

MINNESOTA  
STATE  
BOARD OF  
INVESTMENT



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& Chief Investment  
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DATE: February 11, 2021

TO: The Honorable Tim Walz  
Minnesota Legislative Reference Library

FROM: Mansco Perry III *MP3*  
Executive Director and Chief Investment Officer

SUBJECT: External Money Manager Report Pursuant to Minnesota  
Statutes Section 11A.04, clause (12)

*Minnesota Statutes*, Section 11A.04, clause (12) requires the State Board of Investment (SBI) to report annually to the Governor and Legislative Reference Library the cost and investment performance of external investment managers employed by the Board.

As of June 30, 2020, the Defined Benefit Plan assets were invested with 16 domestic equity managers, 15 international equity managers, seven core/core plus fixed income managers, and three treasury protection managers. The Non-Retirement Program utilized one fixed income manager, one equity manager, and a cash manager. The Assigned Risk Plan utilized a different fixed income manager as its mandate is different than the Non-Retirement Program bond manager. Finally, the Stable Value Fund investment option for eligible participants in the Participant Directed Investment Program is managed by one external investment manager.

The fees paid to each of the external money managers that invest a separately managed portfolio is provided on **pages 5-6** of this memo. This information is also included in the SBI's Fiscal Year 2020 Annual Report.

The returns earned from each of the investment managers is provided on **pages 7-10** of this memo. It is important to note that all performance data reported by the SBI is net of fees and transactions costs associated with the various portfolios and funds. The SBI's Fiscal Year 2020 Annual Report contains additional detail on manager performance and may be accessed online at <http://mn.gov/sbi>.

Relevant pages from the SBI's Fiscal Year 2020 Annual Report are included within this report.

## **Retirement Program - Defined Benefit Plan**

### **Domestic Stock Program Managers**

The SBI evaluates domestic equity manager returns against the performance of Russell style indices which reflect the managers' specific investment approaches. The benchmark portfolios take into account the market forces that, at times, favorably or unfavorably impact certain investment styles. The aggregate Domestic Equity Program is designed to outperform its asset class target. The Domestic Equity Program targets fixed policy weights of 90% large-cap, managed to the Russell 1000 Index, and 10% small-cap, managed to the Russell 2000 Index. Assets are allocated to managers within each of the Russell style indices.

As a group, the Domestic Equity Program managers outperformed its asset class target by 0.2 percentage point for the fiscal year. For fiscal year 2020, five of the 14 active managers outperformed their assigned benchmarks while nine managers underperformed. One semi-passive manager outperformed and the other semi-passive manager underperformed the Russell 1000 Index. The passive mandate's are managed by one manager. For the fiscal year 2020, the large-cap mandate matched the return of the Russell 1000 and the all-cap and small-cap mandates, the Russell 3000 and Russell 2000, outperformed their respective benchmark returns, respectively. (See **page 7**.)

### **International Stock Program Managers**

The SBI evaluates individual international equity managers against two market indices published by Morgan Stanley Capital International MSCI: the MSCI World ex USA Index (net) and the MSCI Emerging Markets Index (net). The International Stock Program benchmark represents 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). As a group, the International Equity Program managers outperformed the asset class target by 0.6 percentage point for the fiscal year. Five of the six active developed market managers outperformed their benchmark and three of the seven active emerging markets managers outperformed their benchmark over the year. The semi-passive developed market manager underperformed the benchmark over the year. The passive developed markets portfolio outperformed the return of the MSCI World ex USA Index (net) along with the emerging markets passively managed portion of the program, which slightly outperformed the return of the MSCI Emerging Markets Index (net). (See **page 8**.)

### **Core/Core Plus Program Managers**

The Core/Core Plus Bond aggregate is measured against the Bloomberg Barclays U.S. Aggregate Bond Index. As a group, the Core/Core Plus Bond managers outperformed its asset class target by 0.5 percentage point for the fiscal year. For fiscal year 2020, five of the seven Core/Core Plus Bond managers outperformed their benchmark and two underperformed. (See **page 9**.)

### **Treasury Protection Portfolio Managers**

The Treasury Protection Portfolio, launched in early 2018, is used exclusively by the Combined Funds. Three Treasury Portfolio managers were hired with a blend of investment styles to outperform the Bloomberg Barclays Treasury 5+ Years Index

total return over time. For fiscal year 2020, all three managers underperformed their benchmark for the fiscal year. As a group, the Treasury Program underperformed by 0.5 percentage point for the fiscal year. (See **page 10**.)

### **Non-Retirement Program**

#### **Non-Retirement Equity Fund Manager**

This fund is passively managed by Mellon Investments Corporation and is measured against the S&P 500 Index. For fiscal year 2020 and all other time periods, the Non-Retirement Equity Fund matched its benchmark. (See **page 11**.)

#### **Non-Retirement Bond Fund Manager**

This fund is actively managed by Prudential Global Investment Management (PGIM) and is measured against the Bloomberg Barclays U.S. Aggregate Bond Index, which is a broad-based index of investment grade, U.S. dollar denominated, fixed rate taxable bonds. For fiscal year 2020, the Non-Retirement Bond Fund underperformed its benchmark by 0.5 percentage point. (See **page 12**.)

#### **Non-Retirement Money Market Fund Manager**

This fund is managed by State Street Global Advisors (SSGA) and is measured against the iMoneyNet All Taxable Money Fund Average. For fiscal year 2020, the Non-Retirement Money Market Fund outperformed its benchmark by 0.4 percentage point. (See **page 13**.)

