MINNESOTA STATE BOARD OF INVESTMENT

2018 Annual Report

Minnesota State Board of Investment
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2018 Annual Report

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This annual report can be accessed on our website at http://mn.gov/sbi

MINNESOTA STATE BOARD OF INVESTMENT

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December 2018

The Minnesota State Board of Investment (SBI) is pleased to present its report for the fiscal year ending June 30, 2018.

SBI Results for Fiscal Year 2018

In a positive economic environment, the Combined Funds returned 10.3% during the fiscal year 2018. Over the recent ten and 20 fiscal year time periods, the Combined Funds generated annualized returns of 7.8% and 6.8%, respectively (see **page 10**).

- Solid economic growth, strong corporate earnings and continued economic expansion led to strong equity market returns in the U.S., even as tightening labor markets and firming wage growth evidenced late business cycle pressures. The U.S. equity markets returned 14.8% over the fiscal year.

- Non-U.S. equity markets underperformed the U.S. equity markets as global manufacturing slowed in many non-U.S. economies. European Central Bank tightening and increased trade risks are expected to continue as headwinds to global markets. The international equity markets returned 7.3% for the fiscal year.

- U.S. bonds returned a -0.4%, for the fiscal year ending June 30, 2018, as interest rates rose across the yield curve and bond prices fell.

On June 30, 2018, assets under management totaled $96.2 billion. This total is the aggregate of pension funds, trust funds, and cash accounts, each with different investment objectives. In establishing a comprehensive management program, the Board has developed an investment strategy for each fund which reflects its unique requirements.

Investment Beliefs

A set of Investment Beliefs adopted by the State Board of Investment in 2017 reflect the SBI's investment values, acknowledge its role in supporting the State's broader pension systems, and guide the development of sound investing policies. These Investment Beliefs apply to the Combined Funds and other funds under the SBI's responsibility wherever appropriate. The Investment Beliefs appear after this letter.

The primary purpose of this annual report is to communicate the investment goals, policies and performance of each fund managed by the Board. Through the investment programs presented in this report, the Minnesota State Board of Investment seeks to enhance the management and performance of the assets under its control.

Sincerely,

Mansco Perry III
Executive Director and Chief Investment Officer

In September 2017, the State Board of Investment (SBI) adopted a set of Investment Beliefs for managing the assets of the Combined Funds (those funds utilized to support the defined benefit plans of the State's employees). The primary purpose of these Beliefs is to guide the SBI toward sound investing principles related to investing on behalf of the Combined Funds. In this respect, the Beliefs help provide context for SBI's actions, reflect SBI's investment values, and acknowledge SBI's role in supporting the State's broader retirement systems. When relevant, the SBI also uses these Beliefs as a guide when investing the assets of the other investment programs that it manages, as deemed appropriate.

The SBI is a long-term investor whose primary mission is to maintain the viability of the retirement systems it supports.

When determining an appropriate level of risk that the systems' assets should bear the SBI must reflect the nature of those systems' liabilities and funding policy.

The SBI's strategic allocation policy is the primary determinant of (i) the asset portfolio's long-term investment return and (ii) asset portfolio's risk.

While the SBI can sacrifice some short-term liquidity to pursue a greater long-term return, the investment portfolio's net cash flows and ability to pay benefits on a year-by-year basis are key risk considerations.

Diversification improves the risk-adjusted return profile of the SBI investment portfolio.

Diversification of the SBI investment portfolio takes place across several critical dimensions, such as allocation across global regions and country markets (e.g., U.S. versus Europe, Asia, emerging markets, etc.), allocation among different types of assets (equities, bonds, real estate, etc.), spreading assets across various sectors and industries (e.g., technology, financials, consumer-oriented, etc.), and weighting of different risk factor premiums (e.g., value vs. growth, small companies vs. big companies, carry, illiquidity, etc.). If the correlation (i.e., relationship) among the returns generated by these factors is less than perfect (i.e., less than 1.0), then diversification is beneficial.

There are long-term benefits to SBI managing investment costs.

The equity risk premium is significantly positive over a long-term investment horizon although it can vary over time.

The equity risk premium is also pervasive across several asset classes and its overall exposure should be managed accordingly.

Private market investments have an illiquidity premium that the SBI can capture.

This risk premium can increase the portfolio's long-term compound return and help diversify the portfolio's risk.

It is extremely challenging for a large institutional investor to add significant value over market-representative benchmarks, particularly in the highly-competitive public global equity markets.

Passive management should be utilized when there is low confidence that active management can add value. Active management can have potential to add value where information processing is difficult and challenging, allowing for market inefficiencies that are potentially exploitable.

The SBI benefits significantly when roles and levels of authority are clearly defined and followed.

The role of the members of the State Board of Investment (Board) is to establish investment policies that are in compliance with state statute and guide the ongoing management of the funds. The Board delegates implementation of that policy to the Executive Director/CIO, and exercises oversight with respect to the Executive Director/CIO's implementation activities and the portfolio's active risk level in the context of the portfolio's strategic allocation policy. The Board also ensures adequate resources are available to the SBI staff to perform their work;

The Investment Advisory Council (IAC) key role is advising the Board and Executive Director/CIO on general policy matters and methods to enhance the management of the investment portfolio;

The Executive Director's/CIO's key role is implementing SBI investment policies and setting the portfolio's active risk level in a prudent manner to achieve value-added over policy benchmarks.

Utilizing engagement initiatives to address environmental, social, and governance-related (ESG) issues can lead to positive portfolio and governance outcomes.

In addition to specific engagement strategies the SBI might apply, proxy rights attached to shareholder interests in public companies are also "plan assets" of the SBI and represent a key mechanism for expressing SBI's positions relating to specific ESG issues. By taking a leadership role in promoting responsible corporate governance through the proxy voting process, SBI can contribute significantly to implementing ESG best practices which should, in turn, add long-term value to SBI's investments.

Approved by State Board of Investment

Date: June 14, 2018

Governor Mark Dayton, Chair
State Auditor Rebecca Otto
Secretary of State Steve Simon
State Attorney General Lori Swanson

Investment Advisory Council

The Legislature has established a seventeen member Investment Advisory Council (IAC) to advise the Board and its staff on investment-related matters.

The IAC fulfills its statutory duty to the State Board of Investment (SBI) by providing advice and independent due diligence review of the investment policy and implementation recommendations that guide the SBI's investment of assets.

The Board appoints ten members from the public experienced in finance and investment. These members traditionally have come from the Minneapolis and St. Paul investment community.

The Commissioner of Minnesota Management & Budget and the Executive Directors of the three statewide retirement systems are permanent members of the IAC.

Two active employee representatives and one retiree representative are appointed to the IAC by the Governor.

All proposed investment policies are reviewed by the IAC before they are presented to the Board for action.

Public Members

Gary Martin, Chair
Chief Investment Officer
Macalester College

Kim Faust, Vice Chair
Vice President and Treasurer
Fairview Health Services

Kerry Brick
Manager, Pension Investments
Cargill, Inc.

Dennis Duerst
President, 3M Investment Management Corporation
3M Company

Susanna Gibbons
Managing Director
Carlson Funds Enterprise
Carlson School of Management

Morris Goodwin, Jr.
Sr. Vice President and CFO
American Public Media Group

Malcolm W. McDonald
Director & Corporate Secretary (Retired)
Space Center, Inc.

Carol Peterfeso
Chief Treasury and Investment Officer
University of St. Thomas

Shawn Wischmeier
Chief Investment Officer
Margaret A. Cargill Philanthropies

Permanent Members

Doug Anderson
Executive Director
Public Employees Retirement Association

Erin Leonard
Executive Director
MN State Retirement System

Myron Frans
Commissioner
MN Management and Budget

Jay Stoffel
Executive Director
Teachers Retirement Association

Employee and Retirement Representative

Denise Anderson
Governor's Appointee
Active Employee Representative

As of December 2018

Staff, Consultants & Custodians

Mansco Perry III	Executive Director and Chief Investment Officer
Charlene Olson	Executive Assistant

Senior Leadership Team

LeaAnn M. Stagg
Assistant Executive Director and Chief Operating Officer

Paul T. Anderson
Director, Investment Administration

Andrew Krech
Director,
Private Markets

Michael J. Menssen
Director,
Debt Management

John Mulé
Manager,
Legal and Legislative Policy

Investment Staff

Patricia Ammann
Investment Officer

Nathan Blumenshine
Investment Officer

Cassandra Boll
Investment Officer

Tammy Brusehaver
Investment Officer

Stephanie Gleeson
Investment Officer

Aaron D. Griga
Investment Officer

Steven P. Kuettel
Investment Officer

Jonathan Stacy
Investment Officer

Administrative Staff

Kailee Anderson
Accounting Officer

Shirley Baribeau
Controller

Julie Grill
Accounting Officer, Intermediate

Kathy Leisz
Information Technology Specialist 3

Melissa Mader
Office Administrative Specialist, Intermediate

William J. Nicol
Investment Accounting Specialist

Kelly Nordstrom
Office Administrative Specialist, Intermediate

Iryna Shafir
Compliance Analyst

Consultants

General Consultant
Aon Hewitt Investment Consulting, Inc.
Chicago, Illinois

Special Projects Consultant
Pension Consulting Alliance, LLC
Portland, Oregon

Custodian Banks

Retirement and Trust Funds
State Street Corporation
Boston, Massachusetts

State Cash Accounts
Wells Fargo Bank, National Association
St. Paul, Minnesota

As of December 2018

Introduction

The Minnesota State Board of Investment is responsible for the investment management of various retirement funds, trust funds and cash accounts. On June 30, 2018, the market value of all assets was $96.2 billion.

Constitutional and Statutory Authority

The Minnesota State Board of Investment (SBI) is established by Article XI of the Minnesota Constitution to invest all state funds. Its membership as specified in the Constitution is comprised of the Governor (who is designated as chair of the Board), State Auditor, Secretary of State and State Attorney General.

All investments undertaken by the SBI are governed by the prudent person rule and other standards codified in *Minnesota Statutes*, Chapter 11A and Chapter 356A.

Prudent Person Rule

The prudent person rule, as codified in *Minnesota Statutes,* Section 11A.09, requires all members of the Board, Investment Advisory Council, and SBI staff to *"...act in good faith and ...exercise that degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived therefrom." Minnesota Statutes,* Section 356A.04 contains similar codification of the prudent person rule applicable to the investment of pension fund assets.

Authorized Investments

In addition to the prudent person rule, *Minnesota Statutes,* Section 11A.24 contains a specific list of asset classes available for investment including common stocks, bonds, short term securities, real estate, private equity, and resource funds. The section prescribes the maximum percentage of fund assets that may be invested in various asset classes and contains specific restrictions to ensure the quality of the investments.

Investment Policies

Within the requirements defined by state law, the State Board of Investment, in conjunction with SBI staff and the Investment Advisory Council, establishes investment policies for all funds under its control. These investment policies are tailored to the particular needs of each fund and specify investment objectives, risk tolerance, asset allocation, investment management structure and specific performance standards.

The Board, its staff, and the Investment Advisory Council have conducted detailed analyses that address investment objectives, asset allocation policy and management structure of each of the funds under the SBI's control. The studies guide the on-going management of these funds and are updated periodically.

Important Notes

Readers should note that the SBI's returns in this report are shown ***after*** transaction costs and fees are deducted. Performance is computed and reported after all applicable charges to assure that the Board's focus is on true net returns.

Due to the large number of individual securities owned by the funds managed by the SBI, this report does not include asset listings. **A complete list of securities is available on the SBI's website at http://mn.gov/sbi**. Asset listings are updated semi-annually as the new data becomes available.

			Market Value June 30, 2018*
Retirement Funds			**$77.6 billion**
Combined Funds		**$68.3 billion**	

The Combined Funds represent the assets for both the active and retired public employees in eight statewide retirement plans:

Teachers Retirement Fund (TRA)	$22.3 billion
Public Employees Retirement Association (PERA)	
General Employees Retirement Fund	21.5 billion
Police and Fire Fund	8.5 billion
Correctional Fund	680 million
Minnesota State Retirement System (MSRS)**	
State Employees Retirement Fund	13.3 billion
Correctional Employees Fund	1.1 billion
Highway Patrol Retirement Fund	729 million
Judges Retirement Fund	202 million

Supplemental Investment Fund (SIF) — ***$2.3 billion***

The Supplemental Investment Fund includes assets of the unclassified state employees retirement plan, a defined benefit plan, other defined contribution retirement plans, a healthcare savings plan, and various retirement programs for local firefighters. Participating plans use one or more of the eight accounts which have different investment objectives designed to meet a wide range of needs and objectives.

Balanced Fund	stocks and bonds	$444 million
U.S. Stock Index Fund	passively managed stocks	615 million
U.S. Stock Actively Managed Fund	actively managed stocks	260 million
Bond Fund	actively managed bonds	171 million
Broad International Stock Fund	non-U.S. stocks	196 million
Stable Value Fund	stable value investments	214 million
Money Market Fund	short-term debt securities	328 million
Volunteer Firefighter Account	stocks and bonds	88 million

Note: There are two investment options from the SIF that are offered in the State Deferred Compensation Plan (Plan) which are excluded from the SIF totals above. Specifically, there is an additional $1.3 billion invested in the SIF Stable Value Fund and an additional $76 million invested in the SIF Money Market Fund in the Plan as noted in the table below.

These two SIF investments for the Plan have been excluded from the above SIF assets to avoid double counting. Total SIF assets as reported elsewhere (including the Plan investments in the SIF Stable Value and the SIF Money Market Fund) are $3.7 billion.

State Deferred Compensation Plan — ***$7.0 billion***

The State Deferred Compensation Plan provides public employees with a tax sheltered retirement savings program that is a supplemental plan to their primary retirement plan.

Vanguard Institutional Index Plus	$1,259 million
Vanguard Dividend Growth	613 million
Vanguard Mid-Cap Index	547 million
T. Rowe Price Small-Cap Stock	732 million
Fidelity Diversified International	309 million
Vanguard Total International Stock Index	201 million
Vanguard Balanced Index	786 million

			Market Value June 30, 2018*
State Deferred Compensation Plan (cont.)			
Dodge & Cox	240 million		
Vanguard Total Bond Market Index	209 million		
SIF Stable Value	1,340 million		
SIF Money Market	76 million		
Target Date Retirement Funds	620 million		
Self-Directed Brokerage	75 million		
Miscellaneous Retirement Assets	21 million		

Non-Retirement Funds (including College Savings Plan and State Cash Accounts) — ***$18.6 billion***

Assigned Risk Plan — $319 million
The Minnesota Workers Compensation Assigned Risk Plan provides worker compensation insurance for companies unable to obtain coverage through private carriers.

Closed Landfill Investment Fund — $89 million
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.

Environmental Trust Fund — $1.1 billion
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.

Permanent School Fund — $1.4 billion
The Permanent School Fund is a trust established for the benefit of Minnesota public schools.

Miscellaneous Trust Accounts*** — $236 million

Other Postemployment Benefits Accounts (OPEBs) — $636 million
These accounts are the assets set aside by local units of government for the payment of retiree benefits trusteed by the Public Employees Retirement Association.

Minnesota College Savings Plan — $1.4 billion
The Minnesota College Savings Plan is an education savings plan designed to help families set aside funds for future college costs. It is established under the provisions of the Internal Revenue Code Section 529, which authorized these types of savings plans to help families meet the costs of qualified colleges nationwide.

State Cash Accounts — $13.1 billion
These accounts are the cash balances of state government funds including the General Fund, transportation funds, and miscellaneous cash accounts. Assets are invested through the Invested Treasurers Cash Pool in high quality, liquid, debt securities.

Miscellaneous State Accounts**** — $281 million

Total Assets Invested by SBI — ***$96.2 billion***

* Totals may not add due to rounding.
** The MSRS Legislative Plan is a closed plan that is funded by the General Fund on a "pay-as-you-go" basis.
*** Miscellaneous Trust Accounts including Qualifying Governmental Entities.
**** Includes Achieve a Better Life Experience (ABLE), Debt Service, Public Facilities Authority (PFA), and Housing Finance.

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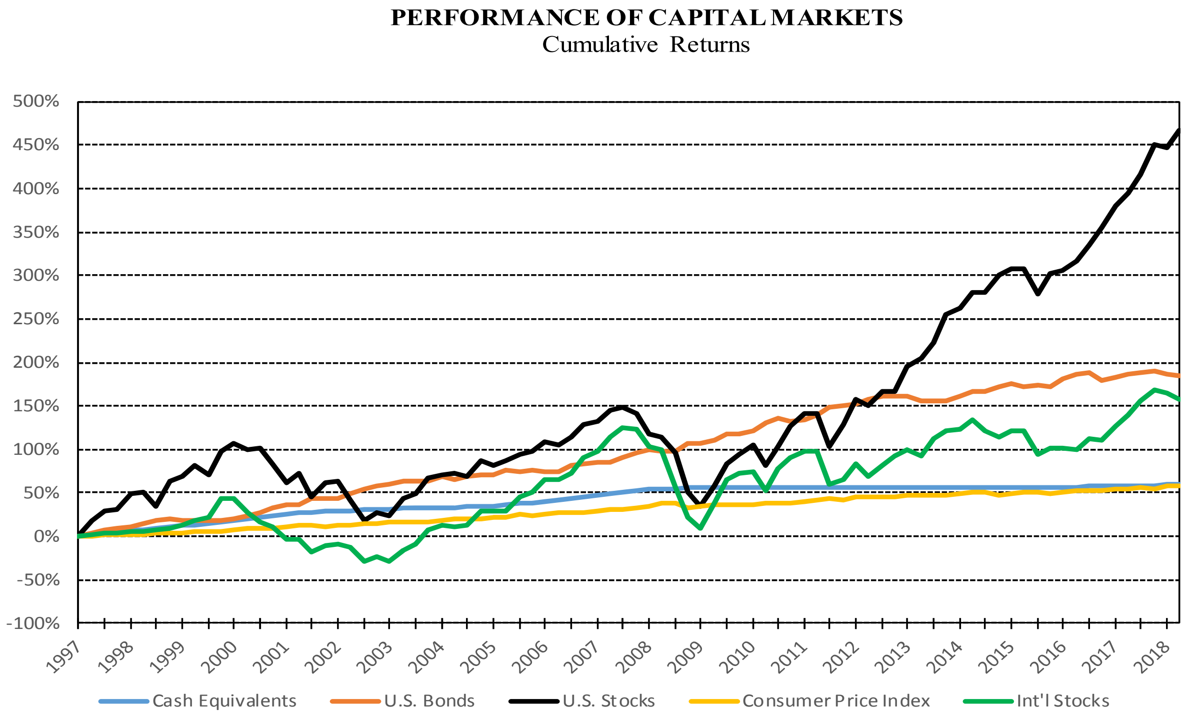
RETIREMENT PROGRAM

Figure 1.



Periods Ending June 30, 2018

	1 Yr.	3 Yr.	5 Yr.	10 Yr.	20 Yr.	30 Yr.
Domestic Equity						
Russell 3000(1)	14.8%	11.6%	13.3%	10.2%	6.6%	10.1%
Domestic Fixed Income						
Bloomberg Barclays U.S. Aggregate(2)	-0.4	1.7	2.3	3.7	4.7	6.1
3 month U.S. Treasury Bills	1.4	0.7	0.4	0.4	2.0	3.2
International Equity						
MSCI ACWI ex USA (net)(3)	7.3	5.1	6.0	2.5	4.9	N/A
MSCI Emerging Market Index(4)	8.2	5.6	5.0	2.3	8.6	N/A
Inflation Measure						
Consumer Price Index CPI-U	2.8	1.8	1.5	1.4	2.2	2.5

(1) The returns reported here for the time periods prior to 10/01/2003 reflect the use of various forms of the Wilshire 5000 as the Domestic Equity benchmark.

(2) The returns reported here for the time periods prior to 06/30/1994 reflect the use of the Salomon Brothers Broad Investment Grade Index as the Fixed Income benchmark.

(3) The returns reported here for the time periods prior to 10/01/2003 reflect the use of a weighted combination of MSCI EAFE and Emerging Markets as the International Equity benchmark.

(4) The returns reported here for the time periods prior to 01/01/2001 reflect the use of the MSCI Emerging Market Index (gross) as the Emerging Markets benchmark.

The Combined Funds represent the assets of both active and retired public employees who participate in the defined benefit plans of three statewide retirement systems: Teachers Retirement Association (TRA), Public Employees Retirement Association (PERA) and the Minnesota State Retirement System (MSRS). On June 30, 2018, the Combined Funds had a market value of $68.3 billion.

Background

The Combined Funds consist of the assets of active employees and retired members of the three statewide retirement systems that sponsor eight different funds. The SBI commingles the assets of these plans into the Combined Funds to capture investment efficiencies.

Figure 2 identifies the eight different retirement funds which comprise the Combined Funds.

Investment Objectives

One overriding responsibility of the State Board of Investment (SBI) with respect to the management of the Combined Funds is to ensure that sufficient funds are available to finance promised benefits.

Actuarial Assumed Return

Employee and employer contribution rates are specified in state law as a percentage of an employee's salary. The rates are set so that contributions plus expected investment earnings will cover the projected cost of promised pension benefits. The investment returns needed to meet these projected pension costs are set by statute. The 2018 Legislature lowered the actuarial interest rate assumption to 7.5% on an annual basis for the three statewide retirement systems composing the Combined Funds.

Time Horizon

In general, pension assets will accumulate in the Combined Funds for 30 to 40 years during an employee's years of active service. A typical retiree can be expected to draw benefits for an additional 15 to 20 years. This provides the Combined Funds with a long investment time horizon and permits the Board to take advantage of the long-run return opportunities offered by common stocks and other equity investments in order to meet the actuarial return target.

Asset Allocation

The allocation of assets among stocks, bonds, private markets (private market investments include private equity, private credit, real estate, real assets and distressed/opportunistic) and cash has a dramatic impact on investment results. In fact, asset allocation decisions overwhelm the impact of individual security selection within a total portfolio.

As illustrated in Figure 1, historical evidence indicates that U.S. Stocks have provided the greatest opportunity to maximize investment returns over the long-term. As a result,

Figure 2. Composition of Combined Funds as of June 30, 2018

Teachers Retirement Association (TRA)		**32.7%**
Public Employees Retirement Association (PERA)		
General Employees Retirement Fund	31.5%	
Police and Fire Fund	12.4	
Correctional Fund	1.0	
Total PERA		**44.9**
Minnesota State Retirement System (MSRS)*		
State Employees Retirement Fund	19.4	
Correctional Employees Fund	1.6	
Highway Patrol Retirement Fund	1.1	
Judges Retirement Fund	0.3	
Total MSRS		**22.4**
Funds Total**		**100.0%**

* The MSRS Legislative Plan is a closed plan that is funded by the General Fund on a "pay-as-you-go" basis.
** Total may not add due to rounding.

the Board has chosen to incorporate a large commitment to Public Equity (common stocks) and Private Equity in the asset allocation policy for the retirement funds. In order to limit the short-run volatility of returns exhibited by common stocks, the Board includes other asset classes such as fixed income (bonds), as well as other private market investments such as real estate, real assets, distressed/opportunistic and private credit investments in the total portfolio. 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.

