Net Contributions	-590
Investment Return	4,106
Ending Market Value	74,208

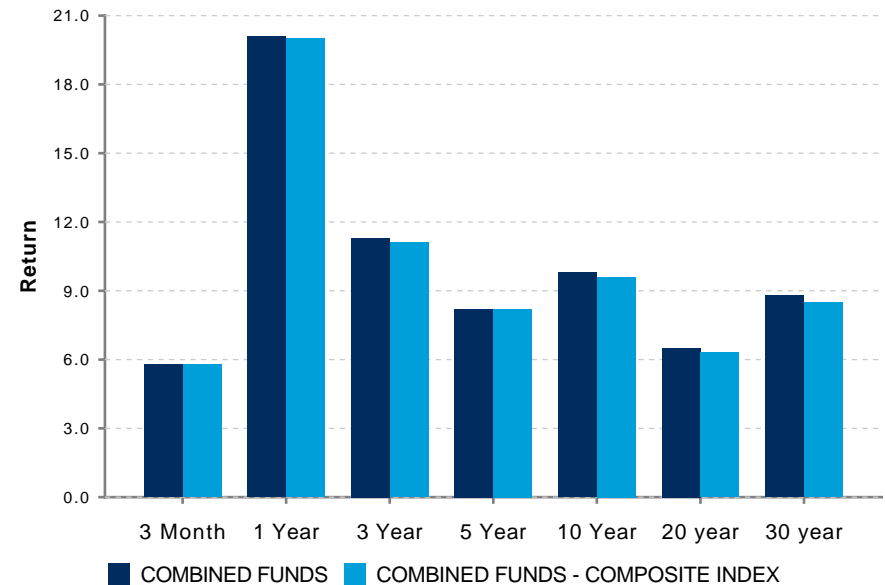
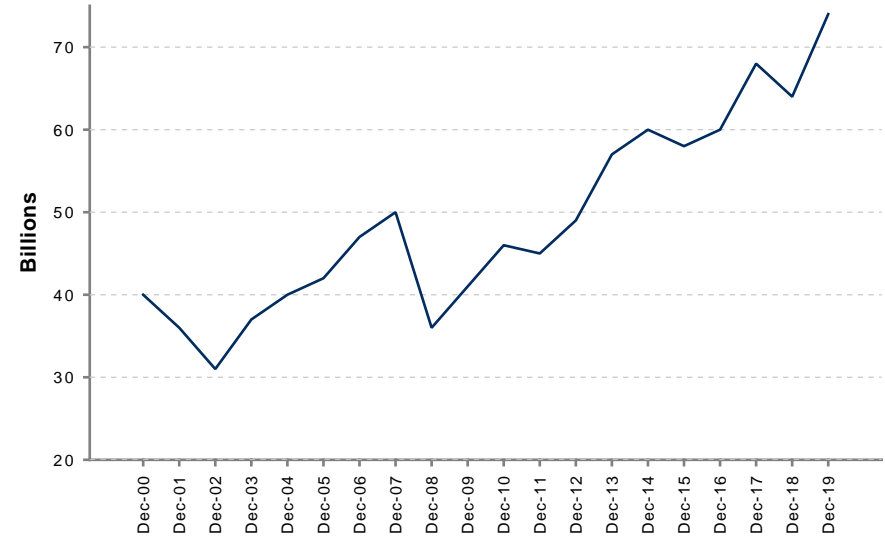
The change in market value of the Combined Funds since the end of last quarter is due to net contributions and investment returns.

### Performance (Net of Fees)

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

	<u>Qtr</u>	<u>FYTD</u>	<u>1 Yr</u>	<u>3 Yr</u>	<u>5 Yr</u>	<u>10 Yr</u>	<u>20 Yr</u>	<u>30 Yr</u>
COMBINED FUNDS	5.8%	6.9%	20.1%	11.3%	8.2%	9.8%	6.5%	8.8%
COMBINED FUNDS - COMPOSITE INDEX	5.8	6.9	20.0	11.1	8.2	9.6	6.3	8.5
Excess	0.1	-0.0	0.1	0.2	0.0	0.3	0.2	0.3

### Asset Growth



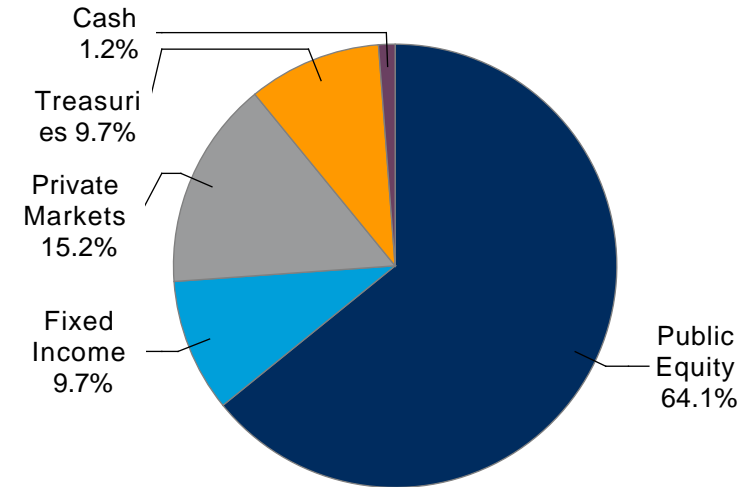


## Combined Funds Summary

### Asset Mix

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

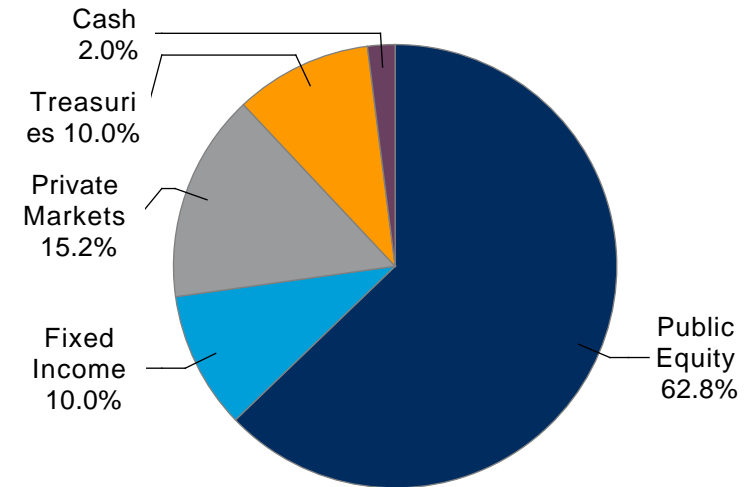
	<u>(Millions)</u>	<u>Actual Mix</u>	<u>Policy Target</u>
Public Equity	\$47,603	64.1%	53.0%
Fixed Income	7,218	9.7	10.0
Private Markets	11,293	15.2	25.0
Treasuries	7,231	9.7	10.0
Cash	863	1.2	2.0
<b>TOTAL</b>	<b>74,208</b>	<b>100.0</b>	



### Composite Index Comparison

The Combined Funds Composite is set as the Strategic Asset Allocation Policy Target with the uninvested portion of Private Markets allocated to Public Equity. Asset class weights for Public Equity and Private Markets are reset at the start of each month. The Combined Funds Composite weighting shown below is as of the first day of the quarter.

	<u>Policy Weight</u>	<u>Benchmark</u>
Public Equity	62.8%	Public Equity Benchmark
Fixed Income	10.0	BB Barclays U.S. Aggregate
Private Markets	15.2	Private Markets
Treasuries	10.0	BB Barclays Treasury 5+ Years
Cash	2.0	3 Month T-Bills





## Combined Funds Asset Class Performance Summary

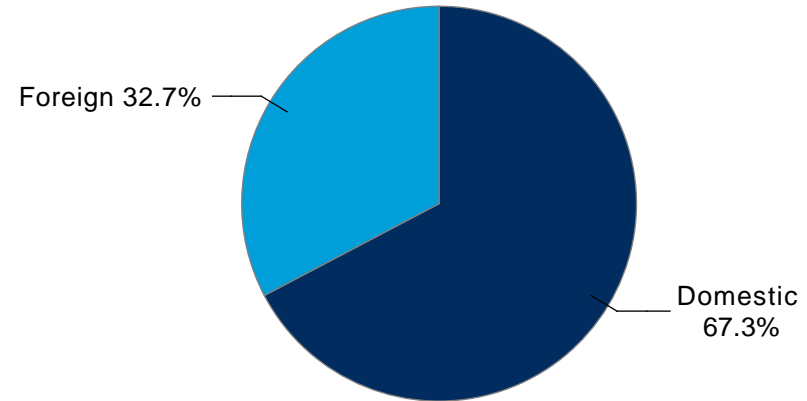
### Public Equity

The Combined Funds Public Equity includes Domestic Equity and International Equity.

The Public Equity benchmark is 60.3% Russell 1000, 6.7% Russell 2000, 24.75% MSCI World ex US (net), and 8.25% MSCI EM (net).

The Russell 1000 and Russell 2000 measure the performance of the 1000 largest and 2000 next largest U.S. companies based on total market capitalization.

The MSCI World ex US index is composed of large and mid cap companies that capture approximately 85% of the total market capitalization in 22 of the 23 developed markets. The MSCI Emerging Markets index is composed of large and mid cap companies that capture approximately 85% of the total market capitalization across 24 Emerging Markets countries.



	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 year</u>
Public Equity	9.0%	9.1%	28.0%	13.1%	9.5%	11.3%	5.6%	9.1%
Public Equity Benchmark	9.1	9.2	27.7	13.0				
Excess	-0.0	-0.1	0.3	0.1				
Domestic Equity	9.1	9.9	30.7	14.5	10.9	13.3	6.0	9.6
Domestic Equity Benchmark	9.1	10.3	30.8	14.5	11.2	13.4	6.2	9.8
Excess	-0.1	-0.4	-0.2	0.0	-0.3	-0.1	-0.1	-0.2
International Equity	9.0	7.3	22.4	10.1	5.9	5.5	4.1	
International Equity Benchmark	8.9	6.9	21.5	9.9	5.5	5.0	3.8	
Excess	0.1	0.4	0.9	0.3	0.4	0.5	0.4	

Note:

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





## Combined Funds Asset Class Performance Summary

### Fixed Income

The Combined Funds Fixed Income program includes Core Fixed Income and Treasuries. The Combined Funds performance for these asset classes is shown here.

The Core Fixed Income benchmark is the Bloomberg Barclays U.S. Aggregate Index. This index reflects the performance of the broad bond market for investment grade (Baa or higher) bonds, U.S. Treasury and agency securities, and mortgage obligations with maturities greater than one year.

The Treasuries benchmark is the Bloomberg Barclays Treasury 5+ Years Index.

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 year</u>
Fixed Income	0.5%	2.8%	9.7%	4.5%	3.6%	4.5%	5.4%	6.3%
Fixed Income Benchmark	0.2	2.5	8.7	4.0	3.0	3.7	5.0	5.9
Excess	0.3	0.3	1.0	0.5	0.5	0.8	0.4	0.4
Treasuries	-2.2	2.2	10.5					
BBG BARC 5Y + Us Tsy Idx	-2.3	2.2	10.4					
Excess	0.1	0.0	0.0					

### Cash

The Combined Funds Cash performance is shown here. Cash is held by the Combined Funds to meet the liquidity needs of the retirement systems to pay benefits.

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>30 year</u>
Cash	0.5%	1.1%	2.3%	1.8%	1.2%	0.8%	2.1%	3.6%
US 3-Month Treasury Bill	0.5	1.0	2.3	1.7	1.1	0.6	1.8	2.9

Note:

For additional information regarding historical asset class performance and benchmarks, please refer to the Combined Funds Performance Report.



## Combined Funds Asset Class Performance Summary

### Private Markets

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>25 year</u>	<u>30 year</u>
Private Markets	2.4%	4.2%	6.6%	13.5%	9.8%	12.2%	12.5%	13.6%	12.2%
Private Equity	4.2%	7.8%	13.2%	17.7%	15.0%	15.1%	13.5%	15.4%	
Private Credit	3.3	4.7	8.5	13.1	11.9	13.2	12.4		
Resources	-4.0	-7.4	-13.2	3.1	-5.4	4.5	14.5	14.1	
Real Estate	2.3	5.5	9.5	10.4	10.7	10.9	9.1	9.7	

### Private Markets

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

### Private Equity Investments

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

### Private Credit Investments

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

### Resource Investments

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

### Real Estate Investments

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

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



## Quarterly Report

# Asset Class & Manager Performance

## December 31, 2019

The assets of the Combined Funds are allocated to public equity, fixed income, private markets, and cash. Each asset class may be further differentiated by geography, management style, and/or strategy. Managers are hired to manage the assets accordingly. This diversification is intended to reduce wide fluctuations in investment returns on a year-to-year basis and enhances the Funds' ability to meet or exceed the actuarial return target over the long-term.

The Combined Funds consist of the assets of active employees and retired members of the statewide retirement plans. The SBI commingles the assets of these plans into the Combined Funds to capture investment efficiencies. This sharing is accomplished by grouping managers by asset class, geography, and management style, into several Investment Pools. The individual funds participate in the Investment Pools by purchasing units which function much like the shares of a mutual fund.

While the vast majority of the units of these pools are owned by the Combined Funds, the Supplemental Investment Fund also owns units of these pools. The Supplemental Investment Funds are mutual fund-like investment vehicles which are used by investors in the Participant Directed Investment Program. Please refer to the Participant Directed Investment Program report for more information.

The performance information presented on the following pages for Public Equity and Fixed Income includes both the Combined Funds and Supplemental Investment Fund. The Private Markets is Combined Funds only. All assets in the Combined Funds are managed externally by investment management firms retained by contract.

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# Domestic Equity

## December 31, 2019

Minnesota State Board of Investment  
Quarter Ending December 31, 2019  
Domestic Equity Managers



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Domestic Equity</b>										
<b>ACTIVE DOMESTIC EQUITY AGGREGATE (1)</b>	<b>\$4,658,817,762</b>	<b>14.3%</b>	<b>9.5%</b>	<b>6.7%</b>	<b>27.6%</b>	<b>12.9%</b>	<b>9.7%</b>	<b>12.6%</b>		
Active Domestic Equity Benchmark			9.4	9.0	28.2	11.8	9.9	12.7		
Excess			0.1	-2.3	-0.6	1.1	-0.2	-0.1		
<b>SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>2,522,231,632</b>	<b>7.7</b>	<b>8.9</b>	<b>10.1</b>	<b>30.9</b>	<b>15.1</b>	<b>11.2</b>	<b>13.6</b>		
Semi Passive Domestic Equity Benchmark			9.0	10.6	31.4	15.0	11.5	13.5		
Excess			-0.2	-0.4	-0.5	0.1	-0.2	0.1		
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (3)</b>	<b>25,412,824,931</b>	<b>78.0</b>	<b>9.0</b>	<b>10.5</b>	<b>31.3</b>	<b>14.8</b>	<b>11.3</b>	<b>13.5</b>		
Passive Domestic Equity Benchmark			9.1	10.5	31.3	14.9	11.4	13.5		
Excess			-0.0	0.0	0.0	-0.1	-0.0	-0.0		
TRANSITION AGGREGATE DOMESTIC EQUITY (4)	17,227	0.0								
<b>TOTAL DOMESTIC EQUITY (5)</b>	<b>32,593,891,551</b>	<b>100.0</b>	<b>9.1</b>	<b>9.9</b>	<b>30.7</b>	<b>14.5</b>	<b>10.9</b>	<b>13.3</b>	<b>10.6</b>	<b>01/1984</b>
Domestic Equity Benchmark			9.1	10.3	30.8	14.5	11.2	13.4	10.8	01/1984
Excess			-0.1	-0.4	-0.1	0.0	-0.3	-0.1	-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 contains Domestic Equity securities that are being transitioned to a different manager.

(5) The current Domestic Equity Benchmark is 90% Russell 1000 and 10% Russell 2000.

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



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Total Domestic Equity</b>					
<b>ACTIVE DOMESTIC EQUITY AGGREGATE (1)</b>	<b>-6.5%</b>	<b>20.6%</b>	<b>10.9%</b>	<b>-0.4%</b>	<b>9.3%</b>
Active Domestic Equity Benchmark	-8.0	18.3	15.7	-0.6	11.0
Excess	1.4	2.3	-4.8	0.3	-1.7
<b>SEMI PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>-4.9</b>	<b>22.5</b>	<b>11.1</b>	<b>0.5</b>	<b>14.2</b>
Semi Passive Domestic Equity Benchmark	-4.8	21.7	12.1	0.9	13.2
Excess	-0.1	0.8	-1.0	-0.4	1.0
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (3)</b>	<b>-5.0</b>	<b>21.3</b>	<b>12.6</b>	<b>0.5</b>	<b>12.6</b>
Passive Domestic Equity Benchmark	-5.0	21.5	12.5	0.5	12.6
Excess	-0.0	-0.2	0.1	0.0	0.0
<b>TRANSITION AGGREGATE DOMESTIC EQUITY (4)</b>					
<b>TOTAL DOMESTIC EQUITY (5)</b>	<b>-5.3%</b>	<b>21.4%</b>	<b>11.5</b>	<b>0.3</b>	<b>12.3</b>
Domestic Equity Benchmark	-5.2%	21.1%	12.7	0.5	12.6
Excess	-0.0%	0.2%	-1.3	-0.2	-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 contains Domestic Equity securities that are being transitioned to a different manager.

(5) The current Domestic Equity Benchmark is 90% Russell 1000 and 10% Russell 2000.