#### **Non-Retirement / Assigned Risk Plan Fixed Income Manager**

The SBI evaluates the performance of the Assigned Risk Plan fixed income manager, RBC Global Asset Management, against the Bloomberg Barclays Intermediate Government Index. During fiscal year 2020, the fixed income manager outperformed its benchmark by 0.2 percentage point. (See **pages 14-15**.)

### **Participant Directed Investment Program (PDIP)**

#### **Stable Value Fund**

The Stable Value Fund is a separately managed fund available to qualified defined contribution plans. The SBI evaluates the performance of the stable value manager, Galliard Capital Management, a subsidiary of Wells Fargo Asset Management, against the 3-Year Constant Maturity Treasury plus 45 basis points, overtime. During fiscal year 2020, the stable value manager outperformed its benchmark by 1.1 percentage points. This return is reported on both the Supplemental Investment Fund (SIF) and Mutual Fund return summaries explained later. (See **page 16**.)

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**Financials**  
**Investment Manager Fees – Total Payments for Fiscal Year 2020**

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Manager Name	Fees Paid
<b>Domestic Equity Active Managers</b>	
ArrowMark Colorado Holdings, LLC	\$ 1,554,060
Barrow, Hanley, Mewhinney & Strauss, LLC	645,387
Earnest Partners, LLC	501,958
Goldman Sachs Asset Management, L.P.	1,901,822
Hood River Capital Management, LLC	1,878,212
Hotchkis and Wiley Capital Management, LLC	1,241,404
LSV Asset Management	484,389
Martingale Asset Management, L.P.	1,318,295
Peregrine Capital Management	1,612,191
Rice Hall James & Associates, LLC	1,520,002
Sands Capital Management, LLC	1,412,376
Wellington Management Company LLP	1,644,568
Winslow Capital Management, LLC	841,347
Zevenbergen Capital Investments LLC	1,506,202
<b>Domestic Equity Semi-Passive Managers</b>	
BlackRock Institutional Trust Company, N.A.	1,175,015
J.P. Morgan Investment Management Inc.	1,431,653
<b>Domestic Equity Passive Manager</b>	
BlackRock Institutional Trust Company, N.A. (Passive R3000)	68,546
BlackRock Institutional Trust Company, N.A. (Passive R2000)	27,965
BlackRock Institutional Trust Company, N.A. (Passive R1000)	998,351
<b>Fixed Income Active Managers</b>	
Columbia Threadneedle Investments	1,021,742
Dodge & Cox	1,145,071
Pacific Investment Management Company LLC (PIMCO)	2,225,486
Western Asset Management Company	1,232,246
<b>Fixed Income Semi-Passive Managers</b>	
BlackRock Financial Management, Inc.	736,323
Goldman Sachs Asset Management	816,304
Neuberger Berman Investment Advisers LLC	428,279
<b>Treasury Managers</b>	
BlackRock Financial Management, Inc.	1,110,085
Goldman Sachs Asset Management	1,149,004
Neuberger Berman Investment Advisers LLC	1,019,852

## Financials

### Investment Manager Fees – Total Payments for Fiscal Year 2020

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<b>Manager Name</b>	<b>Fees Paid</b>
International Active Developed Markets Managers	
Acadian Asset Management LLC	\$ 1,499,232
Columbia Threadneedle Investments	1,204,472
Fidelity Institutional Asset Management LLC	1,319,396
J.P. Morgan Investment Management Inc.	1,127,496
Marathon Asset Management LLP	1,271,440
McKinley Capital Management, LLC	1,091,337
International Semi Passive Developed Markets Managers	
AQR Capital Management, LLC	1,511,534
International Passive Developed Markets Manager	
State Street Global Advisors	727,772
International Active Emerging Markets Managers	
Earnest Partners LLC	1,892,691
Macquarie Investment Management Advisers	1,763,749
Martin Currie Inc.	1,860,507
Morgan Stanley Investment Management Inc.	3,726,853
Neuberger Berman Investment Advisers LLC	2,359,143
Pzena Investment Management, LLC	2,047,807
The Rock Creek Group, LLC	2,077,997
International Passive Emerging Markets Manager	
State Street Global Advisors	590,412
Stable Value Manager	
Galliard Capital Management, Inc. <sup>(1)</sup>	3,485,620
Assigned Risk Plan Manager	
RBC Global Asset Management (U.S.) Inc.	235,800
Non-Retirement Managers	
Mellon Investments Corporation	98,691
Prudential Global Investment Management, Inc. (PGIM)	1,270,495
State Street Global Advisors	25,100
<b>Total Investment Manager Fees Paid</b>	<b>\$ 63,835,677</b>

<sup>1</sup> Includes Investment Contract fees of \$2,655,626 charged by wrap providers.

## Combined Funds

### Public Equity / Domestic Equity Program

Figure 18. Domestic Equity Program Manager Performance for Periods Ending June 30, 2020