Long-Term Allocation Policy

The Combined Funds have a policy asset allocation that is based on the investment objectives of the Combined Funds and the expected long-run performance of the capital markets. The SBI periodically reviews this policy allocation. An increase in the Private Markets allocation from 20% to 25% was approved by the Board in December 2017.

The long-term Strategic Asset Allocation of the SBI is:

Public Equity	53%
Fixed Income	20
Private Markets	25
Cash	2
Total	100%

Included in the Fixed Income allocation is a dedicated Treasury allocation.

The unfunded allocation to private markets investments is held in public equities until it is needed for investment. As a result, the actual amount invested in stocks at any time can be above the target allocation.

Figure 3 presents the actual asset mix of the Combined Funds at the end of fiscal year 2018. Historical asset mix data is displayed in Figure 4.

Asset Mix Compared to Other Pension Funds

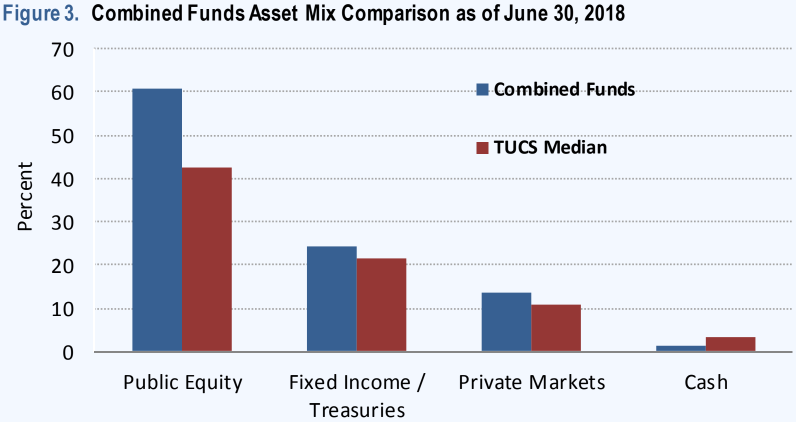
The Board finds it instructive to review asset mix and performance of the Combined Funds relative to other pension fund investors. The comparison universe used by the SBI is the Master Trust portion of the Trust Universe Comparison Service (TUCS). This universe contains information on public and corporate pension and trust funds with diversified asset mixes and more than $1 billion in assets.

Comparisons of the Combined Funds' actual asset mix to the median allocation to stocks, bonds and other assets of the funds in TUCS on June 30, 2018 are also displayed in Figure 3. The Combined Funds were overweighted in public equities, fixed income and private markets but underweighted in cash relative to the median allocation in TUCS.

Total Return Vehicles

The SBI invests the majority of the Combined Funds' assets in ***Common Stocks*** (both domestic and international). A large allocation is consistent with the investment time horizon of the Combined Funds and the advantageous long-term risk-return characteristics of common stocks. Including international stocks in the asset mix allows the SBI to diversify holdings across world markets and offers

Figure 3. Combined Funds Asset Mix Comparison as of June 30, 2018



	Combined Funds(1)	Median Allocation in TUCS(2)
Public Equity	60.7%	42.7%
Fixed Income/Treasuries	24.3	21.4
Private Markets(3)	13.8	10.8
Cash	1.2	3.3

(1) May not add to 100% due to rounding.
(2) Represents the median allocation by asset class, and does not add to 100%.
(3) TUCS may include assets other than Private Markets Investments.

the opportunity to enhance returns and reduce the volatility of the total portfolio. The rationale underlying the inclusion of ***Private Equity*** is similar.

The Board recognizes that this sizable policy allocation to common stock and private equity likely will produce more volatile portfolio returns than a more conservative policy focused on fixed income securities. It is understood that this policy may result in quarters or even years of relative underperformance. Nevertheless, the long-run return benefits of this policy are expected to compensate for the additional volatility.

Diversification Vehicles

The Board includes other asset classes in the Combined Funds to provide some protection against highly inflationary or deflationary environments and to diversify the portfolio sufficiently to avoid excessive return volatility.

The allocation to ***Fixed Income*** (bonds) acts as a hedge against a deflationary economic environment. In the event of substantial deflation, high quality fixed income assets are expected to protect principal and generate significant capital gains. Bonds, like real estate and real assets, under normal financial conditions, help to diversify the Combined Funds, thereby controlling return volatility.

In fiscal year 2018, the Board added a dedicated ***Treasury*** portfolio to the asset allocations for the Combined Funds. The Treasury portfolio provides strong downside protection during market crisis and also acts as a hedge against deflation.

Real Estate and ***Real Assets*** (oil and gas) investments provide an inflation hedge that other financial assets cannot offer. Under normal financial conditions, such as low to moderate inflation, the returns on these assets are not highly correlated with common stocks. As a result, inclusion of these assets in the Combined Funds serves to dampen return volatility.

Private Credit investments provide the opportunity for higher long-term returns than those typically available from bonds, yet still generate sufficient current income. Typically, these investments (e.g., subordinated debt, mezzanine debt, or resource income investments such as producing properties) are structured more like fixed income securities with the opportunity to participate in the appreciation of the underlying assets. While these investments may have an equity component, they display a return pattern more like a bond. Therefore, they will help reduce the volatility of the total portfolio, but should also generate higher returns relative to more traditional bond investments.

Investment Management

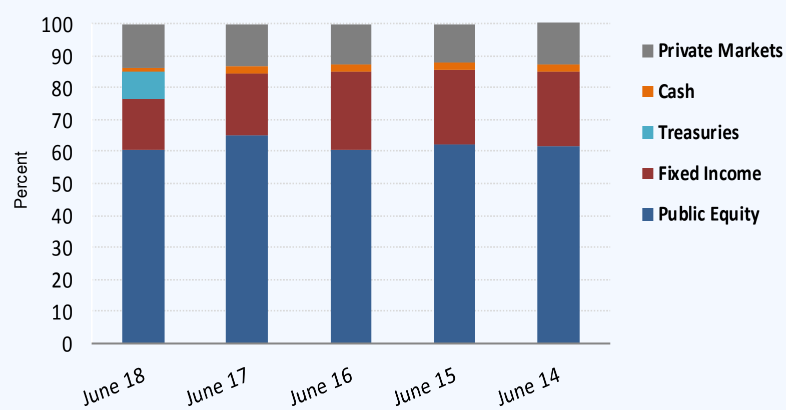
All assets in the Combined Funds are managed externally by investment management firms retained by contract. More information on the structure, management and performance of the various investment managers is included in the **Investment Program** sections of this report.

Return Objectives

The Board measures the performance of the Combined Funds relative to the following total rate of return objectives:

— ***Provide Real Returns.*** Over a twenty year period, the Combined Funds are expected to produce returns that exceed inflation by three to five percentage points on an annualized basis.

Figure 4. Combined Funds Historical Asset Mix Fiscal Year 2013-2018



— ***Match or Exceed Market Returns.*** Over a ten year period, the Combined Funds are expected to match or exceed a composite of market indices weighted using the asset allocation of the Combined Funds.

Performance is reported net of all fees and costs to assure that the Board's focus is on true net return.

Investment Results

Comparison to Inflation

Over the last twenty years, the Combined Funds exceeded inflation by 4.6 percentage points. Historical results compared to inflation are shown in Figure 5.

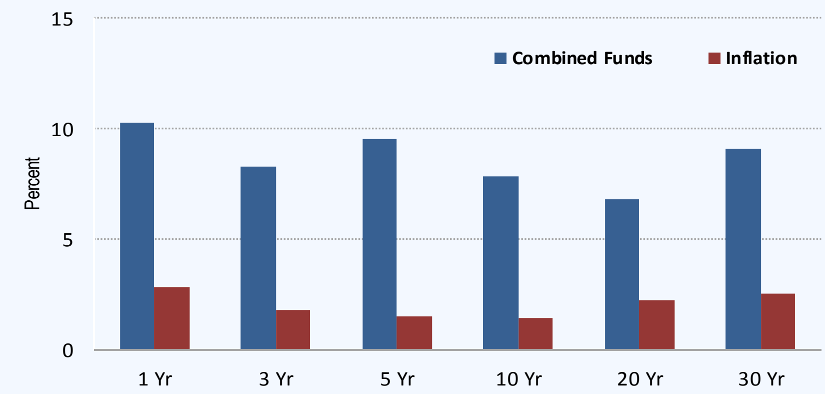
Comparison to Market Returns

The Combined Funds' performance is also evaluated relative to a composite of market indices which is weighted in a manner that reflects the asset allocation of the Combined Funds. Performance relative to this standard will measure two effects:

— The ability of the managers selected by the SBI, in aggregate, to add value to the returns available from the broad capital markets.

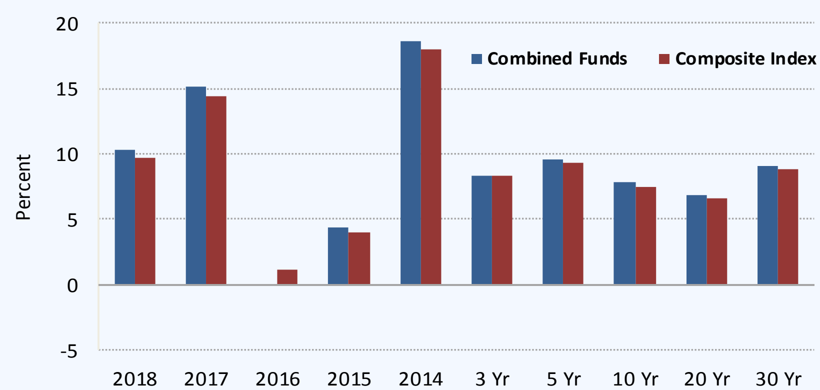
— The impact of the SBI's rebalancing activity. The SBI rebalances the total Fund when market movements take the stock (domestic and international), bond, or cash segments above or below long-term asset allocation targets. This policy imposes a low risk discipline of "buy low-sell high" among asset classes on a total fund basis.

Figure 5. Combined Funds Performance vs. Inflation For Periods Ending June 30, 2018



	Annualized					
	1 Yr.	3 Yr.	5 Yr.	10 Yr.	20 Yr.	30 Yr.
Combined Funds	**10.3%**	**8.3%**	**9.5%**	**7.8%**	**6.8%**	**9.1%**
Inflation	2.8	1.8	1.5	1.4	2.2	2.5

Figure 6. Combined Funds Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014
Combined Funds	**10.3%**	**15.1%**	**-0.1%**	**4.4%**	**18.6%**
Composite Index	9.7	14.4	1.1	4.0	18.0

	Annualized				
	3 Yr.	5 Yr.	10 Yr.	20 Yr.	30 Yr.
Combined Funds	**8.3%**	**9.5%**	**7.8%**	**6.8%**	**9.1%**
Composite Index	8.3	9.3	7.4	6.6	8.8

Performance results and a breakdown of the composite index are shown in Figures 6 and 7. Note that the Combined Funds asset allocation will transition from the allocation shown in Figure 7 to the long-term strategic asset allocation by the end of June 30, 2019. The Combined Funds exceeded the composite index over the last ten years by 0.4 percentage point and, therefore, met the stated performance goal. The Funds met or exceeded the composite index over all time periods shown excluding fiscal year 2016 when the Combined Funds underperformed the benchmark. These results are largely a measure of value added or lost from active management after all fees and expenses have been taken into consideration.

Comparison to Other Funds

While the SBI is concerned with how its returns compare to other pension investors, universe comparison data should be used with great care. There are two primary reasons why such comparisons will provide an "apples-to-oranges" look at performance:

— ***Differing Allocations.*** Asset allocation has a dominant effect on returns. The allocation to stocks among the funds in TUCS typically ranges from 20% to 90%, too wide a range for meaningful comparison. In addition, it appears that many funds do not include private market holdings in their reports to TUCS. This further distorts comparisons among funds.

— ***Differing Goals/Liabilities.*** Each pension fund structures its portfolio to meet its own liabilities and risk tolerance, leading to different choices on asset mix. Since asset mix will largely determine investment results, a universe ranking may not be relevant to a discussion of how well a plan sponsor is meeting its long-term liabilities.

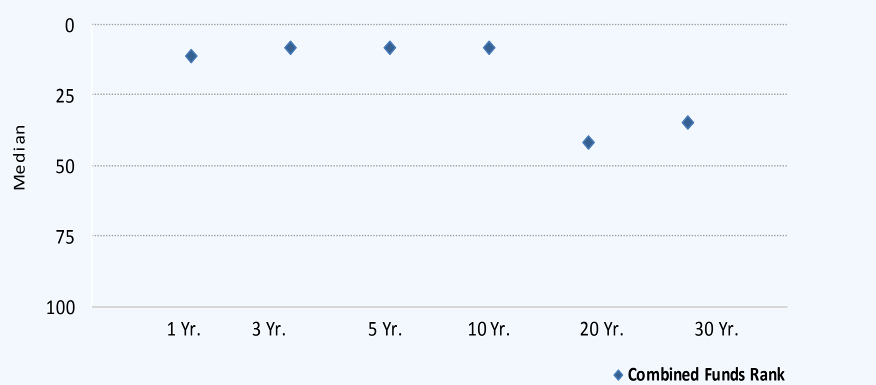
With these considerations in mind, the performance of the Combined Funds compared to other public and corporate pension funds with over $1 billion in assets in the Master Trust portion of TUCS is displayed in Figure 8. It shows that the Combined Funds have ranked in the first quartile over all time periods shown.

Figure 7. Composite Index For Period Ending June 30, 2018

Asset Class	Market Index	Transitional Composite Index Wts. *
Public Equity	67% Russell 3000/ 33% MSCI ACWI ex USA (net)	60.3%
Fixed Income	BB Barclays U.S. Aggregate	16.0
Private Markets	Private Markets	13.8
Treasuries	BB Barclays Treasury 5+ Years	8.0
Cash	3 Month T-Bills	2.0
Total		**100.0%**

* Weights are reset in the composite at the start of each month to reflect the combined allocation policies of the Combined Funds.

Figure 8. Combined Funds Performance Compared to Other Pension Funds For Periods Ending June 30, 2018



	Annualized					
	1 Yr.	3 Yr.	5 Yr.	10 Yr.	20 Yr.	30 Yr.
Combined Funds	11th	8th	8th	8th	42nd	35th
Percentile Rank in TUCS*						

* Compared to public and corporate plans greater than $1 billion, gross of fees.

The SBI adopted a **Strategic Allocation Category Framework** and a **Volatility Equivalent Benchmark** for the purpose of increasing the focus on the investment risk within the Combined Funds portfolio.

Strategic Allocation Category Framework

The objective of the Strategic Allocation Category Framework is to provide better guidance in determining the risk profile during the portfolio construction process. This approach should allow for greater awareness of the portfolio's expected volatility while managing for the variance in projected portfolio returns.

The Board approved the adoption of the Strategic Allocation Category Framework to better define the different roles that asset classes play in the portfolio. This approach focuses less in terms of "what we invest in" and rather on "why we invest." Such approaches were developed as a response to the "Great Recession" when it was observed that supposedly diversifying asset classes could still be highly correlated to public equities during periods of market stress.

Many institutional investors have advocated approaches similar to the Strategic Allocation Category Framework to recognize that while certain asset classes may be different (e.g., public equities versus private equity), some asset classes respond to the same underlying fundamental factors and economic drivers, are highly correlated, and have limited ability to counter the investment risk of one another. The perspective that the inclusion of a number of different asset classes in a portfolio provides adequate risk reduction has now evolved to an understanding that risk reducing diversification comes from having assets which behave differently during various economic regimes. Some investors refer to this approach as a risk-based allocation approach.

Key factors in the development of a Strategic Allocation Category Framework for the SBI will be 1) defining the role of the strategic allocation categories and 2) grouping asset classes that respond to similar economic drivers into the same strategic allocation category.

Following are the strategic allocation categories within the Framework and their intended roles within the portfolio. Please note that while considerable thought has gone into the approach, there is not a unique set of strategic allocation categories. As a result, the proposal is based on judgement and some conclusions are arbitrary and subject to change as we move forward.

- **Growth-Appreciation:** represents the primary reason one invests, which is to achieve attractive returns. Growth is the primary return-seeking strategic allocation category with the objective of generating long-term capital appreciation by participating in global economic growth driven primarily by exposure to the equity risk premium.

- **Growth-Income-oriented:** attributes of this category include generation of stable levels of current income and capital appreciation at lower levels of risk than Growth-Appreciation assets, preservation of the principal value of assets, and diversification to the primary drivers of assets in the Growth category. (Please note for some asset classes there may be a "fine line" between whether it should be in the Growth or Income category. Out of necessity, at the end of the day, final judgements may be arbitrary.)

- **Real Assets:** to provide diversification through investments in "hard" assets which have inflation-sensitive characteristics or the ability to provide a hedge against inflation.

- **Inflation Protection:** to provide diversification through investments in "soft" assets (e.g., Inflation-linked securities, commodities) which have a direct link to inflation. These assets provide a hedge against inflation.

- **Protection:** provides stability, protection during crisis, and can act as a hedge against deflation.

- **Liquidity:** provides liquidity to meet daily obligations, primarily benefit payments and capital calls. Consists of cash and cash equivalents.

- **Opportunity:** the purpose of this bucket is to allow for investments in interesting opportunities or new strategies that do not fit within clearly-defined asset class lines. Asset allocation constraints should not preclude investors from accessing interesting and attractive opportunities.

The Framework will become an integral part for developing and managing the asset allocation of the Combined Funds.

Following is the status of the Strategic Allocation Category Framework at June 30, 2018.

	6/30/18 $	6/30/18 Weights	Category Ranges	
Growth - Appreciation	-	-		
Public Equity	$41,429,613,107	60.7%		
Private Equity	$ 4,793,444,858	7.0%		
Non-Core Real Assets	$ 2,217,792,033	3.2%		
Distressed/Opportunistic	$ 1,177,175,565	1.7%		
	$49,618,025,563	**72.7%**	*50%*	*75%*
Growth - Income-oriented				
Core Fixed Income	$10,695,312,701	15.7%		
Private Credit	$ 540,924,098	0.8%		
Return-Seeking Fixed Income	$ -	0.0%		
	$11,236,236,799	**16.5%**	*15%*	*30%*
Real Assets				
Core Real Estate	$ -	0.0%		
Real Assets	$ 658,953,148	1.0%		
	$ 658,953,148	**1.0%**	*0%*	*10%*
Inflation Protection				
TIPS	$ -	0.0%		
Commodities	$ -	0.0%		
	$ -	**0.0%**	*0%*	*10%*
Protection				
U.S. Treasuries	$ 5,880,054,748	8.6%		
	$ 5,880,054,748	**8.6%**	*5%*	*20%*
Liquidity				
Cash	$ 895,002,537	1.3%		
	$ 895,002,537	**1.3%**	*0%*	*5%*
Opportunity				
Opportunity	**$ -**	**0.0%**	*0%*	*10%*
Total	**$68,288,272,795**	**100.0%**		
Illiquid Asset Exposure	**$ 9,388,289,702**	**13.7%**	*0%*	*30%*

Volatility Equivalent Benchmark

The Volatility Equivalent Benchmark was introduced as a metric to compare the long-term investment performance of the Combined Funds' portfolio relative to a passively managed equity and bond portfolio which had a similar level of risk (as measured by its standard deviation) over the same time period. The comparison is an evaluation of how well our decisions made for the portfolio match up against a passively managed index strategy (which we would be unable to define on an ad hoc basis). When the comparison of the Combined Funds portfolio exceeds the Volatility Equivalent Benchmark the positive value added is a validation of how well our investment process performs.

A comparison of the Combined Funds portfolio versus the Volatility Equivalent Benchmark indicates the value added the SBI's approach to managing the investment program versus a simple buy and hold passive strategy. As can be seen in the comparison, the SBI's management results have yielded positive long-term results.

Volatility Equivalent Benchmark Comparison
Periods Ending 6/30/18

As of (Date):	6/30/2018							
	1-year	*3-year*	*5-year*	*10-year*	*15-year*	*20-year*	*25-year*	*30-year*
SBI Combined Funds Return	**10.3%**	**8.3%**	**9.5%**	**7.8%**	**8.6%**	**6.8%**	**8.4%**	**9.1%**
Volatility Equivalent Benchmark Return	**6.3%**	**5.8%**	**6.7%**	**5.2%**	**6.6%**	**5.4%**	**6.6%**	**7.6%**
Value Added	**4.0%**	**2.5%**	**2.8%**	**2.6%**	**2.0%**	**1.3%**	**1.8%**	**1.5%**
Standard Deviation: Benchmark = Combined Funds			**6.2%**	**9.5%**	**8.7%**	**9.6%**	**9.2%**	**9.1%**
Benchmark Stock Weight	**61%**	**61%**	**61%**	**57%**	**58%**	**62%**	**62%**	**61%**
Benchmark Bond Weight	**39%**	**39%**	**39%**	**43%**	**42%**	**38%**	**38%**	**39%**

The Volatility Equivalent Benchmark stock and bond weights are adjusted to equal the standard deviation of the SBI Combined Funds portfolio. Then a return is calculated.

The Supplemental Investment Fund program is an investment program that offers a range of investment options to state and local public employees. The program serves individuals who participate in defined contribution or supplemental retirement savings plans and many local volunteer fire relief associations. On June 30, 2018, the market value of the SIF Fund (excluding Deferred Compensation Plan assets) was $2.3 billion. Including Deferred Compensation investments in the SIF Money Market Fund and SIF Stable Value Fund the SIF assets totaled $3.7 billion.

The Supplemental Investment Fund (SIF) program provides investment vehicles for a variety of retirement plans. It provides some or all of the investment options for the Unclassified Employees Retirement Plan, Public Employees Defined Contribution Plan, Hennepin County Supplemental Retirement Plan, Health Care Savings Plan and the St. Paul Teachers Retirement Fund Association. The State Deferred Compensation Plan uses two of the SIF investment options, the Stable Value Fund and the Money Market Fund, for its participants. All Funds in the SIF program, except the Stable Value Fund, are available to local volunteer fire relief associations who invest their assets with the SBI.

The Volunteer Firefighter Account is available only for those local firefighter entities that participate in the Statewide Volunteer Firefighter Retirement Plan administered by PERA. Local entities that participate in this Plan must have all their assets invested in the Volunteer Firefighter Account.

Fund Structure

Investment goals among the SIF's many participants are varied. In order to meet the variety of goals, the Supplemental Investment Fund is 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 statutory requirements and rules established by the participating organizations. Participation in the SIF is accomplished through the purchase or sale of shares in each Fund.

Fund Management

As of June 30, 2018 the Supplemental Investment Fund program offered the eight investment options shown in Figure 9. The objectives, asset allocation, management and performance of each Fund in the SIF program are explained in the following sections.

Share Values

A share value is established daily for each account in the SIF program, and participants buy or sell shares based on the most recent share value.

Figure 9. Accounts in the Supplemental Investment Fund

Balanced Fund	a balanced portfolio of U.S. common stocks, fixed income and cash.
U.S. Stock Actively Managed Fund	an actively and semi-passively managed portfolio of U.S. common stocks.
U.S. Stock Index Fund	a passively managed portfolio of U.S. common stocks.
Broad International Stock Fund	a portfolio of actively, semi-passively, and passively managed non-U.S. stocks.
Bond Fund	a portfolio of both actively and semi-passively managed fixed income securities.
Money Market Fund	a portfolio of short-term, liquid debt securities.
Stable Value Fund	a high quality fixed income portfolio including a portfolio of stable value instruments, security backed contracts, insurance company investment contracts and bank investment contracts.
Volunteer Firefighter Account	a balanced portfolio of U.S. and international common stocks, fixed income and cash.