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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Large Cap Growth</b>										
<b>SANDS</b>	<b>\$436,889,256</b>	<b>1.3%</b>	<b>10.5%</b>	<b>4.9%</b>	<b>33.5%</b>	<b>24.6%</b>	<b>13.1%</b>	<b>16.6%</b>	<b>11.5%</b>	<b>01/2005</b>
Russell 1000 Growth			10.6	12.3	36.4	20.5	14.6	15.2	10.5	01/2005
Excess			-0.1	-7.3	-2.8	4.1	-1.5	1.4	1.0	
<b>WINSLOW</b>	<b>293,973,646</b>	<b>0.9</b>	<b>9.3</b>	<b>8.9</b>	<b>34.2</b>	<b>23.0</b>	<b>14.3</b>	<b>14.7</b>	<b>11.2</b>	<b>01/2005</b>
Russell 1000 Growth			10.6	12.3	36.4	20.5	14.6	15.2	10.5	01/2005
Excess			-1.3	-3.4	-2.2	2.5	-0.4	-0.5	0.7	
<b>ZEVENBERGEN</b>	<b>390,613,462</b>	<b>1.2</b>	<b>15.0</b>	<b>2.2</b>	<b>43.0</b>	<b>25.5</b>	<b>15.4</b>	<b>15.0</b>	<b>11.2</b>	<b>04/1994</b>
Russell 1000 Growth			10.6	12.3	36.4	20.5	14.6	15.2	10.1	04/1994
Excess			4.4	-10.0	6.7	5.0	0.7	-0.2	1.1	
<b>RUSSELL 1000 GROWTH AGGREGATE</b>	<b>1,121,476,365</b>	<b>3.4</b>	<b>11.7</b>	<b>4.7</b>	<b>37.3</b>	<b>24.2</b>	<b>15.2</b>	<b>15.8</b>		
Russell 1000 Growth			10.6	12.3	36.4	20.5	14.6	15.2		
Excess			1.1	-7.6	0.9	3.7	0.5	0.6		





	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Large Cap Growth</b>					
<b>SANDS</b>	<b>7.0%</b>	<b>35.3%</b>	<b>-6.9%</b>	<b>2.9%</b>	<b>9.1%</b>
Russell 1000 Growth	-1.5	30.2	7.1	5.7	13.0
Excess	8.6	5.1	-13.9	-2.8	-3.9
<b>WINSLOW</b>	<b>4.2</b>	<b>33.2</b>	<b>-1.9</b>	<b>6.7</b>	<b>11.0</b>
Russell 1000 Growth	-1.5	30.2	7.1	5.7	13.0
Excess	5.7	3.0	-9.0	1.0	-2.0
<b>ZEVENBERGEN</b>	<b>2.3</b>	<b>35.1</b>	<b>-2.8</b>	<b>6.4</b>	<b>3.4</b>
Russell 1000 Growth	-1.5	30.2	7.1	5.7	13.0
Excess	3.8	4.9	-9.9	0.7	-9.6
<b>RUSSELL 1000 GROWTH AGGREGATE</b>	<b>4.7%</b>	<b>33.4%</b>	<b>1.0</b>	<b>4.6</b>	<b>9.6</b>
Russell 1000 Growth	-1.5%	30.2%	7.1	5.7	13.0
Excess	6.2%	3.2%	-6.1	-1.1	-3.4



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Large Cap Value</b>										
<b>BARROW HANLEY</b>	<b>\$351,520,913</b>	<b>1.1%</b>	<b>5.6%</b>	<b>9.7%</b>	<b>26.9%</b>	<b>11.0%</b>	<b>8.6%</b>	<b>11.6%</b>	<b>8.4%</b>	<b>04/2004</b>
Russell 1000 Value			7.4	8.9	26.5	9.7	8.3	11.8	8.1	04/2004
Excess			-1.8	0.8	0.4	1.4	0.3	-0.2	0.4	
<b>EARNEST PARTNERS</b>	<b>323,033,879</b>	<b>1.0</b>	<b>9.4</b>	<b>8.8</b>	<b>28.1</b>	<b>12.3</b>	<b>9.9</b>	<b>11.7</b>	<b>7.4</b>	<b>07/2000</b>
Russell 1000 Value			7.4	8.9	26.5	9.7	8.3	11.8	7.5	07/2000
Excess			2.0	-0.1	1.5	2.6	1.6	-0.1	-0.1	
<b>LSV</b>	<b>429,347,269</b>	<b>1.3</b>	<b>9.5</b>	<b>11.1</b>	<b>26.9</b>	<b>9.9</b>	<b>8.7</b>	<b>12.8</b>	<b>9.2</b>	<b>04/2004</b>
Russell 1000 Value			7.4	8.9	26.5	9.7	8.3	11.8	8.1	04/2004
Excess			2.0	2.2	0.4	0.2	0.4	1.0	1.1	
<b>RUSSELL 1000 VALUE AGGREGATE</b>	<b>1,103,902,061</b>	<b>3.4</b>	<b>8.1</b>	<b>10.1</b>	<b>27.4</b>	<b>10.9</b>	<b>8.8</b>	<b>12.0</b>		
Russell 1000 Value			7.4	8.9	26.5	9.7	8.3	11.8		
Excess			0.7	1.3	0.9	1.3	0.5	0.2		



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Large Cap Value</b>					
<b>BARROW HANLEY</b>	<b>-5.9%</b>	<b>14.6%</b>	<b>12.8%</b>	<b>-2.1%</b>	<b>13.0%</b>
Russell 1000 Value	-8.3	13.7	17.3	-3.8	13.5
Excess	2.4	0.9	-4.5	1.7	-0.5
<b>EARNEST PARTNERS</b>	<b>-7.7</b>	<b>19.9</b>	<b>16.2</b>	<b>-2.7</b>	<b>14.0</b>
Russell 1000 Value	-8.3	13.7	17.3	-3.8	13.5
Excess	0.6	6.2	-1.1	1.1	0.5
<b>LSV</b>	<b>-11.8</b>	<b>18.6</b>	<b>17.0</b>	<b>-2.2</b>	<b>14.0</b>
Russell 1000 Value	-8.3	13.7	17.3	-3.8	13.5
Excess	-3.6	4.9	-0.4	1.6	0.6
<b>RUSSELL 1000 VALUE AGGREGATE</b>	<b>-8.7%</b>	<b>17.3%</b>	<b>15.3</b>	<b>-3.2</b>	<b>13.1</b>
Russell 1000 Value	-8.3%	13.7%	17.3	-3.8	13.5
Excess	-0.4%	3.7%	-2.1	0.6	-0.4



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Semi-Passive Large Cap</b>										
<b>BLACKROCK</b>	\$1,232,376,434	3.8%	8.4%	9.4%	30.4%	15.9%	12.1%	14.0%	10.2%	01/1995
Semi Passive Domestic Equity Benchmark			9.0	10.6	31.4	15.0	11.5	13.5	9.8	01/1995
Excess			-0.6	-1.2	-1.0	0.9	0.6	0.5	0.4	
<b>J.P. MORGAN</b>										
	1,289,855,198	4.0	9.3	10.8	31.3	14.8	11.4	13.8	10.1	01/1995
Semi Passive Domestic Equity Benchmark			9.0	10.6	31.4	15.0	11.5	13.5	9.8	01/1995
Excess			0.2	0.2	-0.1	-0.2	-0.1	0.3	0.3	
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>										
	2,522,231,632	7.7	8.9	10.1	30.9	15.1	11.2	13.6		
Semi Passive Domestic Equity Benchmark			9.0	10.6	31.4	15.0	11.5	13.5		
Excess			-0.2	-0.4	-0.5	0.1	-0.2	0.1		



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Semi-Passive Large Cap</b>					
<b>BLACKROCK</b>	<b>-4.1%</b>	<b>24.6%</b>	<b>12.5%</b>	<b>0.8%</b>	<b>14.2%</b>
Semi Passive Domestic Equity Benchmark	-4.8	21.7	12.1	0.9	13.2
Excess	0.7	2.9	0.5	-0.1	1.0
<b>J.P. MORGAN</b>					
<b>J.P. MORGAN</b>	<b>-5.4</b>	<b>21.8</b>	<b>12.3</b>	<b>0.8</b>	<b>15.0</b>
Semi Passive Domestic Equity Benchmark	-4.8	21.7	12.1	0.9	13.2
Excess	-0.6	0.1	0.2	-0.1	1.8
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>					
<b>SEMI-PASSIVE DOMESTIC EQUITY AGGREGATE</b>	<b>-4.9%</b>	<b>22.5%</b>	<b>11.1</b>	<b>0.5</b>	<b>14.2</b>
Semi Passive Domestic Equity Benchmark	-4.8%	21.7%	12.1	0.9	13.2
Excess	-0.1%	0.8%	-1.0	-0.4	1.0



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Small Cap Growth</b>										
<b>ARROWMARK</b>	<b>\$251,167,796</b>	<b>0.8%</b>	<b>13.4%</b>	<b>7.9%</b>	<b>20.1%</b>	<b>15.2%</b>			<b>17.5%</b>	<b>11/2016</b>
Russell 2000 Growth			11.4	6.7	28.5	12.5			15.4	11/2016
Excess			2.0	1.2	-8.4	2.7			2.2	
<b>HOOD RIVER</b>	<b>266,743,937</b>	<b>0.8</b>	<b>9.8</b>	<b>0.4</b>	<b>24.3</b>	<b>11.9</b>			<b>14.2</b>	<b>11/2016</b>
Russell 2000 Growth			11.4	6.7	28.5	12.5			15.4	11/2016
Excess			-1.6	-6.4	-4.2	-0.6			-1.2	
<b>RICE HALL JAMES</b>	<b>237,158,309</b>	<b>0.7</b>	<b>9.6</b>	<b>4.5</b>	<b>18.0</b>	<b>12.0</b>			<b>15.4</b>	<b>11/2016</b>
Russell 2000 Growth			11.4	6.7	28.5	12.5			15.4	11/2016
Excess			-1.8	-2.2	-10.5	-0.5			0.1	
<b>WELLINGTON</b>	<b>284,624,669</b>	<b>0.9</b>	<b>13.1</b>	<b>9.8</b>	<b>35.6</b>	<b>13.7</b>			<b>16.5</b>	<b>11/2016</b>
Russell 2000 Growth			11.4	6.7	28.5	12.5			15.4	11/2016
Excess			1.7	3.1	7.1	1.2			1.2	
<b>RUSSELL 2000 GROWTH AGGREGATE</b>	<b>1,039,694,712</b>	<b>3.2</b>	<b>11.5</b>	<b>5.6</b>	<b>24.6</b>	<b>12.6</b>	<b>8.6</b>	<b>11.3</b>		
Russell 2000 Growth			11.4	6.7	28.5	12.5	9.3	13.0		
Excess			0.1	-1.1	-3.9	0.1	-0.8	-1.7		



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Small Cap Growth</b>					
<b>ARROWMARK</b>	<b>0.9%</b>	<b>26.2%</b>			
Russell 2000 Growth	-9.3	22.2			
Excess	10.3	4.1			
<b>HOOD RIVER</b>	<b>-7.0</b>	<b>21.3</b>			
Russell 2000 Growth	-9.3	22.2			
Excess	2.3	-0.9			
<b>RICE HALL JAMES</b>	<b>-6.9</b>	<b>27.9</b>			
Russell 2000 Growth	-9.3	22.2			
Excess	2.4	5.8			
<b>WELLINGTON</b>	<b>-11.6</b>	<b>22.6</b>			
Russell 2000 Growth	-9.3	22.2			
Excess	-2.3	0.4			
<b>RUSSELL 2000 GROWTH AGGREGATE</b>	<b>-6.2%</b>	<b>22.0%</b>	<b>4.7</b>	<b>1.0</b>	<b>-3.4</b>
Russell 2000 Growth	-9.3%	22.2%	11.3	-1.4	5.6
Excess	3.2%	-0.1%	-6.6	2.4	-9.0



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Small Cap Value</b>										
<b>GOLDMAN SACHS</b>	<b>\$389,018,353</b>	<b>1.2%</b>	<b>7.1%</b>	<b>6.1%</b>	<b>23.2%</b>	<b>6.3%</b>	<b>7.3%</b>	<b>12.3%</b>	<b>9.3%</b>	<b>01/2004</b>
Russell 2000 Value			8.5	7.9	22.4	4.8	7.0	10.6	7.8	01/2004
Excess			-1.4	-1.8	0.8	1.5	0.3	1.7	1.5	
<b>HOTCHKIS AND WILEY</b>	<b>316,633,553</b>	<b>1.0</b>	<b>8.4</b>	<b>6.3</b>	<b>19.7</b>	<b>3.4</b>	<b>3.9</b>	<b>12.3</b>	<b>7.9</b>	<b>01/2004</b>
Russell 2000 Value			8.5	7.9	22.4	4.8	7.0	10.6	7.8	01/2004
Excess			-0.1	-1.6	-2.7	-1.4	-3.0	1.7	0.1	
<b>MARTINGALE</b>	<b>306,018,159</b>	<b>0.9</b>	<b>8.2</b>	<b>7.9</b>	<b>21.1</b>	<b>3.3</b>	<b>7.0</b>	<b>12.0</b>	<b>7.7</b>	<b>01/2004</b>
Russell 2000 Value			8.5	7.9	22.4	4.8	7.0	10.6	7.8	01/2004
Excess			-0.3	0.0	-1.3	-1.5	-0.0	1.5	-0.1	
<b>PEREGRINE</b>	<b>382,074,561</b>	<b>1.2</b>	<b>5.5</b>	<b>6.3</b>	<b>21.1</b>	<b>4.5</b>	<b>6.4</b>	<b>10.9</b>	<b>9.8</b>	<b>07/2000</b>
Russell 2000 Value			8.5	7.9	22.4	4.8	7.0	10.6	9.3	07/2000
Excess			-3.0	-1.6	-1.3	-0.2	-0.6	0.4	0.4	
<b>RUSSELL 2000 VALUE AGGREGATE</b>	<b>1,393,744,625</b>	<b>4.3</b>	<b>7.2</b>	<b>6.6</b>	<b>21.3</b>	<b>4.5</b>	<b>6.2</b>	<b>11.8</b>		
Russell 2000 Value			8.5	7.9	22.4	4.8	7.0	10.6		
Excess			-1.3	-1.3	-1.1	-0.3	-0.8	1.2		





	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Small Cap Value</b>					
<b>GOLDMAN SACHS</b>	<b>-13.3%</b>	<b>12.6%</b>	<b>24.6%</b>	<b>-5.2%</b>	<b>7.4%</b>
Russell 2000 Value	-12.9	7.8	31.7	-7.5	4.2
Excess	-0.5	4.7	-7.1	2.3	3.1
<b>HOTCHKIS AND WILEY</b>					
	<b>-14.4</b>	<b>7.9</b>	<b>19.9</b>	<b>-8.5</b>	<b>13.0</b>
Russell 2000 Value	-12.9	7.8	31.7	-7.5	4.2
Excess	-1.5	0.0	-11.8	-1.0	8.8
<b>MARTINGALE</b>					
	<b>-15.0</b>	<b>6.9</b>	<b>34.3</b>	<b>-5.2</b>	<b>7.3</b>
Russell 2000 Value	-12.9	7.8	31.7	-7.5	4.2
Excess	-2.1	-0.9	2.5	2.3	3.1
<b>PEREGRINE</b>					
	<b>-16.1</b>	<b>12.5</b>	<b>27.8</b>	<b>-6.7</b>	<b>4.1</b>
Russell 2000 Value	-12.9	7.8	31.7	-7.5	4.2
Excess	-3.3	4.7	-3.9	0.8	-0.1
<b>RUSSELL 2000 VALUE AGGREGATE</b>					
	<b>-14.7%</b>	<b>10.2%</b>	<b>26.5</b>	<b>-6.5</b>	<b>7.5</b>
Russell 2000 Value	-12.9%	7.8%	31.7	-7.5	4.2
Excess	-1.8%	2.3%	-5.2	1.0	3.3

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 Domestic Equity Managers



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Passive Domestic Equity</b>										
<b>BLACKROCK RUSSELL 1000</b>	<b>\$23,213,796,224</b>	<b>71.2%</b>	<b>9.0%</b>	<b>10.6%</b>	<b>31.4%</b>	<b>15.0%</b>			<b>16.3%</b>	<b>11/2016</b>
Russell 1000			9.0	10.6	31.4	15.0			16.3	11/2016
Excess			-0.0	0.0	0.0	-0.0			-0.0	
<b>BLACKROCK RUSSELL 2000</b>	<b>637,392,341</b>	<b>2.0</b>	<b>9.9</b>	<b>7.2</b>	<b>25.2</b>				<b>10.5</b>	<b>11/2018</b>
RUSSELL 2000 (DAILY)			9.9	7.3	25.5				10.5	11/2018
Excess			-0.1	-0.1	-0.3				0.0	
<b>BLACKROCK RUSSELL 3000 (1)</b>	<b>1,561,636,366</b>	<b>4.8</b>	<b>9.1</b>	<b>10.4</b>	<b>31.1</b>	<b>14.6</b>	<b>11.3%</b>	<b>13.4%</b>	<b>9.6</b>	<b>07/1995</b>
Passive Manager Benchmark			9.1	10.4	31.0	14.6	11.2	13.4	9.5	07/1995
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>25,412,824,931</b>	<b>78.0</b>	<b>9.0</b>	<b>10.5</b>	<b>31.3</b>	<b>14.8</b>	<b>11.3</b>	<b>13.5</b>		
Passive Domestic Equity Benchmark			9.1	10.5	31.3	14.9	11.4	13.5		
Excess			-0.0	0.0	0.0	-0.1	-0.0	-0.0		

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

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



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Total Passive Domestic Equity</b>					
<b>BLACKROCK RUSSELL 1000</b>	<b>-4.8%</b>	<b>21.7%</b>			
Russell 1000	-4.8	21.7			
Excess	-0.0	-0.0			
<b>BLACKROCK RUSSELL 2000</b>					
RUSSELL 2000 (DAILY)					
Excess					
<b>BLACKROCK RUSSELL 3000 (1)</b>	<b>-5.2</b>	<b>21.1</b>	<b>12.7%</b>	<b>0.5%</b>	<b>12.6%</b>
Passive Manager Benchmark	-5.2	21.1	12.7	0.5	12.6
<b>PASSIVE DOMESTIC EQUITY AGGREGATE (2)</b>	<b>-5.0%</b>	<b>21.3%</b>	<b>12.6</b>	<b>0.5</b>	<b>12.6</b>
Passive Domestic Equity Benchmark	-5.0%	21.5%	12.5	0.5	12.6
Excess	-0.0%	-0.2%	0.1	0.0	0.0

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

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

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# International Equity

## December 31, 2019



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total International Equity</b>										
<b>DEVELOPED MARKETS (1)</b>	<b>\$11,724,612,893</b>	<b>74.6%</b>	<b>8.0%</b>	<b>7.0%</b>	<b>23.3%</b>	<b>9.7%</b>	<b>5.9%</b>	<b>6.1%</b>		
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3		
Excess			0.2	0.1	0.8	0.4	0.5	0.8		
<b>EMERGING MARKETS (2)</b>	<b>3,984,209,212</b>	<b>25.4</b>	<b>11.9</b>	<b>8.5</b>	<b>20.3</b>	<b>11.9</b>	<b>5.6</b>	<b>3.3</b>		
BENCHMARK EM			11.8	7.1	18.4	11.6	5.6	3.7		
Excess			0.1	1.4	1.9	0.4	-0.1	-0.4		
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)	1,341,980	0.0								
<b>TOTAL INTERNATIONAL EQUITY (4)</b>	<b>15,710,164,086</b>	<b>100.0</b>	<b>9.0</b>	<b>7.3</b>	<b>22.4</b>	<b>10.1</b>	<b>5.9</b>	<b>5.5</b>	<b>6.6</b>	<b>10/1992</b>
International Equity Benchmark			8.9	6.9	21.5	9.9	5.5	5.0	6.1	10/1992
Excess			0.1	0.4	0.9	0.2	0.4	0.5	0.5	

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

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

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

(4) The current International Equity Benchmark is 75% MSCI World ex USA (net) and 25% MSCI Emerging Markets Free (net). Does not includes impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio.

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



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Total International Equity</b>					
<b>DEVELOPED MARKETS (1)</b>	<b>-14.2%</b>	<b>24.9%</b>	<b>1.3%</b>	<b>-0.3%</b>	<b>-4.1%</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-0.1	0.7	-1.5	2.8	0.2
<b>EMERGING MARKETS (2)</b>	<b>-15.4</b>	<b>37.7</b>	<b>7.5</b>	<b>-13.1</b>	<b>-3.8</b>
BENCHMARK EM	-14.6	37.3	11.2	-14.9	-2.2
Excess	-0.8	0.4	-3.7	1.9	-1.6
TRANSITION AGGREGATE INTERNATIONAL EQUITY (3)					
<b>TOTAL INTERNATIONAL EQUITY (4)</b>	<b>-14.5%</b>	<b>27.6%</b>	<b>2.6</b>	<b>-2.9</b>	<b>-4.0</b>
International Equity Benchmark	-14.2%	27.2%	4.5	-5.7	-3.9
Excess	-0.3%	0.4%	-1.8	2.8	-0.2

(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 75% MSCI World ex USA (net) and 25% MSCI Emerging Markets Free (net). Does not include impact of currency overlay on the passive EAFE portfolio from 12/1/95-10/31/00. This impact is included in the return for the Combined Funds portion of the International Equity portfolio.