Manager Strategy (Benchmark)	Annualized Returns <sup>1</sup>						Market Value <sup>2</sup> (\$ millions)
	1 Year		3 Years		5 Years		
	Actual	Bmk	Actual	Bmk	Actual	Bmk	
	%	%	%	%	%	%	
<b>Active Managers</b>							
<b>Large Cap Growth (Russell 1000 Growth)</b>							
Sands Capital Management	31.6	23.3	25.8	19.0	18.2	15.9	367.5
Winslow Capital Management	22.1	23.3	20.7	19.0	15.9	15.9	272.9
Zevenbergen Capital	55.2	23.3	33.8	19.0	23.1	15.9	466.7
<b>Large Cap Value (Russell 1000 Value)</b>							
Barrow, Hanley	-9.7	-8.8	2.1	1.8	4.2	4.6	289.5
Earnest Partners	-6.9	-8.8	4.6	1.8	6.1	4.6	255.4
LSV Asset Management	-12.6	-8.8	0.0	1.8	3.2	4.6	337.9
<b>Small Cap Growth (Russell 2000 Growth)</b>							
ArrowMark	-4.4	3.5	6.3	7.9			222.4
Hood River	8.1	3.5	9.7	7.9			287.3
Rice Hall James	1.5	3.5	6.3	7.9			230.3
Wellington	4.7	3.5	7.7	7.9			311.5
<b>Small Cap Value (Russell 2000 Value)</b>							
Goldman Sachs	-19.7	-17.5	-3.8	-4.3	0.9	1.3	322.9
Hotchkis & Wiley	-24.2	-17.5	-7.8	-4.3	-3.2	1.3	238.4
Martingale Asset Management	-20.0	-17.5	-6.2	-4.3	0.2	1.3	239.5
Peregrine Capital Management	-18.8	-17.5	-4.9	-4.3	0.0	1.3	291.9
<b>Semi-Passive Managers (Russell 1000)</b>							
BlackRock Institutional	7.3	7.5	11.6	10.6	11.2	10.5	1,240.6
J.P. Morgan Investment Management	8.2	7.5	10.6	10.6	10.5	10.5	1,290.8
<b>Passive Managers</b>							
<b>Large Cap (Russell 1000)</b>							
BlackRock Institutional	7.5	7.5	10.6	10.6			20,289.6
<b>Small Cap (Russell 2000)</b>							
BlackRock Institutional	-5.8	-6.6					549.1
<b>All Cap (Russell 3000)</b>							
BlackRock Institutional	6.7	6.5	10.1	10.0	10.1	10.0	1,510.3
<b>Aggregate Domestic Equity Program</b>	<b>6.2</b>	<b>6.0</b>	<b>10.0</b>	<b>9.9</b>	<b>9.7</b>	<b>9.9</b>	<b>29,014.4</b>

<sup>1</sup> The Domestic Equity Program benchmark as of 1/1/2019 is 90% Russell 1000 and 10% Russell 2000. From 10/1/2003 to 12/31/2018 the target was the Russell 3000. The SBI Domestic Equity Program return includes the performance of terminated managers.

<sup>2</sup> Market values include Supplemental Investment Fund (SIF) assets.

## Combined Funds Public Equity / International Equity Program

Figure 20. International Equity Program Manager Performance for Periods Ending June 30, 2020

Manager Approach (Benchmark)	Annualized Returns <sup>1</sup>						Market Value <sup>2</sup> (\$ in millions)
	1 Year		3 Years		5 Years		
	Actual %	Bmk %	Actual %	Bmk %	Actual %	Bmk %	
<b>Active Managers</b>							
<b>Developed Markets (MSCI World ex USA net)</b>							
Acadian Asset Management	-3.2	-5.4	2.1	0.8	6.4	2.0	374.7
Columbia Mgmt. Investment Advisers	-1.3	-5.4	4.7	0.8	4.0	2.0	401.1
Fidelity Institutional Asset Management	-0.3	-5.4	3.7	0.8	4.0	2.0	385.5
J.P. Morgan Investment Management	-1.7	-5.4	3.3	0.8	3.5	2.0	312.0
Marathon Asset Management	-7.1	-5.4	-0.3	0.8	1.7	2.0	334.6
McKinley Capital Management	0.0	-5.4	3.9	0.8	2.7	2.0	265.3
<b>Semi- Passive Managers</b>							
<b>Developed Markets (MSCI World ex USA net)</b>							
AQR Capital Management	-7.9	-5.4	-1.9	0.8	0.8	2.0	316.9
<b>Passive Manager</b>							
<b>Developed Markets (MSCI World ex USA net)</b>							
State Street Global Advisers	-5.0	-5.4	1.2	0.8	2.4	2.0	8,022.7
<b>Active Managers</b>							
<b>Emerging Markets (MSCI Emerging Markets net)</b>							
Earnest Partners	-11.3	-3.4	-1.1	1.9			275.8
Macquarie Investment Management Advisers	6.0	-3.4	5.0	1.9			381.1
Martin Currie	3.0	-3.4	5.6	1.9			378.4
Morgan Stanley Investments Management	-4.1	-3.4	0.2	1.9	2.3	2.9	488.4
Neuberger Berman Investment Advisers	-3.7	-3.4	1.9	1.9			337.5
Pzena Investment Management	-15.1	-3.4	-3.9	1.9			251.6
Rock Creek	0.9	-3.4	1.7	1.9			358.0
<b>Passive Manager</b>							
<b>Emerging Markets (MSCI World ex USA net)</b>							
State Street Global Advisers	-3.1	-3.4	2.0	1.9	3.0	2.9	1,108.6
<b>Aggregate International Equity Program</b>	<b>-4.2</b>	<b>-4.8</b>	<b>1.3</b>	<b>1.1</b>	<b>2.5</b>	<b>2.3</b>	<b>13,992.1</b>

<sup>1</sup> The International Equity Program benchmark is the 75% MSCI World ex USA Index (net) and 25% MSCI Emerging Markets Index (net). From 6/1/08 to 12/31/18 the target was the MSCI ACWI ex U.S. (net). The SBI International Equity Aggregate includes the performance of terminated managers.

<sup>2</sup> Market Value includes assets of the SIF Broad International Equity Fund.