Shares in the Balanced Fund, U.S. Stock Actively Managed Fund, U.S. Stock Index Fund, Broad International Stock Fund, Bond Fund, and the Volunteer Firefighter Account are priced based on the market value of each Fund. Performance of these Funds is a function of the income and capital appreciation (or depreciation) generated by the securities in the Funds.

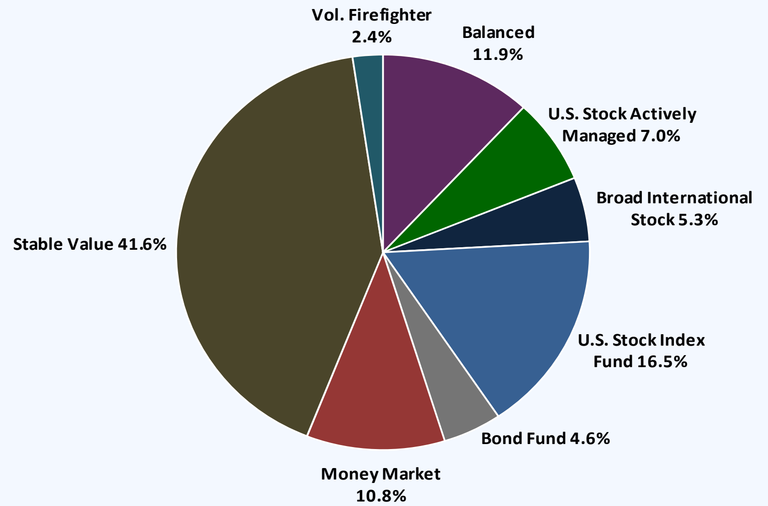
In the Stable Value Fund, shares are priced based on the blended crediting rates of the contracts and yields from any liquidity investments. Performance is calculated based on changes in these share values.

In the Money Market Fund, share values remain constant and the accrued interest income is credited to the Fund through the purchase of additional shares.

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, but do not reflect administrative expenses that may be deducted by the retirement systems to defray administrative costs.

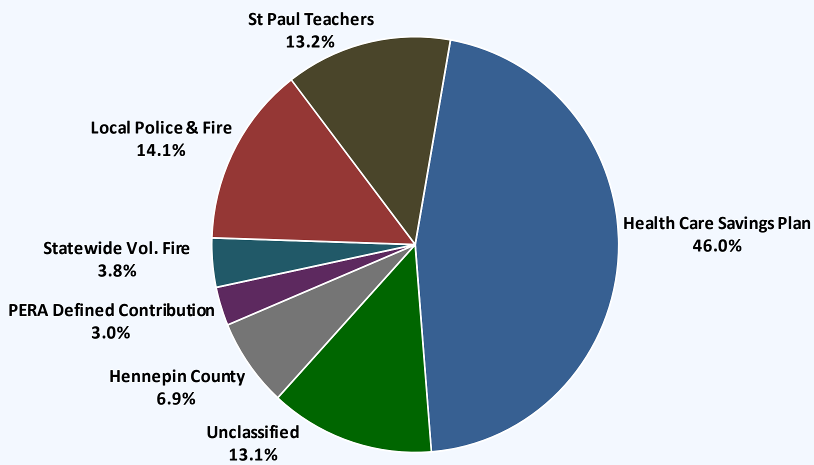
The distribution of assets by market value in the Supplemental Investment Fund as of June 30, 2018 is shown by Fund in Figure 10 and by Plan in Figure 11.

Figure 10. **Composition of $2.3 billion SIF by Investment Fund as of June 30, 2018**



Note: Does not include Deferred Compensation Plan assets in the SIF Stable Value Fund ($1.3 billon) and Money Market Fund ($76.3 million) which are reported elsewhere in the Annual Report.

Figure 11. **Participation in $2.3 billion SIF by Plan as of June 30, 2018**



Note: Does not include Deferred Compensation Plan assets in the SIF Stable Value Fund ($1.3 billion) and Money Market Fund ($76.3 million) which are reported elsewhere in the Annual Report.

Balanced Fund

Objective

The investment objectives of the Balanced Fund are to earn a return both from capital appreciation (increases in market value) and current yield (dividends from stock and interest on bonds). The Balanced Fund pursues these objectives within the constraints of protecting against adverse financial environments and limiting short-run portfolio return volatility.

The SBI invests the Balanced Fund in a balanced portfolio of common stocks and fixed income securities (bonds) with the following long-term asset mix: 60% domestic common stocks, 35% bonds, 5% cash equivalents.

Domestic common stocks provide the potential for significant long-term capital appreciation, while bonds provide both a hedge against deflation and the diversification needed to limit excessive portfolio return volatility.

At the close of fiscal year 2018, the value of the Balanced Fund was $444 million.

Management

The Balanced Fund assets are invested by external managers. The fixed income assets are invested in the SIF Bond Fund, which includes active and semi-passive external investment managers retained by the SBI. The common stock segment is managed and invested in the U.S. Stock Index Fund and is designed to track the returns of the Russell 3000 Index (see page 19). The passive manager for this portion of the Fund is BlackRock Institutional Trust Company. The cash portion of the Fund is actively managed by State Street Global Advisors.

Performance

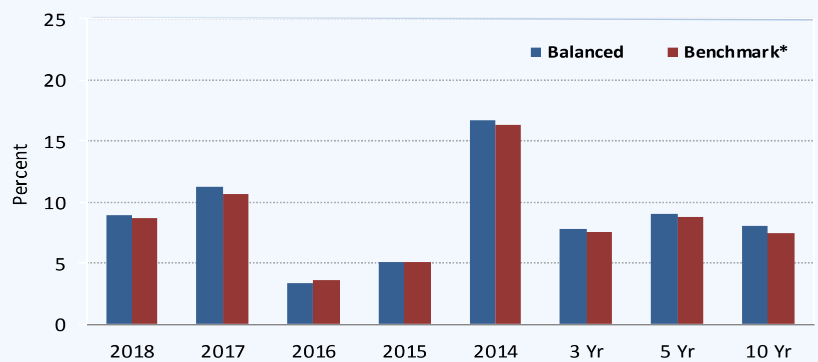
As with the other SBI funds which use a multi-manager investment structure, the Board evaluates the performance of the Balanced Fund on two levels:

— ***Total Fund.*** The Balanced Fund is expected to exceed the returns of a composite of market indices weighted in the same proportion as its long-term asset allocation.

— ***Individual Manager.*** The passive stock manager is expected to closely track the performance of the Russell 3000. The group of external bond managers for the Fund are expected to exceed the performance of the Bloomberg Barclays U.S. Aggregate Bond Index. The cash manager for the Fund is expected to exceed the performance of 3 Month U.S. Treasury Bills.

The Balanced Fund provided a return of 8.9% for fiscal year 2018, slightly outperforming its benchmark. Over the most recent ten years, the Balanced Fund exceeded its benchmark by 0.6 percentage point. Figure 12 shows a history of performance results.

Figure 12. **Balance Fund Performance For Periods Ending June 30, 2018**



						Annualized		
	2018	**2017**	**2016**	**2015**	**2014**	**3 Yr.**	**5 Yr.**	**10 Yr.**
Balanced	**8.9%**	**11.3%**	**3.4%**	**5.1%**	**16.7%**	**7.8%**	**9.0%**	**8.1%**
Benchmark*	8.7	10.7%	3.6	5.1	16.3	7.6	8.8	7.5

* 60% Russell 3000/35% Bloomberg Barclays U.S. Aggregate Bond Index/5% T-Bills Composite since 10/1/03.

U.S. Stock Actively Managed Fund

Objective

The investment objective of the U.S. Stock Actively Managed Fund is to generate high returns from capital appreciation. To achieve this objective, the Fund is invested primarily in U.S common stocks.

At the close of fiscal year 2018, the value of the Fund was $260 million.

Management

The assets of the U.S. Stock Actively Managed Fund are actively managed within the Domestic Stock Program. This allocation reflects a more aggressive investment than is available through passive management. The Fund may hold a small amount of cash that represents new contributions received prior to investment in the market and cash that may be held by the individual managers in the Fund.

Performance

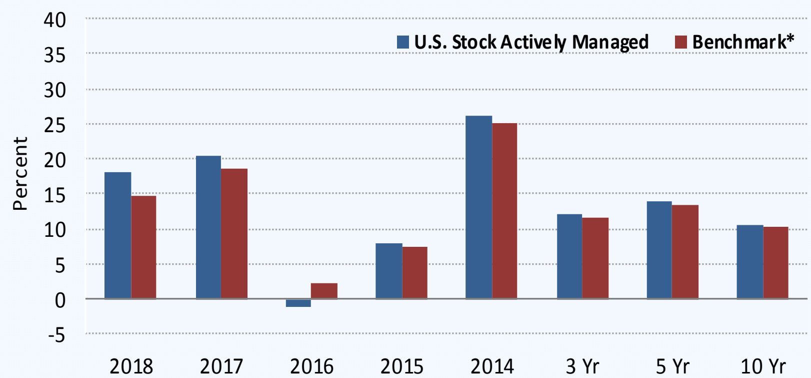
The Board evaluates the performance of the U.S. Stock Actively Managed Fund on two levels:

— ***Total Fund.*** The U.S. Stock Actively Managed Fund is expected to exceed the returns of the Russell 3000 Index.

— ***Individual Manager.*** Performance objectives for the individual managers are described beginning on page 27 of this report.

The U.S. Stock Actively Managed Fund provided a return of 18.2% for the fiscal year, outperforming its benchmark. Over the last ten year period, the Fund outperformed its benchmark by 0.3 percentage point. See the investment discussion beginning on page 27 concerning the actively and semi-passively managed Domestic Stock Program for performance information on the managers used by this Fund. A history of performance results is shown in Figure 13.

Figure 13. **U.S. Stock Actively Managed Fund Performance For Periods Ending June 30, 2018**



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
U.S. Stock	**18.2%**	**20.5%**	**-1.1%**	**7.9%**	**26.1%**	**12.1%**	**13.9%**	**10.5%**
Benchmark*	14.8	18.5	2.1	7.3	25.2	11.6	13.3	10.2

* Russell 3000 since 10/1/03.

U.S. Stock Index Fund

Objective
The investment objective of the U.S. Stock Index Fund is to generate returns that track the performance of the broad U.S. common stock market as represented by the Russell 3000 Index. To accomplish this objective, the SBI allocates all of the assets of the Fund to passively managed domestic stocks.

At the end of fiscal year 2018, the Fund had a market value of $615 million.

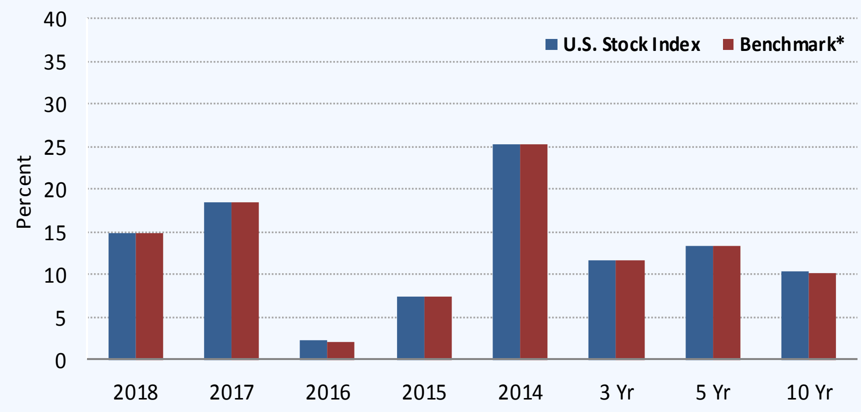
Management
The Fund is passively managed by BlackRock Institutional Trust Company.

Performance
The performance objective of the U.S. Stock Index Fund is to track the performance of the Russell 3000. The SBI recognizes that the Fund's returns may deviate slightly from those of the Russell 3000 due to the effects of management fees, trading costs and cash flows.

Individual Manager.
Performance objectives for the individual managers are described beginning on page 27 of this report.

As expected, the U.S. Stock Index Fund tracked the Russell 3000 Index for the fiscal year and closely tracked over longer periods as shown in Figure 14.

Figure 14. U.S. Stock Index Fund Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
U.S. Stock Index	**14.8%**	**18.5%**	**2.2%**	**7.3%**	**25.2%**	**11.6%**	**13.3%**	**10.3%**
Benchmark*	14.8	18.5	2.1	7.3	25.2	11.6	13.3	10.2

* Russell 3000 since 10/1/03.

Broad International Stock Fund

Objective

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.

Typically, a majority of the Fund is invested in the largest international stock markets (United Kingdom, Japan, Canada, France, Germany, and Switzerland) and is invested in other well established markets in Europe and the Pacific region. In addition, the fund invests in emerging markets around the world, including those in Latin America, Eastern Europe, the Middle East, China and ASEAN regions.

At the end of fiscal year 2018, the Fund had a market value of $196 million.

Management

The structure of the Broad International Stock Fund combines active, semi-passive, and passive management. The Fund has several actively managed portfolios that invest portfolios in both developed and emerging markets. These managers use a variety of investment styles and approaches to buy and sell stocks in an attempt to maximize market value. The passively managed portfolio's objective is to approximate the returns of the international markets in both the developed and emerging markets. The semi-passive mandates add incremental value over the index return by investing in broadly diversified portfolios of stocks in the developed and emerging markets. Overall, the Fund is designed to consistently track the return of the MSCI ACWI ex USA Index (net), a developed and emerging markets index. The Fund uses the same managers used by the Combined Funds in the International Stock Program.

Performance

The Board evaluates the performance of the Broad International Stock Fund on two levels:

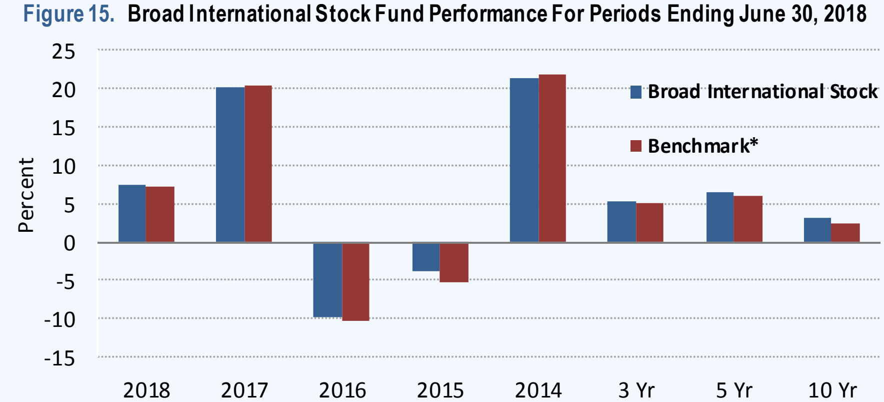
— ***Total Fund.*** The Broad International Stock Fund is expected to exceed the returns of the MSCI ACWI ex USA Index (net).

— ***Individual Manager.*** Performance objectives for the individual managers are described beginning on page 39 of this report.

During fiscal year 2018, the Broad International Stock Fund, with a return of 7.5%, outperformed the MSCI ACWI ex USA Index (net) by 0.2 percentage point. Over the most recent ten year period, the Broad International Stock Fund exceeded its benchmark by 0.6 percentage point.

See the discussion on performance of the international managers beginning on page 39 of this report. A history of performance results is shown in Figure 15.

Figure 15. **Broad International Stock Fund Performance For Periods Ending June 30, 2018**



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Broad International	**7.5%**	**20.2%**	**-9.7%**	**-3.8%**	**21.4%**	**5.3%**	**6.4%**	**3.1%**
Benchmark*	7.3	20.5	-10.2	-5.3	21.8	5.1	6.0	2.5

* The International Equity Asset Class Target is MSCI ACWI ex USA Index (net) since 10/1/03.

Bond Fund

Objective

The objective of the Bond Fund is to earn returns from fixed income securities. The Fund is invested primarily in investment-grade government and corporate bonds and mortgage securities with intermediate to long maturities. A small portion of the Fund is invested in below investment grade and non-U.S. securities.

At the end of fiscal year 2018, the market value of the Fund was $171 million.

The Fund earns investment returns through interest income and capital appreciation. Because bond prices move inversely with interest rates, the Fund entails some risk for investors. Historically, however, it represents a lower risk alternative than the investment options that include common stocks.

Management

The Bond Fund invests in the Fixed Income Program used by the Combined Funds. The Fixed Income Program retains both active and semi-passive managers.

Performance

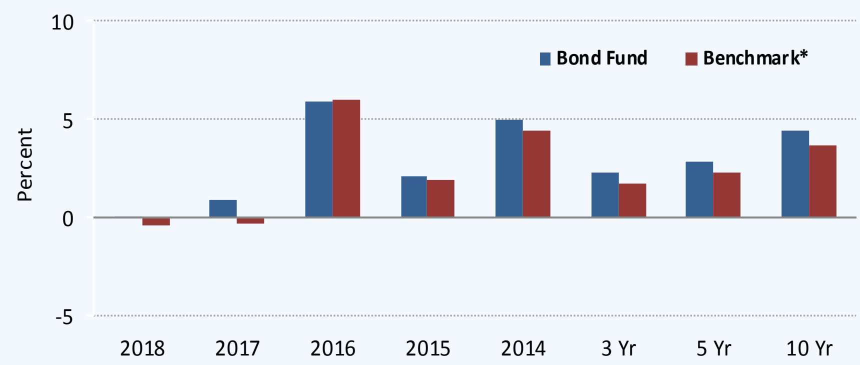
The Board evaluates the performance of the Bond Fund on two levels:

— ***Total Fund.*** The Fund is expected to exceed the returns of the Bloomberg Barclays U.S. Aggregate Bond Index.

— ***Individual Manager.*** Performance objectives for the individual managers are described beginning on page 51 of this report.

For fiscal year 2018, the Bond Fund produced a return of 0.1%, which was 0.5 percentage point above the Bloomberg Barclays U.S. Aggregate benchmark. For the most recent ten year period, the Fund exceeded its benchmark by 0.7 percentage point. See the discussion regarding bond manager performance beginning on page 51 of this report. A history of performance results is shown in Figure 16.

Figure 16. **Bond Fund Performance For Periods Ending June 30, 2018**



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Bond Fund	**0.1%**	**0.9%**	**5.9%**	**2.1%**	**5.0%**	**2.3%**	**2.8%**	**4.4%**
Benchmark*	-0.4	-0.3	6.0	1.9	4.4	1.7	2.3	3.7

* Bloomberg Barclays U.S. Aggregate Bond Index.

Money Market Fund

Objective

The Money Market Fund invests in high-quality, short-term debt instruments. The Fund's investment objectives are to preserve capital and offer competitive money market returns.

At the end of fiscal year 2018, the Fund had a market value of $328 million excluding Deferred Compensation Plan assets. The Deferred Compensation Plan Money Market assets totaled $76.3 million.

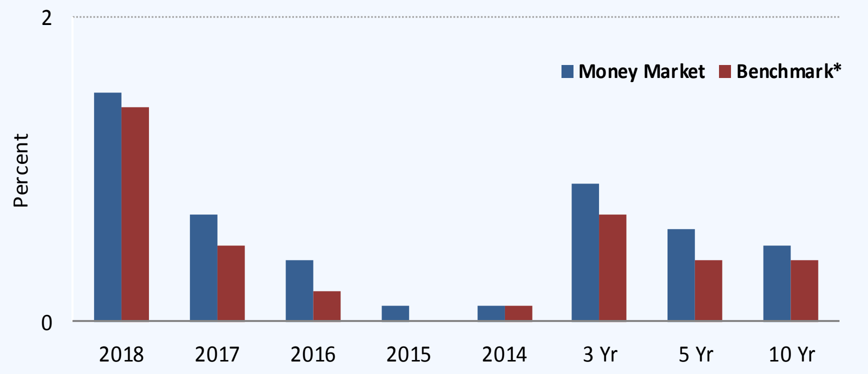
Management

The Fund uses the same cash manager as the Combined Funds, which is State Street Global Advisors.

Performance

The Fund is expected to produce returns competitive with those available from short-term debt securities. For fiscal year 2018, the Money Market Fund generated a return of 1.5%, which was 0.1 percentage point above the 3 month U.S. Treasury Bills. Over the most recent ten year period, the Fund slightly outperformed its target. A history of performance results is shown in Figure 17.

Figure 17. **Money Market Fund Performance For Periods Ending June 30, 2018**



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Money Market	**1.5%**	**0.7%**	**0.4%**	**0.1%**	**0.1%**	**0.9%**	**0.6%**	**0.5%**
3 Month T-Bills*	1.4	0.5	0.2	0.0	0.1	0.7	0.4	0.4

* 90 Day T-Bill.

Stable Value Fund

Objective
The investment objectives of the Stable Value Fund are to seek to provide preservation of principal, maintain adequate liquidity to meet potential withdrawals, and produce a level of income consistent with an underlying portfolio of short to intermediate duration, high quality fixed income securities.

At the end of fiscal year 2018, the Fund totaled $214 million, excluding Deferred Compensation Plan assets. Deferred Compensation Plan assets invested in the SIF Stable Value Fund totaled $1.3 billion.

Management
The Fund is invested in a well-diversified portfolio of high quality fixed income securities. The Fund also holds insurance 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, and maintain a relatively stable return profile for the portfolio. The portfolio may also hold cash or cash equivalents for liquidity purposes. Performance reflects the blended crediting rates from all investments in the fund.

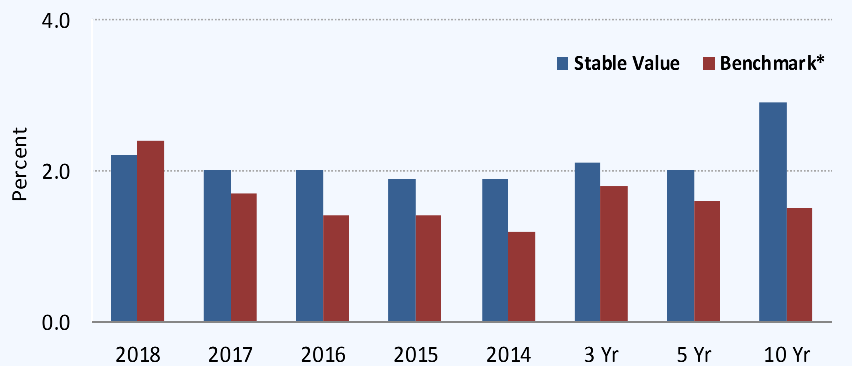
The manager for the Fund is Galliard Capital Management, a subsidiary of Wells Fargo Bank.

Figure 18 shows a history of the Fund's performance results.

Performance
The Stable Value Fund is expected to exceed the returns of its custom benchmark, the 3-year Constant Maturity Treasury plus 45 basis points (0.45%).

During fiscal year 2018, the Stable Value Fund provided a return of 2.2%, which was 0.2 percentage point below its benchmark. Over the most recent ten year period, the Stable Value Fund exceeded its benchmark by 1.4 percentage points.