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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Developed Markets</b>										
<b>ACADIAN</b>	<b>\$409,615,730</b>	<b>2.6%</b>	<b>7.1%</b>	<b>5.8%</b>	<b>19.1%</b>	<b>12.2%</b>	<b>9.3%</b>	<b>8.5%</b>	<b>6.6%</b>	<b>07/2005</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	5.1	07/2005
Excess			-0.8	-1.0	-3.4	2.8	3.9	3.2	1.5	
<b>COLUMBIA</b>	<b>385,548,838</b>	<b>2.5</b>	<b>8.5</b>	<b>7.8</b>	<b>28.9</b>	<b>13.3</b>	<b>7.9</b>	<b>7.5</b>	<b>3.4</b>	<b>03/2000</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	3.6	03/2000
Excess			0.6	0.9	6.4	4.0	2.5	2.2	-0.2	
<b>FIDELITY</b>	<b>416,511,632</b>	<b>2.7</b>	<b>8.7</b>	<b>7.4</b>	<b>27.1</b>	<b>11.0</b>	<b>6.7</b>	<b>7.0</b>	<b>6.7</b>	<b>07/2005</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	5.1	07/2005
Excess			0.9	0.5	4.6	1.6	1.3	1.7	1.6	
<b>JP MORGAN</b>	<b>286,232,935</b>	<b>1.8</b>	<b>8.1</b>	<b>6.7</b>	<b>28.5</b>	<b>10.9</b>	<b>6.2</b>	<b>5.8</b>	<b>5.4</b>	<b>07/2005</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	5.1	07/2005
Excess			0.3	-0.1	6.0	1.5	0.8	0.5	0.3	
<b>MARATHON</b>	<b>390,466,216</b>	<b>2.5</b>	<b>9.1</b>	<b>8.5</b>	<b>23.5</b>	<b>9.6</b>	<b>6.8</b>	<b>7.7</b>	<b>8.1</b>	<b>11/1993</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	5.2	11/1993
Excess			1.2	1.6	1.0	0.3	1.4	2.4	2.9	
<b>MCKINLEY</b>	<b>281,667,155</b>	<b>1.8</b>	<b>8.2</b>	<b>6.2</b>	<b>25.6</b>	<b>10.7</b>	<b>5.3</b>	<b>5.9</b>	<b>4.9</b>	<b>07/2005</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	5.1	07/2005
Excess			0.4	-0.7	3.1	1.4	-0.1	0.6	-0.2	
<b>ACTIVE DEVELOPED MARKETS AGGREGATE</b>	<b>2,170,042,506</b>	<b>13.8</b>	<b>8.3</b>	<b>7.1</b>	<b>25.0</b>	<b>11.1</b>	<b>7.1</b>	<b>7.1</b>		
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3		
Excess			0.4	0.3	2.5	1.8	1.7	1.7		





	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Developed Markets</b>					
<b>ACADIAN</b>	<b>-13.5%</b>	<b>37.0%</b>	<b>8.1%</b>	<b>2.4%</b>	<b>-1.7%</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	0.6	12.8	5.4	5.4	2.6
<b>COLUMBIA</b>	<b>-14.9</b>	<b>32.7</b>	<b>-5.6</b>	<b>6.4</b>	<b>-5.6</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-0.8	8.5	-8.3	9.4	-1.2
<b>FIDELITY</b>	<b>-14.6</b>	<b>25.9</b>	<b>1.2</b>	<b>0.1</b>	<b>-5.6</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-0.5	1.7	-1.5	3.2	-1.3
<b>JP MORGAN</b>	<b>-17.3</b>	<b>28.3</b>	<b>4.0</b>	<b>-4.7</b>	<b>-5.1</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-3.3	4.1	1.2	-1.6	-0.7
<b>MARATHON</b>	<b>-13.4</b>	<b>23.1</b>	<b>-1.1</b>	<b>6.7</b>	<b>-4.0</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	0.7	-1.1	-3.8	9.7	0.3
<b>MCKINLEY</b>	<b>-15.9</b>	<b>28.5</b>	<b>-7.5</b>	<b>3.1</b>	<b>-2.7</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-1.9	4.3	-10.2	6.2	1.6
<b>ACTIVE DEVELOPED MARKETS AGGREGATE</b>	<b>-14.5%</b>	<b>28.4%</b>	<b>-0.2</b>	<b>3.2</b>	<b>-4.1</b>
BENCHMARK DM	-14.1%	24.2%	2.7	-3.0	-4.3
Excess	-0.4%	4.2%	-3.0	6.2	0.2



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Semi-Passive Developed Markets</b>										
AQR	\$364,540,109	2.3%	9.0%	5.9%	20.8%	7.3%	4.7%	5.6%	5.3%	07/2005
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	5.1	07/2005
Excess			1.1	-0.9	-1.7	-2.0	-0.7	0.3	0.1	
<b>SEMI-PASSIVE DEVELOPED MARKETS AGGREGATE</b>										
	364,540,109	2.3	9.0	5.9	20.8	6.6	3.8	5.0		
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3		
Excess			1.1	-0.9	-1.7	-2.7	-1.6	-0.4		



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Semi-Passive Developed Markets</b>					
AQR	-18.2%	25.1%	0.8%	0.9%	-4.4%
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-4.1	0.9	-2.0	3.9	-0.1
<b>SEMI-PASSIVE DEVELOPED MARKETS AGGREGATE</b>	<b>-18.7%</b>	<b>23.3%</b>	<b>-0.4</b>	<b>-0.3</b>	<b>-4.4</b>
BENCHMARK DM	-14.1%	24.2%	2.7	-3.0	-4.3
Excess	-4.6%	-0.9%	-3.1	2.7	-0.1



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Developed Markets</b>										
<b>ACTIVE DEVELOPED MARKETS AGGREGATE</b>	<b>\$2,170,042,506</b>	<b>13.8%</b>	<b>8.3%</b>	<b>7.1%</b>	<b>25.0%</b>	<b>11.1%</b>	<b>7.1%</b>	<b>7.1%</b>		
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3		
Excess			0.4	0.3	2.5	1.8	1.7	1.7		
<b>SEMI-PASSIVE DEVELOPED MARKETS AGGREGATE</b>	<b>364,540,109</b>	<b>2.3</b>	<b>9.0</b>	<b>5.9</b>	<b>20.8</b>	<b>6.6</b>	<b>3.8</b>	<b>5.0</b>		
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3		
Excess			1.1	-0.9	-1.7	-2.7	-1.6	-0.4		
<b>SSgA DEVELOPED MARKETS PASSIVE</b>	<b>9,190,030,279</b>	<b>58.5</b>	<b>7.9</b>	<b>7.0</b>	<b>23.0</b>	<b>9.7</b>	<b>5.8</b>	<b>5.7</b>	<b>6.3</b>	<b>10/1992</b>
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3	6.0	10/1992
Excess			0.1	0.1	0.5	0.4	0.4	0.4	0.3	
<b>DEVELOPED MARKETS TOTAL</b>	<b>11,724,612,893</b>	<b>74.6</b>	<b>8.0</b>	<b>7.0</b>	<b>23.3</b>	<b>9.7</b>	<b>5.9</b>	<b>6.1</b>		
BENCHMARK DM			7.9	6.9	22.5	9.3	5.4	5.3		
Excess			0.2	0.1	0.8	0.4	0.5	0.8		



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Total Developed Markets</b>					
<b>ACTIVE DEVELOPED MARKETS AGGREGATE</b>	<b>-14.5%</b>	<b>28.4%</b>	<b>-0.2%</b>	<b>3.2%</b>	<b>-4.1%</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-0.4	4.2	-3.0	6.2	0.2
<b>SEMI-PASSIVE DEVELOPED MARKETS AGGREGATE</b>	<b>-18.7</b>	<b>23.3</b>	<b>-0.4</b>	<b>-0.3</b>	<b>-4.4</b>
BENCHMARK DM	-14.1	24.2	2.7	-3.0	-4.3
Excess	-4.6	-0.9	-3.1	2.7	-0.1
<b>SSgA DEVELOPED MARKETS PASSIVE</b>	<b>-13.9%</b>	<b>24.7%</b>	<b>3.2</b>	<b>-2.6</b>	<b>-3.9</b>
BENCHMARK DM	-14.1%	24.2%	2.7	-3.0	-4.3
Excess	0.2%	0.5%	0.4	0.5	0.4
<b>DEVELOPED MARKETS TOTAL</b>	<b>-14.2%</b>	<b>24.9%</b>	<b>1.3</b>	<b>-0.3</b>	<b>-4.1</b>
BENCHMARK DM	-14.1%	24.2%	2.7	-3.0	-4.3
Excess	-0.1%	0.7%	-1.5	2.8	0.2



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Emerging Markets</b>										
<b>EARNEST PARTNERS</b>	<b>\$339,952,645</b>	<b>2.2%</b>	<b>11.9%</b>	<b>9.3%</b>	<b>24.7%</b>				<b>9.7%</b>	<b>04/2017</b>
MSCI EMERGING MARKETS			11.8	7.1	18.4				8.3	04/2017
Excess			0.1	2.2	6.3				1.4	
<b>MARTIN CURRIE</b>	<b>376,704,245</b>	<b>2.4</b>	<b>14.2</b>	<b>11.9</b>	<b>27.3</b>				<b>12.8</b>	<b>04/2017</b>
BENCHMARK EM			11.8	7.1	18.4				8.3	04/2017
Excess			2.3	4.8	8.8				4.4	
<b>MACQUARIE</b>	<b>357,018,040</b>	<b>2.3</b>	<b>14.0</b>	<b>12.4</b>	<b>23.2</b>				<b>10.5</b>	<b>04/2017</b>
BENCHMARK EM			11.8	7.1	18.4				8.3	04/2017
Excess			2.2	5.4	4.7				2.1	
<b>MORGAN STANLEY</b>	<b>659,876,904</b>	<b>4.2</b>	<b>11.1</b>	<b>8.7</b>	<b>20.4</b>	<b>11.4%</b>	<b>5.8%</b>	<b>4.4%</b>	<b>9.5</b>	<b>01/2001</b>
BENCHMARK EM			11.8	7.1	18.4	11.6	5.6	3.7	9.2	01/2001
Excess			-0.7	1.6	1.9	-0.2	0.2	0.7	0.3	
<b>NEUBERGER BERMAN</b>	<b>339,357,583</b>	<b>2.2</b>	<b>9.4</b>	<b>6.7</b>	<b>19.7</b>				<b>8.5</b>	<b>04/2017</b>
BENCHMARK EM			11.8	7.1	18.4				8.3	04/2017
Excess			-2.5	-0.4	1.3				0.2	
<b>PZENA</b>	<b>314,263,272</b>	<b>2.0</b>	<b>12.2</b>	<b>6.0</b>	<b>13.4</b>				<b>5.9</b>	<b>04/2017</b>
BENCHMARK EM			11.8	7.1	18.4				8.3	04/2017
Excess			0.4	-1.1	-5.1				-2.4	
<b>ROCK CREEK</b>	<b>323,042,659</b>	<b>2.1</b>	<b>11.9</b>	<b>9.6</b>	<b>22.3</b>				<b>6.9</b>	<b>04/2017</b>
BENCHMARK EM			11.8	7.1	18.4				8.3	04/2017
Excess			0.1	2.5	3.9				-1.4	



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Emerging Markets</b>					
<b>EARNEST PARTNERS</b>	<b>-15.4%</b>				
MSCI EMERGING MARKETS	-14.6				
Excess	-0.8				
<b>MARTIN CURRIE</b>					
<b>BENCHMARK EM</b>	<b>-16.6</b>				
BENCHMARK EM	-14.6				
Excess	-2.0				
<b>MACQUARIE</b>					
<b>BENCHMARK EM</b>	<b>-13.3</b>				
BENCHMARK EM	-14.6				
Excess	1.3				
<b>MORGAN STANLEY</b>					
<b>BENCHMARK EM</b>	<b>-16.7</b>	<b>37.9%</b>	<b>6.1%</b>	<b>-9.4%</b>	<b>-2.5%</b>
BENCHMARK EM	-14.6	37.3	11.2	-14.9	-2.2
Excess	-2.2	0.6	-5.1	5.5	-0.3
<b>NEUBERGER BERMAN</b>					
<b>BENCHMARK EM</b>	<b>-17.1</b>				
BENCHMARK EM	-14.6				
Excess	-2.6				
<b>PZENA</b>					
<b>BENCHMARK EM</b>	<b>-10.8</b>				
BENCHMARK EM	-14.6				
Excess	3.8				
<b>ROCK CREEK</b>					
<b>BENCHMARK EM</b>	<b>-17.6</b>				
BENCHMARK EM	-14.6				
Excess	-3.1				



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Emerging Markets</b>										
<b>ACTIVE EMERGING MARKETS AGGREGATE</b>	<b>\$2,710,215,350</b>	<b>17.3%</b>	<b>12.0%</b>	<b>9.2%</b>	<b>21.4%</b>	<b>12.0%</b>	<b>5.3%</b>	<b>3.1%</b>		
BENCHMARK EM			11.8	7.1	18.4	11.6	5.6	3.7		
Excess			0.2	2.1	3.0	0.5	-0.4	-0.6		
<b>SSGA EMERGING MARKETS PASSIVE</b>	<b>1,273,993,862</b>	<b>8.1</b>	<b>11.7</b>	<b>6.9</b>	<b>18.1</b>	<b>11.5</b>	<b>5.6</b>		<b>5.1</b>	<b>01/2012</b>
BENCHMARK EM			11.8	7.1	18.4	11.6	5.6		5.0	01/2012
Excess			-0.1	-0.2	-0.3	-0.1	-0.0		0.1	
<b>EMERGING MARKETS TOTAL</b>	<b>3,984,209,212</b>	<b>25.4</b>	<b>11.9</b>	<b>8.5</b>	<b>20.3</b>	<b>11.9</b>	<b>5.6</b>	<b>3.3</b>		
BENCHMARK EM			11.8	7.1	18.4	11.6	5.6	3.7		
Excess			0.1	1.4	1.9	0.4	-0.1	-0.4		





	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Total Emerging Markets</b>					
<b>ACTIVE EMERGING MARKETS AGGREGATE</b>	-15.6%	37.2%	5.3%	-12.7%	-4.1%
BENCHMARK EM	-14.6	37.3	11.2	-14.9	-2.2
Excess	-1.0	-0.1	-5.9	2.2	-2.0
<b>SSGA EMERGING MARKETS PASSIVE</b>					
<b>SSGA EMERGING MARKETS PASSIVE</b>	-14.7%	37.4%	11.1	-14.6	-2.1
BENCHMARK EM	-14.6%	37.3%	11.2	-14.9	-2.2
Excess	-0.1%	0.1%	-0.1	0.3	0.0
<b>EMERGING MARKETS TOTAL</b>					
<b>EMERGING MARKETS TOTAL</b>	-15.4%	37.7%	7.5	-13.1	-3.8
BENCHMARK EM	-14.6%	37.3%	11.2	-14.9	-2.2
Excess	-0.8%	0.4%	-3.7	1.9	-1.6

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# Fixed Income

## December 31, 2019



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Total Fixed Income</b>										
<b>ACTIVE FIXED INCOME AGGREGATE</b>	<b>\$4,188,177,145</b>	<b>56.5%</b>	<b>0.6%</b>	<b>2.9%</b>	<b>10.0%</b>	<b>4.8%</b>	<b>3.9%</b>	<b>4.9%</b>		
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7		
Excess			0.5	0.4	1.3	0.8	0.8	1.1		
<b>SEMI PASSIVE FIXED INCOME AGGREGATE</b>	<b>3,222,148,798</b>	<b>43.5</b>	<b>0.2</b>	<b>2.7</b>	<b>9.3</b>	<b>4.3</b>	<b>3.3</b>	<b>4.1</b>		
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7		
Excess			0.0	0.2	0.6	0.2	0.2	0.4		
TRANSITION AGGREGATE FIXED INCOME (1)	18,547	0.0								
<b>TOTAL FIXED INCOME (2)</b>	<b>7,410,344,490</b>	<b>100.0</b>	<b>0.5</b>	<b>2.8</b>	<b>9.7</b>	<b>4.5</b>	<b>3.6</b>	<b>4.5</b>	<b>7.5</b>	<b>07/1984</b>
Fixed Income Benchmark			0.2	2.5	8.7	4.0	3.0	3.7	7.1	07/1984
Excess			0.3	0.3	1.0	0.5	0.5	0.8	0.4	

(1) The Transition Aggregate Fixed Income includes fixed income securities that are being transition to a different manager.

(2) The current Fixed Income Benchmark is the Bloomberg Barclays U.S. Aggregate calculated daily: BBG BARC Agg (Dly). For historical benchmark details please refer to the addendum of this report.

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



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Total Fixed Income</b>					
<b>ACTIVE FIXED INCOME AGGREGATE</b>	<b>0.0%</b>	<b>4.7%</b>	<b>4.4%</b>	<b>0.6%</b>	<b>6.2%</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.0	1.2	1.7	0.0	0.2
<b>SEMI PASSIVE FIXED INCOME AGGREGATE</b>	<b>-0.1</b>	<b>3.7</b>	<b>2.8</b>	<b>0.8</b>	<b>6.1</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.1	0.2	0.2	0.2	0.1
TRANSITION AGGREGATE FIXED INCOME (1)					
<b>TOTAL FIXED INCOME (2)</b>	<b>-0.0%</b>	<b>4.2%</b>	<b>3.6</b>	<b>0.7</b>	<b>6.1</b>
Fixed Income Benchmark	0.0%	3.5%	2.6	0.5	6.0
Excess	-0.1%	0.7%	0.9	0.1	0.2

(1) The Transition Aggregate Fixed Income includes fixed income securities that are being transition to a different manager.

(2) The current Fixed Income Benchmark is the Bloomberg Barclays U.S. Aggregate calculated daily: BBG BARC Agg (Dly). For historical benchmark details please refer to the addendum of this report.