## Combined Funds Fixed Income / Core Bond Program

Figure 23. Core Bond Manager Performance for Periods Ending June 30, 2020

	Annualized Returns <sup>1</sup>						Market Value <sup>2</sup> (\$ millions)
	1 Year		3 Years		5 Years		
	Actual %	Bmk %	Actual %	Bmk %	Actual %	Bmk %	
<b>Active Managers</b>							
Columbia Management	9.4	8.7	6.3	5.3	5.3	4.3	1,045.4
Dodge & Cox	8.5	8.7	5.5	5.3	4.8	4.3	1,033.4
PIMCO	8.5	8.7	5.5	5.3	4.5	4.3	1,026.4
Western Asset Management	9.8	8.7	6.2	5.3	5.5	4.3	1,093.9
<b>Semi-Passive Managers</b>							
BlackRock Financial Management	9.2	8.7	5.6	5.3	4.5	4.3	1,138.7
Goldman Sachs Asset Management	9.6	8.7	5.8	5.3	4.7	4.3	997.9
Neuberger Investment Management	9.6	8.7	5.7	5.3	4.5	4.3	1,130.1
<b>Total Core Bond Program</b>	<b>9.2</b>	<b>8.7</b>	<b>5.8</b>	<b>5.3</b>	<b>4.8</b>	<b>4.3</b>	<b>7,466.0</b>

<sup>1</sup> Returns are net of investment management fees. The Fixed Income Program asset class target has been the Bloomberg Barclays U.S. Aggregate Bond Index since July 1994.

<sup>2</sup> Market value includes assets of SIF Funds.

Figure 24. Fixed Income Program Sector Weights and Portfolio Characteristics for Period Ending June 30, 2020

	Active Managers %	Semi-Passive Managers %	Aggregate Fixed Income Program %	BB Barclays Benchmark %
Treasury	20.5	23.7	21.4	39.3
Government-Related	2.5	2.4	2.5	3.4
Corporate	34.0	38.5	35.9	27.3
U.S. Mortgage	27.7	29.8	28.1	26.9
Commercial Mortgage	3.8	2.8	3.3	2.2
Asset Backed	10.3	1.6	6.4	0.4
Municipal	1.2	0.9	1.0	0.7
Other	1.0	0.3	0.9	0.0

Note: May not equal 100% due to rounding.

Figure 25. Core Bond Program Portfolio Characteristics for Period Ending June 30, 2020

	Active Managers %	Semi-Passive Managers %	Core Bond Program %	BB Barclays Benchmark %
Average Quality	A	A+	A	A+
Average Yield to Maturity (%)	2.6	1.6	2.1	1.3
Effective Duration <sup>1</sup> (yrs)	6.0	5.7	5.9	5.8
Weighted Average Life <sup>2</sup> (yrs)	8.2	8.0	8.1	8.2

<sup>1</sup> Measures the interest rate sensitivity of a bond. It is the approximation of the percentage price change of the bond per 100 bp increase or decrease in prevailing market interest rates. Effective duration takes into consideration how the cashflows of the bonds change when interest rates change. This measure is most appropriate for bonds (and portfolios) with optionality, such as callable bonds and mortgage bonds.

<sup>2</sup> The Weighted Average Life (WAL) of a bond is the average number of years for which each dollar of unpaid principal of a bond remains outstanding. Once calculated, WAL tells how many years it will take to pay half of the outstanding principal.

## Combined Funds

### Fixed Income / Treasury Portfolio

#### Treasury Portfolio

The Treasury Portfolio, launched in early 2018, represents 10% of the Fixed Income allocation. This segment of the fixed income portfolio is used exclusively by the Combined Funds.

As of June 30, 2020, the program had a market value of \$7.2 billion.

The SBI's objectives included offsetting credit risk inherent in the bond program, and providing downside protection for the overall retirement program during periods of significant equity drawdowns.

#### Investment Management

A group of three bond managers were retained for their blend of investment styles. Each manager has been given a modest risk budget with the goal of outperforming the Bloomberg Barclays Treasury 5+ Years Index total return over time, while largely retaining the primary characteristics of the benchmark.

The managers are required to remain within +/- 0.5 years of the overall benchmark duration (currently 11 years), but may employ interest rates strategies that result in overweight or underweight positions in certain maturities along the curve. In addition, managers finding relative value in the short-end may choose to hold out-of-benchmark Treasury securities of less than five years duration, either through direct purchases or through those becoming shorter than five years due to the passage of time/roll down the curve.

The managers are also permitted to purchase limited amounts of out-of-benchmark U.S. Agencies, U.S. Supranationals, and Treasury Inflation Protected Securities (TIPS).

A description of each bond manager's investment approach is included in the **Investment Manager Summaries** section on page B41.

#### Investment Performance

The SBI constrains the risk of the Treasury portfolio managers to ensure that their accounts continue to be comparable to the benchmark and fulfill their total fund diversification roles.

Since inception in February 2018, the Treasury portfolio returned 11.1% through June 30, 2020 slightly underperforming its benchmark performance of 11.4% for the same time-period.

During the fiscal year, the Treasury portfolio returned 16.7%, which underperformed its benchmark return of 17.2% by 0.5 percentage point.

Individual manager performance is shown below in Figure 26 and portfolio characteristics as of June 30, 2020, is shown in Figure 27.

**Figure 26. Treasury Portfolio Manager Performance and Market Value as of June 30, 2020**

	1 Year Return (%)		Market Value
	Actual	Bmk <sup>1</sup>	(\$ in millions)
<b>Treasury Managers</b>			
BlackRock Financial Mgmt.	16.8	17.2	2,461.0
Goldman Sachs Asset Mgmt.	16.7	17.2	2,307.9
Neuberger Investment Mgmt.	16.6	17.2	2,420.4
<b>Total Treasury Portfolio</b>	<b>16.7</b>	<b>17.2</b>	<b>7,189.4</b>

<sup>1</sup> The Treasury benchmark is the Bloomberg Barclay 5 Year U.S. Treasury Index.