Figure 18. Stable Value Fund Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Stable Value	**2.2%**	**2.0%**	**2.0%**	**1.9%**	**1.9%**	**2.1%**	**2.0%**	**2.9%**
Benchmark*	2.4	1.7	1.4	1.4	1.2	1.8	1.6	1.5

* 3-Year Constant Maturity Treasury plus 45 basis points.

Statewide Volunteer Firefighter Retirement Plan

Minnesota Statutes, Chapter 353G creates a statewide, voluntary plan for local relief associations. Local entities may choose to join the statewide plan which is administered by PERA. Investments of the plan are invested in the Statewide Volunteer Firefighter Retirement Plan (Volunteer Firefighter Plan). Participation in the plan is effective on December 31 of a given year. The SBI must evaluate the assets of each local entity that seeks to join the plan. In 2018, 17 local entities joined the plan, transferring over $7.7 million to the SBI for investment. At the close of fiscal year 2018, 159 local fire entities, representing over $88 million in assets, were in the Plan.

Objective

The investment objective of the Volunteer Firefighter Plan is to earn a high rate of return from both capital appreciation (increases in market value) and current yield (dividends from stocks and interest on bonds). The Plan pursues this objective within the constraints of protecting against adverse financial environments and limiting short-run portfolio return volatility.

The SBI invests the Plan in a balanced portfolio of domestic common stocks, international stocks and fixed income securities with the following long-term asset mix: 35% U.S. Equities, 15% International Equities, 45% Bonds, 5% Cash. Domestic stocks provide the potential for significant long-term capital appreciation, international stocks provide similar potential along with a measure of diversification, and bonds provide both a hedge against deflation and the diversification needed to limit excessive portfolio return volatility.

Management

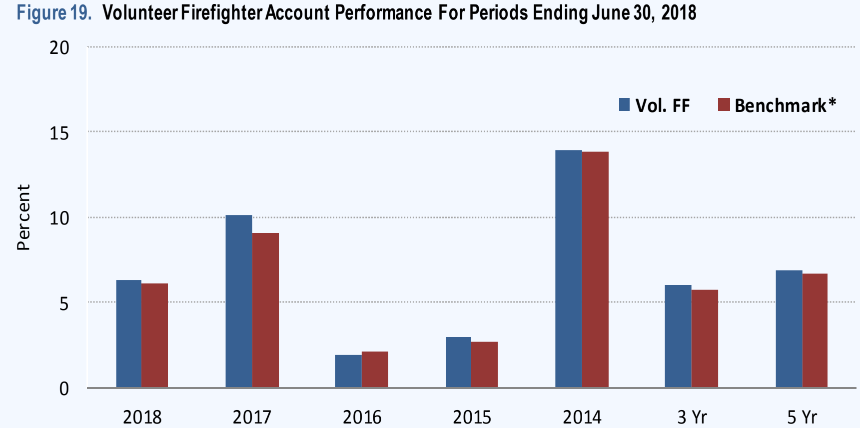
The Plan's investment management structure combines active and passive management used by the Combined Funds. The domestic stock segment is managed as part of the passively managed segment of the Domestic Stock Program designed to track the returns of the Russell 3000 Index. The international stock segment invests in the International Stock Program which uses a combination of active, semi-passive and passive management to invest across a broad range of developed and emerging markets. The bond segment invests in the Fixed Income Program used by the Combined Funds. The Fixed Income Program retains both active and semi-passive managers.

Performance

As with other SBI funds which utilize a multi-manager investment structure, the Board evaluates the performance of the Volunteer Firefighter Plan on two levels:

— ***Total Account.*** The Volunteer Firefighter Account is expected to exceed the returns of a composite of market indices weighted in the same proportion as its long-term asset allocation.

Figure 19. Volunteer Firefighter Account Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	Annualized 5 Yr.
Volunteer Firefighter (FF)	**6.3%**	**10.1%**	**1.9%**	**3.0%**	**13.9%**	**6.0%**	**6.9%**
Benchmark*	6.1	9.1	2.1	2.7	13.8	5.7	6.7

* 35% Russell 3000, 15% MSCI ACWI ex USA (net), 45% Bloomberg Barclays U.S. Aggregate Bond Index, 5% 3 Month T-Bills.

— ***Individual Manager.*** The passive domestic stock and passive international stock managers are expected to closely track the performance of their respective benchmarks. The performance objectives of the individual international equity and bond managers are described in their respective sections of this report.

The Statewide Volunteer Firefighter Retirement Plan was established January 1, 2010. The Plan provided a return of 6.3% for the year ending June 30, 2018 and outperformed its composite benchmark by 0.2 percentage point. Over the most recent five year period, the Plan exceeded its benchmark by 0.2 percentage point.

Figure 19 on the previous page shows a history of the Account's performance results.

Local Fire Fund Activity

Volunteer Fire Plans Investment
Volunteer firefighter retirement plans that are not eligible to be consolidated with PERA may invest their assets with the SBI through the Supplemental Investment Fund (SIF). There are more than 560 local volunteer firefighter plans with investment authority that could participate in the SIF. As of the end of fiscal year 2018, there were 174 plans participating in the SIF with $326 million in assets.

Local Plan Performance Reports
The SBI provides participating local plans with reports showing annual returns and market value for all SIF Funds in compliance with *Minnesota Statutes*, Chapter 356. The local plans are responsible for providing their specific data to the Office of the State Auditor.

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To gain greater operating efficiency, external managers are grouped into several "Investment Programs" which are segregated by asset class. The various retirement funds participate in one or more of the programs corresponding to their individual asset allocation strategies.

The Combined Funds and Supplemental Investment Fund (SIF) share many of the same stock and bond managers. This sharing is accomplished by grouping managers by asset class into several different investment pools, which are further aggregated into a select number of Investment Programs. The individual funds participate in the various Investment Programs by purchasing units in the related investment pools which function much like shares of a mutual fund.

This investment management structure allows the SBI to gain greater operating efficiency within asset classes and to keep management costs as low as possible for all participants.

Domestic Stock Program

The Domestic Stock Program is made up of active large-cap and small-cap managers, a passive U.S. all-cap manager, and a passive large-cap manager which is used by the Combined Funds. The active large-cap and small-cap managers and the passive all-cap manager are used by the Supplemental Investment Fund's U.S. Stock Actively Managed Fund, U.S. Stock Index Fund, and the stock portions of the Balanced Fund and Volunteer Firefighter Account.

The following are the dollar values as of June 30, 2018 of each fund's participation in the Domestic Stock Program:

Combined Funds (active, passive and semi-passive)	$28.3 billion
U.S. Stock Active (active and semi-passive)	$259.9 million
U.S. Stock Index (passive)	$614.5 million
Stock portion of the Balanced Fund (passive)	$268.6 million
Volunteer Firefighter Account (active and passive)	$31.2 million

Management Structure

The SBI uses three styles of management to invest the assets of the Domestic Stock Program:

— ***Active Management***
At the end of fiscal year 2018, approximately 16% of the Domestic Stock Program was actively managed by a group of 14 external investment managers. The assets allocated to each of the managers ranged in size from approximately $235 million to $600 million.

— ***Semi-Passive Management***
At the end of fiscal year 2018, approximately 9% of the Domestic Stock Program was managed by two semi-passive external investment managers with portfolios ranging from $1.1 billion to $1.5 billion.

— ***Passive Management***
At the end of fiscal year 2018, approximately 75% of the Domestic Stock Program was passively managed with two external investment mandates with portfolio ranges from $9.4 billion to $12.6 billion.

The goal of the Domestic Stock Program is to outperform the asset class target, the Russell 3000 Index, over time. The Russell 3000 Index can be segmented into sub-indexes or Russell style indexes.

Assets of the Program are allocated based on the Russell style indexes in proportion to the style weighting within the Russell 3000. Assets within each style are then allocated to managers within the designated style. This allocation is done to minimize the style bias within the Program.

Each **active manager** is expected to add value over the long run relative to the Russell style index which reflects its investment approach or style.

The **semi-passive managers** are expected to add incremental value relative to the Russell 1000 Index. However, they employ a strategy that more closely tracks the benchmark than active management and are generally more consistent at generating modest excess returns.

The **passive managers** in the Domestic Stock Program manage their portfolios to consistently and inexpensively track their respective Russell indices.

A description of each domestic stock manager's investment approach is included in the **Investment Manager Summaries** section beginning on page 32.

FY 2018 Changes

During fiscal year 2018, one change was made to the manager structure.

In March 2018, McKinley Capital Management, LLC was terminated.

Investment Performance

A comprehensive monitoring system has been established to ensure that the many elements of the Domestic Stock Program conform to the SBI's investment policies. Published performance benchmarks are used for each domestic stock manager. These benchmarks enable the SBI to evaluate the managers' results, both individually and in aggregate, with respect to risk incurred and returns achieved.

Two primary long-term ***risk objectives*** have been established for the domestic stock managers:

— ***Investment Approach***
Each manager (active, semi-passive, or passive) is expected to hold a portfolio that is consistent, in terms of risk characteristics, with the manager's stated investment approach. In the short-run, market fluctuations may result in a departure from the active managers' risk targets as part of their specific investment strategies.

— ***Diversification***
The passive and semi-passive managers are expected to hold highly diversified portfolios, while each active domestic stock manager may hold a more concentrated portfolio, appropriate for the particular investment strategy and style.

The domestic stock managers successfully fulfilled their long-term risk objectives during fiscal year 2018. In general, the managers constructed portfolios consistent with their stated investment approaches and maintained levels of diversification that were appropriate for their respective active, semi-passive and passive approaches.

The Board's ***return objectives*** for active and semi-passive stock managers are measured against the published Russell style and market capitalization indices that represent the managers' specific investment approaches. These indices take into account the equity market forces that affect certain investment styles. Thus, a Russell style index or benchmark is a more appropriate return target against which to judge these managers' returns than the Russell 3000 broad market index.

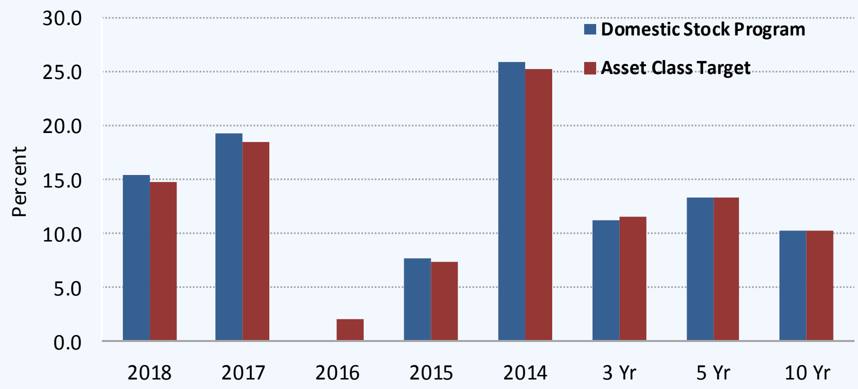
Active managers are expected to exceed their benchmark by an amount appropriate for their active risk level. This active risk level varies by manager and is influenced by the manager's stated strategy and style.

In aggregate, the Domestic Stock Program outperformed the Russell 3000 Index by 0.6 percentage point for the fiscal year. The active manager and semi-passive manager groups outperformed their respective benchmarks.

Relative to the aggregate benchmark, the outperformance of the active manager group was due to overall stock selection, especially in the Consumer Discretionary sector. The semi-passive manager's positive relative performance benefited from stock selection overall, particularly in the Information Technology, Consumer Staples, and Energy sectors.

Figure 20 provides details of the historical performance of the entire Domestic Stock Program. Manager performance relative to the respective benchmarks for the fiscal year end was mixed. Ten of 14 active managers outperformed their assigned benchmarks, while four managers underperformed. One semi-passive manager outperformed and the other semi-passive manager underperformed the Russell 1000 index. Both the Russell 3000 and Russell 1000 index passive managers matched the performance of their respective benchmarks during the fiscal year. Individual manager performance for fiscal year 2018 is shown in Figure 21. Aggregate portfolio sector characteristics are shown in Figure 22.

Figure 20. Domestic Stock Program Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Domestic Stock Program	**15.4%**	**19.3%**	**0.0%**	**7.7%**	**25.9%**	**11.3%**	**13.3%**	**10.2%**
Asset Class Target*	14.8	18.5	2.1	7.3	25.2	11.6	13.3	10.2

* Reflects the Russell 3000 since 10/1/2003.

Figure 21. Domestic Stock Program Manager Performance for Periods Ending June 30, 2018

	1 Year		3 Years		5 Years		Market
	Actual %	Bmk %	Actual %	Bmk %	Actual %	Bmk %	Value ($ in millions)
Active Managers							
Large Cap Growth (Russell 1000 Growth)							
Sands Capital Mgmt.	34.7	22.5	16.1	15.0	17.6	16.4	598.5
Winslow Capital Mgmt.	28.2	22.5	15.1	15.0	16.9	16.4	240.2
Zevenbergen Capital	34.2	22.5	16.6	15.0	18.6	16.4	567.1
Large Cap Value (Russell 1000 Value)							
Barrow, Hanley	8.3	6.8	7.8	8.3	10.6	10.3	382.3
Earnest Partners	12.9	6.8	10.0	8.3	12.2	10.3	273.0
LSV Asset Mgmt.	11.9	6.8	9.5	8.3	12.5	10.3	419.1
Small Cap Growth (Russell 2000 Growth)							
ArrowMark	27.1	21.9					235.5
Hood River	16.5	21.9					253.6
Rice Hall James	28.3	21.9					246.1
Wellington	19.0	21.9					258.1
Small Cap Value (Russell 2000 Value)							
Goldman Sachs	12.2	13.1	9.6	11.2	11.8	11.2	371.2
Hotchkis & Wiley	13.4	13.1	7.0	11.2	11.5	11.2	326.3
Martingale Asset Mgmt.	12.6	13.1	11.3	11.2	13.1	11.2	309.4
Peregrine Capital Mgmt.	16.0	13.1	10.5	11.2	11.4	11.2	394.2
Semi-Passive Managers (Russell 1000)							
BlackRock Institutional	17.3	14.5	12.8	11.6	14.4	13.4	1,060.7
J.P. Morgan Investment Mgmt.	14.0	14.5	11.5	11.6	13.6	13.4	1,535.8
Passive Manager (Russell 1000)							
BlackRock Institutional	14.5	14.5					12,600.5
Passive Manager (Russell 3000)							
BlackRock Institutional	14.8	14.8	11.6	11.6	13.3	13.3	9,424.7
Aggregate Domestic Stock Program(1)	**15.4**	**14.8**	**11.3**	**11.6**	**13.3**	**13.3**	**29,500.3**
Asset Class Target							
Russell 3000		14.8		11.6		13.3	

(1) Aggregate includes the performance of terminated managers.

Figure 22. Domestic Stock Program Allocations Russell Global (U.S.) Sector Weights for Period Ending June 30, 2018

Russell Sector	Active Managers %	Semi-Passive Managers %	Passive Manager %	Aggregate Domestic Stock Program %	Benchmarks Russell 1000 %	Benchmarks Russell 3000 %
Consumer Discretionary	16.1	15.0	13.7	14.6	14.3	14.3
Consumer Staples	1.6	5.5	6.1	4.5	5.8	5.5
Energy	5.7	5.8	5.6	5.8	6.1	5.9
Financial Services	25.9	20.9	21.0	22.1	20.9	21.3
Health Care	11.3	13.1	13.3	12.6	12.9	13.2
Materials and Processing	3.2	3.9	3.8	3.6	3.5	3.8
Producer Durables	9.5	10.2	10.8	10.3	10.6	10.8
Technology	16.6	21.1	19.5	19.5	21.3	20.7
Utilities	2.7	3.9	4.7	3.9	4.6	4.5
Cash	1.9	0.3	1.6	1.7	N/A	N/A
Unassigned*	5.5	0.3	0.0	1.4	N/A	N/A
Assigned Benchmark:	Russell 3000	Russell 1000	Russell 3000	Russell 3000		

* Holdings not included in benchmark.

Note: Totals may not add due to rounding.

Domestic Stock Program Managers

Active Managers

Large-Cap Growth
(Russell 1000 Growth)

Sands Capital Management, LLC

Mandate:	Large-Cap Growth	**Benchmark:**	Russell 1000 Growth
Product assets/Firm Assets (as of 6/30):	$21.8 billion / $43.4 billion	**# of Holdings:**	29
		Expected Turnover:	20-40%
Style:	Growth	**Fund/Quant:**	Fundamental
Product Location:	Arlington, VA	**Date Funded:**	January 2005

Sands invests in concentrated portfolios of high-quality, seasoned, growing businesses. Bottom-up, company-focused and long-term oriented research is the cornerstone of the investment process. To be considered as a potential holding, companies must demonstrate superior historical and projected sales and earnings growth; have the potential for wealth creation; and reside in growing sectors. The strategy focuses on six key investment criteria: 1) sustainable above average earnings growth; 2) leadership position in a promising business space; 3) significant competitive advantages or unique business franchise; 4) management with a clear mission and value added focus; 5) financial strength; and 6) rational valuation relative to the overall market and the company's business prospects.

Winslow Capital Management, LLC

Mandate:	Large-Cap Growth	**Benchmark:**	Russell 1000 Growth
Product assets/Firm Assets (as of 6/30):	$21.6 billion / $21.9 billion	**# of Holdings:**	56
		Expected Turnover:	60-80%
Style:	Growth	**Fund/Quant:**	Fundamental
Product Location:	Minneapolis, MN	**Date Funded:**	January 2005

Winslow believes that investing in quality large-cap companies with above-average growth provides the best opportunity for achieving superior portfolio returns over the long-term. The investment philosophy is founded on bottom up, fundamental research. The strategy identifies companies that can grow earnings above consensus expectations to build portfolios with forward weighted earnings growth in the range of 15-20% annually. A quantitative screen is employed for factors such as revenue, earnings and cash flow growth, return on invested capital, earnings consistency, earnings revisions, low financial leverage and high free cash flow rates relative to net income. Resulting companies are subjected to a qualitative assessment within the context of industry sectors. Detailed examination of income statements, cash flow and balance sheet projections is conducted, along with a judgment on the quality of management. Attractively valued stocks are chosen based on Price to Earnings (P/E) relative to the benchmark, sector peers, the company's sustainable future growth rate and return on invested capital. Final portfolio construction includes diversification by economic sectors, earnings growth rates, price/earnings ratios and market capitalizations.

Zevenbergen Capital Investments LLC

Mandate:	Large-Cap Growth	**Benchmark:**	Russell 1000 Growth
Product assets/Firm Assets (as of 6/30):	$2.8 billion / $3.0 billion	**# of Holdings:**	42
		Expected Turnover:	20-40%
Style:	Growth	**Fund/Quant:**	Fundamental
Product Location:	Seattle, WA	**Date Funded:**	April 1994

Zevenbergen's investment philosophy is founded on the principles that superior fundamentals drive stock price appreciation and exceptional management combined with balance sheet strength provides capital protection. The firm employs a forward looking, bottom-up investment process designed for long-term results. Portfolios are constructed with companies presenting established and prospective revenue, cash flow and earnings growth, while diversification and risk control are accomplished through a blend of company size, expected growth rates, and appropriate portfolio weightings.

Large-Cap Value
(Russell 1000 Value)

Barrow, Hanley, Mewhinney & Strauss, LLC

Mandate:	Large-Cap Value	**Benchmark:**	Russell 1000 Value
Product assets/Firm Assets (as of 6/30):	$38.6 billion / $84.9 billion	**# of Holdings:**	41
		Expected Turnover:	15-35%
Style:	Value	**Fund/Quant:**	Fundamental
Product Location:	Dallas, TX	**Date Funded:**	April 2004

Barrow, Hanley, Mewhinney & Strauss believes that markets are inefficient and can best be exploited through adherence to a value-oriented investment process dedicated to the selection of securities on a bottom-up basis. The overall portfolio will always reflect all three value characteristics: price/earnings and price/book ratios below the market and dividend yields above the market. The stocks must also be attractive according to the firm's dividend discount and relative return models. Analysts provide fundamental analysis in the final step of their investment process.

Earnest Partners, LLC

Mandate:	Large-Cap Value	**Benchmark:**	Russell 1000 Value
Product assets/Firm Assets (as of 6/30):	$286.0 million / $21.7 billion	**# of Holdings:**	53
		Expected Turnover:	0-20%
Style:	Value	**Fund/Quant:**	2/3 Fundamental, 1/3 Quant
Product Location:	Atlanta, GA	**Date Funded:**	July 2000

Earnest Partners utilizes a proprietary valuation and performance model, and rigorous fundamental review to identify stocks with the most attractive risk adjusted returns. They have identified six performance drivers – valuation measures, operating trends, market trends, growth measures, profitability measures and macroeconomic measures – and have done research to determine which combination of performance drivers, or return patterns, precede outperformance for stocks in each sector. The firm's fundamental review generally includes conversations with the company's management team and industry specialists, a review of the company's financial reports, analysis of industry and company-specific studies, as well as independent field research. They control risk using a statistical approach designed to measure and control the prospects of substantially underperforming the benchmark. The portfolio is diversified across industry groups.

LSV Asset Management

Mandate:	Large-Cap Value	Benchmark:	Russell 1000 Value
Product assets/Firm Assets (as of 6/30):	$33.5 billion / $118.2 billion	# of Holdings:	161
		Expected Turnover:	5-25%
Style:	Value	Fund/Quant:	Quantitative
Product Location:	Chicago, IL	Date Funded:	April 2004

LSV's philosophy is that superior long-term results can be achieved by systematically exploiting the judgmental biases and behavioral weaknesses that influence the decisions of many investors. They use quantitative techniques to rank securities based on fundamental measures of value, past performance, and indicators of near-term appreciation potential. Their risk control discipline limits the portfolio's industry and sector concentrations.

Small-Cap Growth
(Russell 2000 Growth)

ArrowMark Colorado Holdings, LLC

Mandate:	Small-Cap Growth	Benchmark:	Russell 2000 Growth
Product assets/Firm Assets (as of 6/30):	$2.6 billion / $16.6 billion	# of Holdings:	119
		Expected Turnover:	30-50%
Style:	Growth	Fund/Quant:	Fundamental
Product Location:	Denver, CO	Date Funded:	November 2016

ArrowMark manages a fundamentally driven small-cap growth portfolio and prioritizes downside risk while maintaining a long-term investment horizon. They believe companies with sustainable competitive advantages, growing from a low share of a large market at returns on capital that exceed cost of capital, can compound for longer and create more value than is often priced into small-cap stocks. The team undertakes both quantitative analysis and qualitative assessments including interviews with management. The core of the fundamental research process is extensive financial modeling to forecast cash flow generation and value creation potential. Scenario analysis is utilized to project a range of outcomes (best/base/stressed).

Hood River Capital Management, LLC

Mandate:	Small-Cap Growth	Benchmark:	Russell 2000 Growth
Product assets/Firm Assets (as of 6/30):	$2.0 billion / $2.0 billion	# of Holdings:	92
		Expected Turnover:	100-150%
Style:	Growth	Fund/Quant:	Fundamental
Product Location:	Portland, OR	Date Funded:	November 2016

Hood River believes the small-cap market is inefficient, which is caused by many factors: a decline in the quantity and quality of sell-side coverage; higher probability of errors in analysts' models; accessible but under-followed management teams; and pure-play companies whose fundamentals are less certain than those of their larger-cap counterparts. In-depth, original research can uncover companies whose future fundamentals, such as sales or earnings, are likely to exceed the market's expectations. They call this difference between reality and the market's perception the "information gap." Hood River is focused on identifying and monetizing the information gap. They aggressively pursue a research advantage by speaking to management teams, customers, competitors, suppliers and other primary sources.