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



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Active Fixed Income Managers</b>										
<b>COLUMBIA</b>	<b>\$992,605,014</b>	<b>13.4%</b>	<b>0.4%</b>	<b>2.9%</b>	<b>10.7%</b>	<b>5.1%</b>	<b>4.1%</b>	<b>4.8%</b>	<b>5.5%</b>	<b>07/1993</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	5.2	07/1993
Excess			0.2	0.5	1.9	1.1	1.1	1.1	0.2	
<b>DODGE &amp; COX</b>	<b>1,084,871,820</b>	<b>14.6</b>	<b>0.8</b>	<b>2.9</b>	<b>9.6</b>	<b>4.5</b>	<b>3.7</b>	<b>4.7</b>	<b>6.0</b>	<b>02/2000</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	5.1	02/2000
Excess			0.6	0.5	0.9	0.5	0.7	0.9	1.0	
<b>PIMCO</b>	<b>972,494,180</b>	<b>13.1</b>	<b>0.4</b>	<b>2.0</b>	<b>8.4</b>	<b>4.3</b>	<b>3.4</b>	<b>4.6</b>	<b>5.5</b>	<b>10/2008</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	4.3	10/2008
Excess			0.2	-0.5	-0.3	0.3	0.3	0.9	1.2	
<b>WESTERN</b>	<b>1,138,206,131</b>	<b>15.4</b>	<b>0.9</b>	<b>3.6</b>	<b>11.1</b>	<b>5.4</b>	<b>4.3</b>	<b>5.3</b>	<b>8.3</b>	<b>07/1984</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	7.2	07/1984
Excess			0.8	1.1	2.4	1.4	1.3	1.5	1.2	
<b>ACTIVE FIXED INCOME AGGREGATE</b>	<b>4,188,177,145</b>	<b>56.5</b>	<b>0.6</b>	<b>2.9</b>	<b>10.0</b>	<b>4.8</b>	<b>3.9</b>	<b>4.9</b>		
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7		
Excess			0.5	0.4	1.3	0.8	0.8	1.1		



	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Active Fixed Income Managers</b>					
<b>COLUMBIA</b>	<b>0.2%</b>	<b>4.8%</b>	<b>5.2%</b>	<b>0.2%</b>	<b>5.8%</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	0.2	1.2	2.6	-0.4	-0.2
<b>DODGE &amp; COX</b>	<b>-0.0</b>	<b>4.2</b>	<b>4.8</b>	<b>0.3</b>	<b>6.0</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.1	0.7	2.2	-0.3	0.0
<b>PIMCO</b>	<b>0.4</b>	<b>4.4</b>	<b>2.8</b>	<b>1.0</b>	<b>5.5</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	0.4	0.8	0.2	0.4	-0.4
<b>WESTERN</b>	<b>-0.2</b>	<b>5.6</b>	<b>4.9</b>	<b>0.7</b>	<b>7.0</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.3	2.1	2.2	0.1	1.0
<b>ACTIVE FIXED INCOME AGGREGATE</b>	<b>0.0%</b>	<b>4.7%</b>	<b>4.4</b>	<b>0.6</b>	<b>6.2</b>
BBG BARC Agg (Dly)	0.0%	3.5%	2.6	0.5	6.0
Excess	-0.0%	1.2%	1.7	0.0	0.2



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Semi Passive Fixed Income Managers</b>										
<b>BLACKROCK</b>	<b>\$1,089,479,130</b>	<b>14.7%</b>	<b>0.2%</b>	<b>2.5%</b>	<b>9.3%</b>	<b>4.2%</b>	<b>3.2%</b>	<b>4.0%</b>	<b>5.3%</b>	<b>04/1996</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	5.2	04/1996
Excess			0.0	0.1	0.6	0.2	0.2	0.2	0.1	
<b>GOLDMAN SACHS</b>	<b>1,101,443,636</b>	<b>14.9</b>	<b>0.2</b>	<b>2.9</b>	<b>9.6</b>	<b>4.4</b>	<b>3.4</b>	<b>4.3</b>	<b>5.6</b>	<b>07/1993</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	5.2	07/1993
Excess			0.0	0.4	0.9	0.4	0.3	0.5	0.3	
<b>NEUBERGER</b>	<b>1,031,226,033</b>	<b>13.9</b>	<b>0.2</b>	<b>2.6</b>	<b>9.0</b>	<b>4.1</b>	<b>3.2</b>	<b>4.2</b>	<b>6.4</b>	<b>07/1988</b>
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7	6.2	07/1988
Excess			0.0	0.1	0.3	0.1	0.1	0.4	0.2	
<b>SEMI PASSIVE FIXED INCOME</b>	<b>3,222,148,798</b>	<b>43.5</b>	<b>0.2</b>	<b>2.7</b>	<b>9.3</b>	<b>4.3</b>	<b>3.3</b>	<b>4.1</b>		
BBG BARC Agg (Dly)			0.2	2.5	8.7	4.0	3.0	3.7		
Excess			0.0	0.2	0.6	0.2	0.2	0.4		





	<u>2018 Calendar Return</u>	<u>2017 Calendar Return</u>	<u>2016 Calendar Return</u>	<u>2015 Calendar Return</u>	<u>2014 Calendar Return</u>
<b>Semi Passive Fixed Income Managers</b>					
<b>BLACKROCK</b>	<b>-0.1%</b>	<b>3.7%</b>	<b>2.8%</b>	<b>0.9%</b>	<b>6.0%</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.2	0.1	0.1	0.3	0.0
<b>GOLDMAN SACHS</b>	<b>-0.0</b>	<b>3.9</b>	<b>3.0</b>	<b>0.8</b>	<b>6.1</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.0	0.4	0.3	0.2	0.1
<b>NEUBERGER</b>	<b>-0.1</b>	<b>3.6</b>	<b>2.7</b>	<b>0.7</b>	<b>6.1</b>
BBG BARC Agg (Dly)	0.0	3.5	2.6	0.5	6.0
Excess	-0.1	0.0	0.1	0.2	0.2
<b>SEMI PASSIVE FIXED INCOME</b>	<b>-0.1%</b>	<b>3.7%</b>	<b>2.8</b>	<b>0.8</b>	<b>6.1</b>
BBG BARC Agg (Dly)	0.0%	3.5%	2.6	0.5	6.0
Excess	-0.1%	0.2%	0.2	0.2	0.1

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# Treasuries

## December 31, 2019



	<u>Ending Market Value</u>	<u>Portfolio Weight</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>Treasuries Managers</b>										
<b>BLACKROCK</b>	<b>\$2,346,598,198</b>	<b>32.5%</b>	<b>-2.1%</b>	<b>2.2%</b>	<b>10.4%</b>				<b>6.6%</b>	<b>02/2018</b>
BBG BARC 5Y + Us Tsy Idx			-2.3	2.2	10.4				6.7	02/2018
Excess			0.1	0.0	-0.1				-0.1	
<b>GOLDMAN SACHS</b>	<b>2,431,136,273</b>	<b>33.6</b>	<b>-2.3</b>	<b>2.2</b>	<b>10.6</b>				<b>6.6</b>	<b>02/2018</b>
BBG BARC 5Y + Us Tsy Idx			-2.3	2.2	10.4				6.7	02/2018
Excess			0.0	0.0	0.1				-0.0	
<b>NEUBERGER</b>	<b>2,453,071,645</b>	<b>33.9</b>	<b>-2.2</b>	<b>2.2</b>	<b>10.4</b>				<b>6.5</b>	<b>02/2018</b>
BBG BARC 5Y + Us Tsy Idx			-2.3	2.2	10.4				6.7	02/2018
Excess			0.1	0.0	-0.0				-0.1	
TREASURIES TRANSITION ACCOUNT	0	0.0								03/2018
<b>TOTAL TREASURIES</b>	<b>7,230,806,117</b>	<b>100.0</b>	<b>-2.2</b>	<b>2.2</b>	<b>10.4</b>				<b>6.6%</b>	<b>02/2018</b>
BBG BARC 5Y + Us Tsy Idx			-2.3	2.2	10.4				6.7%	02/2018
Excess			0.1	0.0	0.0				-0.1%	



2018 Calendar Return

2017 Calendar Return

2016 Calendar Return

2015 Calendar Return

2014 Calendar Return

**Treasuries Managers**

**BLACKROCK**

BBG BARC 5Y + Us Tsy Idx

Excess

**GOLDMAN SACHS**

BBG BARC 5Y + Us Tsy Idx

Excess

**NEUBERGER**

BBG BARC 5Y + Us Tsy Idx

Excess

**TOTAL TREASURIES**

BBG BARC 5Y + Us Tsy Idx

Excess

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# Private Markets

## December 31, 2019



## Combined Funds Asset Class Performance Summary

### Private Markets

	<u>Last Qtr</u>	<u>FYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>20 Year</u>	<u>25 year</u>	<u>30 year</u>
Private Markets	2.4%	4.2%	6.6%	13.5%	9.8%	12.2%	12.5%	13.6%	12.2%
Private Equity	4.2%	7.8%	13.2%	17.7%	15.0%	15.1%	13.5%	15.4%	
Private Credit	3.3	4.7	8.5	13.1	11.9	13.2	12.4		
Resources	-4.0	-7.4	-13.2	3.1	-5.4	4.5	14.5	14.1	
Real Estate	2.3	5.5	9.5	10.4	10.7	10.9	9.1	9.7	

### Private Markets

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

### Private Equity Investments

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

### Private Credit Investments

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

### Resource Investments

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

### Real Estate Investments

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

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



Minnesota State Board of Investment  
- Alternative Investments -

As of December 31, 2019

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<b>I. PRIVATE EQUITY</b>								
<b>Adams Street Partners</b>								
<i>Adams Street Global Secondary Fund 5</i>	100,000,000	76,529,750	50,794,218	42,776,897	23,470,250	5.94	1.22	<b>7.28</b>
<i>Adams Street Global Secondary Fund 6</i>	100,000,000	23,700,000	26,362,127	1,214,007	76,300,000	34.64	1.16	<b>2.50</b>
<b>Advent International</b>								
<i>Advent International GPE VI</i>	50,000,000	52,993,313	7,707,266	100,573,095	0	16.80	2.04	<b>11.50</b>
<i>Advent International GPE VII</i>	90,000,000	84,690,641	66,681,601	82,131,791	5,400,000	14.95	1.76	<b>7.04</b>
<i>Advent International GPE VIII</i>	100,000,000	88,950,000	110,574,901	0	11,050,000	12.57	1.24	<b>3.65</b>
<i>Advent International GPE IX</i>	115,000,000	13,225,000	12,518,891	0	101,775,000	-5.34	0.95	<b>0.64</b>
<b>Affinity Ventures</b>								
<i>Affinity Ventures IV</i>	4,000,000	4,000,000	314,755	1,541,970	0	-15.66	0.46	<b>15.25</b>
<i>Affinity Ventures V</i>	5,000,000	5,000,000	2,116,220	1,706,245	0	-4.54	0.76	<b>11.25</b>
<b>APAX Partners</b>								
<i>Apax VIII - USD</i>	200,000,000	227,487,449	147,033,330	215,179,630	9,168,362	14.50	1.59	<b>6.56</b>
<i>Apax IX - USD</i>	150,000,000	138,697,018	175,915,976	3,944,404	15,247,386	22.32	1.30	<b>3.36</b>
<i>Apax X - USD</i>	150,000,000	0	0	0	150,000,000	0.00	0.00	<b>0.48</b>
<b>Arsenal Capital Partners</b>								
<i>Arsenal Fund V</i>	75,000,000	20,164,317	20,164,317	0	54,835,683	0.00	1.00	<b>0.74</b>
<b>Asia Alternatives</b>								
<i>Asia Alternatives Capital Partners V</i>	99,000,000	26,275,629	20,993,599	569,636	73,272,834	-24.73	0.82	<b>2.25</b>
<b>Banc Fund</b>								
<i>Banc Fund VIII</i>	98,250,000	98,250,000	54,926,286	160,145,973	0	13.39	2.19	<b>11.44</b>
<i>Banc Fund IX</i>	107,205,932	107,205,932	114,398,592	19,549,737	0	7.04	1.25	<b>5.31</b>
<i>Banc Fund X</i>	71,345,455	37,099,636	36,537,354	0	34,245,818	-2.18	0.98	<b>1.41</b>
<b>BlackRock</b>								
<i>BlackRock Long Term Capital</i>	250,000,000	115,030,072	111,721,922	925,013	134,969,928	-1.89	0.98	<b>0.75</b>
<b>Blackstone Capital Partners</b>								
<i>Blackstone Capital Partners IV</i>	70,000,000	84,459,884	1,715,119	200,025,998	1,832,302	37.02	2.39	<b>17.23</b>
<i>Blackstone Capital Partners V</i>	140,000,000	152,333,301	5,302,014	238,281,850	7,027,560	7.93	1.60	<b>13.66</b>
<i>Blackstone Capital Partners VI</i>	100,000,000	104,564,882	76,078,138	90,352,349	12,389,605	12.25	1.59	<b>11.19</b>
<i>Blackstone Capital Partners VII</i>	130,000,000	100,798,593	110,771,789	11,575,111	42,771,332	15.72	1.21	<b>4.25</b>
<i>Blackstone Capital Partners VIII</i>	150,000,000	0	0	0	150,000,000	0.00	0.00	<b>0.75</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<b>Blackstone Strategic Partners (CSFB/ DLJ)</b>								
<i>Strategic Partners III VC</i>	25,000,000	25,039,648	469,835	33,676,348	1,028,056	6.00	1.36	<b>14.34</b>
<i>Strategic Partners III-B</i>	100,000,000	79,581,948	437,188	118,286,611	14,851,676	6.35	1.49	<b>14.34</b>
<i>Strategic Partners IV VC</i>	40,500,000	42,049,501	5,003,570	58,969,684	2,373,004	9.24	1.52	<b>11.52</b>
<i>Strategic Partners IV-B</i>	100,000,000	99,112,893	9,598,547	145,322,825	17,707,552	12.29	1.56	<b>11.29</b>
<i>Strategic Partners V</i>	100,000,000	84,472,442	18,565,637	118,762,317	37,619,596	19.04	1.63	<b>8.12</b>
<i>Strategic Partners VI</i>	150,000,000	97,348,314	47,175,305	95,525,946	58,902,888	16.11	1.47	<b>5.46</b>
<i>Strategic Partners VII</i>	150,000,000	96,008,033	105,727,193	29,962,530	68,186,972	23.13	1.41	<b>2.77</b>
<i>Strategic Partners VIII</i>	150,000,000	32,247,258	41,302,382	750,000	118,498,757	100.53	1.30	<b>0.99</b>
<b>Bridgepoint</b>								
<i>Bridgepoint Europe VI</i>	168,138,044	24,835,033	21,999,373	0	143,303,011	-19.23	0.89	<b>1.53</b>
<b>Brookfield Asset Management</b>								
<i>Brookfield Capital Partners Fund IV</i>	100,000,000	93,042,897	88,571,448	121,226,181	26,856,915	55.53	2.25	<b>4.05</b>
<i>Brookfield Capital Partners V</i>	250,000,000	53,653,003	48,742,359	0	196,346,997	-15.14	0.91	<b>1.18</b>
<b>Cardinal Partners</b>								
<i>DSV Partners IV</i>	10,000,000	10,000,000	30,783	39,196,082	0	10.61	3.92	<b>34.76</b>
<b>Carlyle Group</b>								
<i>Carlyle Partners VII</i>	150,000,000	37,669,107	32,589,569	210,128	112,541,021	-19.98	0.87	<b>1.79</b>
<b>Chicago Growth Partners (William Blair)</b>								
<i>William Blair Capital Partners VII</i>	50,000,000	48,150,000	578,788	69,698,512	1,650,000	8.59	1.46	<b>18.57</b>
<i>Chicago Growth Partners I</i>	50,000,000	52,441,998	1,845,974	54,532,745	300,000	1.69	1.08	<b>14.19</b>
<i>Chicago Growth Partners II</i>	60,000,000	58,347,626	1,722,529	121,871,703	1,652,374	19.55	2.12	<b>11.56</b>
<b>Court Square Capital Partners</b>								
<i>Court Square Capital Partners II</i>	175,000,000	170,186,067	15,936,492	295,201,185	16,455,909	12.85	1.83	<b>13.07</b>
<i>Court Square Capital Partners III</i>	175,000,000	181,390,725	180,400,820	110,644,670	12,750,068	19.54	1.60	<b>7.33</b>
<i>Court Square Capital Partners IV</i>	150,000,000	29,206,229	31,102,502	0	120,793,771	16.64	1.06	<b>1.39</b>
<b>Crescendo</b>								
<i>Crescendo IV</i>	101,500,000	103,101,226	3,067,040	55,121,736	0	-4.62	0.56	<b>19.56</b>
<b>CVC Capital Partners</b>								
<i>CVC European Equity Partners V</i>	133,919,459	153,813,045	14,982,859	275,096,237	1,603,197	16.48	1.89	<b>11.52</b>
<i>CVC Capital Partners VI</i>	257,521,346	263,643,548	259,956,064	129,679,202	42,692,338	15.94	1.48	<b>6.23</b>
<b>Elevation Partners</b>								
<i>Elevation Partners</i>	75,000,000	73,237,580	144,246	113,492,106	799,634	11.81	1.55	<b>14.38</b>
<b>Glouston Capital Partners**</b>								
<i>Glouston Private Equity Opportunities Fund IV</i>	5,337,098	4,378,779	1,120,078	3,606,251	1,090,000	3.24	1.08	<b>4.75</b>
<b>Goldner Hawn Johnson &amp; Morrison</b>								
<i>Goldner Hawn Fund VII</i>	57,755,138	6,516,618	5,150,897	0	51,403,870	-21.35	0.79	<b>1.43</b>
<i>TrailHead Fund</i>	20,000,000	16,070,803	28,275,070	12,806,955	3,935,813	18.30	2.56	<b>7.60</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<b>GS Capital Partners</b>								
<i>GS Capital Partners V</i>	100,000,000	74,319,006	1,101,210	191,435,136	1,041,099	18.26	2.59	<b>14.50</b>
<i>GS Capital Partners VI</i>	100,000,000	110,136,316	12,471,882	131,553,863	2,551,356	7.22	1.31	<b>12.66</b>
<i>GS Vintage VII</i>	100,000,000	76,085,978	72,005,938	22,528,375	46,562,536	18.02	1.24	<b>3.25</b>
<i>West Street Capital Partners VII</i>	150,000,000	82,397,501	71,078,307	15,552,958	80,258,025	4.07	1.05	<b>2.77</b>
<i>GS China-US Cooperation Fund</i>	99,800,000	10,154,445	7,526,906	0	89,820,000	-25.88	0.74	<b>1.37</b>
<b>GTCR</b>								
<i>GTCR IX</i>	75,000,000	71,414,933	204,933	128,764,150	3,585,067	13.77	1.81	<b>13.25</b>
<i>GTCR X</i>	100,000,000	103,907,821	13,793,390	188,421,061	6,751,396	20.72	1.95	<b>8.81</b>
<i>GTCR XI</i>	110,000,000	99,095,726	104,092,933	77,861,791	12,066,556	25.08	1.84	<b>5.87</b>
<b>HarbourVest**</b>								
<i>Dover Street VII Cayman Fund</i>	2,198,112	2,073,547	261,679	1,617,089	132,416	-4.67	0.91	<b>4.75</b>
<i>HarbourVest Intl PE Partners V-Cayman US</i>	3,520,205	3,345,135	593,192	3,825,663	179,600	13.61	1.32	<b>4.75</b>
<i>Harbourvest Intl PE Partners VI-Cayman</i>	4,233,572	4,038,952	3,716,553	2,754,700	196,437	15.44	1.60	<b>4.75</b>
<i>HarbourVest Partners VIII Cayman Buyout</i>	4,506,711	4,302,827	1,292,121	4,532,288	234,000	13.39	1.35	<b>4.75</b>
<i>HarbourVest Partners VIII-Cayman Venture</i>	7,190,898	7,084,902	3,449,159	5,924,280	140,000	9.25	1.32	<b>4.75</b>
<b>Hellman &amp; Friedman</b>								
<i>Hellman &amp; Friedman Capital Partners VI</i>	175,000,000	171,037,755	7,530,877	309,639,874	5,084,864	12.90	1.85	<b>12.50</b>
<i>Hellman &amp; Friedman Capital Partners VII</i>	50,000,000	49,780,756	72,879,705	66,253,157	2,321,599	24.73	2.79	<b>10.45</b>
<i>Hellman &amp; Friedman Investors IX</i>	175,000,000	0	-313,512	0	172,258,308	0.00	0.00	<b>1.25</b>
<b>IK Investment Partners</b>								
<i>IK Fund VII</i>	180,221,836	177,217,341	146,541,772	148,679,827	8,513,341	13.53	1.67	<b>6.04</b>
<i>IK Fund VIII</i>	170,997,778	150,391,355	163,562,720	31,294,092	22,047,899	16.89	1.30	<b>3.19</b>
<i>IK Fund IX</i>	151,532,214	315,129	320,343	0	151,217,085	1.65	1.02	<b>0.47</b>
<b>Kohlberg Kravis Roberts</b>								
<i>KKR Millennium Fund</i>	200,000,000	205,167,570	178,659	424,946,028	0	16.37	2.07	<b>16.81</b>
<i>KKR 2006 Fund</i>	200,000,000	219,067,814	65,452,072	321,372,989	3,360,223	9.20	1.77	<b>13.01</b>
<i>KKR Americas Fund XII</i>	150,000,000	73,630,717	77,382,175	988,851	78,250,452	5.38	1.06	<b>3.57</b>
<i>KKR Asian Fund III</i>	100,000,000	48,932,429	62,338,984	4,999,726	55,591,334	39.99	1.38	<b>2.50</b>
<i>KKR Europe V</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>1.15</b>
<b>Leonard Green &amp; Partners</b>								
<i>Green Equity Investors VI</i>	200,000,000	216,367,988	219,510,130	153,320,148	20,125,964	15.57	1.72	<b>7.54</b>
<b>Lexington Capital Partners</b>								
<i>Lexington Capital Partners VI</i>	100,000,000	98,374,022	7,936,348	138,129,769	1,634,703	7.95	1.48	<b>13.77</b>
<i>Lexington Capital Partners VII</i>	200,000,000	172,466,709	47,097,188	227,628,729	38,059,995	14.60	1.59	<b>10.72</b>
<i>Lexington Capital Partners VIII</i>	150,000,000	130,580,881	106,956,236	65,893,646	36,915,301	17.06	1.32	<b>5.58</b>
<i>Lexington Co-Investment Partners IV</i>	200,000,000	151,668,259	166,714,827	8,030,822	56,362,563	12.61	1.15	<b>3.16</b>
<i>Lexington Middle Market Investors IV</i>	100,000,000	17,147,574	17,048,273	1,458,011	82,852,426	22.62	1.08	<b>2.77</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<i>Lexington Capital Partners IX</i>	150,000,000	10,623,000	20,508,902	0	139,377,000	93.06	1.93	<b>1.23</b>
<b>Madison Dearborn Capital Partners</b>								
<i>Madison Dearborn Capital Partners VII</i>	100,000,000	75,754,661	80,232,705	9,274,293	33,484,237	9.25	1.18	<b>3.78</b>
<i>Madison Dearborn Capital Partners VIII</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.29</b>
<b>Neuberger Berman</b>								
<i>Dyal Capital Partners III</i>	175,000,000	163,645,419	108,043,558	99,461,155	105,714,164	21.90	1.27	<b>4.44</b>
<i>Dyal Capital Partners IV</i>	250,000,000	24,687,639	17,961,925	9,156,912	234,104,683	14.22	1.10	<b>1.48</b>
<b>Nordic Capital</b>								
<i>Nordic Capital Fund VIII</i>	176,980,208	191,778,674	158,931,229	116,714,756	102,747,959	12.61	1.44	<b>6.05</b>
<i>Nordic Capital Fund IX</i>	168,314,388	50,319,549	60,906,950	0	117,994,839	43.65	1.21	<b>2.45</b>
<b>North Sky Capital**</b>								
<i>North Sky Capital LBO Fund III</i>	1,070,259	720,259	290,272	730,649	350,000	13.71	1.42	<b>4.75</b>
<i>North Sky Capital Venture Fund III</i>	1,384,080	1,277,830	288,620	1,369,463	106,250	11.44	1.30	<b>4.75</b>
<b>Oak Hill Capital Management</b>								
<i>Oak Hill Capital Partners IV</i>	150,000,000	119,353,934	114,076,193	28,267,962	52,442,502	21.71	1.19	<b>2.80</b>
<i>Oak Hill Capital Partners V</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>1.06</b>
<b>Paine Schwartz</b>								
<i>Paine Schwartz IV</i>	75,000,000	55,846,197	56,935,933	14,823,737	20,226,957	9.53	1.28	<b>4.80</b>
<i>Paine Schwartz V</i>	150,000,000	0	-1,403,561	0	150,000,000	0.00	0.00	<b>1.41</b>
<b>Permira</b>								
<i>Permira V</i>	177,171,243	173,011,785	246,623,069	131,855,496	25,021,407	21.05	2.19	<b>5.75</b>
<i>Permira VI</i>	136,177,862	106,588,083	127,538,250	0	29,589,779	12.62	1.20	<b>3.18</b>
<i>Permira VII</i>	140,312,434	0	0	0	140,312,434	0.00	0.00	<b>0.58</b>
<b>Public Pension Capital Management</b>								
<i>Public Pension Capital</i>	150,000,000	80,494,048	88,996,837	45,684,523	80,350,177	24.26	1.67	<b>5.37</b>
<b>RWI Ventures</b>								
<i>RWI Ventures I</i>	7,603,265	7,603,265	452,827	6,122,274	0	-4.04	0.86	<b>13.25</b>
<b>Silver Lake Partners</b>								
<i>Silver Lake Partners II</i>	100,000,000	90,200,747	659,100	171,246,452	11,771,953	11.03	1.91	<b>15.25</b>
<i>Silver Lake Partners III</i>	100,000,000	91,961,615	30,007,070	175,803,509	10,559,311	18.53	2.24	<b>12.50</b>
<i>Silver Lake Partners IV</i>	100,000,000	111,140,696	128,279,434	76,819,511	5,231,461	24.39	1.85	<b>7.01</b>
<i>Silver Lake Partners V</i>	135,000,000	62,222,157	68,626,024	992,615	59,737,877	11.01	1.12	<b>2.50</b>
<b>Split Rock Partners</b>								
<i>Split Rock Partners</i>	50,000,000	47,890,906	4,197,791	58,794,192	2,109,094	3.36	1.32	<b>14.42</b>
<i>Split Rock Partners II</i>	60,000,000	59,165,000	29,174,198	47,174,545	835,000	5.32	1.29	<b>11.42</b>
<b>Summit Partners</b>								
<i>Summit Partners Growth Equity Fund VIII</i>	100,000,000	115,667,192	53,525,181	193,525,542	23,496,551	26.54	2.14	<b>8.41</b>
<i>Summit Partners Growth Equity Fund IX</i>	100,000,000	94,530,001	90,810,917	27,851,839	33,321,838	22.49	1.26	<b>4.09</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<i>Summit Partners Growth Equity Fund X</i>	150,000,000	0	0	0	150,000,000	0.00	0.00	<b>0.82</b>
<b>Thoma Bravo</b>								
<i>Thoma Bravo Fund XII</i>	75,000,000	73,248,476	92,968,436	3,754,581	5,577,340	13.64	1.32	<b>3.05</b>
<i>Thoma Bravo Fund XIII</i>	150,000,000	54,155,519	53,427,181	606	95,844,481	-1.61	0.99	<b>1.50</b>
<b>Thoma Cressey</b>								
<i>Thoma Cressey Fund VII</i>	50,000,000	50,000,000	470,059	107,057,940	0	23.59	2.15	<b>19.10</b>
<i>Thoma Cressey Fund VIII</i>	70,000,000	69,677,888	0	203,028,952	770,000	18.27	2.91	<b>13.42</b>
<b>Thomas H. Lee Partners</b>								
<i>Thomas H. Lee Equity Fund VII</i>	100,000,000	98,172,669	108,093,437	30,607,993	10,593,693	20.04	1.41	<b>4.05</b>
<i>Thomas H. Lee Equity Fund VIII</i>	150,000,000	35,295,943	37,278,456	2,735,321	116,646,079	52.58	1.13	<b>1.50</b>
<b>Thomas, McNerney &amp; Partners</b>								
<i>Thomas, McNerney &amp; Partners I</i>	30,000,000	30,000,000	4,044,714	15,087,143	0	-6.70	0.64	<b>16.91</b>
<i>Thomas, McNerney &amp; Partners II</i>	50,000,000	48,125,000	5,417,250	107,648,037	1,875,000	16.75	2.35	<b>13.25</b>
<b>TPG Capital</b>								
<i>TPG Partners VII</i>	100,000,000	93,975,015	99,709,738	20,902,816	13,616,503	13.37	1.28	<b>4.05</b>
<i>TPG Partners VIII</i>	150,000,000	1,497,778	0	0	148,502,222	0.00	0.00	<b>1.50</b>
<b>Vestar Capital Partners</b>								
<i>Vestar Capital Partners IV</i>	55,000,000	55,652,024	540,804	102,273,825	57,313	14.64	1.85	<b>19.80</b>
<i>Vestar Capital Partners V</i>	75,000,000	76,649,712	10,088,944	91,371,279	-112,878	4.00	1.32	<b>13.79</b>
<i>Vestar Capital Partners VI</i>	100,000,000	106,195,246	63,746,794	123,127,619	357,259	25.26	1.76	<b>8.02</b>
<i>Vestar Capital Partners VII</i>	150,000,000	35,671,184	31,624,951	93,377	114,328,816	-13.07	0.89	<b>1.79</b>
<b>Warburg Pincus</b>								
<i>Warburg Pincus Equity Partners</i>	100,000,000	100,000,000	390,628	163,542,253	0	10.03	1.64	<b>21.27</b>
<i>Warburg Pincus Private Equity VIII</i>	100,000,000	100,373,266	364,622	228,717,051	0	14.74	2.28	<b>17.47</b>
<i>Warburg Pincus Private Equity IX</i>	100,000,000	100,000,000	4,689,455	169,104,301	0	9.73	1.74	<b>14.18</b>
<i>Warburg Pincus Private Equity X</i>	150,000,000	150,000,000	43,806,740	211,039,831	0	9.00	1.70	<b>11.94</b>
<i>Warburg Pincus Private Equity XI</i>	200,000,000	200,299,952	125,749,780	203,441,948	0	13.36	1.64	<b>6.77</b>
<i>Warburg Pincus Private Equity XII</i>	131,000,000	123,205,500	139,182,989	12,356,313	7,794,500	11.64	1.23	<b>3.86</b>
<i>Warburg Pincus China</i>	45,000,000	42,615,000	46,853,257	5,879,250	4,320,000	14.81	1.24	<b>2.79</b>
<i>Warburg Pincus Financial Sector</i>	90,000,000	49,675,808	45,011,422	4,590,000	44,730,000	-0.18	1.00	<b>1.79</b>
<i>Warburg Pincus Global Growth</i>	250,000,000	39,897,089	36,845,905	0	209,875,000	-20.82	0.92	<b>1.11</b>
<i>Warburg Pincus China-Southeast Asia II</i>	50,000,000	1,750,000	1,677,055	0	48,250,000	-4.17	0.96	<b>0.57</b>
<b>Wellspring Capital Partners</b>								
<i>Wellspring Capital Partners VI</i>	125,000,000	42,773,393	39,077,986	0	82,226,607	-12.56	0.91	<b>3.04</b>
<b>Welsh, Carson, Anderson &amp; Stowe</b>								
<i>Welsh, Carson, Anderson &amp; Stowe XI</i>	100,000,000	100,000,000	34,572,342	129,502,945	0	12.07	1.64	<b>11.19</b>
<i>Welsh, Carson, Anderson &amp; Stowe XII</i>	150,000,000	133,905,102	140,566,261	62,562,461	16,094,898	21.18	1.52	<b>4.78</b>
<i>Welsh, Carson, Anderson &amp; Stowe XIII</i>	250,000,000	1,833,825	0	0	248,166,175	0.00	0.00	<b>1.51</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<b>Whitehorse Capital</b>								
<i>Whitehorse Liquidity Partners III</i>	100,000,000	49,860,515	50,033,575	3,696,980	53,902,732	14.54	1.08	<b>0.75</b>
<b>Wind Point Partners</b>								
<i>Wind Point Partners IX</i>	100,000,000	754,603	750,000	0	99,250,000	-0.61	0.99	<b>0.51</b>
<b>Windjammer Capital Investors</b>								
<i>Windjammer Mezzanine &amp; Equity Fund II</i>	66,708,861	55,215,684	65,458	84,876,800	10,139,363	8.94	1.54	<b>19.50</b>
<i>Windjammer Senior Equity Fund III</i>	75,000,000	62,684,411	390,136	154,997,986	13,380,380	19.57	2.48	<b>13.74</b>
<i>Windjammer Senior Equity Fund IV</i>	100,000,000	89,524,405	113,563,380	41,101,357	18,397,478	14.34	1.73	<b>7.60</b>
<i>Windjammer Senior Equity Fund V</i>	100,000,000	12,669,403	11,757,852	0	87,330,597	-13.83	0.93	<b>1.86</b>
<b>Private Equity Total</b>	<b>15,410,396,397</b>	<b>10,047,340,193</b>	<b>6,398,272,995</b>	<b>9,350,309,072</b>	<b>6,216,125,937</b>	<b>12.47</b>	<b>1.57</b>	