**Figure 27. Treasury Portfolio Characteristics as of June 30, 2020**

	Total Portfolio	Benchmark <sup>1</sup>
Effective Duration (yrs)	12.1	12.1
Convexity	2.5	2.3
Coupon Rate (%)	2.5	2.7
Yield to Maturity (%)	0.9	0.9
Option Adjusted Spread (bps)	7.0	3.0

<sup>1</sup> The Treasury benchmark is the Bloomberg Barclay 5 Year U.S. Treasury Index.

## Non-Retirement Program

### Investment Vehicle: Non-Retirement Equity Fund

Mellon Investments Corporation manages the Non-Retirement Equity Fund used by various state trust funds such as the Permanent School Fund, Environmental Trust Fund, Assigned Risk Plan, and Closed Landfill Investment Fund. On June 30, 2020, the total market value of the Non-Retirement Equity Fund was \$2.6 billion.

#### Non-Retirement Equity Fund

The Non-Retirement Equity Fund provides domestic equity exposure to entities with authority to use this investment vehicle. The types of entities that invest in the Non-Retirement Equity Fund include state and other trust funds, OPEB funds, and Qualifying Governmental Entities.

#### Investment Objectives

The investment objective of the Non-Retirement Equity Fund is to track the S&P 500 index, a large capitalization domestic equity benchmark. The portfolio is expected to have a realized active risk level relative to the benchmark of 0.2 or less, where active risk is the annualized standard deviation of the Manager's excess returns relative to the benchmark. Over time, the annual return shortfall relative to the benchmark, due to fees and trading expenses, should be no more than 0.1%.

#### Asset Allocation

As a passively managed portfolio, this fund will closely track the benchmark sector and will provide 100% domestic equity exposure.

#### Investment Management

In 2017, Mellon Investments Corporation was hired to manage the fund. Prior to Mellon, the fund was managed internally by SBI staff.

The strategy replicates the S&P 500 by owning all of the names in the index at the weightings assigned by the index. To maintain appropriate liquidity for daily cash flows, some cash is held in the portfolio and is equitized by using S&P 500 futures contracts.

Mellon Investments Corporation is required to adhere to the investment guidelines in managing the account.

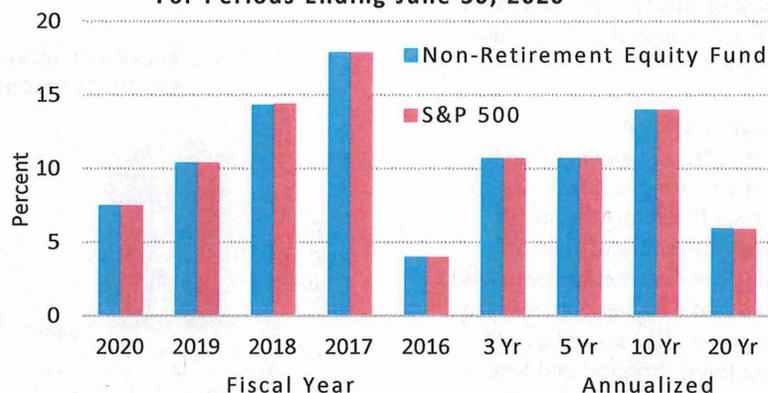
#### Investment Performance

The SBI measures the Non-Retirement Equity Fund against the S&P 500 Index.

For fiscal year 2020, the Non-Retirement Equity Fund matched its benchmark, the S&P 500 Index. Over the most recent three, five and ten year time-period, the Non-Retirement Equity Fund matched its benchmark and outperformed on a twenty-year time-period.

Historical performance results are shown below in Figure 59.

**Figure 59. Non-Retirement Equity Fund Return For Periods Ending June 30, 2020**



	Fiscal Year End Returns (%)				
	2020	2019	2018	2017	2016
Non-Retirement Equity Fund	7.5	10.4	14.3	17.9	4.0
S&P 500 Index	7.5	10.4	14.4	17.9	4.0

	Annualized Returns (%) as of June 30, 2020			
	3 Yr.	5 Yr.	10 Yr.	20 Yr.
Non-Retirement Equity Fund	10.7	10.7	14.0	6.0
S&P 500 Index	10.7	10.7	14.0	5.9

## Non-Retirement Program

### Investment Vehicle: Non-Retirement Bond Fund

Prudential Global Investment Management manages the Non-Retirement Bond Fund used by various state trust funds such as the Permanent School Fund, Environmental Trust Fund, and Closed Landfill Investment Fund. On June 30, 2020, the total market value of the Non-Retirement Bond Fund was \$1.3 billion.

#### Non-Retirement Bond Fund

The Non-Retirement Bond Fund is an investment vehicle to generate income and preserve capital. This Fund is available to state and other Trust funds and to OPEB entities that have received authority to use this fund.

#### Investment Objectives

The investment objectives for the Non-Retirement Bond Fund are to deliver cumulative returns in excess of its benchmark, the Bloomberg Barclays U.S. Aggregate Bond Index, and to manage the level and composition of active risk in the portfolio relative to this benchmark. The U.S. Aggregate Bond Index is a broad-based index of investment grade, U.S. dollar denominated, fixed rate taxable bonds.

#### Asset Allocation

As an actively managed bond fund, the sector allocation will deviate from the benchmark composition. As of June 30, 2020, the Non-Retirement Bond Fund had a higher allocation in Corporate debt securities and Structured Products and less exposure to U.S. Government and Mortgage bonds relative to its' benchmark, the Bloomberg Barclays U.S. Aggregate.