Rice Hall James & Associates, LLC

Mandate:	Small-Cap Growth	**Benchmark:**	Russell 2000 Growth
Product assets/Firm Assets (as of 6/30):	$1.8 billion / $3.9 billion	**# of Holdings:**	68
		Expected Turnover:	20-40%
Style:	Growth	**Fund/Quant:**	Fundamental
Product Location:	Los Angeles, CA	**Date Funded:**	November 2016

Rice Hall James Small-Cap Opportunities strategy employs a fundamental, bottom-up analytical process to identify companies that meet three primary criteria; high earnings growth, high or improving returns-on-invested capital (ROIC), and sustainable competitive advantages. The team's investment philosophy is rooted in historical analysis indicating the high relative return potential of these factors in combination. The team believes that superior results can be achieved by owning companies that exhibit not only high earnings growth, but also the ability to sustainably generate high ROIC over long periods of time.

Wellington Management Company LLP

Mandate:	Small-Cap Growth	**Benchmark:**	Russell 2000 Growth
Product assets/Firm Assets (as of 6/30):	$4.0 billion / $1.0 trillion	**# of Holdings:**	171
		Expected Turnover:	40-60%
Style:	Growth	**Fund/Quant:**	Fundamental
Product Location:	Boston, MA	**Date Funded:**	November 2016

Wellington Management Company's Disciplined U.S. Small-Cap Growth's investment philosophy is based on three core beliefs: 1) changes in the quality of a company's fundamentals are often not reflected in its stock price; 2) the persistence of a company's fundamentals is frequently underestimated by the market; and 3) active managers frequently underestimate the range of possible outcomes. Central to the investment process is fundamental research focused on uncovering companies with improving quality metrics, business momentum and attractive relative valuations. This process is aided by a proprietary screening process that narrows the investment universe to companies consistent with the investment philosophy. The investment team spends most of its time conducting fundamental research on companies elevated by this screening process. This research relies on extensive management meetings and a high level of collaboration with Wellington Management's Global Industry Analysts.

Small-Cap Value (Russell 2000 Value)

Goldman Sachs Asset Management, L.P.

Mandate:	Small-Cap Value	**Benchmark:**	Russell 2000 Value
Product assets/Firm Assets (as of 6/30):	$10.2 billion / $1.3 trillion	**# of Holdings:**	235
		Expected Turnover:	30-60%
Style:	Value	**Fund/Quant:**	Fundamental
Product Location:	New York, NY	**Date Funded:**	January 2004

Goldman Sachs manages a small-cap value portfolio using a strong valuation discipline to purchase well-positioned, cash generating businesses run by shareholder-oriented management teams. Portfolio managers are organized by industry, and use industry-specific valuation measures to evaluate companies within their area. They decompose the historical financial reports, meet with management to evaluate their competitive position within the industry, and evaluate each company's valuation attractiveness relative to other comparable companies within the sector.

Hotchkis and Wiley Capital Management, LLC

Mandate:	Small-Cap Value	**Benchmark:**	Russell 2000 Value
Product assets/Firm Assets (as of 6/30):	$2.3 billion / $31.5 billion	**# of Holdings:**	60
		Expected Turnover:	30-50%
Style:	Value	**Fund/Quant:**	Fundamental
Product Location:	Los Angeles, CA	**Date Funded:**	January 2004

Hotchkis and Wiley seeks to exploit mispriced securities in the small-cap market by investing in “undiscovered” and “out of favor” companies. They invest in stocks of which the present value of the company’s future cash flows exceeds the current market price. Industry analysts determine a company’s normal earnings power, or sustainable earnings level under equilibrium economic and competitive market conditions, which becomes the basis for security valuation.

Martingale Asset Management, L.P.

Mandate:	Small-Cap Value	**Benchmark:**	Russell 2000 Value
Product assets/Firm Assets (as of 6/30):	$339.0 million / $8.2 billion	**# of Holdings:**	317
		Expected Turnover:	90-110%
Style:	Value	**Fund/Quant:**	Quantitative
Product Location:	Boston, MA	**Date Funded:**	January 2004

Martingale employs a systematic, quantitatively-driven investment approach that seeks to exploit behavioral biases. The process uses a 21 factor model, where the factors are fairly evenly distributed among the three broad buckets of value, growth, and quality, culminating in an alpha score for each stock in the viable universe. This score is then added to an industry rating, yielding an overall composite score for each stock. Value traps are avoided by favoring stocks with positive relative strength and earnings estimate revisions versus peers. Martingale builds a risk-aware portfolio of the highest ranked stocks by maintaining industry, sector, style, and size exposures that are similar to the benchmark.

Peregrine Capital Management

Mandate:	Small-Cap Value	**Benchmark:**	Russell 2000 Value
Product assets/Firm Assets (as of 6/30):	$661.0 million / $4.4 billion	**# of Holdings:**	103
		Expected Turnover:	60-80%
Style:	Value	**Fund/Quant:**	Fundamental
Product Location:	Minneapolis, MN	**Date Funded:**	July 2000

Peregrine’s small-cap value investment process begins with their proprietary valuation analysis, which is designed to identify the small-cap value stocks most likely to outperform. The valuation analysis identifies the most underpriced securities on a sector-by-sector basis. The firm analyzes sixty fundamental factors to identify the most relevant factors in each sector. The focus of the team’s fundamental research is to determine if one or more of the style’s “Value Buy Criteria” are present. These include resolvable short-term problems, unrecognized assets, take-over potential, fundamental undervaluation and catalysts for change. The portfolio is diversified and sector weights are aligned closely to the benchmark allowing stock selection to drive performance.

Semi-Passive Managers

Semi-Passive Managers
(Russell 1000)

BlackRock Institutional Trust Company, N.A.

Mandate:	Semi-Passive U.S. Equity	**Benchmark:**	Russell 1000 Index
Product assets/Firm Assets (as of 6/30):	$2.9 billion / $6.3 trillion	**# of Holdings:**	332
		Expected Turnover:	80-150%
Style:	Core	**Fund/Quant:**	Quantitative
Product Location:	San Francisco, CA	**Date Funded:**	January 1995

BlackRock has a disciplined, rigorous and repeatable investment process incorporating a unique blend of bottom-up stock selection insights across relative value, earnings quality and sentiment while combining broader top-down thematic insights to generate risk controlled and consistent active returns. The relative value criteria assesses intrinsic value relative to market price. Earnings quality criteria help identify companies likely to sustain earnings growth and avoid negative surprises. Sentiment criteria help identify market participants' beliefs regarding valuation. The thematic criteria seeks to exploit opportunities from a collection of stocks that move together because they share a common exposure which is currently less obvious to the market. Research is incorporated through top down thematic insights to capture macro views as well as through a program which utilizes big data techniques to capture alpha from the large volumes of unstructured data (text, internet search and social media). Implementation costs are also considered when balancing return potential with risk profile of trades.

J.P. Morgan Investment Management Inc.

Mandate:	Semi-Passive U.S. Equity	**Benchmark:**	Russell 1000 Index
Product assets/Firm Assets (as of 6/30):	$7.4 billion / $1.7 trillion	**# of Holdings:**	410
		Expected Turnover:	30-40%
Style:	Core	**Fund/Quant:**	Fundamental
Product Location:	New York, NY	**Date Funded:**	January 1995

J.P. Morgan believes that superior stock selection is necessary to achieve excellent investment results. To accomplish this objective, the firm uses fundamental research and a systematic valuation model. Analysts forecast earnings and dividends for the stock universe and enter these into a stock valuation model that calculates a dividend discount rate for each security. The stocks are ranked according to this valuation measure within their economic sectors. Stocks most undervalued are placed in the first quintile. The portfolio takes overweight positions in stocks in the first and second quintiles, while underweighting stocks in the fourth and fifth quintiles. In addition, the portfolio will closely approximate the sectors and style of the benchmark. The portfolio remains fully invested at all times.

Passive Managers

Passive Manager (R3000)

BlackRock Institutional Trust Company, N.A.

Mandate:	Passive U.S. Equity	**Benchmark:**	Russell 3000 Index
Product assets/Firm Assets (as of 6/30):	$39.3 billion / $6.3 trillion	**# of Holdings:**	3,007
		Expected Turnover:	2.5%
Style:	Core	**Fund/Quant:**	N.A.
Product Location:	San Francisco, CA	**Date Funded:**	July 1995

For the passive account, BlackRock seeks to match the total rate of return of the Russell 3000 Index. BlackRock uses their proprietary risk management and optimization tools to identify a portfolio with characteristics that closely match those of the benchmark with less exposure to some of the less liquid stocks in the index.

Passive Manager (R1000)

BlackRock Institutional Trust Company, N.A.

Mandate:	Passive U.S. Equity	**Benchmark:**	Russell 1000 Index
Product assets/Firm Assets (as of 6/30):	$79.5 billion / $6.3 trillion	**# of Holdings:**	986
		Expected Turnover:	2.5%
Style:	Core	**Fund/Quant:**	N.A.
Product Location:	San Francisco, CA	**Date Funded:**	October 2016

For this passive account, BlackRock seeks to match the total rate of return of the Russell 1000 Index. BlackRock aims to fully replicate the benchmark when managing against this index. BlackRock uses their proprietary risk management and optimization tools to help manage day-to-day activity in an attempt to keep transaction costs low.

International Stock Program

The International Stock Program is used by the Combined Funds, the Broad International Stock Fund and the international portion of the Volunteer Firefighter Account in the Supplemental Investment Fund.

The following are the dollar values as of June 30, 2018 of each fund's participation in the International Stock Program:

Combined Funds (mixed)	$13.1 billion
Broad Int'l Stock Fund (mixed)	$196.0 million
Volunteer Firefighter Account (active and passive)	$12.9 million

Management Structure

Currently, the SBI uses three styles of management to invest the assets of the International Stock Program:

— ***Active Management***
At the end of fiscal year 2018, approximately 38% of the program was actively managed by a group of 13 external investment managers with portfolios ranging in size from $260 million to over $832 million. Six of these managers manage portfolios in the developed markets and seven manage portfolios in the emerging markets.

— ***Semi-Passive Management***
At the end of fiscal year 2018, 3% of the program was semi-passively managed by a single external investment manager, AQR Capital Management, LLC with a portfolio of $404 million.

— ***Passive Management***
At the end of fiscal year 2018, approximately 59% of the International Stock Program was passively managed by State Street Global Advisors in two separate portfolios, one a developed markets equity index account and the other an emerging markets equity index account, with $7.1 billion and $770 million, respectively.

The goal of the International Stock Program is to outperform the asset class target, which is the MSCI ACWI ex USA Index (net). The SBI uses the market capitalization weights of the developed and emerging markets as they are represented in the program's benchmark index as target weights for the developed and emerging markets within the International Stock Program. At the end of fiscal year 2018, 76% of the International Stock Program was invested in developed markets and 24% was invested in emerging markets.

Six of the 13 ***active*** managers and the ***semi-passive*** manager invest entirely in developed markets and use a variety of investment approaches in an effort to maximize the value added to the MSCI World ex USA Index (net) over time.

These managers address currency management as part of their investment process. Their views on currency may be factored into their country and security selection, they may explicitly hedge currency exposure on an opportunistic basis, or they may seek to add value by actively managing currency positions. Managers are not required to hedge currency risk.

Seven of the 13 ***active*** managers invest entirely in emerging markets. They are expected to add incremental value, over time, relative to the MCSI Emerging Markets Index (net) which is made up of markets in developing countries throughout the world.

The ***passive*** manager in the International Stock Program designs one of its portfolios to consistently and inexpensively track the developed markets MSCI World ex USA Index (net) and designs the other portfolio to track the MSCI Emerging Markets Index (net).

A description of each international stock manager's investment approach is included in the **Investment Manager Summaries** section beginning on page 43.

FY 2018 Changes

The SBI terminated its relationship with two developed markets semi-passive managers, Fidelity Institutional Asset Management LLC and State Street Global Advisors (SSgA), in March 2018.

Investment Performance

Similar to the Domestic Stock Program, two long-term ***risk objectives*** exist for the international equity managers:

— ***Investment Approach***. Each manager (active, semi-passive or passive) is expected to hold a portfolio that is consistent with the manager's stated investment approach.

— ***Diversification***. The index manager is expected to hold a well-diversified portfolio which closely tracks its target index. The semi-passive managers are expected to hold risk-adjusted portfolios which modestly outperform the index, and each active manager is expected to hold a portfolio which represents its best ideas for outperforming the index.

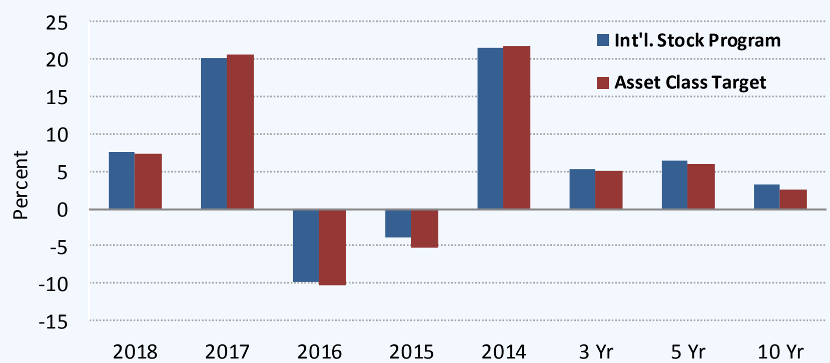
The international stock managers successfully fulfilled their long-term risk objectives during fiscal year 2018. In general, the managers constructed portfolios consistent with their stated investment approaches and maintained appropriate levels of diversification.

The Board's ***return objectives*** for the International Stock Program are stated relative to the Morgan Stanley Capital International (MSCI) Standard indices which includes large and mid-capitalization stocks. The indices are capitalization weighted and measured in U.S. dollar terms, with currencies unhedged. Individual active managers are expected to exceed their benchmark by an amount appropriate for their level of active risk. The active risk level varies by manager and is influenced by the manager's stated strategy and style. Performance results for the International Stock Program are shown in Figure 23. In aggregate, performance over the last ten year period exceeded the benchmark by 0.5 percentage point and performance over the last five year period exceeded the benchmark by 0.4 percentage point. The program outperformed the target by 0.2 percentage point for the fiscal year.

Individual manager performance during fiscal year 2018 is shown in Figure 24. All six of the active developed market managers outperformed the benchmark over the year. Two out of seven active emerging markets managers outperformed the benchmark. The single semi-passive developed market manager underperformed the benchmark over the year. Finally, the developed markets passively managed portfolio outperformed the return of the MSCI World ex USA Index (net). The emerging markets passively managed portion of the program matched the return of the MSCI Emerging Markets Index (net).

The International Stock Program's country weights are displayed in Figure 25.

Figure 23. **Int'l. Stock Program Performance For Periods Ending June 30, 2018**



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Int'l. Stock Program	**7.5%**	**20.2%**	**-9.7%**	**-3.8%**	**21.4%**	**5.3%**	**6.4%**	**3.0%**
Asset Class Target*	7.3	20.5	-10.2	-5.3	21.8	5.1	6.0	2.5

* MSCI ACWI ex USA (net) since 10/1/03. Composite of EAFE-Free and Emerging Markets Free from 5/1/96 through 9/30/03.

Figure 24. International Stock Program Manager Performance for Periods Ending June 30, 2018

	1 Year Actual %	1 Year Bmk %	3 Years Actual %	3 Years Bmk %	5 Years Actual %	5 Years Bmk %	Market Value ($ in millions)
Active Managers							
Developed Mkts (MSCI World ex USA net)							
Acadian Asset Mgmt.	13.5	7.0	13.4	4.9	12.1	6.2	452.6
Columbia Mgmt. Investment Advisers	12.8	7.0	6.2	4.9	7.8	6.2	347.3
Fidelity Institutional Asset Management	9.1	7.0	5.9	4.9	7.0	6.2	431.1
J.P. Morgan Investment Management	8.4	7.0	5.3	4.9	6.3	6.2	259.6
Marathon Asset Management	7.3	7.0	5.6	4.9	7.9	6.2	831.9
McKinley Capital Management	12.8	7.0	4.7	4.9	7.0	6.2	266.4
Semi-Passive Managers							
Developed Mkts (MSCI World ex USA net)							
AQR Capital Management	4.4	7.0	4.9	4.9	6.4	6.2	404.3
Active Managers							
Emerging Mkts (MSCI Emerging Markets net)							
Earnest Partners	3.3	8.2					294.0
Macquarie Investment Management Advisers	8.1	8.2					314.6
Martin Currie	14.5	8.2					337.1
Morgan Stanley Investment Management	3.3	8.2	4.7	5.6	4.4	5.0	597.5
Neuberger Berman Investment Advisers	10.0	8.2					318.3
Pzena Investment Management	2.1	8.2					289.6
Rock Creek	5.0	8.2					297.3
Passive Managers							
Developed Mkts (MSCI World ex USA net)							
State Street Global Advisors	7.3	7.0	5.3	4.9	6.7	6.2	7,098.8
Passive Managers							
Emerging Mkts (MSCI Emerging Markets net)							
State Street Global Advisors	8.2	8.2	5.7	5.6	5.2	5.0	770.4
Aggregate International Stock Program(1)	**7.5**	**7.3**	**5.3**	**5.1**	**6.4**	**6.0**	**13,315.7**
Asset Class Target							
MSCI ACWI ex USA (net)		7.3		5.1		6.0	

(1) Aggregate includes the performance of terminated managers.

Figure 25. International Stock Program Aggregate Country Weights for Period Ending June 30, 2018

Country	Program Weights* %	Benchmark Weights** %
Argentina	0.0	0.0
Australia	4.9	4.7
Austria	0.3	0.2
Belgium	0.8	0.7
Brazil	1.0	1.5
Canada	7.0	6.5
Chile	0.1	0.3
China	1.1	2.2
Colombia	0.1	0.1
Cyprus	0.0	0.0
Czech Republic	0.1	0.0
Denmark	1.4	1.1
Egypt	0.0	0.0
Finland	0.9	0.7
France	7.0	7.2
Germany	5.9	6.5
Greece	0.0	0.1
Hong Kong	6.1	8.2
Hungary	0.2	0.1
India	1.1	2.2
Indonesia	0.4	0.5
Ireland	0.3	0.2
Israel	0.3	0.3
Italy	1.4	1.6
Japan	17.0	16.4
Luxembourg	0.0	0.0
Malaysia	0.4	0.6
Mexico	0.7	0.7
Morocco	0.0	0.0
Netherlands	2.8	2.5
New Zealand	0.2	0.1
Norway	0.6	0.5
Pakistan	0.0	0.0
Peru	0.0	0.0
Philippines	0.2	0.2
Poland	0.3	0.3
Portugal	0.1	0.1
Qatar	0.0	0.2
Russia	0.6	0.9
Singapore	1.3	1.0
South Africa	0.9	1.6
South Korea	2.4	3.6
Spain	2.0	2.1
Sweden	1.8	1.8
Switzerland	5.3	5.3
Taiwan	1.7	2.9
Thailand	0.2	0.5
Turkey	0.1	0.2
United Arab Emirates	0.0	0.2
United Kingdom	14.5	12.5
United States	3.9	0.7
Miscellaneous Accounting Entries	2.7	--
Total* **	**100.0**	**100.0**

* Grouped by country of Domicile. Source: FactSet.
** Benchmark is the MSCI ACWI ex USA Index (net). Source: FactSet.
*** Totals may not add due to rounding.

International Stock Program Managers*

Active Developed Markets Managers

Acadian Asset Management LLC

Mandate:	Non U.S. Equity	**Benchmark:**	MSCI World ex. USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$6.7 billion / $96.8 billion	**# of Holdings:**	413
Style:	Core	**Fund/Quant:**	Quantitative
Product Location:	Boston, MA	**Expected Turnover:**	40-60%
		Date Funded:	July 2005

Acadian first uses a quantitative process to rank their universe of 40,000 stocks by relative attractiveness. In its process, Acadian also applies separate models to forecast how well each stock's region/industry peer group will perform relative to world equities. The two forecasts are combined to determine a relative return forecast for each stock in the allowable universe. At the individual stock level, Acadian uses a wide range of factors including valuation, earnings, size and price movements in their quantitative process. At the peer group level, Acadian utilizes valuation, risk, growth and economic indicators. Portfolios are normally fully invested with a minimal amount of cash. Country and sector weights fall out of the bottom-up stock selection process, with overall portfolio risk control ensuring the desired level of diversification. The last step of the process is a careful review of optimized portfolios by the investment team, before trading, to ensure the portfolio meets the client's investment goals.

Columbia Threadneedle Investments

Mandate:	Threadneedle EAFE Equities Strategy	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$647.0 million / $482.9 billion	**# of Holdings:**	60
Style:	Core Growth	**Fund/Quant:**	Fundamental
Product Location:	London, England	**Expected Turnover:**	50-75%
		Date Funded:	March 2000

Columbia believes that a good understanding of the company level impact of thematic "key forces of change" in the market, in addition to management's ability to exploit these changes, creates significant opportunities to pick winners and avoid losers. "Top-down" views on macroeconomics and trends in global sectors are combined with "bottom-up" company analysis along regional and global sector lines. Analysts rate approximately 150 to 200 stocks in each region based on the expected 12-month performance. The global equity team then conducts additional research to determine which ones are potential portfolio candidates and decide as a group which ones to add or delete. Final portfolio construction is the responsibility of the lead portfolio manager.

Presented in U.S. dollars unless otherwise noted.

Fidelity Institutional Asset Management LLC

Mandate:	Fidelity International Growth	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$6.7 billion / $160.7 billion	**# of Holdings:**	195
Style:	Core Growth	**Fund/Quant:**	Fundamental
Product Location:	Smithfield, RI	**Expected Turnover:**	50-75%
		Date Funded:	July 2005

Fidelity's International Growth strategy is a core, growth-oriented strategy that provides diversified exposure to the developed international markets benchmark. The investment process combines active stock selection and regional asset allocation. Four portfolio managers in London, Smithfield, Rhode Island, and Toronto construct regional sub-portfolios, selecting stocks based on Fidelity analysts' bottom-up research as well as their own judgment and expertise. The four regional portfolios are combined according to the policy determined by Fidelity's Asset Allocation Group (AAG). The AAG is comprised of senior investment professionals who base their decisions on micro-economic data derived from portfolio manager inputs, analysts' field research, and proprietary data on liquidity, market activity, and fund flows. Portfolio guidelines are designed to ensure risk is appropriate with the performance target and to ensure that active risk is focused on stock selection.

J.P. Morgan Investment Management Inc.