## II. PRIVATE CREDIT

### Audax Group

<i>Audax Mezzanine Fund III</i>	100,000,000	97,392,001	16,610,905	110,793,425	4,246,122	9.66	1.31	<b>9.49</b>
<i>Audax Mezzanine Fund IV</i>	100,000,000	58,536,874	34,084,136	29,978,904	52,216,273	8.97	1.09	<b>4.48</b>

### BlackRock

<i>BlackRock Middle Market Senior Fund</i>	97,500,000	49,496,251	50,153,611	637,329	48,003,749	3.90	1.03	<b>1.46</b>
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### Energy Capital Partners

<i>Energy Capital Credit Solutions II</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.99</b>
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### GS Mezzanine Partners

<i>GS Mezzanine Partners 2006</i>	100,000,000	113,454,150	739,157	134,861,849	9,858,563	5.00	1.20	<b>13.48</b>
<i>GS Mezzanine Partners V</i>	150,000,000	147,704,244	1,896,128	179,089,405	37,564,028	9.04	1.23	<b>11.94</b>

### Gold Hill Venture Lending

<i>Gold Hill Venture Lending</i>	40,000,000	40,000,000	396,011	65,077,862	0	10.69	1.64	<b>15.01</b>
<i>Gold Hill 2008</i>	25,852,584	25,852,584	5,865,333	44,745,145	0	14.73	1.96	<b>11.25</b>

### HPS Investment Partners

<i>HPS Mezzanine Partners 2019</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.72</b>
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### Kohlberg Kravis Roberts

<i>KKR Lending Partners II</i>	75,000,000	86,189,157	22,426,849	79,154,623	8,802,924	8.82	1.18	<b>4.57</b>
<i>KKR Lending Partners III</i>	199,000,000	94,204,729	91,680,094	17,340,490	111,708,154	15.10	1.16	<b>2.47</b>

### LBC Credit Partners

<i>LBC Credit Partners IV</i>	100,000,000	89,811,121	67,041,211	34,775,536	32,291,029	10.03	1.13	<b>3.42</b>
<i>LBC Credit Partners V</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.50</b>

### Marathon

<i>Marathon Secured Private Strategies Fund II</i>	100,000,000	45,022,008	44,000,000	0	56,000,000	-3.87	0.98	<b>0.25</b>
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Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<b>Merit Capital Partners</b>								
<i>Merit Mezzanine Fund IV</i>	75,000,000	70,178,571	0	139,120,463	4,821,429	11.54	1.98	<b>14.79</b>
<i>Merit Mezzanine Fund V</i>	75,000,000	71,044,898	40,338,963	68,849,860	3,955,102	10.09	1.54	<b>9.78</b>
<i>Merit Mezzanine Fund VI</i>	100,000,000	58,328,723	68,288,830	6,343,284	41,604,478	14.76	1.28	<b>3.52</b>
<b>Portfolio Advisors</b>								
<i>DLJ Investment Partners III</i>	100,000,000	82,719,050	558,202	96,478,980	509,988	6.81	1.17	<b>13.28</b>
<b>Prudential Capital Partners</b>								
<i>Prudential Capital Partners II</i>	100,000,000	97,418,748	5,726,946	136,427,860	11,049,052	8.83	1.46	<b>14.25</b>
<i>Prudential Capital Partners III</i>	100,000,000	100,641,752	4,799,098	170,006,438	14,859,276	14.19	1.74	<b>10.46</b>
<i>Prudential Capital Partners IV</i>	100,000,000	108,017,173	55,631,637	83,850,428	3,552,519	9.36	1.29	<b>7.70</b>
<i>Prudential Capital Partners V</i>	150,000,000	104,294,119	107,782,981	15,822,226	49,470,706	13.57	1.19	<b>3.12</b>
<b>Summit Partners</b>								
<i>Summit Subordinated Debt Fund III</i>	45,000,000	44,088,494	3,816,372	60,443,093	2,250,000	8.93	1.46	<b>15.63</b>
<i>Summit Subordinated Debt Fund IV</i>	50,000,000	55,914,003	4,731,635	72,207,729	19,850,132	10.36	1.38	<b>11.51</b>
<b>TCW Asset Management</b>								
<i>TCW Direct Lending VI</i>	100,000,000	83,599,652	43,281,292	56,768,625	25,329,409	8.03	1.20	<b>5.03</b>
<i>TCW Direct Lending VII</i>	100,000,000	63,032,508	62,302,524	5,949,415	39,930,144	13.97	1.08	<b>1.71</b>
<b>Private Credit Total</b>	<b>2,482,352,584</b>	<b>1,786,940,809</b>	<b>732,151,915</b>	<b>1,608,722,967</b>	<b>877,873,076</b>	<b>9.87</b>	<b>1.31</b>	

### III. REAL ASSETS

#### BlackRock

<i>BlackRock Global Renewable Power Fund II</i>	98,500,000	77,999,463	69,420,904	9,218,613	26,858,878	0.51	1.01	<b>3.85</b>
<i>BlackRock Global Renewable Power Infrastructure III</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.25</b>

#### EIG Global Energy Partners

<i>EIG Energy Fund XIV</i>	100,000,000	113,177,137	9,298,177	94,745,253	2,761,129	-2.89	0.92	<b>12.45</b>
<i>EIG Energy Fund XV</i>	150,000,000	159,358,995	53,348,696	128,179,482	22,639,867	3.40	1.14	<b>9.32</b>
<i>EIG Energy Fund XVI</i>	200,000,000	182,065,404	143,061,018	78,400,507	54,284,878	7.26	1.22	<b>6.05</b>

#### EnCap Energy

<i>EnCap Energy Capital Fund VII</i>	100,000,000	105,379,160	6,074,195	135,157,214	0	14.67	1.34	<b>12.25</b>
<i>EnCap Energy Capital Fund VIII</i>	100,000,000	99,410,912	27,075,193	54,781,243	4,394,899	-5.48	0.82	<b>9.00</b>
<i>Encap Energy Capital Fund IX</i>	100,000,000	111,445,745	55,886,655	83,957,459	6,150,487	9.28	1.25	<b>6.81</b>
<i>EnCap Energy Capital Fund X</i>	100,000,000	91,533,815	90,675,985	20,162,033	16,609,822	9.26	1.21	<b>4.57</b>

#### EnerVest Energy

<i>EnerVest Energy Institutional Fund XIV</i>	100,000,000	94,602,874	81,081,665	41,175,285	13,490,824	9.22	1.29	<b>4.30</b>
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#### Energy Capital Partners