#### Investment Management

In 2017, Prudential Global Investment Management (PGIM) was hired to manage the fund. Prior to PGIM, the fund was managed internally by SBI staff. PGIM is required to

adhere to investment guidelines in managing the account. These guidelines give PGIM the flexibility to actively manage the portfolio through duration, yield curve, sector and security selection decisions, while maintaining a maximum five-year active risk level of 1.5, where active risk is the annualized standard deviation of the Manager's excess returns relative to the benchmark.

PGIM is required to maintain the duration of the portfolio within +/- one year of the index duration. The Fund primarily invests in U.S. government, corporate, mortgage and structured securities.

#### Current Positioning

PGIM has portfolio duration positioned slightly longer than the benchmark with an effective

duration of 6.2 years vs. the benchmark duration of 6.0 years. With a relatively higher option adjusted spread (116 bps vs. 66 bps benchmark) and slightly lower average credit quality, the portfolio expects to continue generating yields exceeding the benchmark (as of June 30, 2020 portfolio effective yield to maturity of 1.7% vs. 1.2% benchmark).

#### Investment Performance

The Non-Retirement Bond Fund underperformed it's benchmark for the fiscal year, matched the three-year period and outperformed in the five, ten and twenty year periods ending June 30, 2020.

Historical performance results are shown below in Figure 60.

Figure 60. Non-Retirement Bond Fund Return For Periods Ending June 30, 2020



	Fiscal Year End Return (%)				
	2020	2019	2018	2017	2016
Non-Retirement Bond Fund	8.2	8.4	-0.4	0.8	5.7
BGG Barclays U.S. Aggregate	8.7	7.9	-0.4	-0.3	6.0

	Annualized Returns (%) as of June 30, 2020			
	3 Yr.	5 Yr.	10 Yr.	20 Yr.
Non-Retirement Bond Fund	5.3	4.5	4.2	5.6
BGG Barclays U.S. Aggregate	5.3	4.3	3.8	5.1

## Non-Retirement Program

### Investment Vehicle: Non-Retirement Money Market Fund

State Street Global Advisors manages the Non-Retirement Money Market Fund used by various state trust funds such as the Permanent School Fund and Environmental Trust Fund. On June 30, 2020, the total market value of the Non-Retirement Money Market Fund was \$87.2 million.

#### Non-Retirement Money Market Fund

The Non-Retirement Money Market Fund is an investment vehicle that provides high quality short-term cash exposure to entities that have received authority to use this fund. The types of entities that invest in the Fund include State and other Trust funds and OPEB Accounts.

#### Investment Objectives

The objective of the Non-Retirement Money Market Fund is to provide safety of principal by investing in high quality, short-term securities. The return of the fund is based on the interest income generated by the fund's investments.

#### Asset Allocation

The fund invests in high quality short-term money market securities.

At the end of the fiscal year, the Non-Retirement Fund Money Market Fund had a current average yield of 0.27% and a weighted average maturity of 34.6 days.

#### Investment Management

The Non-Retirement Money Market Fund is managed by State Street Global Advisors (SSGA). SSGA provides short-term investment management for a substantial portion of the Board's cash reserves.

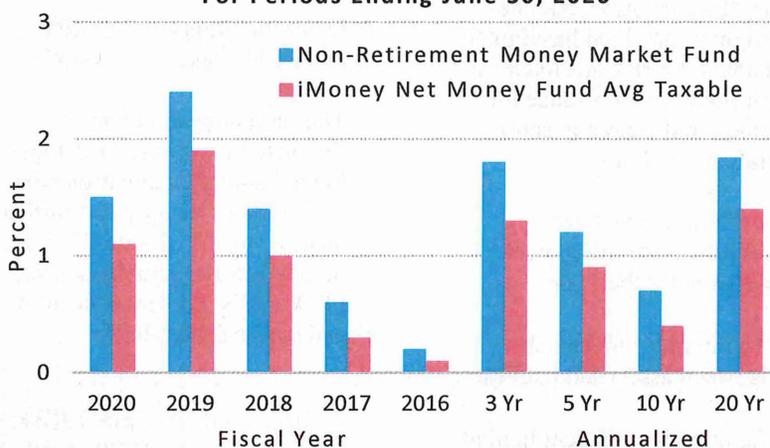
#### Investment Performance

The SBI measures the Non-Retirement Money Market Fund against the iMoneyNet All Taxable Money Fund Average.

As of June 30, 2020, the Non-Retirement Money Market Fund outperformed its benchmark, the iMoneyNet Money All Taxable Money Fund Average, for all time-periods listed and outperformed the ICE BofA 3 Month Treasury Bill Index for a twenty-year time period ending June 30, 2020.

Historical performance for the Non-Retirement Money Market Fund is provided below in Figure 61.

**Figure 61. Non-Retirement Money Market Fund Return For Periods Ending June 30, 2020**



	Fiscal Year End Return (%)				
	2020	2019	2018	2017	2016
Non-Retirement Money Market Fund	1.5	2.4	1.4	0.6	0.2
iMoneyNet Money Fund Avg Taxable	1.1	1.9	1.0	0.3	0.1
Annualized Returns (%) as of June 30, 2020					
	3 Yr.	5 Yr.	10 Yr.	20 Yr.	
Non-Retirement Money Market Fund	1.8	1.2	0.7	1.8	
iMoneyNet Money Fund Avg Taxable	0.1	1.3	0.9	1.4	

## Non-Retirement Account Assigned Risk Plan

The SBI invest the Assigned Risk Plan assets in the Non-Retirement Equity Fund and the Assigned Risk Plan fixed income portfolio managed by RBC Global Asset Management. The Plan has a market value of \$307.6 million as of June 30, 2020.