Mandate:	EAFE Plus Strategy	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$13.5 billion / $1.7 trillion	**# of Holdings:**	82
Style:	Quality/Large-Cap Growth	**Fund/Quant:**	Fundamental
Product Location:	New York, NY	**Expected Turnover:**	20-40%
		Date Funded:	July 2005

J.P. Morgan's international equity process focuses on stock selection as the primary source of added value and seeks to build a portfolio diversified by both sector and region. Analysts regional teams generate local market insights and conduct research on companies in an effort to identify the highest conviction stocks within their region. The highest conviction regional stocks are further analyzed by a team of London-based Global Sector Specialists looking to identify global "industry winners". Their goal is to find well-managed, profitable companies that possess solid financial positions as well as companies whose earnings are growing faster than their competitors. In addition, J.P. Morgan considers valuation and seeks stocks that are trading at or below market multiples. Each global sector specialist ranks the stocks within his or her sector based on a variety of factors including the information gathered from the regional investment professionals and the global sector specialists' own knowledge of industry dynamics and relative valuations. The final stage of the investment process rests with a team of senior portfolio managers who are responsible for constructing risk controlled portfolios that capture the best thinking of both the local and global teams.

Marathon Asset Management LLP

Mandate:	World ex U.S. Strategy	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$3.6 billion / $60.6 billion	**# of Holdings:**	382
Style:	Contrarian Growth	**Fund/Quant:**	Fundamental
Product Location:	London, England	**Expected Turnover:**	10-20%
		Date Funded:	November 1993

At the heart of Marathon's investment philosophy is the "capital cycle" approach to investment. This approach is based on the idea that the prospect of high returns will attract excessive capital and vice versa. In addition, Marathon believes that an assessment of how management responds to the forces of the capital cycle, (i.e. particularly whether they curtail investment when returns have been poor) and how they are incentivized, are critical to the investment outcome. Given the contrarian and long-term nature of the capital cycle, the approach results in strong views versus the market and long holding periods of more than five years. The investment philosophy guides a focused team of investment generalists who seek investment opportunities in the growth and value universes and across the capitalization spectrum.

McKinley Capital Management, LLC

Mandate:	MSCI EAFE Growth	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$428.0 million / $4.6 billion	**# of Holdings:**	67
Style:	Growth	**Fund/Quant:**	Quantitative
Product Location:	Anchorage, AK	**Expected Turnover:**	60-80%
		Date Funded:	July 2005

Using proprietary quantitative models, McKinley's investment process identifies companies that have signs of accelerating growth. The initial universe consists of all publicly traded non-U.S. stocks from all capitalization categories in more than 60 countries. Their primary model includes a risk-adjusted relative return measurement that is designed to identify inefficiently priced common stocks relative to the market. After the risk-adjusted relative return process has been applied the remaining candidates must then pass through liquidity and earnings acceleration tests. For final portfolio construction, McKinley examines a variety of qualitative factors which could ultimately impact earnings including a qualitative data check and street research analysis of economic factors, specific industry themes and company fundamentals. The final portfolio will hold between 50-75 stocks, providing diversification and risk control by issue, industry, sector and country.

Semi-Passive Developed Markets Managers

AQR Capital Management, LLC

Mandate:	Semi-Passive Developed Markets Equity	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$16.6 billion / $225.9 billion	**# of Holdings:**	362
Style:	Value	**Fund/Quant:**	Quantitative
Product Location:	Greenwich, CT	**Expected Turnover:**	75%
		Date Funded:	July 2005

AQR employs a disciplined quantitative approach emphasizing both top-down country/currency allocation and bottom-up security selection decisions to generate excess returns. AQR's investment philosophy is based on the fundamental concepts of value and momentum. AQR's international equity product incorporates stock selection, country selection, and currency selection models as the primary alpha sources. Dynamic strategy allocation (between the three primary alpha sources) and style weighting are employed as secondary alpha sources.

Passive Developed Markets Managers

State Street Global Advisors

Mandate:	Passive Developed Markets Equity	**Benchmark:**	MSCI World ex USA Index (net)
Product Assets/Firm Assets (as of 6/30):	$20.5 billion / $2.7 trillion	**# of Holdings:**	1025
Style:	Core	**Fund/Quant:**	N.A.
Product Location:	Boston, MA	**Expected Turnover:**	3-5%
		Date Funded:	October 1992

State Street uses a replication strategy to construct the portfolio. Exchange-traded stock index futures, approved by the Commodity Futures Trading Commission, are also used to minimize tracking error and trade cash flows in order to minimize transactions costs.

Active Emerging Markets Managers

Earnest Partners LLC

Mandate:	Global Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	$1.1 billion / $21.7 billion	**# of Holdings:**	42 (including China A share fund as 1)
Style:	Growth	**Fund/Quant:**	Fundamental Bottom Up
Product Location:	Atlanta, GA	**Expected Turnover:**	10-20%
		Date Funded:	April 2017

Earnest Partners objective is to outperform the benchmark while controlling volatility and risk. Earnest Partners emphasizes a team decision making approach and uses a proprietary screening process, fundamental analysis, and risk management to minimize the likelihood of meaningfully underperforming the benchmark. Each company identified in the screening process is put through a fundamental review conducted by the investment team. Sector/industry weightings are driven by selection of individual securities, subject to risk concentration limits. In summary, Earnest Partners seeks companies in attractive industries with developed strategies, talented and honest management teams, sufficient funding, and strong financial results.

Macquarie Investment Management Advisers

Mandate:	Global Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	\$8.0 billion / \$249.0 billion	**# of Holdings:**	80
Style:	Growth	**Fund/Quant:**	Fundamental Bottom Up
Product Location:	Philadelphia, PA	**Expected Turnover:**	10-40%
		Date Funded:	April 2017

Macquarie invests in companies with sustainable franchises that trade sufficiently below the team's intrinsic value estimate. They define a sustainable company as one with an evolving business model, resistant to competitive pressures, that demonstrates an identifiable framework for why it will exist over the next five years. Although bigger is not always better, Macquarie tends to focus on mid/large-cap companies due to competitive advantage and dominant market share, combined with greater market liquidity. Regarding valuation, the team uses a long-term perspective of what they feel the company will be worth based on a shared vision of its future. From there, they apply an appropriate valuation model to determine intrinsic value.

Martin Currie Inc.

Mandate:	Active Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	\$2.2 billion / \$19.5 billion	**# of Holdings:**	40-60
Style:	Growth	**Fund/Quant:**	Fundamental Bottom Up
Product Location:	Edinburgh, United Kingdom	**Expected Turnover:**	< 30%
		Date Funded:	April 2017

The Martin Currie Global Emerging Market's (GEMs) team builds long-term, high conviction stock portfolios, driven by fundamental research. They seek to identify those emerging market companies that can sustain cash flow growth and generate returns in excess of their cost of capital. The Martin Currie GEMs team believes that an assessment of a company's environmental, social and governance (ESG) performance, or sustainability, can help identify those business models that are most likely to sustain high returns and resist competitive pressures. The research process is designed to deliver high-conviction stock ideas based on fundamental bottom-up analysis. All GEMs portfolio managers are responsible for internal research, idea generation and analysis and the management of client portfolios top-down factors are viewed as a source of risk and are largely captured within a country-specific cost of equity used in valuation.

Morgan Stanley Investment Management Inc.

Mandate:	Active Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	$22.1 billion / $474.2 billion	**# of Holdings:**	112
Style:	Growth	**Fund/Quant:**	Fundamental Bottom Up / Top Down
Product Location:	New York, NY	**Expected Turnover:**	30-50%
		Date Funded:	January 2001

The Morgan Stanley Investment Management (MSIM) Emerging Markets Equity team believes that future economic growth and currency movements are critical drivers of stock returns. MSIM conducts original macro-thematic research and integrates it with fundamental bottom-up company analysis to amplify returns in a growth-oriented portfolio. Using a proprietary "Rules of the Road" framework that includes rigorous credit and currency analysis, MSIM overweights those countries where growth is likely to accelerate and underweights those countries with macro risks which may not be fully appreciated by consensus. MSIM focuses on investing in companies with quality management dedicated to expanding earnings growth, which can include privately managed as well as state-owned enterprises expected to benefit from reform. The team takes active position sizes to generate meaningful long-term returns.

Neuberger Berman Investment Advisers LLC

Mandate:	Global Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	$6.7 billion / $304.0 billion	**# of Holdings:**	80-110 stocks
Style:	Growth	**Fund/Quant:**	Fundamental and Quant
Product Location:	New York, NY	**Expected Turnover:**	30-50%
		Date Funded:	April 2017

Neuberger Berman seeks to maximize performance by constructing its portfolios with high quality, growing companies trading at attractive valuations, which have the potential to outperform the benchmark at low risk. It is their belief that emerging markets are less efficient than developed ones and, because of this lack of market transparency, mispricing opportunities should exist. The team's main emphasis is on bottom-up stock picking and fundamental analysis, but will also use both qualitative and quantitative processes at times during portfolio construction.

Pzena Investment Management, LLC

Mandate:	Global Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	$3.6 billion / $36.9 billion	**# of Holdings:**	57
Style:	Value	**Fund/Quant:**	Fundamental Bottom Up
Product Location:	New York, NY	**Expected Turnover:**	20-40%
		Date Funded:	April 2017

Pzena is the SBI's deepest value-style Emerging Markets Equity manager. As such, they focus on companies that are underperforming their historically demonstrated earnings power. They apply fundamental research to these companies to determine whether the problems that caused the earnings shortfall are temporary or permanent. Beginning with a proprietary screening tool called Stock Analyzer, Pzena focuses research on the cheapest 20% of its universe. The subsequent decision to dedicate research resources to a security is made by the four co-portfolio managers who make an initial judgement as to whether the causes of the under-valuation are likely temporary or permanent, and whether the research process is likely to reasonably forecast the company's normalized earnings power. Once the team becomes extremely knowledgeable about the company and industry, the analyst and one of the portfolio managers meet with company management, and seeks a meaningful discussion about their business and the strategic options available to them over the next several years and their plans to restore the earnings power.

The Rock Creek Group, LLC

Mandate:	Global Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index
Product Assets/Firm Assets (as of 6/30):	$3.3 billion / $14.0 billion	**# of Holdings:**	Fund of Fund with 15-17 portfolio companies
Style:	Growth	**Fund/Quant:**	Fundamental Bottom Up
Product Location:	Washington, DC	**Expected Turnover:**	40-60%
		Date Funded:	April 2017

Rock Creek Emerging Markets Equity, organized as a fund-of-fund, utilizes an actively managed all-cap approach in which their top-down views drive country and sector selection, while their 15-17 local investment teams provide on-the-ground stock picking talent that drives security selection. The emerging markets investment team then adjusts the bottom-up derived portfolio using an overlay strategy to reflect top-down views on country exposures and betas. Rock Creek's local investment teams are located in the markets in which they invest, which tends to result in small/mid-cap size companies. Rock Creek's domicile of Washington, DC supports its ability to interact with policy makers, economists and strategists that help define their top-down views and themes.

Passive Emerging Markets Managers

State Street Global Advisors

Mandate:	Passive Emerging Markets Equity	**Benchmark:**	MSCI Emerging Markets Index (net)
Product assets/Firm Assets (as of 6/30):	$63.2 billion / $2.7 trillion	**# of Holdings:**	952
Style:	Core	**Fund/Quant:**	N.A.
Product Location:	Boston, MA	**Expected Turnover:**	7-10%
		Date Funded:	December 2011

State Street manages an emerging markets index portfolio designed to track the Morgan Stanley Capital International Emerging Markets Index. State Street uses an optimized strategy to construct the portfolio. Exchange traded stock index futures, approved by the Commodity Futures Trading Commission, are also used to minimize tracking error, obtain exposure where local access is inaccessible, and to trade cash flows in order to minimize transactions costs.

Fixed Income Program

The Fixed Income Program is used by the Combined Funds, the Supplemental Investment Fund (SIF) Bond Fund, the Fixed Income portion of the SIF Balanced Fund, and the bond portion of the Volunteer Firefighter Account.

The following are the dollar values as of June 30, 2018 of each fund's participation in the Program:

Combined Funds (active)	$10.7 billion
Supplemental Bond Fund (active)	$171.1 million
Fixed Income portion of the Balanced Fund (bond component)	$153.7 million
Volunteer Firefighter Account (active and semi-passive)	$40.1 million

Investment Management

The SBI uses a two part approach for the management of the Fixed Income Program:

— ***Active***
At the end of fiscal year 2018, approximately 50% of the Fixed Income Program was actively managed by four external investment managers with portfolios ranging in size from $1.1 billion to $1.6 billion.

— ***Semi-Passive Management***
At the end of fiscal year 2018, approximately 50% of the bond segment was invested by three investment managers with portfolios of $1.7 to $2.1 billion each.

The group of ***active*** bond managers is retained for its blend of investment styles. Each active manager has the goal of outperforming the Bloomberg Barclays U.S. Aggregate Bond Index by focusing on high quality fixed income securities across all sectors of the market. The managers vary, however, in the emphasis they place on interest rate anticipation (duration) and in the manner in which they approach security selection and sector weighting decisions. In keeping with the objective of utilizing the Fixed Income Program as a deflation hedge, the active managers are restricted regarding the duration of their portfolios. This requirement is designed to prevent the dilution of the deflation hedge of the total program due to an excessively short duration position. In addition, the duration restriction helps to avoid extreme variability in total returns relative to the benchmark. The SBI constrains the duration range of the active managers' portfolios to a band of plus or minus two years around the duration of the Bloomberg Barclays U.S. Aggregate. The active bond managers focus on high quality (BBB or better) rated bonds. Four managers have been granted authority to invest a limited portion of their portfolios in BB and B rated dollar denominated debt and three have been given authority to invest in investment grade non-dollar denominated issues. The managers use this additional authority on a tactical basis.

The goal of the ***semi-passive*** managers is to add incremental value relative to the Bloomberg Barclays U.S. Aggregate Bond Index through superior bond selection and sector allocation rather than through interest rate exposure. Semi-passive managers' portfolios are constrained to plus or minus 0.5 years around the duration of the Bloomberg Barclays U.S. Aggregate. One manager has been granted authority to invest a limited portion of its portfolio in BB and B rated dollar denominated debt and in investment grade non-dollar denominated issues. The manager uses this additional authority on a tactical basis.

A description of each bond manager's investment approach is included in the **Investment Manager Summaries** section beginning on page 54.

FY 2018 Changes

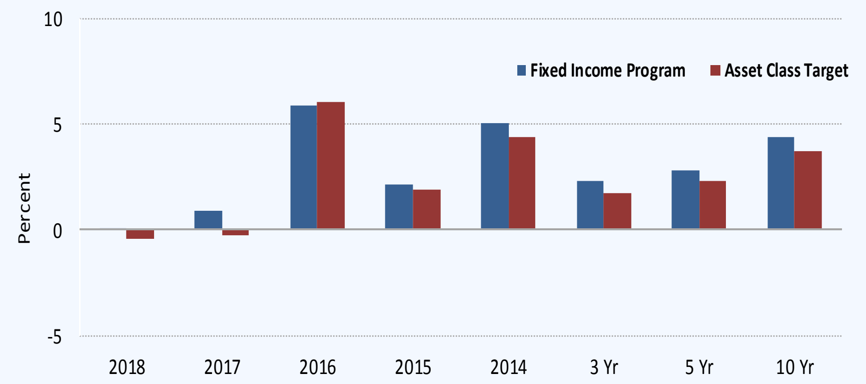
During fiscal year 2018, no changes were made to the manager structure.

Investment Performance

The SBI constrains the ***risk*** of the active bond managers' portfolios to ensure that they fulfill their deflation hedge and total fund diversification roles. As noted earlier, the managers are restricted in terms of the duration of their portfolios and the quality of their fixed income investments. The active and semi-passive bond managers successfully fulfilled their long-term risk objectives during fiscal year 2018. The managers constructed portfolios consistent with stated investment approaches and maintained appropriate levels of quality and duration.

The ***returns*** of each of the bond managers are compared to the Bloomberg Barclays U.S. Aggregate Bond Index. Individual managers are expected to exceed the target, net of fees, on an annualized basis. In total, the program outperformed the Bloomberg Barclays U.S. Aggregate Bond Index by 0.5 percentage point for the recent fiscal year. Relative to the benchmark, the program benefited from overweight positions in CMBS and ABS as well as a slightly underweight duration position. Managers also outperformed the benchmark over the long-term. The program outperformed the asset class target by 0.7 percentage point over the ten year period ending June 30, 2018. All four active managers outperformed the benchmark. One semi-passive manager outperformed and two met the benchmark for the fiscal year. Figure 26 shows historical performance for the entire program. Individual manager performance is shown in Figure 27. Aggregate portfolio sector and portfolio characteristics are shown in Figure 28.

Figure 26. Fixed Income Program Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Fixed Income Program	**0.1%**	**0.9%**	**5.9%**	**2.1%**	**5.0%**	**2.3%**	**2.8%**	**4.4%**
Asset Class Target*	-0.4	-0.3	6.0	1.9	4.4	1.7	2.3	3.7

* The Fixed Income Program asset class target has been the Bloomberg Barclays U.S. Aggregate Bond Index since July 1994.

Figure 27. Fixed Income Program Manager Performance for Periods Ending June 30, 2018

	1 Year Actual %	1 Year Bmk %	3 Years Actual %	3 Years Bmk %	5 Years Actual %	5 Years Bmk %	Market Value ($ in millions)
Active Managers							
Columbia Mgmt.	0.7	-0.4	2.8	1.7	3.1	2.3	1,169.3
Dodge & Cox	0.6	-0.4	2.7	1.7	3.2	2.3	1,655.9
PIMCO	0.2	-0.4	2.0	1.7	2.5	2.3	1,075.7
Western Asset Mgmt.	0.4	-0.4	3.1	1.7	3.5	2.3	1,594.3
Semi-Passive Managers							
BlackRock Financial Mgmt.	-0.4	-0.4	1.8	1.7	2.4	2.3	1,659.0
Goldman Sachs Asset Mgmt.	0.0	-0.4	2.0	1.7	2.6	2.3	2,084.5
Neuberger Investment Mgmt.	-0.4	-0.4	1.8	1.7	2.4	2.3	1,821.5
Aggregate Fixed Income Program(1)	**0.1**	**-0.4**	**2.3**	**1.7**	**2.8**	**2.3**	**11,060.2**
Asset Class Target							
Bloomberg Barclays U.S. Aggregate Bond Index		-0.4		1.7		2.3	

(1) Aggregate includes the performance of terminated managers.

Figure 28. Fixed Income Program Sector Weights and Portfolio Characteristics for Period Ending June 30, 2018

	Active Managers %	Semi-Passive Managers %	Aggregate Fixed Income Program %	BB Barclays Benchmark %
Treasury	25.1	31.5	27.8	40.0
Government-Related	1.6	2.2	1.8	3.7
Corporate	32.3	31.4	31.9	25.1
U.S. Mortgage	25.5	27.9	26.3	28.1
Commercial Mortgage	4.5	2.0	3.7	1.9
Asset Backed	9.3	3.2	6.9	0.6
Municipal	1.5	0.8	1.1	0.7
Other	1.0	1.0	1.0	0.0

Note: May not equal 100% due to rounding.

	Active Managers %	Semi-Passive Managers %	Aggregate Fixed Income Program %	BB Barclays Benchmark %
Average Quality	A	A+	A	AA-
Average Yield to Maturity (%)	3.4	3.5	3.4	3.3
Effective Duration* (yrs)	5.1	6.0	5.6	6.0
Weighted Average Life** (yrs)	7.9	8.5	8.2	8.3

* 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.

** 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.

Fixed Income Program Managers

Active Managers

Columbia Threadneedle Investments

Mandate:	Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$35.4 billion / $482.9 billion	**# of Holdings:**	250
Style:	Active Core Plus	**Fund/Quant:**	Fundamental
Product Location:	Minneapolis, MN	**Tracking Error Target**	250 bps
		Date Funded:	July 1993

Columbia Threadneedle manages portfolios using a bottom-up, relative value approach in combination with a top-down, macro outlook that guides the firm's relative value decisions. Columbia uses security selection and sector allocation as the primary drivers of relative return, while duration and yield curve positioning provide less frequent opportunities. The fixed income team is divided into sector specialists such as Global Rates and Currency, Investment Grade Credit and Structured Assets, who provide input to the portfolio managers in determining an overall investment strategy. The overall investment objective is to deliver positive relative returns within a risk-managed approach, striving for competitive risk-adjusted performance over time.

Dodge & Cox

Mandate:	Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$91.3 billion / $309.3 billion	**# of Holdings:**	282
Style:	Active Core	**Fund/Quant:**	Fundamental
Product Location:	San Francisco, CA	**Tracking Error Target:**	132 bps over 5 yrs.
		Date Funded:	February 2000

Dodge & Cox manages a diversified portfolio of securities that are selected through bottom-up, fundamental analysis. The firm believes that by combining fundamental research with a long-term investment horizon it is possible to uncover and act upon inefficiencies in the valuation of market sectors and individual securities. The investment process begins with idea generation by fixed income traders and analysts, which is then combined with global industry analysts and deliberation among sector committees, and which culminates with recommendations to senior fixed income members/CIO. Dodge & Cox core bond portfolios tend to overweight corporate bond sectors while maintaining a relatively concentrated issuer profile.

Pacific Investment Management Company LLC (PIMCO)

Mandate:	Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$148.0 billion / $1.71 trillion	**# of Holdings:**	656
Style:	Core Plus Total Return	**Fund/Quant:**	Fundamental
Product Location:	Newport Beach, CA	**Tracking Error Target:**	150-250 bps
		Date Funded:	September 2008

PIMCO's investment process starts with an annual Secular Forum. The goal of the Secular Forum is to look beyond the current business cycle and determine how secular forces will play out over the next three to five years. Quarterly, PIMCO holds Economic Forums to evaluate global growth and inflation over the next six to twelve months. The PIMCO Investment Committee (IC) then works, on a consensus basis, to develop major strategies that serve as a model for all portfolios. The IC makes use of the top-down outlook provided by the Forum, PIMCO's Global Advisory Board and strategists and generalist portfolio managers as well as bottom-up input from the Chief Investment Officers and specialists of the asset classes. The IC defines a set of target risk exposures for portfolios. Generalist portfolio managers collaborate with sector specialists, who perform in-depth research and recommend individual securities, for portfolio implementation.

Western Asset Management Company

Mandate:	Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$66.5 billion / $420.0 billion	**# of Holdings:**	1,120
Style:	U.S. Core Full Discretion	**Fund/Quant:**	Fundamental
Product Location:	Pasadena, CA	**Tracking Error Target**	200-300 bps
		Date Funded:	July 1984

Western uses multiple strategies in different environments, so no single strategy dominates performance. Western believes that this approach adds consistent value over time and can reduce volatility. In making their sector decision, the firm seeks the greatest long-term value by analyzing all fixed income market sectors and their economic expectations. Individual issues are identified based on relative credit strength, liquidity, issue structure, event risk, covenant protection, and market valuation. Western will tactically trade the portfolio's overall duration within a stated band around the benchmark, and duration and curve strategies will often comprise a meaningful portion of Western's total risk profile.

Semi-Passive Managers

BlackRock Financial Management, Inc.

Mandate:	Semi-Passive Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$8.3 billion / $6.3 trillion	**# of Holdings:**	750
Style:	U.S. Core Enhanced Index	**Fund/Quant:**	Blend
Product Location:	New York, NY	**Tracking Error Target:**	30-100 bps
		Date Funded:	April 1996

BlackRock manages a semi-passive portfolio that closely tracks the Bloomberg Barclays U.S. Aggregate Index. BlackRock employs a controlled-duration, relative value sector rotation and security selection approach, which can be described as active management with tighter duration, sector, and quality constraints. BlackRock seeks to add value through managing portfolio duration within a narrow band relative to the benchmark, relative value sector/sub-sector rotation and security selection, rigorous quantitative analysis of the valuation of each security and of the portfolio as a whole, intense credit analysis and review, and the judgment of experienced portfolio managers. As with other semi-passive managers with limited risk budgets, BlackRock attempts to add value largely through security selection and sector rotation, which comprises the more efficient, repeatable forms of alpha. To a lesser extent BlackRock seeks to add value through duration and curve strategies.