<i>Energy Capital Partners II</i>	100,000,000	85,722,480	8,011,307	112,434,332	29,749,110	9.61	1.41	<b>9.20</b>
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Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<i>Energy Capital Partners III</i>	200,000,000	215,922,282	172,715,889	83,824,545	21,712,054	7.43	1.19	<b>5.78</b>
<i>Energy Capital Partners IV</i>	150,000,000	50,324,313	52,561,528	7,914,723	106,939,722	16.31	1.20	<b>1.75</b>
<b>Energy &amp; Minerals Group</b>								
<i>NGP Midstream &amp; Resources</i>	100,000,000	103,527,211	10,911,839	178,013,289	17,857	13.69	1.82	<b>12.50</b>
<i>The Energy &amp; Minerals Group Fund II</i>	100,000,000	105,186,174	92,971,033	102,399,087	723,681	14.25	1.86	<b>8.02</b>
<i>The Energy &amp; Minerals Group Fund III</i>	200,000,000	201,327,783	141,191,100	22,410,545	1,284,543	-4.78	0.81	<b>5.57</b>
<i>The Energy &amp; Minerals Group Fund IV</i>	150,000,000	150,173,111	162,253,537	46,989,014	21,414,947	14.94	1.39	<b>3.92</b>
<i>The Energy &amp; Minerals Group Fund V</i>	112,500,000	77,386,782	81,066,754	0	35,821,118	6.21	1.05	<b>0.70</b>
<i>The Energy &amp; Minerals Group Fund V Accordion</i>	17,500,000	14,108,142	14,622,623	0	3,474,727	5.45	1.04	<b>0.70</b>
<b>First Reserve</b>								
<i>First Reserve Fund X</i>	100,000,000	100,000,000	6,850	182,761,608	0	31.05	1.83	<b>14.92</b>
<i>First Reserve Fund XI</i>	150,000,000	150,292,121	7,623,931	98,040,152	0	-7.12	0.70	<b>12.78</b>
<i>First Reserve Fund XII</i>	150,000,000	165,617,044	24,804,277	82,274,676	0	-9.54	0.65	<b>10.92</b>
<i>First Reserve Fund XIII</i>	200,000,000	189,013,029	145,571,371	66,422,959	34,769,711	7.20	1.12	<b>5.91</b>
<b>Kohlberg, Kravis, Roberts &amp; Co.</b>								
<i>KKR Global Infrastructure Investors III</i>	149,850,000	43,870,417	42,453,841	629,505	106,609,088	-3.58	0.98	<b>1.50</b>
<b>Merit Energy Partners</b>								
<i>Merit Energy Partners B</i>	24,000,000	24,000,000	1,554,840	189,858,902	0	24.28	7.98	<b>22.69</b>
<i>Merit Energy Partners C</i>	50,000,000	50,000,000	4,970,844	514,177,741	0	30.96	10.38	<b>20.93</b>
<i>Merit Energy Partners D</i>	88,000,000	70,938,303	11,709,964	333,800,338	0	22.67	4.87	<b>18.36</b>
<i>Merit Energy Partners E</i>	100,000,000	39,983,197	2,104,157	81,962,528	0	11.33	2.10	<b>15.00</b>
<i>Merit Energy Partners F</i>	100,000,000	59,522,861	8,826,810	29,689,739	0	-7.18	0.65	<b>13.52</b>
<i>Merit Energy Partners H</i>	100,000,000	100,000,000	62,721,585	29,668,582	0	-1.57	0.92	<b>8.66</b>
<i>Merit Energy Partners I</i>	169,721,518	169,721,518	198,462,370	35,839,059	0	11.75	1.38	<b>4.95</b>
<i>Merit Energy Partners K</i>	150,000,000	22,279,430	22,279,430	0	127,720,570	0.00	1.00	<b>0.75</b>
<b>NGP</b>								
<i>Natural Gas Partners IX</i>	150,000,000	173,921,032	3,276,291	245,366,339	605,481	12.04	1.43	<b>11.94</b>
<i>NGP Natural Resources X</i>	150,000,000	145,134,130	35,726,909	116,347,777	4,865,870	1.40	1.05	<b>7.97</b>
<i>Natural Gas Capital Resources XI</i>	150,000,000	141,924,721	124,225,335	43,817,505	14,678,538	7.39	1.18	<b>4.81</b>
<i>NGP Natural Resources XII</i>	149,500,000	70,169,304	69,352,784	0	78,990,221	-1.07	0.99	<b>2.16</b>
<b>Sheridan</b>								
<i>Sheridan Production Partners I</i>	100,000,000	116,552,260	0	82,750,000	0	0.00	0.71	<b>12.50</b>
<i>Sheridan Production Partners II</i>	100,000,000	103,500,000	0	7,000,000	3,500,000	0.00	0.07	<b>9.00</b>
<i>Sheridan Production Partners III</i>	100,000,000	34,353,005	29,552,000	19,050,000	65,650,000	13.89	1.41	<b>4.81</b>
<b>Real Assets Total</b>	<b>4,709,571,518</b>	<b>4,009,444,155</b>	<b>2,067,451,687</b>	<b>3,359,220,034</b>	<b>905,718,022</b>	<b>13.23</b>	<b>1.35</b>	



Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<b>IV. REAL ESTATE</b>								
<b>Angelo, Gordon &amp; Co.</b>								
<i>AG Realty Fund IX</i>	100,000,000	85,141,582	98,011,657	13,500,000	18,650,000	11.05	1.31	<b>4.81</b>
<i>AG Asia Realty Fund III</i>	50,000,000	47,587,261	33,685,720	29,500,000	6,196,250	15.82	1.33	<b>2.99</b>
<i>AG Europe Realty Fund II</i>	75,000,000	59,350,822	64,797,420	28,384	15,000,000	9.89	1.09	<b>2.28</b>
<i>AG Realty Fund X</i>	150,000,000	29,618,800	30,979,148	12,431	118,500,000	8.90	1.05	<b>1.41</b>
<i>AG Asia Realty Fund IV</i>	100,000,000	21,500,000	20,559,225	0	78,500,000	-5.66	0.96	<b>1.31</b>
<b>Blackstone Real Estate Partners</b>								
<i>Blackstone Real Estate Partners V</i>	100,000,000	104,213,007	4,437,315	202,303,108	4,174,052	10.78	1.98	<b>13.43</b>
<i>Blackstone Real Estate Partners VI</i>	100,000,000	109,477,567	7,284,844	213,244,964	4,907,906	13.15	2.01	<b>12.50</b>
<i>Blackstone Real Estate Partners VII</i>	100,000,000	107,947,285	49,481,773	141,590,853	13,995,597	16.40	1.77	<b>7.84</b>
<i>Blackstone Real Estate Partners VIII</i>	150,000,000	159,077,545	143,969,531	59,634,533	29,744,743	13.77	1.28	<b>4.51</b>
<i>Blackstone Real Estate Partners Asia II</i>	74,500,000	25,417,482	25,120,264	593,409	50,964,697	1.70	1.01	<b>2.02</b>
<i>Blackstone Real Estate Partners IX</i>	300,000,000	51,876,190	50,685,143	1,151,479	248,926,649	-0.15	1.00	<b>1.02</b>
<b>Blackstone Strategic Partners (CSFB)</b>								
<i>Strategic Partners III RE</i>	25,000,000	25,988,048	132,833	15,199,539	9,006	-6.49	0.59	<b>14.25</b>
<i>Strategic Partners IV RE</i>	50,000,000	51,489,268	4,245,719	47,804,228	1,080,393	0.18	1.01	<b>11.29</b>
<b>Carlyle Group</b>								
<i>Carlyle Realty Partners VIII</i>	150,000,000	27,587,645	25,827,511	405,648	122,826,870	-5.83	0.95	<b>2.40</b>
<b>Colony Capital</b>								
<i>Colony Investors III</i>	100,000,000	99,660,860	2,650,800	173,802,105	0	14.50	1.77	<b>21.76</b>
<b>Landmark Partners</b>								
<i>Landmark Real Estate Partners VIII</i>	149,500,000	60,331,708	48,365,658	20,304,107	92,724,735	18.74	1.14	<b>2.79</b>
<b>Lubert Adler</b>								
<i>Lubert-Adler Real Estate Fund VII-B</i>	74,147,868	50,901,943	55,040,628	1,731,088	24,098,057	7.97	1.12	<b>2.98</b>
<b>Rockpoint</b>								
<i>Rockpoint Real Estate Fund V</i>	100,000,000	87,998,417	83,455,176	22,427,953	26,125,220	10.21	1.20	<b>4.72</b>
<i>Rockpoint Real Estate Fund VI</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.78</b>
<b>Rockwood</b>								
<i>Rockwood Capital RE Partners X</i>	100,000,000	82,035,499	78,162,504	9,090,910	19,657,120	3.80	1.06	<b>4.21</b>
<i>Rockwood Capital RE Partners XI</i>	100,000,000	0	0	0	100,000,000	0.00	0.00	<b>0.51</b>
<b>Silverpeak Real Estate Partners</b>								
<i>Silverpeak Legacy Pension Partners II</i>	75,000,000	73,005,908	963,868	91,268,650	7,559,162	4.16	1.26	<b>14.17</b>
<i>Silverpeak Legacy Pension Partners III</i>	150,000,000	70,573,046	11,529,027	13,427,052	79,431,504	-11.08	0.35	<b>11.42</b>
<b>T.A. Associates Realty</b>								
<i>Realty Associates Fund VIII</i>	100,000,000	100,000,000	58,262	99,227,557	0	-0.08	0.99	<b>13.25</b>
<i>Realty Associates Fund X</i>	100,000,000	100,000,000	17,156,211	144,650,832	0	12.97	1.62	<b>7.58</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<i>Realty Associates Fund XI</i>	100,000,000	100,000,000	101,393,713	22,842,900	0	9.41	1.24	<b>4.24</b>
<i>Realty Associates Fund XII</i>	100,000,000	0	-923,817	0	100,000,000	0.00	0.00	<b>1.50</b>
<b>Real Estate Total</b>	<b>2,873,147,868</b>	<b>1,730,779,882</b>	<b>957,070,132</b>	<b>1,323,741,729</b>	<b>1,263,071,960</b>	<b>7.95</b>	<b>1.32</b>	
<b>V. DISTRESSED/ OPPORTUNISTIC</b>								
<b>Avenue Capital Partners</b>								
<i>Avenue Energy Opportunities Fund</i>	100,000,000	100,977,328	97,332,546	19,472,941	0	3.70	1.16	<b>5.25</b>
<i>Avenue Energy Opportunities Fund II</i>	100,000,000	100,000,000	102,166,000	417,420	0	1.62	1.03	<b>2.40</b>
<b>BlackRock**</b>								
<i>BlackRock Tempus Fund</i>	1,774,870	1,774,870	303,412	1,683,064	0	6.67	1.12	<b>4.30</b>
<b>Carlyle Group</b>								
<i>Carlyle Strategic Partners IV</i>	100,000,000	44,816,741	26,943,153	20,126,174	75,267,542	4.67	1.05	<b>3.50</b>
<b>Carval Investors</b>								
<i>CVI Global Value Fund</i>	200,000,000	190,000,000	4,870,256	315,888,483	10,000,000	9.54	1.69	<b>12.72</b>
<i>CVI Credit Value Fund I</i>	100,000,000	95,000,000	6,222,517	207,569,569	5,000,000	18.75	2.25	<b>9.00</b>
<i>CVI Credit Value Fund A II</i>	150,000,000	142,500,000	8,473,798	194,560,061	7,500,000	8.38	1.42	<b>6.92</b>
<i>CVI Credit Value Fund A III</i>	150,000,000	142,500,000	80,824,118	101,732,488	7,500,000	9.11	1.28	<b>4.32</b>
<i>CVI Credit Value Fund IV</i>	150,000,000	112,703,333	119,193,638	60	37,500,000	6.38	1.06	<b>1.99</b>
<b>Marathon</b>								
<i>Marathon Distressed Credit Fund</i>	200,000,000	0	0	0	200,000,000	0.00	0.00	<b>0.07</b>
<b>Merced Capital</b>								
<i>Merced Partners III</i>	100,000,000	100,000,000	10,455,777	124,997,107	0	6.15	1.35	<b>9.40</b>
<i>Merced Partners IV</i>	125,000,000	124,968,390	62,573,997	93,097,539	0	5.41	1.25	<b>6.22</b>
<i>Merced Partners V</i>	53,737,500	53,915,358	52,372,944	0	0	-1.21	0.97	<b>2.25</b>
<b>MHR Institutional Partners</b>								
<i>MHR Institutional Partners IV</i>	75,000,000	41,246,892	37,953,756	3,751,515	37,446,043	0.47	1.01	<b>5.28</b>
<b>Oaktree Capital Management</b>								
<i>Oaktree Principal Fund VI</i>	100,000,000	87,272,518	86,109,136	14,037,147	25,193,967	7.39	1.15	<b>4.75</b>
<i>Oaktree Opportunities Fund X</i>	50,000,000	46,500,021	47,114,352	11,119,660	8,500,000	10.96	1.25	<b>4.63</b>
<i>Oaktree Opportunities Fund Xb</i>	100,000,000	25,000,000	23,285,300	0	75,000,000	-10.75	0.93	<b>4.63</b>
<i>Oaktree Special Situations Fund II</i>	100,000,000	2,184,491	2,125,592	0	97,800,000	-7.63	0.97	<b>1.43</b>
<b>Pimco Bravo**</b>								
<i>Pimco Bravo Fund OnShore Feeder I</i>	3,958,027	3,958,027	87,720	3,978,735	2,348,173	2.61	1.03	<b>4.75</b>
<i>Pimco Bravo Fund OnShore Feeder II</i>	5,243,670	4,685,039	2,313,764	3,755,717	4,309,160	6.17	1.30	<b>4.75</b>
<b>TSSP</b>								
<i>TSSP Adjacent Opportunities Partner</i>	50,000,000	28,654,543	28,619,201	2,186,115	23,531,572	9.82	1.08	<b>1.49</b>

Investment	Total Commitment	Total Contribution	Market Value	Distributions	Unfunded Commitment	IRR %	NET MOIC*	Period Years
<i>TSSP Adjacent Opportunities Contingent</i>	100,000,000	82,193	82,193	204	99,917,807	0.29	1.00	<b>1.56</b>
<i>TSSP Opportunities Partners IV</i>	50,000,000	8,088,859	8,498,238	9,829	41,911,141	7.59	1.05	<b>1.39</b>
<b>Varde Fund</b>								
<i>Varde Fund IX</i>	100,000,000	100,000,000	631,361	215,289,913	0	15.00	2.16	<b>11.27</b>
<i>Varde Fund X</i>	150,000,000	150,000,000	38,743,443	247,345,376	0	11.52	1.91	<b>9.44</b>
<i>Varde Fund XI</i>	200,000,000	200,000,000	175,366,110	126,883,658	0	7.93	1.51	<b>6.22</b>
<i>Varde Fund XIII</i>	150,000,000	15,000,000	14,709,915	0	135,000,000	-3.70	0.98	<b>1.22</b>
<b>Wayzata</b>								
<i>Wayzata Opportunities Fund II</i>	150,000,000	174,750,000	2,254,926	327,229,040	30,000,000	16.48	1.89	<b>11.94</b>
<i>Wayzata Opportunities Fund III</i>	150,000,000	68,415,000	26,261,350	37,605,787	15,000,000	-2.06	0.93	<b>7.29</b>
<i>Distressed/Oppportunistic Total</i>	<b>3,064,714,067</b>	<b>2,164,993,603</b>	<b>1,065,888,513</b>	<b>2,072,737,600</b>	<b>938,725,406</b>	<b>10.44</b>	<b>1.45</b>	
<i>Private Markets Total</i>	<b>28,540,182,433</b>	<b>19,739,498,643</b>	<b>11,220,835,241</b>	<b>17,714,731,403</b>	<b>10,201,514,400</b>	<b>11.77</b>	<b>1.47</b>	

<i>Private Markets Portfolio Status</i>	Investment Manager Count	Investments Count
PRIVATE EQUITY	52	139
PRIVATE CREDIT	14	25
REAL ASSETS	11	42
REAL ESTATE	11	27
DISTRESSED/ OPPORTUNISTIC	12	29
Total	100	262

### 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. 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.

\* MOIC: Multiple of Invested Capital

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

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# Participant Directed Investment Program

## December 31, 2019



## Quarterly Report

# Participant Directed Investment Program

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

- The Supplemental Investment Fund (SIF) is an investment platform that provides participants with the option to invest in many of the same pools as the Combined Fund 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. Stock Actively Managed Fund - an actively managed, U.S. common stock portfolio.
- U.S. Stock Index Fund - a passively managed, common stock portfolio designed to broadly track the performance of the U.S. stock market.
- Broad International Stock Fund - a portfolio of non-U.S. stocks that incorporates both active and passive management.
- Bond Fund - an actively managed, bond portfolio.
- Money Market Fund - a portfolio utilizing short-term, liquid debt securities.
- Stable Value Fund - a portfolio of stable value instruments, including security backed contracts and insurance company and bank investment contracts.
- Volunteer Firefighter Account - a balanced portfolio only used by the Statewide Volunteer Firefighter Plan.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Option Since</u>
BALANCED FUND	\$96,724,020	5.5%	21.7%	10.5%	8.2%	9.8%	01/1980
U.S. ACTIVELY MANAGED FUND	65,109,317	9.4	31.2	15.5	11.2	13.5	07/1986
U.S. STOCK INDEX FUND	390,072,802	9.1	31.1	14.6	11.3	13.4	07/1986
BROAD INTERNATIONAL STOCK FUND	124,249,837	9.0	22.4	10.1	5.9	5.5	09/1994
BOND FUND	107,162,509	0.5	9.7	4.5	3.6	4.5	07/1986
MONEY MARKET FUND	500,866,484	0.5	2.4	1.8	1.3	0.7	07/1986
STABLE VALUE FUND	1,588,008,044	0.7	2.7	2.4	2.2	2.6	11/1994
VOLUNTEER FIREFIGHTER ACCOUNT	120,056,286	4.7	18.3	8.8	6.6	7.7	01/2010



## 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% Barclays Aggregate Bond Index/5% T-Bills Composite.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>*BALANCED FUND</b>	<b>\$96,724,020</b>	<b>5.5%</b>	<b>21.7%</b>	<b>10.5%</b>	<b>8.2%</b>	<b>9.8%</b>
SIF BALANCED FUND BENCHMARK		5.5	21.6	10.3	8.0	9.5
Excess		0.0	0.2	0.1	0.1	0.3

### U.S. Actively Managed Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>U.S. ACTIVELY MANAGED FUND</b>	<b>65,109,317</b>	<b>9.4</b>	<b>31.2</b>	<b>15.5</b>	<b>11.2</b>	<b>13.5</b>
Russell 3000		9.1	31.0	14.6	11.2	13.4
Excess		0.3	0.2	0.9	0.0	0.1

\*Please note that the returns reflect a price adjustment that occurred in December to correctly reflect a cash flow entry from a 7/1/2019 rebalance.