### Assigned Risk Plan

#### Overview

Minnesota Workers Compensation Assigned Risk Plan was established in 1983 to provide workers' compensation coverage to Minnesota employers rejected by a private insurance carrier. The Assigned Risk Plan operates as a non-profit, tax-exempt entity administered by the Department of Commerce. The Plan provides disability income, medical expenses, retraining expenses and death benefits with payments made either periodically or in lump sum.

#### Investment Objectives

The SBI recognizes that the Assigned Risk Plan has limited tolerance for risk due to erratic cash flows, no allowance for surplus, and generally short duration liabilities.

Therefore, the SBI has established two investment objectives for the Plan:

- To minimize mismatch between assets and liabilities.
- To provide sufficient liquidity (cash) for payment of on-going claims and operating expenses.

Performance relative to these objectives is measured against a composite index that reflects the asset allocation of the portfolio.

#### Asset Allocation

The SBI believes that due to the uncertainty of premium and liability cash flows, the Plan

should be invested very conservatively.

The fixed income portfolio is invested to fund the shorter-term liabilities (less than 10 years) and the equity segment is invested to fund the longer-term liabilities. The result is a high fixed income allocation, which minimizes the possibility of a future fund deficit. The smaller equity exposure provides higher expected returns and hedges some of the inflation risk associated with the future liability stream.

The current long-term asset allocation targets for the Plan are as follows:

Domestic Equity	20%
Domestic Bonds	80%

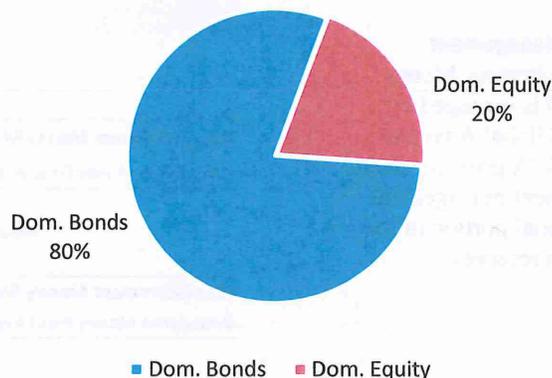
The asset allocation may fluctuate in response to changes in the liability stream projected by the Plan's actuary and further analysis by the SBI staff. Figure 68 presents the actual asset mix of the Assigned Risk Plan at the end of fiscal year 2020.

#### Investment Management

The *equity segment* is managed by Mellon Investments Corporation in the Non-Retirement Equity Fund to fund the longer-term liabilities of the Plan. More detail on the Non-Retirement Equity Fund is provided on pages B105.

The *bond segment* is managed by RBC Global Asset Management using a fundamental approach, with a focus primarily on security selection and secondarily on sector analysis. More information on the Assigned Risk Plan fixed income portfolio is provided on page B108.

Figure 68. Assigned Risk Plan Asset Mix as of June 30, 2020



## Non-Retirement Account Assigned Risk Plan

### Investment Performance

Due to the focus on liability matching, the Assigned Risk Plan's investment portfolio is conservatively structured.

While active management is utilized in the fixed income portfolio, return enhancement plays a secondary role.

The Assigned Risk Plan is measured against a composite index which is weighted to reflect the asset allocation of the Plan:

- The target for the equity component is the S&P 500.
- The target for the fixed income component is a custom benchmark which reflects the duration target established for the bond segment (approximately three years).

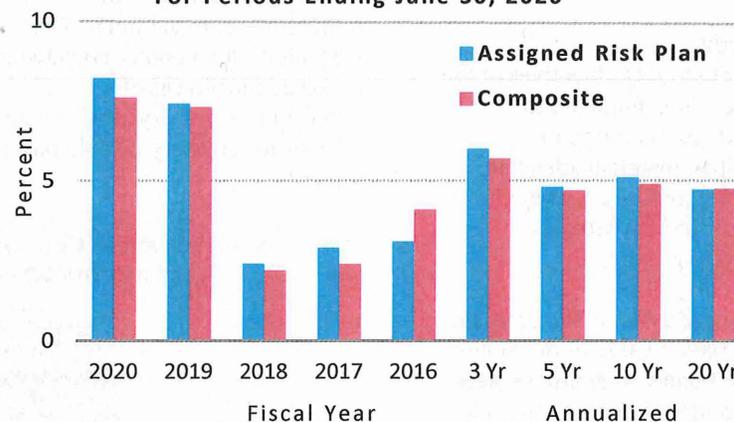
The *equity* segment matched the benchmark, the S&P 500, with a 7.5% return at fiscal year-end 2020.

The *bond* segment outperformed its benchmark, the Bloomberg Barclays U.S. Intermediate Government Index, with a 7.2% return at fiscal year-end 2020.

**Overall**, the Assigned Risk Plan provided a return of 8.2% for fiscal year 2020, which was 0.6 percentage point above the composite index. For longer time-periods, the ten year outperformed and the twenty year underperformed the composite benchmark return as of June 30, 2020.

Historical performance results are provided in Figure 69.