Goldman Sachs Asset Management

Mandate:	Semi-Passive Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$34.9 billion / $1.3 trillion	**# of Holdings:**	800
Style:	U.S. Core High Quality Fixed Income	**Fund/Quant:**	Fundamental
Product Location:	New York, NY	**Target Tracking Error:**	35 bps
		Date Funded:	July 1993

Goldman manages a semi-passive portfolio within a risk-controlled framework to closely track the Bloomberg Barclays U.S. Aggregate Index. The firm relies primarily on sector allocation and security selection strategies to generate incremental return relative to the benchmark. To a lesser degree, term structure and highly controlled interest rate anticipation strategies are also implemented. Portfolios are diversified among various sectors and individual securities. Strategic investments are based on fundamental and quantitative sector research that seeks to optimize the long-term risk/return profile of portfolios.

Neuberger Berman Investment Advisers LLC

Mandate:	Semi-Passive Public Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate
Product Assets/Firm Assets (as of 6/30):	$10.0 billion / $304.0 billion	**# of Holdings:**	455
Style:	Enhanced Bond Index	**Fund/Quant:**	Blend
Product Location:	Chicago, IL	**Target Tracking Error:**	10-30 bps
		Date Funded:	July 1988

Neuberger manages a semi-passive portfolio that closely tracks the Bloomberg Barclays U.S. Aggregate Index. Neuberger's process relies on a combination of quantitative tools and active management judgment. Explicit quantification and management of risks are at the heart of their investment process. Neuberger's proprietary risk exposure analysis includes all relevant factors. Neuberger then calculates a bond's expected return with respect to changes in interest rates and spreads. As with other semi-passive managers with limited risk budgets, Neuberger Berman attempts to add value largely through security selection and sector rotation, and to a lesser extent through duration and curve strategies.

Treasury Portfolio

The Treasury Portfolio, launched in early 2018, is used exclusively by the Combined Funds. As of June 30, 2018, the program had a market value of $5.9 billion. In developing the program, 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 was retained for its blend of investment styles. Each manager has been given a modest risk budget with the goal of outperforming the Bloomberg Barclays Treasury 5+ Years Total Return over time, while largely retaining the primary characteristics of the benchmark.

The manager is required to remain within +/- 0.5 years of the overall benchmark duration (currently 10.5 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 5 years due to the passage of time/roll down the curve.

The managers are also permitted to purchase 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 beginning on page 59.

FY 2018 Changes

The Treasury Portfolio was launched in FY 2018.

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, the Treasury Portfolio returned 0.3% through June 30, matching benchmark performance.

Treasury Portfolio Characteristics

	Total Portfolio	Benchmark
Effective Duration (yrs)	10.7	10.6
Convexity	1.8	1.8
Coupon Rate (%)	2.7	2.8
Yield to Maturity (%)	2.9	2.9
Option Adjusted Spread (bps)	4	1

Treasury Portfolio Managers

BlackRock Financial Management, Inc.

Mandate:	U.S. Treasury Portfolio	**Benchmark:**	Bloomberg Barclays Treasury 5+ Yr. Index
Product assets/Firm Assets (as of 6/30):	\$2.0 billion / \$6.3 trillion	**# of Holdings:**	93
Style:	Long Duration Treasury	**Fund/Quant:**	Fundamental
Product Location:	New York, NY	**Target Tracking Error:**	50-75 bps
		Date Funded:	December 2017

BlackRock manages a fixed income protection portfolio that closely tracks the Bloomberg Barclays Treasury 5+ Year Index. BlackRock employs a controlled-duration, relative value sector rotation and security selection approach (sectors include Treasuries, TIPS, Agencies and Supranational securities), which is considered as active management within the guideline constraints and the nature of the mandate. BlackRock seeks to add value through managing portfolio duration, relative value sector rotation and security selection, rigorous quantitative analysis of the valuation of each security and of the portfolio as a whole, and the judgment of experienced portfolio managers.

Goldman Sachs Asset Management

Mandate:	U.S. Treasury Portfolio	**Benchmark:**	Bloomberg Barclays Treasury 5+ Yr. Index
Product assets/Firm Assets (as of 6/30):	\$2.6 billion / \$1.3 trillion	**# of Holdings:**	22-37
Style:	Long Duration Treasury	**Fund/Quant:**	Fundamental
Product Location:	New York, NY	**Target Tracking Error**	50-75 bps
		Date Funded:	December 2017

Goldman manages a protection portfolio that closely tracks the Bloomberg Barclays U.S. Treasury 5+ Year Index. Goldman manages the portfolio within a risk-controlled framework. The firm relies primarily on security selection strategies, term structure and highly controlled interest rate anticipation strategies to generate incremental return relative to the benchmark. Goldman combines long-term strategic investments with short-term tactical trading opportunities. Tactical trades between Treasuries, Agencies, Supranational and TIPS are implemented to take advantage of short-term market anomalies.

Neuberger Berman Investment Advisers LLC

Mandate:	U.S. Treasury Portfolio	**Benchmark:**	Bloomberg Barclays Treasury 5+ Yr. Index
Product assets/Firm Assets (as of 6/30):	$9.0 billion / $304.0 billion	**# of Holdings:**	59
Style:	Long Duration Treasury	**Fund/Quant:**	Fundamental
Product Location:	Chicago, IL	**Target Tracking Error:**	50-75 bps
		Date Funded:	December 2017

Neuberger manages a protection portfolio that seeks to replicate the interest rate risk characteristics of the Bloomberg Barclays Treasury 5+ Year Index. The manager has limited discretion to actively manage the underlying portfolio. The manager may purchase or sell fixed income instruments, and interest rate derivative instruments defined as interest rate futures on U.S. Treasury securities, Eurodollar futures, and interest rate options on U.S. Treasury futures and Eurodollar futures.

Private Markets Program

Like the stock and bond segments, private markets assets (real estate, private equity, real assets, private credit, and distressed/opportunistic investments) are managed on a program basis. The Private Markets Program is not offered to the Supplemental Investment Fund.

Statutory Constraints

The statutory constraints for any private markets asset investment for the Combined Funds are as follows:

— Each investment must involve at least four other investors.

— SBI's participation in an investment may not exceed 20% of the total investment.

Management Structure

Given their long investment time horizon, the Combined Funds are especially well suited for private markets investments. Up to 25% of the market value of the Combined Funds is targeted for private markets investments. Market value plus unfunded commitments may be up to 35% of the total market value of the Combined Funds. A breakdown of the program by segment is shown in Figure 29. The SBI does not establish an allocation target for each segment. As of June 30, 2018, the market value of current private markets investments was $9.4 billion, or 14% of the Combined Funds.

Descriptions of each of the private markets investments are included in the **Investment Manager Summaries** section beginning on page 63.

Private Equity

The private equity investment strategy is to establish and maintain a broadly diversified private equity portfolio comprised of investments that provide diversification by industry type, stage of corporate development and location.

Prospective private equity managers are reviewed and selected based, primarily, on the manager's experience, investment strategy, diversification potential and performance history.

During fiscal year 2018, the SBI approved commitments with Wellspring Capital Partners, Neuberger Berman, Public Pension Capital Management, Thomas H. Lee Partners, Warburg Pincus & Co., Windjammer Capital Investors, Carlyle Group, The Banc Funds Co., Court Square Capital, Hellman and Friedman, Lexington Capital Partners, Bridgepoint, Brookfield Asset Management, Goldman Sachs Capital Partners, Goldner Hawn Johnson and Morrison, Paine Schwartz, Thoma Bravo Equity Partners, and Welsh, Carson, Anderson and Stowe. The SBI will continue to review and add new private equity investments as attractive opportunities are identified.

Private Credit

The strategy for private credit investments is to target funds that typically provide a current return and may have an equity component. Structures such as subordinated debt, mezzanine, and direct lending investments are typical private credit investments. Managers are selected based on the manager's performance, experience and investment strategy. During fiscal year 2018, the SBI approved commitments with BlackRock and TPG. The SBI will continue to review private credit investment opportunities for inclusion in the program.

Real Estate

The real estate investment strategy calls for the establishment and maintenance of a broadly diversified real estate portfolio comprised of investments that provide overall diversification by property type and location. The main components of this portfolio consist of investments in closed-end commingled funds. The remaining portion of the portfolio may include investments in less diversified, more focused (specialty) commingled funds and REITs.

Prospective real estate managers are reviewed and selected based on the manager's experience, investment strategy and performance history. During fiscal year 2018, the SBI approved commitments with Blackstone Real Estate Partners, Angelo Gordon & Co., Carlyle Group, and Landmark Partners. The SBI will continue to review real estate managers for possible inclusion in the program.

Real Assets

The strategy for real asset investments is to establish and maintain a diversified portfolio of investment vehicles comprised of tangible assets, which provide an inflation hedge and additional diversification. Real asset investments may include natural resources, infrastructure, and agricultural and timber assets.

The portfolio will be diversified by geographic area as well as by type.

Real asset investments are selected based on the manager's experience, investment strategy and performance history. During fiscal year 2018, the SBI approved commitments with Natural Gas Partners, Energy Capital Partners and KKR. The SBI will continue to review real asset investments for possible inclusion in the program.

Distressed and Opportunistic

The strategy for distressed and opportunistic investments is to seek funds that target equity and/or debt investments in companies in some form of distress, as well as unique or idiosyncratic investments that may share characteristics of other private asset classes. Managers are selected based on the manager's performance, experience and investment strategy. During fiscal year 2018, the SBI approved commitments with Oaktree Capital Management and CarVal Investors. The SBI will continue to review distressed and opportunistic investment opportunities for inclusion in the program.

Investment Performance

The SBI reviews performance of its private markets investments relative to inflation, as measured by changes in the Consumer Price Index (CPI), and expects that private markets investments in the aggregate will be accretive to other investments in the Combined Funds. The Private Markets Program provided a 14.8% return in fiscal year 2018 and has provided a 9.2% return annualized over the past ten years, which provided a positive contribution to overall fund performance for the Combined Funds. Performance of the Private Markets Program is shown in Figure 30 for the period ending June 30, 2018.

At this time, benchmarks have not been established for the private markets fund managers. The long-term nature of these investments and the lack of comprehensive data on the returns provided by the private markets investments preclude comprehensive performance evaluation. In the future, as markets for these asset classes become more institutionalized, the SBI hopes to integrate appropriate performance standards for these assets into its performance analysis. A listing of individual investment funds can be found in the **Investment Manager Summaries** section beginning on page 63.

Figure 29. Private Markets Program Asset Mix as of June 30, 2018

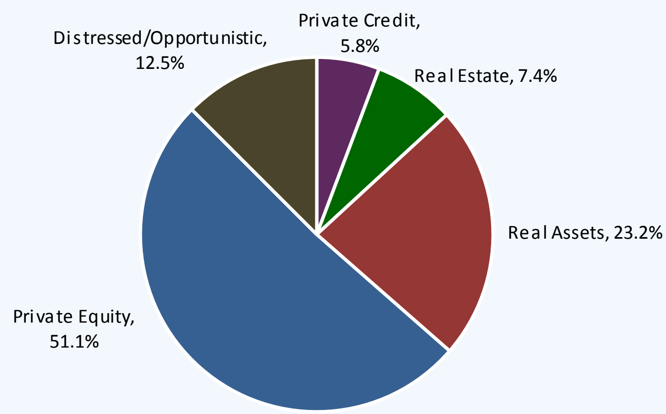
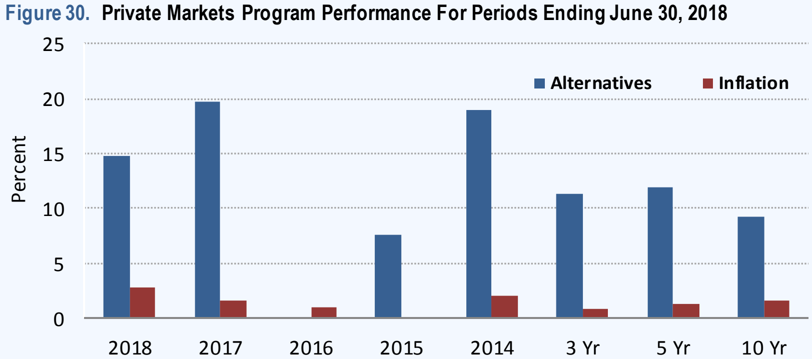


Figure 30. Private Markets Program Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Alt. Investments	**14.8%**	**19.7%**	**0.2%**	**7.6%**	**11.3%**	**8.9%**	**12.0%**	**9.2%**
Inflation	1.6	1.6	1.0	0.2	2.1	0.9	1.3	1.6

Private Markets Managers

Private Equity Managers

Adams Street Partners

Adams Street (formerly Brinson Partners) Global Secondary Fund 5 and Fund 6 was formed to invests exclusively in secondary venture capital and private equity limited partnership interests which are sold by investors who, for a variety of reasons, have decided to sell some or all of their partnership interests. Adams Street Partners is based in Chicago, IL. The funds were formed in 2012 and 2017, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Global Secondary Fund 5	63,209,755	23,470,250	2012
Global Secondary Fund 6	120,748	100,000,000	2017

Advent International

Advent International GPE VI, VII and VIII were formed for the purpose of investing primarily in buyout and recapitalization opportunities in upper middle-market companies in Europe and North America. Advent has regional headquarters in Boston, MA and London. The funds were formed in 2008, 2012 and 2016, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Advent International GPE VI	23,954,720	0	2008
Advent International GPE VII	96,295,749	5,400,000	2012
Advent International GPE VIII	51,185,154	50,850,000	2016

Affinity Capital

Affinity Ventures Funds IV and V were formed to make venture capital investments exclusively in the health care industry, with a focus on companies in the medical device, health care service, health care information technology, and biotechnology sectors. Affinity Capital is based in Minneapolis, MN.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Affinity Ventures IV	649,643	0	2004
Affinity Ventures V	2,310,985	0	2008

Apax Partners

Apax Partners VIII and Fund IX invests primarily in buyout and recapitalization opportunities in upper middle-market and large capitalization companies in Europe and North America. Apax is headquartered in London. The funds were formed in 2013 and 2016, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Apax VIII	224,508,143	28,571,096	2013
Apax IX	69,448,213	85,005,421	2016

Asia Alternatives

Asia Alternatives Capital Partners V pursues investment opportunities with top-performing private equity managers and will hold a diversified portfolio of Asian private equity funds. The Fund intends to be diversified across buyout, growth and expansion, venture capital and special situations. Asia Alternatives is headquartered in San Francisco, CA, but has regional offices in Hong Kong, Beijing, and Shanghai.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Asia Alternatives V	3,001,830	94,861,948	2017

The Banc Funds Co.

Based in Chicago, IL, Banc Fund VII, Banc Fund VIII, Banc Fund IX and Banc Fund X invest primarily in sub-regional banks, across the U.S., which have demonstrated above average growth and are likely acquisition targets.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Banc Fund VII	10,393,834	0	2005
Banc Fund VIII	114,008,722	0	2008
Banc Fund IX	128,704,366	0	2014
Banc Fund X	3,937,091	146,062,909	2018

Blackstone Group

Blackstone Capital Partners Funds IV, V, VI and VII are limited partnerships which were formed in 2002, 2006, 2008 and 2015, respectively. Based in New York, NY, the funds will invest in a variety of private equity transactions in North America and Europe.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Blackstone Capital Partners Fund IV	6,703,721	1,916,968	2002
Blackstone Capital Partners Fund V	11,938,575	7,057,008	2006
Blackstone Capital Partners Fund VI	99,297,123	14,603,148	2008
Blackstone Capital Partners Fund VII	35,219,945	100,876,780	2015

Blackstone Strategic Partners (formerly Credit Suisse)

Strategic Partners III B, III VC, IV B, IV VC, V, VI and VII were formed to invest in secondary leveraged buyout, venture capital, and mezzanine debt limited partnership interests which are sold by investors who, for a variety of reasons have decided to liquidate all or a portion of their private equity holdings. All of the funds are based in New York, NY. In 2013, the Strategic Partners funds platform was sold to The Blackstone Group and is now wholly-owned by Blackstone.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Strategic Partners Fund III B	11,730,307	15,001,769	2005
Strategic Partners Fund III VC	4,749,040	1,093,582	2005
Strategic Partners Fund IV B	16,140,268	17,990,668	2008
Strategic Partners Fund IV VC	11,762,657	2,725,533	2008
Strategic Partners Fund V	28,296,584	39,074,454	2011
Strategic Partners Fund VI	74,247,801	66,058,931	2014
Strategic Partners Fund VII	85,054,565	82,901,524	2016

Bridgepoint

Bridgepoint Europe VI was formed to make equity investments in middle market companies headquartered or with significant operations in Europe. Bridgepoint focuses on companies with sustainable end market growth and high quality of earnings. Bridgepoint has offices globally with eight investment offices in Europe, portfolio offices in Shanghai and New York, and a funds management office in Luxembourg.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Bridgepoint Europe VI	0	175,132,566	2018

Brookfield Asset Management

Brookfield Capital Partners Fund IV was formed in 2015. Brookfield Asset Management is a global operator and asset manager of real assets related businesses. This fund will target investments in complex situations, out of favor sectors and companies that require operational changes. Brookfield Capital Partners is based in Toronto.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Brookfield Capital Partners Fund IV	99,973,679	39,852,369	2015

Cardinal Partners (formerly DSV Management)

DSV Partners IV limited partnership was formed in 1985. The firm has offices in Princeton, NJ. DSV focuses on start-up and early stage investments.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
DSV Partners IV	31,015	0	1985

Carlyle Group

Carlyle Partners VII seeks to make control-oriented and strategic minority investments, targeting market-leading businesses with solid cash flows and attractive fundamentals, where it looks to drive further growth and operational improvement. The Carlyle Group is headquartered in Washington, D.C.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Carlyle Partners VII	0	150,000,000	2017

Chicago Growth Partners (formerly William Blair)

Formed in 2001, 2005 and 2008 and based in Chicago, IL, the Chicago Growth Partners funds seek investments in a broad spectrum of private companies at various stages of corporate development.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
William Blair Capital Partners VII	966,033	1,650,000	2001
Chicago Growth Partners I	3,538,485	300,000	2005
Chicago Growth Partners II	4,714,742	1,652,374	2008

Court Square Capital

Court Square Capital Partners I, II and III were formed in 2001, 2006 and 2012, respectively, to make private equity investments in a diversified, global portfolio of companies. Court Square Capital is based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Court Square Capital Partners I	360,386	185,289	2001
Court Square Capital Partners II	44,105,252	17,601,260	2006
Court Square Capital Partners III	99,723,389	53,307,461	2012

Crescendo Ventures

Crescendo Venture Fund IV was organized in 2000. They have offices in Minneapolis, MN and Palo Alto, CA. The funds will pursue opportunistic venture capital investments throughout the U.S.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Crescendo Venture Fund IV	10,680,230	0	2000

CVC Capital Partners

CVC European Equity Partners V and Capital Partners VI are based in London and were formed in 2008 and 2013, respectively. CVC invests primarily in the European mid and large buyout markets, with investment opportunities available from a broad range of sectors and geographies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
CVC European Equity Partners V	42,442,468	1,667,541	2008
CVC Capital Partners VI	222,339,356	33,576,626	2013

Elevation Partners

Elevation Partners was formed in 2005 for the purpose of making private equity investments targeting the media and entertainment sectors, with a focus on content and intellectual property. Elevation has offices in Menlo Park, CA and New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Elevation Partners	151,344	799,634	2005

Fox Paine and Company

Fox Paine Capital Fund II was formed in 2000. Based in Foster City, CA, the fund focuses on private equity investments in middle market operating businesses in a wide variety of industries.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Fox Paine Capital Fund II	1,943	0	2000

Goldner Hawn Johnson and Morrison

GHJM Marathon Fund V was organized in 2004. Trailhead Fund was formed by this group in 2012. Based in Minneapolis, MN, the funds will pursue primarily middle market private equity investments located in the Midwest and other parts of the U.S.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
GHJM Trailhead Fund	29,355,785	3,935,813	2012

Glouston Capital Partners (fka Permal Capital)

Glouston Private Equity Opportunities Fund was inherited from the Duluth Teachers Retirement Fund Administration in 2015. Glouston is a small investment firm based in New York, NY and was formed to purchase small portfolios of private equity investments on the secondary market.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Permal PE Opportunities IV, L.P.	1,644,870	1,090,000	2015

Goldman Sachs Capital Partners

GS Capital Partners 2000, GS Capital Partners V, and GS Capital Partners VI were formed in 2000, 2005 and 2007, respectively, by Goldman Sachs. West Street Capital Partners and Vintage VII were formed in 2016 by Goldman Sachs. The Capital Partners funds focus on domestic and international private equity investments. Vintage Fund VII was formed to acquire and structured portfolios of private equity partnerships and assets in the secondary market. All of the funds are based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
GS Capital Partners 2000	1,018	0	2000
GS Capital Partners V	640,320	1,041,099	2005
GS Capital Partners VI	15,810,317	3,226,857	2007
West Street Capital Partners	30,148,200	116,250,000	2016
Vintage VII	44,661,536	51,032,916	2016

GTCR Golder Rauner

GTCR Golder Rauner Funds IX, X and XI were formed in 2006, 2010 and 2013 are funds of a successor firm to the private equity firm of Golder, Thoma, Cressey and Rauner. The SBI has several investments with Golder, Thoma, Cressey and Rauner. Based in Chicago, IL, the funds focus primarily on a wide variety of private equity investments in consolidating and fragmented industries.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
GTCR Fund IX	7,803,673	3,585,067	2006
GTCR Fund X	31,373,531	6,751,396	2010
GTCR Fund XI	86,097,590	16,741,556	2013

HarbourVest

The HarbourVest funds were inherited from the Duluth Teachers Retirement Fund Administration in 2015. Based in Boston, MA, HarbourVest is a global investment firm with multiple investment products. The following funds were formed to make direct or secondary investments in established buyout and venture capital funds.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Dover Street VII Cayman Fund L.P.	538,661	132,416	2015
HarboutVest Intl PE Partners V-Cayman US	1,045,589	186,808	2015
HarboutVest Intl PE Partners VI-Cayman	3,793,620	326,914	2015
HarboutVest Partners VIII-Cayman Buyout	2,011,834	234,000	2015
HarboutVest Partners VIII-Cayman Venture	4,314,029	140,000	2015

Hellman and Friedman

Hellman and Friedman V, VI and VII were organized in 2004, 2007 and 2009. Based in San Francisco, CA the funds will pursue opportunistic private equity investments located in the U.S. and Europe.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Hellman and Friedman V	2,770,068	8,070,303	2004
Hellman and Friedman VI	13,730,940	5,084,864	2007
Hellman and Friedman VII	64,844,075	2,444,104	2009