## Supplemental Investment Fund Performance

### U.S. Stock Index Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>U.S. STOCK INDEX FUND</b>	<b>\$390,072,802</b>	<b>9.1%</b>	<b>31.1%</b>	<b>14.6%</b>	<b>11.3%</b>	<b>13.4%</b>
Russell 3000		9.1	31.0	14.6	11.2	13.4
Excess		-0.0	0.0	0.0	0.0	0.0

### Broad International Stock Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BROAD INTERNATIONAL STOCK FUND</b>	<b>124,249,837</b>	<b>9.0</b>	<b>22.4</b>	<b>10.1</b>	<b>5.9</b>	<b>5.5</b>
International Equity Benchmark		8.9	21.5	9.9	5.5	5.0
Excess		0.1	0.9	0.3	0.4	0.5



## 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 Barclays U.S. Aggregate.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>BOND FUND</b>	<b>\$107,162,509</b>	<b>0.5%</b>	<b>9.7%</b>	<b>4.5%</b>	<b>3.6%</b>	<b>4.5%</b>
BBG BARC US Agg		0.2	8.7	4.0	3.0	3.7
Excess		0.3	1.0	0.5	0.5	0.8

### Money Market Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>MONEY MARKET FUND</b>	<b>500,866,484</b>	<b>0.5</b>	<b>2.4</b>	<b>1.8</b>	<b>1.3</b>	<b>0.7</b>
ICE BofA US 3-Month Treasury Bill		0.5	2.3	1.7	1.1	0.6
Excess		0.0	0.1	0.2	0.2	0.1



## Supplemental Investment Fund Performance

### Stable Value Fund

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>STABLE VALUE FUND</b>	<b>\$1,588,008,044</b>	<b>0.7%</b>	<b>2.7%</b>	<b>2.4%</b>	<b>2.2%</b>	<b>2.6%</b>
Fixed Interest Blended Benchmark		0.5	2.4	2.5	2.1	1.6
Excess		0.2	0.3	-0.1	0.2	0.9

### 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 Barclays U.S. Aggregate, 5% 3 Month T-Bills.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
<b>VOLUNTEER FIREFIGHTER ACCOUNT</b>	<b>120,056,286</b>	<b>4.7</b>	<b>18.3</b>	<b>8.8</b>	<b>6.6</b>	<b>7.7</b>
SIF Volunteer Firefighter Account BM		4.6	18.0	8.6	6.4	7.3
Excess		0.1	0.3	0.2	0.3	0.4



## Mutual Funds

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Option Since</u>
VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX PLUS	\$533,329,510						07/2019
VANGUARD INSTITUTIONAL INDEX PLUS	1,417,766,534	9.1%	30.8%	15.0%	11.6%	13.5%	07/1999
VANGUARD DIVIDEND GROWTH	783,205,109	4.6	31.0	16.1			10/2016
VANGUARD MID CAP INDEX	601,499,107	6.9	31.1	12.4	9.3	13.1	01/2004
T. ROWE PRICE SMALL-CAP STOCK	824,467,520	7.5	34.0	14.5	11.6	15.2	04/2000
FIDELITY DIVERSIFIED INTERNATIONAL	319,807,149	10.0	29.7	11.7	6.9	6.7	07/1999
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	309,067,750	9.1	20.9	9.7	5.8		07/2011
VANGUARD BALANCED INDEX	1,268,304,822	5.4	21.8	10.5	8.1	9.7	12/2003
DODGE & COX INCOME	276,132,483	0.3	8.4	4.1	3.4	4.3	07/1999
VANGUARD TOTAL BOND MARKET INDEX	340,396,170	-0.0	8.6	4.0	3.0	3.7	12/2003
2020 FUND	134,885,381	3.2	13.7	6.6	4.9		07/2011
2025 FUND	171,045,216	4.3	16.8	8.1	5.9		07/2011
2030 FUND	126,926,231	5.2	19.9	9.5	6.8		07/2011
2035 FUND	96,456,505	5.9	21.7	10.2	7.3		07/2011
2040 FUND	76,425,529	6.5	22.9	10.8	7.6		07/2011
2045 FUND	65,351,564	7.0	23.9	11.1	7.9		07/2011
2050 FUND	49,126,151	7.4	24.7	11.5	8.1		07/2011
2055 FUND	29,377,635	7.6	25.0	11.5	8.1		07/2011
2060 FUND	23,934,738	7.6	25.0	11.5	8.1		07/2011
INCOME FUND	100,314,276	3.2	13.2	6.0	4.5		07/2011
TD Ameritrade SDB	77,818,096						
TD Ameritrade SDB Roth	1,145,090						



## 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 Nasdaq US Dividend Achievers Select Index, over time.

### MID CAP EQUITY

#### **Vanguard Mid Cap Index (passive) (2)**

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

### SMALL CAP EQUITY

#### **T Rowe Price Small Cap (active)**

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

### INTERNATIONAL EQUITY

#### **Fidelity Diversified International (active)**

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

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

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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>Large Cap US Equity</b>						
VANGUARD TOTAL STOCK MARKET INSTITUTIONAL INDEX PLUS	\$533,329,510	9.0%				07/2019
CRSP US Total Market Index		9.0				07/2019
Excess		0.0				
VANGUARD INSTITUTIONAL INDEX PLUS	1,417,766,534	9.1%	31.5%	15.3%	11.7%	07/1999
S&P 500		9.1	31.5	15.3	11.7	07/1999
Excess		-0.0	-0.0	-0.0	-0.0	
VANGUARD DIVIDEND GROWTH	783,205,109	4.6	31.0	16.1		10/2016
NASDAQ US Dividend Achievers Select		4.9	29.8	15.9		10/2016
Excess		-0.3	1.2	0.3		
<b>Mid Cap US Equity</b>						
VANGUARD MID CAP INDEX	601,499,107	6.9	31.1	12.4	9.3	01/2004
CRSP US Mid Cap Index		6.9	31.1	12.4	9.3	01/2004
Excess		0.0	-0.0	-0.0	-0.0	
<b>Small Cap US Equity</b>						
T. ROWE PRICE SMALL-CAP STOCK	824,467,520	7.5	34.0	14.5	11.6	04/2000
Russell 2000		9.9	25.5	8.6	8.2	04/2000
Excess		-2.5	8.4	5.9	3.3	
<b>International Equity</b>						
FIDELITY DIVERSIFIED INTERNATIONAL	319,807,149	10.0	29.7	11.7	6.9	07/1999
MSCI EAFE FREE (NET)		8.2	22.0	9.6	5.7	07/1999
Excess		1.8	7.7	2.2	1.2	
VANGUARD TOTAL INTERNATIONAL STOCK INDEX	309,067,750	9.1	21.6	9.9	5.9	07/2011
FTSE Global All Cap ex US Index Net		9.2	21.8	9.8	5.8	07/2011
Excess		-0.2	-0.2	0.1	0.1	



## 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% BB Barclays 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 BB Barclays 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 BB Barclays U.S. Aggregate.

#### Money Market Fund (5)

A fund that invests in short-term debt instruments which is expected to outperform the return on 90-Day U.S. Treasury 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

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>VANGUARD BALANCED INDEX</b>	<b>\$1,268,304,822</b>	<b>5.4%</b>	<b>21.8%</b>	<b>10.5%</b>	<b>8.1%</b>	<b>12/2003</b>
Vanguard Balanced Fund Benchmark		5.4	21.8	10.5	8.1	12/2003
Excess		-0.0	-0.0	-0.0	-0.0	

#### Fixed Income

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>DODGE &amp; COX INCOME</b>	<b>276,132,483</b>	<b>0.3</b>	<b>8.4</b>	<b>4.1</b>	<b>3.4</b>	<b>07/1999</b>
BBG BARC Agg Bd		0.2	8.7	4.0	3.0	07/1999
Excess		0.1	-0.3	0.1	0.4	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>VANGUARD TOTAL BOND MARKET INDEX</b>	<b>340,396,170</b>	<b>-0.0</b>	<b>8.6</b>	<b>4.0</b>	<b>3.0</b>	<b>12/2003</b>
BBG BARC Agg Bd		0.2	8.7	4.0	3.0	12/2003
Excess		-0.2	-0.1	-0.0	-0.1	

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>MONEY MARKET FUND</b>	<b>500,866,484</b>	<b>0.5</b>	<b>2.4</b>	<b>1.8</b>	<b>1.3</b>	<b>07/1986</b>
ICE BofA US 3-Month Treasury Bill		0.5	2.3	1.7	1.1	07/1986
Excess		0.0	0.1	0.2	0.2	

#### Stable Value

	Ending Market Value	Last Qtr	1 Year	3 Year	5 Year	Option Since
<b>STABLE VALUE FUND</b>	<b>1,588,008,044</b>	<b>0.7</b>	<b>2.7</b>	<b>2.4</b>	<b>2.2</b>	<b>11/1994</b>
Fixed Interest Blended Benchmark		0.5	2.4	2.5	2.1	11/1994
Excess		0.2	0.3	-0.1	0.2	

- (1) Vanguard Dividend Growth replaced the Janus Twenty Fund in the third quarter of 2016.
- (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 Barclays U.S. Aggregate.
- (5) Money Market and Stable Value are Supplemental Investment Fund options which are also offered to eligible plans that invest through other plans.



Mutual Funds

MN TARGET RETIREMENT ACCOUNTS

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

**Target Date Retirement Funds**

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Option Since</u>		<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>Option Since</u>
<b>SSgA</b>													
<b>2020 FUND</b>	<b>\$134,885,381</b>	<b>3.2%</b>	<b>13.7%</b>	<b>6.6%</b>	<b>4.9%</b>	<b>07/2011</b>	<b>2045 FUND</b>	<b>\$65,351,564</b>	<b>7.0%</b>	<b>23.9%</b>	<b>11.1%</b>	<b>7.9%</b>	<b>07/2011</b>
2020 FUND BENCHMARK		3.2	13.7	6.6	4.9	07/2011	2045 FUND BENCHMARK		7.0	23.9	11.2	7.9	07/2011
Excess		-0.0	-0.0	-0.0	0.0		Excess		-0.0	-0.0	-0.0	0.0	
<b>2025 FUND</b>	<b>171,045,216</b>	<b>4.3</b>	<b>16.8</b>	<b>8.1</b>	<b>5.9</b>	<b>07/2011</b>	<b>2050 FUND</b>	<b>49,126,151</b>	<b>7.4</b>	<b>24.7</b>	<b>11.5</b>	<b>8.1</b>	<b>07/2011</b>
2025 FUND BENCHMARK		4.3	16.8	8.1	5.9	07/2011	2050 FUND BENCHMARK		7.5	24.8	11.5	8.1	07/2011
Excess		-0.0	0.0	0.0	0.0		Excess		-0.0	-0.0	-0.0	0.0	
<b>2030 FUND</b>	<b>126,926,231</b>	<b>5.2</b>	<b>19.9</b>	<b>9.5</b>	<b>6.8</b>	<b>07/2011</b>	<b>2055 FUND</b>	<b>29,377,635</b>	<b>7.6</b>	<b>25.0</b>	<b>11.5</b>	<b>8.1</b>	<b>07/2011</b>
2030 FUND BENCHMARK		5.2	19.9	9.5	6.8	07/2011	2055 FUND BENCHMARK		7.6	25.0	11.5	8.1	07/2011
Excess		-0.0	0.0	-0.0	0.0		Excess		-0.0	-0.0	-0.0	0.0	
<b>2035 FUND</b>	<b>96,456,505</b>	<b>5.9</b>	<b>21.7</b>	<b>10.2</b>	<b>7.3</b>	<b>07/2011</b>	<b>2060 FUND</b>	<b>23,934,738</b>	<b>7.6</b>	<b>25.0</b>	<b>11.5</b>	<b>8.1</b>	<b>07/2011</b>
2035 FUND BENCHMARK		6.0	21.7	10.3	7.3	07/2011	2060 FUND BENCHMARK		7.6	25.0	11.5	8.1	07/2011
Excess		-0.0	-0.0	-0.0	0.0		Excess		-0.0	-0.0	0.0	0.0	
<b>2040 FUND</b>	<b>76,425,529</b>	<b>6.5</b>	<b>22.9</b>	<b>10.8</b>	<b>7.6</b>	<b>07/2011</b>	<b>INCOME FUND</b>	<b>100,314,276</b>	<b>3.2</b>	<b>13.2</b>	<b>6.0</b>	<b>4.5</b>	<b>07/2011</b>
2040 FUND BENCHMARK		6.5	22.9	10.8	7.6	07/2011	INCOME FUND BENCHMARK		3.2	13.2	6.1	4.5	07/2011
Excess		-0.0	-0.0	-0.0	0.0		Excess		-0.0	-0.0	-0.0	-0.0	

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



## MN College Savings Plan Options

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

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

### **ENROLLMENT-BASED MANAGED ALLOCATIONS**

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

### **RISK BASED ALLOCATIONS**

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

### **ASSET CLASS BASED ALLOCATIONS**

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

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

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

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

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

**100% FIXED INCOME** - A fund that passively invests in fixed income holdings that tracks the Bloomberg Barclays 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% BB Barclays 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.





**MINNESOTA COLLEGE SAVINGS PLAN**

**Performance Statistics for the Period Ending: December 31, 2019**

**Total = \$1,561 Million**

Fund Name	Ending Market	3 Months	1 Year	Annualized			Since Inception	Inception Date
				3 Years	5 Years	10 Years		
2036/2037 Enrollment Option	\$11,751,847						4.80%	10/28/2019
2036-2037 Custom Benchmark							5.55%	
2034/2035 Enrollment Option	\$21,921,516						4.70%	10/28/2019
2034-2035 Custom Benchmark							5.42%	
2032/2033 Enrollment Option	\$28,436,050						4.50%	10/28/2019
2032-2033 Custom Benchmark							5.18%	
2030/2031 Enrollment Option	\$38,971,010						4.30%	10/28/2019
2030-2031 Custom Benchmark							4.93%	
2028/2029 Enrollment Option	\$54,624,880						3.90%	10/28/2019
2028-2029 Custom Benchmark							4.51%	
2026/2027 Enrollment Option	\$81,159,140						3.30%	10/28/2019
2026-2027 Custom Benchmark							3.82%	
2024/2025 Enrollment Option	\$119,668,299						2.80%	10/28/2019
2024-2025 Custom Benchmark							3.21%	
2022/2023 Enrollment Option	\$154,868,778						2.20%	10/28/2019
2022-2023 Custom Benchmark							2.58%	
2020/2021 Enrollment Option	\$189,082,958						1.50%	10/28/2019
2020-2021 Custom Benchmark							1.79%	
In School Option	\$226,002,463						1.30%	10/28/2019
In School Custom Benchmark							1.47%	



**MINNESOTA COLLEGE SAVINGS PLAN**  
**Performance Statistics for the Period Ending: December 31, 2019**

Fund Name	Ending Market	3 Months	1 Year	Annualized				Inception Date
				3 Years	5 Years	10 Years	Since Inception	
U.S. and International Equity Option BB: U.S. and International Equity Option	\$300,161,165	7.98%	27.95%	12.91%	9.34%	10.95%	7.36%	10/ 1/2001
Moderate Allocation Option BB: Moderate Allocation Option	\$76,975,219	4.92%	20.11%	9.34%	6.86%	7.98%	5.67%	8/ 2/2007
100% Fixed-Income Option BB: 100% Fixed-Income Option	\$18,895,445	0.32%	8.60%	3.68%	2.86%	3.30%	3.69%	8/16/2007
International Equity Index Option BB: International Equity Index Option	\$5,585,790	8.58%	21.04%	10.03%	5.72%		5.19%	6/18/2013
Money Market Option BB: Money Market Option	\$13,733,009	0.47%	2.00%	1.41%	0.86%	0.39%	0.57%	11/ 1/2007
Principal Plus Interest Option Citigroup 3-Month U.S. Treasury Bill	\$122,728,035	0.51%	2.02%	1.76%	1.59%	1.74%	2.48%	10/10/2001
Aggressive Allocation Option BB: Aggressive Allocation Option	\$35,564,678	6.47%	23.77%	11.19%	8.13%		8.02%	8/12/2014
Conservative Allocation Option BB: Conservative Allocation Option	\$12,708,730	2.62%	12.46%	6.06%	4.54%		4.32%	8/18/2014
Equity and Interest Accumulation Option BB: Equity and Interest Accumulation Option	\$5,111,464	4.74%	15.23%	8.03%	6.31%		6.35%	8/18/2014
U.S. Large Cap Equity Option BB: U.S. Large Cap Equity Option	\$40,365,259	9.04%	31.29%	15.06%	11.48%		12.06%	8/12/2014
Matching Grant Citigroup 3-Month U.S. Treasury Bill	\$2,282,916	0.51%	2.02%	1.76%	1.59%	1.74%	2.48%	3/22/2002

**MINNESOTA COLLEGE SAVINGS PLAN**

**Performance Statistics for the Age Based Investment Option for the Period Ending: October 25, 2019**

The age-based investment option transitioned to the Enrollment-Based Option on 10/28/2019. The following table shows the returns of each Investment Option over the time period(s) indicated for the time period ending 10/24/2019.

Fund Name	Calendar YTD	1 Year	Annualized				Inception Date
			3 Years	5 Years	10 Years	Since Inception	
Managed Ages 0-4	18.39%	13.30%	10.23%	7.74%		7.39%	8/12/2014
BB: Managed Ages 0-4	18.26%	13.51%	10.20%	7.84%		7.47%	
Managed Ages 5-8	17.06%	12.84%	9.31%	7.14%		6.83%	8/12/2014
BB: Managed Ages 5-8	17.02%	13.13%	9.33%	7.28%		6.95%	
Managed Ages 9-10	15.79%	12.47%	8.44%	6.55%		6.29%	8/12/2014
BB: Managed Ages 9-10	15.77%	12.73%	8.45%	6.70%		6.43%	
Managed Ages 11-12	14.25%	11.57%	7.45%	5.85%		5.63%	8/12/2014
BB: Managed Ages 11-12	14.18%	11.91%	7.49%	6.01%		5.78%	
Managed Ages 13-14	12.62%	10.69%	6.48%	5.20%		5.01%	8/12/2014
BB: Managed Ages 13-14	12.59%	11.07%	6.53%	5.31%		5.13%	
Managed Age 15	10.11%	9.04%	5.39%	4.37%		4.24%	8/12/2014
BB: Managed Age 15	10.35%	9.43%	5.40%	4.40%		4.25%	
Managed Age 16	8.93%	7.96%	4.78%	3.90%		3.79%	8/12/2014
BB: Managed Age 16	9.07%	8.43%	4.80%	3.88%		3.76%	
Managed Age 17	7.67%	6.99%	4.22%	3.48%		3.38%	8/12/2014
BB: Managed Age 17	7.81%	7.42%	4.20%	3.37%		3.26%	
Managed Ages 18 & Over	6.20%	5.91%	3.66%	3.04%		2.96%	8/12/2014
BB: Managed Ages 18 & Over	6.55%	6.42%	3.60%	2.85%		2.76%	

# MINNESOTABLE *plan*

A member of The National ABLE Alliance

Performance as of  
12/31/19

Total Market Value: \$ **8,816,334**

<u>Fund Name</u>	<u>Market Value</u>	<u>% of Plan</u>	<u>1 Month</u>	<u>3 Months</u>	<u>YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Inception</u>	<u>Inception Date</u>
Aggressive Option	\$ 773,364	8.77%	1.88	7.11	24.54	24.54	10.69			10.50	12/15/16
ABLE Aggressive Custom Benchmark			2.49	7.32	25.09	25.09	11.16			11.08	
<b>Variance</b>			<b>(0.61)</b>	<b>(0.21)</b>	<b>(0.55)</b>	<b>(0.55)</b>	<b>(0.47)</b>			<b>(0.58)</b>	
Moderately Aggressive Option	\$ 855,369	9.70%	1.55	5.91	21.32	21.32	9.39			9.25	12/15/16
ABLE Moderately Aggressive Custom Benchmark			2.13	6.18	21.90	21.90	9.87			9.84	
<b>Variance</b>			<b>(0.58)</b>	<b>(0.27)</b>	<b>(0.58)</b>	<b>(0.58)</b>	<b>(0.48)</b>			<b>(0.59)</b>	
Growth Option	\$ 1,211,494	13.74%	1.28	4.81	18.24	18.24	8.05			8.00	12/15/16
ABLE Growth Custom Benchmark			1.77	5.03	18.74	18.74	8.55			8.58	
<b>Variance</b>			<b>(0.49)</b>	<b>(0.22)</b>	<b>(0.50)</b>	<b>(0.50)</b>	<b>(0.50)</b>			<b>(0.58)</b>	
Moderate Option	\$ 1,088,137	12.34%	0.99	3.65	14.99	14.99	6.75			6.75	12/15/16
ABLE Moderate Custom Benchmark			1.40	3.89	15.63	15.63	7.21			7.28	
<b>Variance</b>			<b>(0.41)</b>	<b>(0.24)</b>	<b>(0.64)</b>	<b>(0.64)</b>	<b>(0.46)</b>			<b>(0.53)</b>	
Moderately Conservative Option	\$ 928,819	10.54%	0.78	2.56	10.87	10.87	5.06			5.09	12/15/16
ABLE Moderately Conservative Custom Benchmark			0.99	2.74	11.42	11.42	5.48			5.55	
<b>Variance</b>			<b>(0.21)</b>	<b>(0.18)</b>	<b>(0.55)</b>	<b>(0.55)</b>	<b>(0.42)</b>			<b>(0.46)</b>	
Conservative Option	\$ 1,519,287	17.23%	0.37	1.11	5.42	5.42	2.81			2.84	12/15/16
ABLE Conservative Custom Benchmark			0.44	1.21	5.88	5.88	3.13			3.17	
<b>Variance</b>			<b>(0.07)</b>	<b>(0.10)</b>	<b>(0.46)</b>	<b>(0.46)</b>	<b>(0.32)</b>			<b>(0.33)</b>	
Checking Option	\$ 2,439,864	27.67%									03/30/17

## MINNESOTA ACHIEVE A BETTER LIFE EXPERIENCE

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

## 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.



# Non-Retirement

## December 31, 2019



## Quarterly Report

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# Non-Retirement Funds

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

- The 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 Minnesota Workers Compensation Assigned Risk Plan provides worker compensation insurance for companies unable to obtain coverage through private carriers.
- The Closed Landfill Investment Fund is a trust created by the Legislature to invest money to pay for the long-term costs of maintaining the integrity of landfills in Minnesota once they are closed.
- Other Post-Employment Benefits Accounts (OPEB) are the assets set aside by local units of government for the payment of retiree benefits trusted by the Public Employees Retirement Association.
- Miscellaneous Trust Accounts are other small funds managed by the SBI for a variety of purposes.