**Figure 69. Assigned Risk Plan Total Performance  
For Periods Ending June 30, 2020**



	Fiscal Year End Return (%)				
	2020	2019	2018	2017	2016
<b>Assigned Risk Plan</b>	<b>8.2</b>	<b>7.4</b>	<b>2.4</b>	<b>2.9</b>	<b>3.1</b>
Composite <sup>1</sup>	7.6	7.3	2.2	2.4	4.1
Stock Segment	7.5	10.4	14.3	17.9	4.0
S&P 500	7.5	10.4	14.4	17.9	4.0
Bond Segment	7.2	6.0	-0.6	-1.1	4.0
Benchmark <sup>2</sup>	7.0	6.2	-0.7	-1.2	3.9

	Annualized Returns (%) as of June 30, 2020			
	3 Yr.	5Yr.	10 Yr.	20 Yr.
<b>Assigned Risk Plan</b>	<b>6.0</b>	<b>4.8</b>	<b>5.1</b>	<b>4.7</b>
Composite <sup>1</sup>	5.7	4.7	4.9	4.8
Stock Segment	10.7	9.9	13.2	6.2
S&P 500	10.7	10.7	14.0	5.9
Bond Segment	4.2	3.0	2.8	4.0
Benchmark <sup>2</sup>	4.1	3.0	2.5	4.2

<sup>1</sup> Represents the aggregate returns of the target allocation: 20% equity and 80% fixed income

<sup>2</sup> Fixed income portfolio benchmark since 7/1/11 is the Bloomberg Barclays US Int Govt. From 4/1/02 – 6/30/11 was: 10% ML 91 Day T-Bill / 25% ML 1-3yr Govt / 15% ML 3-5yr Treasury/Agency / 25% ML 5-10yr Tsy/Agy / 25% ML Mortgage Master. From 7/1/01 – 3/31/02 was: 10% ML 91 Day T-Bill / 25% ML 1-3yr Govt/Credit / 15% ML 3-5yr Govt/Credit / 25% ML 5-10yr Govt/Credit / 25% ML Mortgage Master.

## SIF Investment Vehicle Investment Option - Stable Value Fund

### Stable Value Fund

#### Objective

The investment objectives of the Stable Value Fund are to provide preservation of principal, maintain adequate liquidity, produce a level of income, and provide low volatility of returns.

At the end of June 30, 2020, the total market value of the Stable Value Fund was approximately \$1.7 billion. Figure 45 provides the composition of the plans invested in the Stable Value Fund as of June 30, 2020.

#### Management

The manager for the Stable Value Fund is Galliard Capital Management, a subsidiary of Wells Fargo Asset Management.

The Fund invests in synthetic Guaranteed Investment Contracts (GICs), each of which is a combination of an underlying fixed income portfolio and a book value wrap contract issued by an insurance company or a bank. These wrap contracts are designed to allow participants to transact at book value (principal plus accrued interest) and provide preservation of principal and a relatively stable return profile.

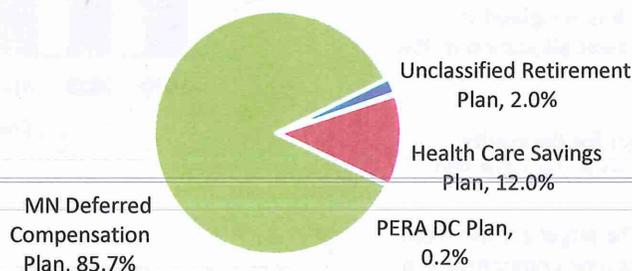
The underlying fixed income portfolio invests in a well-diversified portfolio of U.S. dollar denominated, investment grade fixed income securities. Separate from the assets held under the wrap contracts, the Fund may hold up to 3% of the Fund's assets in a short-term investment fund in order to maintain necessary liquidity.

#### Performance

Performance reflects the blended crediting rates from all investments in the fund. The Stable Value Fund is expected to exceed the returns of its benchmark, the 3-year Constant Maturity Treasury plus 45 basis points.

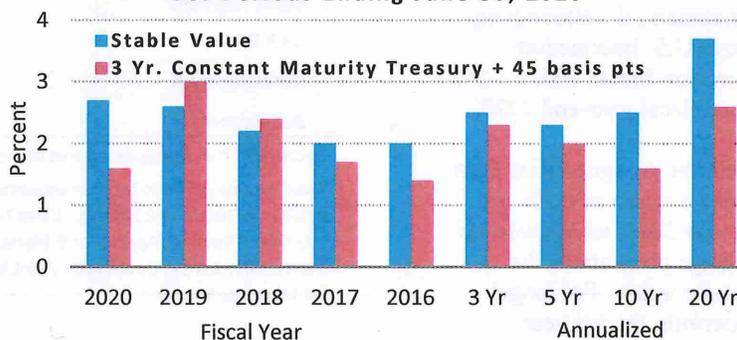
During fiscal year 2020, the Stable Value Fund provided a return of 2.7%, an outperformance of 1.1 percentage points above its benchmark. Figure 46 provides the historical performance results for the Stable Value Fund.

**Figure 45. Composition of Stable Value Fund by Plan as of June 30, 2020**



Allocation of Stable Value Fund Assets by Plan as of June 30, 2020		
Plan Sponsor	Investment Platform	Market Value (\$ in 000's)
PERA DC Plan	SIF	4,083.8
Health Care Savings Plan	Mutual Fund	199,820.4
MN Deferred Compensation Plan	Mutual Fund	1,422,997.7
Unclassified Retirement Plan	Mutual Fund	32,884.0
<b>Total</b>		<b>1,659,785.9</b>

**Figure 46. Stable Value Fund Performance For Periods Ending June 30, 2020**



	Fiscal Year End Return (%)				
	2020	2019	2018	2017	2016
Stable Value Fund	2.7	2.6	2.2	2.0	0.4
Benchmark*	1.6	3.0	2.4	1.7	0.2
	Annualized Return (%) as of June 30, 2020				
	3 Yr.	5 Yr.	10 Yr.	20 Yr.	
Stable Value Fund	2.5	2.3	2.5	3.7	
Benchmark*	2.3	2.0	1.6	2.6	

\* Benchmark is the 3-Year Constant Maturity Treasury plus 45 basis points since 7/1/02.