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



Non-Retirement

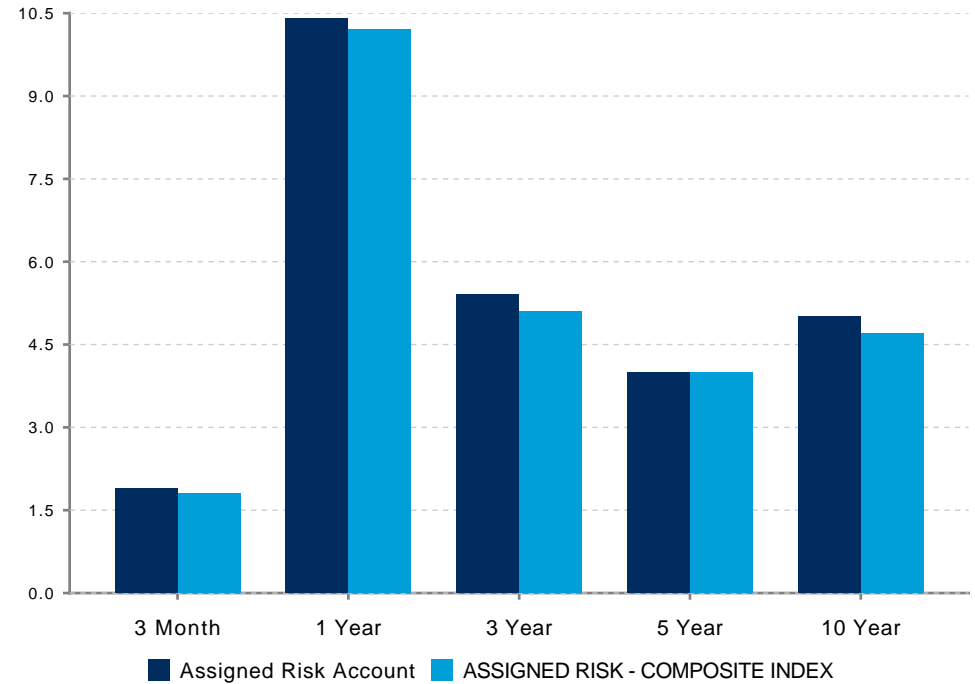
**Assigned Risk Plan**

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

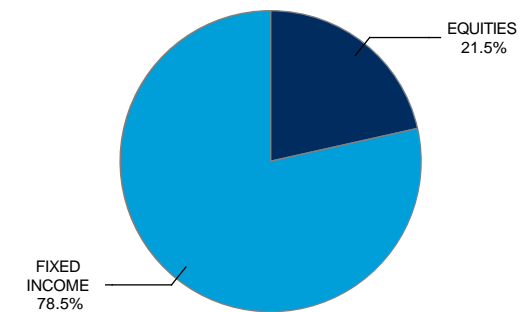
The Assigned Risk Plan is invested in a portfolio of common stocks and bonds

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

The fixed income benchmark is the Bloomberg Barclays Intermediate Government 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% equities and 20% 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
Assigned Risk Account	\$293,438,876	1.9%	10.4%	5.4%	4.0%	5.0%
EQUITIES	63,198,792	9.0	31.5	15.5	10.9	12.4
FIXED INCOME	230,240,084	0.1	5.2	2.6	2.0	2.8
ASSIGNED RISK - COMPOSITE INDEX		1.8	10.2	5.1	4.0	4.7
Excess		0.1	0.2	0.2	-0.0	0.3
S&P 500		9.1	31.5	15.3	11.7	13.6
BBG BARC US Gov: Int		0.0	5.2	2.6	2.0	2.4



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.



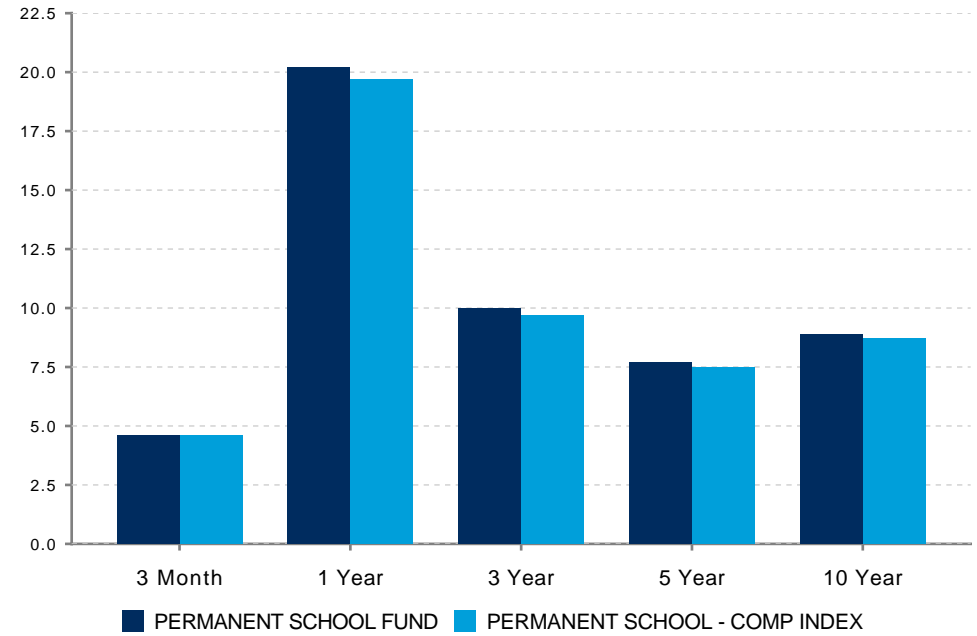
Non-Retirement

**Permanent School Fund**

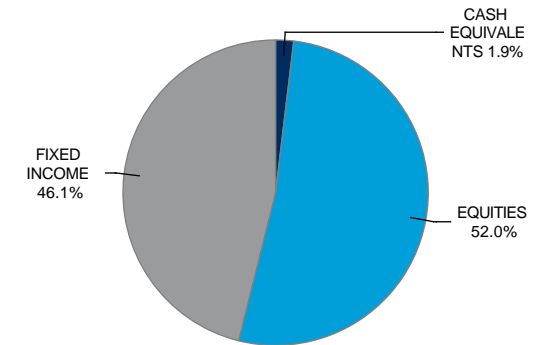
The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is transferred to the school endowment fund and distributed to Minnesota's public schools.

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 Barclays 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.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
PERMANENT SCHOOL FUND	\$1,611,614,840	4.6%	20.2%	10.0%	7.7%	8.9%
CASH EQUIVALENTS	31,292,577	0.5	2.3	1.7	1.1	0.7
EQUITIES	837,433,622	9.0	31.5	15.3	11.7	13.6
FIXED INCOME	742,888,641	0.3	9.6	4.5	3.5	4.1
PERMANENT SCHOOL - COMP INDEX		4.6	19.7	9.7	7.5	8.7
Excess		0.1	0.5	0.3	0.2	0.2
S&P 500		9.1	31.5	15.3	11.7	13.6
BBG BARC US Agg		0.2	8.7	4.0	3.0	3.7



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.





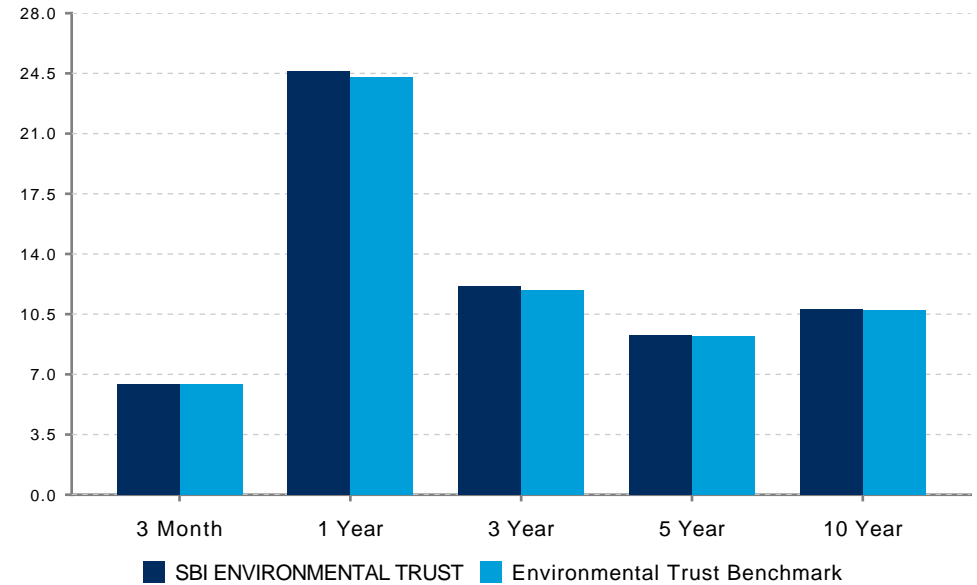
Non-Retirement

**Environmental Trust Fund**

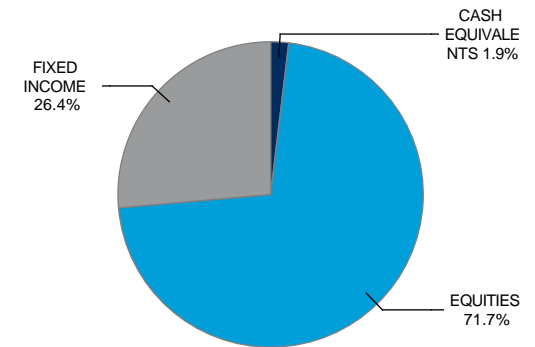
The objective of the Environmental Trust Fund is to increase the market value of the Fund over time in order to increase the annual amount made available for spending within the constraints of maintaining adequate portfolio quality and liquidity.

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 Barclays U.S. Aggregate. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets of 2% cash, 70% equities, and 28% fixed income. The actual asset mix will fluctuate and is shown in the graph below.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
SBI ENVIRONMENTAL TRUST	\$1,302,579,036	6.4%	24.6%	12.1%	9.3%	10.8%
CASH EQUIVALENTS	24,749,915	0.5	2.3	1.7	1.1	0.7
EQUITIES	933,752,235	9.0	31.5	15.3	11.7	13.6
FIXED INCOME	344,076,886	0.3	9.6	4.5	3.5	4.1
Environmental Trust Benchmark		6.4	24.3	11.9	9.2	10.7
Excess		0.1	0.3	0.2	0.1	0.1
S&P 500		9.1	31.5	15.3	11.7	13.6
BBG BARC US Agg		0.2	8.7	4.0	3.0	3.7



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.

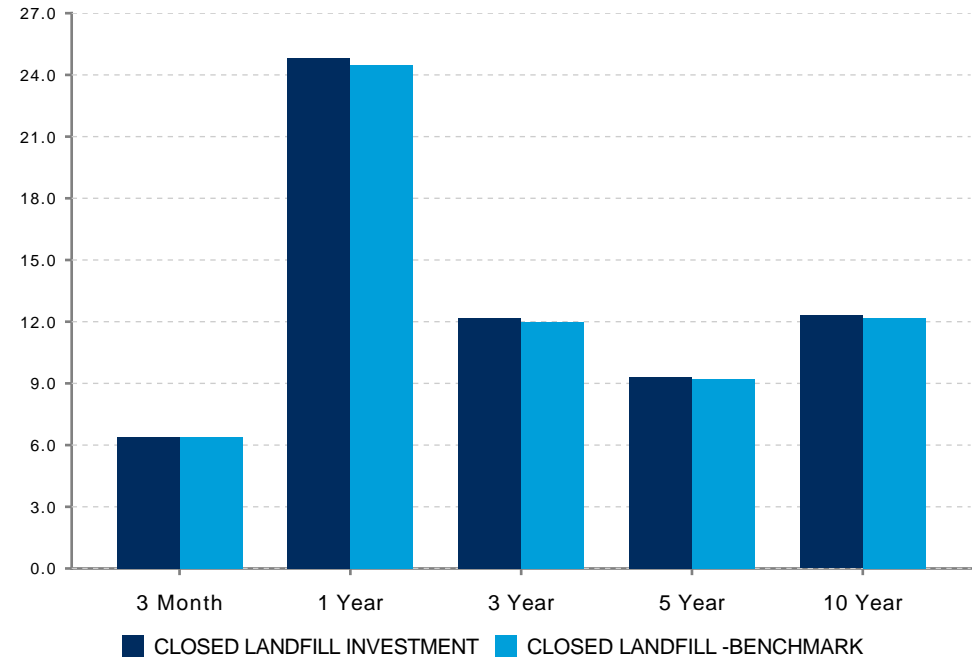


Non-Retirement

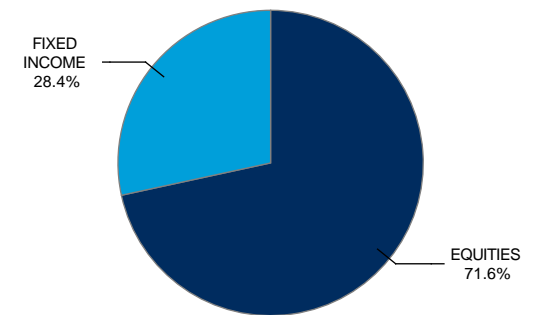
**Closed Landfill Investment Fund**

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 are 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 Barclays U.S. Aggregate. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets of 70% equities and 30% fixed income. The actual asset mix will fluctuate and is shown in the graph below.



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
CLOSED LANDFILL INVESTMENT	\$103,994,724	6.4%	24.8%	12.2%	9.3%	12.3%
EQUITIES	74,487,172	9.0	31.5	15.3	11.7	13.6
FIXED INCOME	29,507,552	0.3	9.6	4.5	3.5	
CLOSED LANDFILL -BENCHMARK		6.4	24.5	12.0	9.2	12.2
Excess		0.1	0.3	0.2	0.1	0.1
S&P 500		9.1	31.5	15.3	11.7	13.6
BBG BARC US Agg		0.2	8.7	4.0	3.0	3.7



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



	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>	<u>Since Inception</u>	<u>Inception Date</u>
<b>NON RETIREMENT EQUITY INDEX - MELLON</b>	<b>2,616,754,538</b>	<b>9.0</b>	<b>10.9</b>	<b>31.5</b>	<b>15.3</b>	<b>11.7</b>	<b>13.6</b>	<b>9.9</b>	<b>07/1993</b>
S&P 500 INDEX (DAILY)		9.1	10.9	31.5	15.3	11.7	13.6	9.9	07/1993
Excess		-0.0	-0.0	-0.0	0.0	0.0	0.0	0.1	
<b>NON RETIREMENT FIXED INCOME - PRUDENTIAL</b>	<b>1,295,006,770</b>	<b>0.3</b>	<b>2.7</b>	<b>9.6</b>	<b>4.5</b>	<b>3.5</b>	<b>4.1</b>	<b>6.0</b>	<b>07/1994</b>
BBG BARC Agg (Dly)		0.2	2.5	8.7	4.0	3.0	3.7	5.5	07/1994
Excess		0.1	0.3	0.9	0.4	0.4	0.4	0.5	
<b>RBC</b>	<b>230,240,019</b>	<b>0.1</b>	<b>1.3</b>	<b>5.2</b>	<b>2.6</b>	<b>2.0</b>	<b>2.8</b>	<b>4.8</b>	<b>07/1991</b>
RBC Custom Benchmark		0.0	1.2	5.2	2.6	2.0	2.4	4.9	07/1991
Excess		0.0	0.1	-0.0	0.1	0.1	0.4	-0.1	
MET COUNCIL OPEB BOND POOL	66,771,680	0.4	1.3	4.3					02/2009
<b>NON RETIREMENT CASH</b>	<b>152,696,364</b>	<b>0.5</b>	<b>1.0</b>	<b>2.3</b>	<b>1.7</b>	<b>1.2</b>	<b>0.7</b>	<b>2.7</b>	
iMoneyNet Money Fund Average- All Taxable		0.4	0.8	1.9	1.3	0.8	0.4		
Excess		0.1	0.2	0.5	0.5	0.3	0.3		

Note:

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

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

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

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# State Cash

## December 31, 2019



## State Cash Accounts

### Invested Treasurer's Cash

The Invested Treasurer's Cash Pool (ITC) represents the balances in more than 400 separate accounts that flow through the Minnesota State Treasury. These accounts vary greatly in size. The ITC contains the cash balances of certain State agencies and non-dedicated cash in the State Treasury.

The investment objectives of the ITC, in order of priority, are as follows:

- Safety of Principal. To preserve capital.
- Liquidity. To meet cash needs without the forced sale of securities at a loss.
- Competitive Rate of Return. To provide a level of current income consistent with the goal of preserving capital.

The SBI seeks to provide safety of principal by investing all cash accounts in high quality, liquid, short term investments. These include U.S. Treasury and Agency issues, repurchase agreements, bankers acceptances, commercial paper, and certificates of deposit.

Beginning in January 2003, the Treasurer's Cash Pool is measured against the iMoneyNet, All Taxable Money Fund Report Average.

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
Treasurer's Cash	13,410,482,706	0.5	2.5	1.9	1.4	1.0
iMoneyNet Money Fund Average-All Taxable		0.4	1.9	1.3	0.8	0.4

### Other State Cash Accounts

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

	<u>Ending Market Value</u>	<u>Last Qtr</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
Debt Service	77,162,069	0.5	5.2	3.5	2.7	
Housing Finance	87,677,023	-0.5	1.2	1.5	1.5	
Public Facilities Authority	60,499,058	0.5	2.8	2.3	2.1	



## 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. The Combined Funds Composite weight is set as the Strategic Asset Allocation Policy Target with the uninvested portion of Private Markets allocated to Public Equity. Asset class weights for Public Equity and Private Markets 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. 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.

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

Since 1/1/2019 the benchmark is 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 Income Benchmark:**

In 2016, the Barclays Agg was rebranded Bloomberg Barclays Agg to reflect an ownership change. 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.



## Addendum

### Benchmark Definitions (continued)

#### **Fixed Interest Blended Benchmark:**

On 6/1/2002, the benchmark was set as the 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 1/1/2019 the benchmark is 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).

#### **Passive Domestic Equity Benchmark:**

A weighted average of the Russell 1000 and Russell 3000 effective 10/1/2016. 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.

#### **Public Equity Benchmark:**

60.3% Russell 1000, 6.7% Russell 2000, 24.75% MSCI World Ex US (net), and 8.25% MSCI EM (net) effective 1/1/2019. 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 the 67% and 33% weighting.

#### **Semi-Passive Domestic Equity Benchmark:**

Russell 1000 index effective 1/1/2004. Prior to 1/1/2004 it was the Completeness Fund benchmark.