IK Investment Partners

IK, based in London, makes investments in lower middle-market business in Europe's northern countries. IK's primary focus is businesses in the consumer industrial, businesses services and healthcare sectors. IK Fund VII was formed in 2013 and Fund VIII was formed in 2016.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
IK Fund VII	162,925,340	8,334,068	2013
IK Fund VIII	69,650,757	108,403,543	2016

Kohlberg, Kravis, Roberts & Co. (KKR)

KKR's Funds invest in large leveraged buyouts but may include other types of investments as well. The partnerships' portfolio companies are often mature, low technology companies with diversified operations. KKR Asia Fund was formed in 2017 to invest in large-leading businesses in Asia. Kohlberg, Kravis, Roberts and Co. is based in New York, NY with offices located across the Asian region.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
KKR Millennium Fund	6,047,399	0	2002
KKR 2006 Fund	55,424,394	3,360,223	2006
KKR Americas Fund XII	21,786,798	128,805,235	2016
KKR Asia Fund III	5,374,842	92,978,643	2017

Leonard Green & Partners (LGP)

LGP invests in middle-market companies in a variety of structured transactions. LGP typically makes investments in the retail, consumer & business services, and healthcare and distribution sectors. Green Equity Investors VI was formed in 2012 to continue this investment philosophy. LGP is based in Los Angeles, CA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Green Equity Investors VI	189,789,935	21,248,883	2012

Lexington Capital Partners

Lexington Capital Partners VI, VII and VIII were formed in 2006, 2009 and 2014, respectively, for the purpose of making investments in established buyout, mezzanine and venture capital funds, primarily through secondary transactions. Lexington Middle Market IV was formed in 2016 to acquire U.S. growth capital, small and middle market buyout interests through negotiated secondary market purchases. Lexington Co-Investment Partners IV was formed in 2017 to make equity co-investments in transactions alongside leading buyout sponsors in U.S. and European companies. The funds are based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Lexington Capital Partners VI	12,320,747	1,634,703	2006
Lexington Capital Partners VII	66,866,254	38,808,437	2009
Lexington Capital Partners VIII	85,708,857	74,156,120	2014
Lexington Middle Market Investors IV	55,521,134	147,089,059	2016
Lexington Co-Investment Partners IV	0	100,000,000	2017

Madison Dearborn Capital Partners

Madison Dearborn Capital Partners is a medium-sized private equity investment firm based in Chicago, IL. Madison Dearborn Capital Partners VII was formed in 2015 to make buyout and growth equity investments in established middle and upper middle-market companies located primarily in the United States.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Madison Dearborn Capital Partners VII	41,359,654	61,607,581	2015

Neuberger Berman

Neuberger Berman formed Dyal Capital Partners III in 2016 to make minority equity investments in established investment management companies. Dyal Capital is based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Dyal Capital Partners III	79,460,945	115,468,788	2016
Dyal Capital Partners IV	12,500,000	237,500,000	2018

Nordic Capital

Nordic Capital is based in Stockholm, Sweden and performs buyouts of middle-market businesses, primarily in the Nordic region of Europe. Nordic focuses on healthcare and information technology businesses where they can use their expertise in these sectors to create value. Nordic Capital VIII was formed in 2013.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Nordic Capital VIII	185,645,281	11,473,248	2013

North Sky Capital

North Sky Capital funds were inherited from the Duluth Teachers Retirement Fund Administration in 2015. Based in Minneapolis, MN, North Sky manages several different investment strategies. The following funds were formed to make direct investments in established buyout and venture capital funds.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
North Sky Capital LBO Fund III, LP	399,340	350,000	2015
North Sky Capital Venture Fund III, LP	377,611	106,250	2015

Oak Hill Capital Management

Oak Hill Capital is a private equity firm based in New York, NY and has offices in Menlo Park, CA and Stamford, CT. Oak Hill Fund IV was formed in 2016 to invest in middle market firms adhering to a theme-based approach.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Oak Hill Capital Partners IV	50,379,828	104,531,216	2016

Paine Schwartz

Paine Schwartz is a small private equity firm with offices in New York, NY, Chicago, IL and San Mateo, CA. Paine & Partners IV was formed in 2014 to make control investments in companies involved in the global food and agribusiness sectors.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Paine & Partners Capital Fund IV	54,715,875	25,444,085	2014

Permira

Permira performs buyouts of middle-market companies across geographies in Europe and North America. Permira typically makes investments in the retail, consumer & business services, healthcare and telecom, media and technology sectors. Permira V and VI were formed in 2013 and 2016, respectively, to continue this investment philosophy. Permira is based in London.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Permira V	174,126,521	28,433,702	2013
Permira VI	57,260,087	84,624,056	2016

Public Pension Capital Management (PPC)

PPC developed an innovated approach to private equity investing, tailored to the needs and demands of modern public pensions in the United States. The fund's evergreen structure allows flexibility, increased transparency and alignment of interests of the GP and LPs. The fund invests in middle-market businesses in the technology, financial and industrial sectors. PPC was formed in 2014 and is based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Public Pension Capital Fund	72,112,452	45,928,858	2014

RWI Ventures

RWI Ventures I was formed in 2000 to make venture capital investments. The Fund is based in Menlo Park, CA. The RWI Funds were transferred to the SBI from the Minneapolis Teachers Retirement Fund Association (MTRFA) on June 30, 2006 pursuant to the merger of MTRFA into TRA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
RWI Ventures I	482,970	0	2006

Silver Lake Partners

Silver Lake Partners II, III, IV, and V were formed in 2004, 2007, 2012, and 2017, respectively. With offices in New York, NY and Menlo Park, CA the funds will focus primarily on large-scale private equity investing in technology companies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Silver Lake Partners II	7,680,700	11,771,953	2004
Silver Lake Partners III	50,653,505	10,559,311	2007
Silver Lake Partners IV	118,028,178	13,000,047	2012
Silver Lake Partners V	9,641,301	125,063,874	2017

Split Rock Partners

Split Rock Partners I and Split Rock Partners II were formed in 2005 and 2008, respectively, by Split Rock Partners Management (formerly part of St. Paul Venture Capital). With offices in Minneapolis, MN and Menlo Park, CA, the funds will focus on private equity investments in seed and early-stage healthcare and software companies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Split Rock Partners I	6,469,807	2,109,094	2005
Split Rock Partners II	37,154,205	835,000	2008

Summit Partners

Summit Ventures VIII and IX are limited partnerships formed in 2011 and 2015. Summit Partners focuses on profitable, expansion stage firms that have not yet received any venture backing. The majority of the partnership investments are in high tech firms. Investments are diversified by location and industry type. Summit Partners is based in Boston, MA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Summit Partners Growth Equity VIII	73,865,680	23,799,945	2011
Summit Partners Growth Equity IX	36,060,976	70,873,626	2015

Thoma Bravo Equity Partners

Thoma Bravo is one of two successor firms to the private equity firm of Golder, Thoma, Cressey and Rauner. Thoma Bravo XII was formed in 2016. Based in Chicago, IL, the fund will make control buyouts of software and technology-enabled services companies in North America.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Thoma Bravo Fund XII	50,278,144	27,708,699	2016
Thoma Bravo Fund XIII	0	150,000,000	2018

Thoma Cressey Bravo Equity Partners

Thoma Cressey Bravo is one of two successor firms to the private equity firm of Golder, Thoma, Cressey and Rauner. Thoma Cressey VII and VIII were formed in 2000, and 2006. Based in Chicago, IL, the funds focus primarily on a wide variety of private equity investments in consolidating and fragmented industries.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Thoma Cressey Fund VII	843,884	0	2000
Thoma Cressey Fund VIII	1,533,689	770,000	2006

Thomas H. Lee Partners

Thomas H. Lee was formed in 2015 to invest in operating companies and create value through acquisitions and restructurings. Thomas H. Lee is located in Boston, MA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Thomas H. Lee Equity Fund VII	78,564,208	34,178,832	2015
Thomas H. Lee Equity Fund VIII	0	150,000,000	2018

Thomas, McNerney & Partners

Thomas, McNerney & Partners is based in Connecticut with additional offices in Minneapolis, MN and San Francisco, CA. The Thomas, McNerney & Partners Fund I and Fund II were formed in 2003 and 2006 to make venture capital investments in all stages of development and across all sectors of the health care industry.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Thomas, McNerney & Partners Fund I	3,032,158	0	2003
Thomas, McNerney & Partners Fund II	9,349,089	1,875,000	2006

TPG

TPG Partners VII was formed in 2015 to invest in operating companies and create value through acquisitions and restructurings. TPG has 17 offices around the world, including Dallas, TX, San Francisco, CA, New York, NY and London.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
TPG Partners VII	73,674,666	36,442,872	2015

Vestar Capital Partners

Vestar Capital Partners IV, V, VI and VII are limited partnerships that were formed in 1999, 2006, 2011, and 2017, respectively. Based in New York, NY, the funds invest primarily in a number of private middle market companies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Vestar Capital Partners IV	743,605	57,313	1999
Vestar Capital Partners V	16,639,277	0	2006
Vestar Capital Partners VI	82,078,467	960,325	2011
Vestar Capital Partners VII	982,609	149,017,391	2017

Warburg Pincus & Co.

Warburg Pincus is based in New York, NY and has a global presence with seven additional offices around the world. These funds will invest private equity in a wide variety of businesses located domestically and abroad. Warburg Pincus China is a companion fund and will invest alongside the current Warburg Pincus global fund. The funds listed were formed in 1998, 2002, 2005, 2007, 2012, 2016, and 2017.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Warburg Pincus Equity Partners	296,524	0	1998
Warburg Pincus Private Equity Partners VIII	9,310,837	0	2002
Warburg Pincus Private Equity Partners IX	9,080,687	0	2005
Warburg Pincus Private Equity Partners X	68,943,894	0	2007
Warburg Pincus Private Equity Partners XI	184,399,135	0	2012
Warburg Pincus Private Equity Partners XII	76,110,264	61,242,500	2016
Waburg Pincus China	28,384,955	18,720,000	2017
Waburg Pincus Financial Sector	9,104,714	80,280,000	2017

Wellspring Capital Partners

Headquartered in New York, NY, Wellspring Capital Partners VI was formed to make value-oriented, control investments in middle-market companies based principally in North America.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Wellspring Capital Partners VI	4,480,963	118,627,429	2016

Welsh, Carson, Anderson and Stowe

Welsh, Carson, Anderson and Stowe Funds X, XI and XII were formed in 2005, 2008 and 2014. Based in New York, NY, the funds focus on private equity investments in the healthcare and information services industries.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Welsh, Carson, Anderson and Stowe Fund X	147,896	2,000,000	2005
Welsh, Carson, Anderson and Stowe Fund XI	51,850,027	0	2008
Welsh, Carson, Anderson and Stowe Fund XII	99,825,280	59,578,783	2014

Windjammer Capital Investors

Windjammer Funds II, III, IV and V are limited partnerships formed in 2000, 2005, 2012 and 2017, respectively. Based in Newport Beach, CA, the Funds provide subordinated debt and/or preferred stock accompanied by warrants or other forms of equity participation and, in certain instances, common stock to middle market companies. The Funds seek to generate both current income and substantial capital gains while limiting risk.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Windjammer Mezzanine & Equity Fund II	63,870	10,139,363	2000
Windjammer Senior Equity Fund III	259,538	13,380,380	2005
Windjammer Senior Equity Fund IV	87,191,590	29,180,469	2012
Windjammer Senior Equity Fund V	0	100,000,000	2017

Private Credit Managers

Audax

Audax Mezzanine Fund III and IV were formed in 2010 and 2015. Based in New York, NY, the funds expect to invest in a diversified portfolio of mezzanine securities, with a specific focus on the middle market.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Audax Mezzanine III	31,052,296	8,142,866	2010
Audax Mezzanine Fund IV	21,024,739	76,103,754	2015

BlackRock

BlackRock Middle Market Senior Fund was formed to invest primarily in a portfolio of senior secured income-generating debt and debt-related instruments. It is expected the investments will be in medium-sized companies domiciled in, or exercising the main part of their economic activity in, the United States. BlackRock is headquartered in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
BlackRock Middle Market Senior Fund	0	250,000,000	2018

Crescent Capital Group (formerly TCW/Crescent)

TCW/Crescent Mezzanine Partners III is a Los Angeles, CA based limited partnership formed in 2001. The Fund makes mezzanine investments including subordinated debt with equity participations primarily in profitable, middle market companies. Crescent Capital Group became formerly independent of TCW in 2011.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
TCW/Crescent Mezzanine Partners III	2,453,737	29,733,852	2001

Goldman Sachs Mezzanine Partners

GS Mezzanine Partners 2006 and V are limited partnerships formed in 2006 and 2007 respectively. Based in New York, NY, the Funds' investment objectives are to achieve long-term capital appreciation and current returns through investments in mezzanine securities. These securities will principally include fixed income securities such as debt and preferred stock, often with an equity component, such as warrants, options, a convertible feature, or common stock associated with the debt or preferred stock purchase.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
GS Mezzanine Partners 2006	1,302,951	9,858,563	2006
GS Mezzanine Partners V	2,207,742	37,594,230	2007

Gold Hill Venture Lending Partners

Gold Hill Venture Lending and Gold Hill 2008 were formed in 2004 and 2008, respectively. The funds generate returns through secured loans, gains on the sales of securities acquired upon the exercise of warrants, and through the disposition of direct equity investments. Prior to forming Gold Hill, the partners executed a similar mandate for Silicon Valley Bank, and they expect to continue a close relationship for purposes of deal-sourcing. Gold Hill has offices in Santa Clara, CA and Boston, MA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Gold Hill Venture Lending	1,064,964	0	2004
Gold Hill 2008	13,311,387	0	2008

KKR

Based in New York, NY, KKR is a large global investment firm with a variety of private equity investment products. KKR Lending Partners II and KKR Lending Partners III were formed in 2015 and 2017, respectively, to make investments primarily in the senior debt securities of middle-market U.S. companies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
KKR Lending Partners II	47,479,271	8,802,924	2015
KKR Lending Partners III	42,740,647	153,045,000	2017

LBC Credit Partners

LBC Credit Partners IV originates and manages a diversified portfolio of high-yielding loans in the middle market. Fund IV will originate and manage investments with maturities ranging generally from three to seven years. LBC is headquartered in Philadelphia, PA with offices in Chicago, IL and Greenwich, CT.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
LBC Credit Partners IV	47,542,770	54,422,909	2016

Merit Capital Partners (formerly William Blair Mezzanine Partners)

Merit Capital Partners IV, Merit Capital Partners V, and Merit Capital Partners VI are limited partnerships formed in 2004, 2009 and 2016. Based in Chicago, IL, the Funds will invest primarily in fixed rate subordinated debt securities. These securities generally will be purchased with a significant equity component in the form of warrants, common stock or contingent interest.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Merit Capital Partners IV	18,731,525	4,821,429	2004
Merit Capital Partners V	42,955,053	4,579,592	2009
Merit Capital Partners VI	36,101,158	67,630,597	2016

Portfolio Advisors (formerly DLJ/Credit Suisse)

DLJ Investment Partners II and III are limited partnerships formed in 1999 and 2006. Based in New York, NY, the Funds will invest in a variety of securities, including subordinated debt with warrants, preferred stock with warrants, common stock or other securities, including interests in joint ventures. Credit Suisse sold the DLJ Investment Partners platform to Portfolio Advisors in 2013.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
DLJ Investment Partners II	86,563	0	1999
DLJ Investment Partners III	555,169	3,158,038	2006

Prudential Capital Group

Prudential Capital Partners II, III, IV, and V were formed in 2005, 2009, 2012, and 2016, respectively. Based in Chicago, IL, the Funds make mezzanine investments, typically including convertible debt, preferred stock and warrants, with a specific focus on middle market companies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Prudential Capital Partners II	6,173,073	11,247,372	2005
Prudential Capital Partners III	17,062,152	15,524,686	2009
Prudential Capital Partners IV	71,828,269	6,590,872	2012
Prudential Capital Partners V	56,829,965	98,603,003	2016

Summit Partners

Summit Subordinated Debt Funds III and IV are limited partnerships formed in 2004 and 2007, respectively. Based in Boston, MA, the funds invest in many of the same companies as the Summit Venture funds. Investments by those partnerships principally take the form of subordinated debt with equity features. These yield-oriented investments provide current income over the life of the investment with the potential for additional returns.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Summit Subordinated Debt Fund III	6,806,976	2,250,000	2004
Summit Subordinated Debt Fund IV	14,821,823	19,926,329	2007

TCW Asset Management

Based in Los Angeles, CA, TCW is a large asset management firm that makes investments in public and private companies. TCW Direct Lending was formed in 2014 to pursue a strategy of originating and investing in loans to middle-market companies primarily in the United States.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
TCW Direct Lending LLC	58,791,868	25,329,409	2014

Real Asset Managers

BlackRock

BlackRock Global Renewable Power Fund II was formed to invest in a diversified portfolio of renewable power generation projects in countries within the Organization for Economic Cooperation and Development (OECD). The Global Renewable Power strategy has offices in New York, Dublin, London, Seattle and Stockholm.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
BlackRock Global Renewable Power Fund II	57,244,584	41,185,768	2016

EIG Global Energy Partners (formerly TCW Asset Management Company)

Energy Partners XIV, XV and XVI were formed in 2007, 2010 and 2013 respectively, for the purpose of making mezzanine and equity investments in energy and energy-related infrastructure projects and companies on a global basis. The funds operate from offices in Washington D.C., Los Angeles, CA, Houston, TX, New York, NY and London. EIG was formally spun out of TCW in 2011.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
EIG Energy Fund XIV	11,418,649	2,761,129	2007
EIG Energy Fund XV	88,475,166	22,871,323	2010
EIG Energy Fund XVI	147,170,360	68,797,014	2013

EnCap Investments

EnCap Energy Capital Funds VII, VIII, IX, and X were formed in 2007, 2010, 2012 and 2015 for the purpose of making privately negotiated equity and equity-linked investments in the independent sector of the oil and gas industry. EnCap Investments is based in Houston, TX.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
EnCap Energy Capital Fund VII	6,945,888	0	2007
EnCap Energy Capital Fund VIII	31,447,771	9,383,470	2010
EnCap Energy Capital Fund IX	73,460,856	9,251,971	2012
EnCap Energy Capital Fund X	71,374,919	30,053,789	2015

Energy Capital Partners

Energy Capital specializes in building and managing energy infrastructure assets to achieve capital appreciation. Energy Capital is based in Short Hills, NJ. Funds II, III, and IV were formed in 2010, 2013, and 2018, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Energy Capital Partners II	30,085,441	29,749,110	2010
Energy Capital Partners III	195,776,809	30,657,688	2013
Energy Capital Partners IV	25,782,452	78,772,222	2018

Energy & Minerals Group (formerly known as NGP Midstream & Resources)

Based in Houston, TX, Energy & Minerals Group will make direct investments in selected areas of the energy infrastructure and natural resources sectors, primarily targeting the midstream energy sector and all facets of the mining, minerals and related power sectors. The funds were formed in 2007, 2011, 2014 and 2015.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
NGP Midstream & Resources	57,922,975	230,871	2007
Energy & Minerals Group II	110,875,231	3,006,959	2011
Energy & Minerals Group III	161,731,207	11,751,224	2014
Energy & Minerals Group IV	115,464,752	70,278,465	2015

EnerVest Energy

EnerVest Energy Institutional Fund XIV was formed in 2015 to acquire, develop, operate and manage oil and gas properties. EnerVest is headquartered in Houston, TX.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
EnerVest Energy Institutional Fund XIV	90,246,917	8,851,531	2015

First Reserve

The First Reserve funds were formed in 2003, 2006, 2008 and 2013, respectively, and are structured as limited partnerships. The general partner's long-term investment strategy is to create diversified portfolios of oil and gas and other energy-related investments. First Reserve is headquartered in Greenwich, CT.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
First Reserve X	347,478	0	2003
First Reserve XI	8,107,918	0	2006
First Reserve XII	33,419,563	2,606,600	2008
First Reserve XIII	100,247,017	97,742,373	2013

Kohlberg, Kravis, Roberts & Co.

KKR Global Infrastructure Investors III was formed to generate attractive risk-adjusted returns by focusing on critical infrastructure investments with low volatility and strong downside protection. KKR intends to make investments in existing assets and businesses located in OECD countries. KKR is headquartered in New York, NY and has over twenty office locations around the world.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
KKR Global Infrastructure Investors III	0	149,850,000	2018

Merit Energy Company

Merit Energy Partners B, C, D, E, F, H and I were formed in 1996, 1998, 2000, 2003, 2005, 2011 and 2014, respectively. Based in Dallas, TX, the funds focus on resource investments in producing oil and gas properties.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Merit Energy Partners B	7,998,384	0	1996
Merit Energy Partners C	20,315,178	0	1998
Merit Energy Partners D	32,631,552	0	2000
Merit Energy Partners E	17,378,306	0	2003
Merit Energy Partners F	19,798,913	0	2005
Merit Energy Partners H	73,186,972	0	2011
Merit Energy Partners I	186,471,373	23,621,519	2014

Natural Gas Partners

Natural Gas Partners is based in Irving, TX and will focus primarily on the sectors of the energy industry that are related to the production and development of crude oil and natural gas in North America. Funds IX, X, XI, and XII were formed in 2007, 2011, 2014, and 2017, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Natural Gas Partners IX	1,120,611	1,153,855	2007
NGP Natural Resources X	73,389,549	8,195,204	2011
Natural Gas Capital Resources XI	146,545,366	26,753,646	2014
Natural Gas Capital Resources XII	29,089,734	118,638,901	2017

Sheridan Production Partners

Sheridan Production Partners I, II and III were formed in 2007, 2010 and 2014 respectively to pursue a strategy of acquiring a portfolio of currently producing oil and gas properties and optimizing the operations of those properties through production acceleration and recovery enhancement, appropriate use of capital reinvestment and aggressive cost control. The Funds are headquartered in Houston, TX.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Sheridan Production Partners I	68,552,017	0	2007
Sheridan Production Partners II	49,114,957	3,500,000	2010
Sheridan Production Partners III	36,013,994	65,650,000	2014

Real Estate Managers

Angelo, Gordon & Co.

Angelo, Gordon & Co is based in New York and has offices in London, Amsterdam, Frankfurt and Milan, these funds will invest primarily in opportunistic commercial real estate investments. AG Realty Fund IX was formed in 2015 and the majority of investments located in North America and up to 25% of exposure to Europe. AG Asia Realty Fund III was formed in 2016 and will make opportunistic investments in real estate in Asia with an emphasis on China, Japan, Hong Kong and South Korea. AG Europe Realty Fund II was formed in 2017 and will make commercial real estate investments in Europe.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
AG Realty Fund IX	74,925,706	32,150,000	2015
AG Asia Realty Fund III	39,665,588	15,196,250	2016
AG Europe Realty Fund II	12,765,476	61,687,500	2017

Blackstone Real Estate Partners

Based in New York, NY, Blackstone Real Estate Partners V, VI, VII, VIII and Asia II were formed in 2006, 2007, 2011, 2015, and 2017 to make real estate investments in a variety of sectors, geographic locations and business climates. Blackstone will consider investments in major urban office buildings, the lodging sector, distribution and warehousing centers, retail, and a variety of real estate operating companies.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Blackstone Real Estate Partners V	17,458,796	4,174,052	2006
Blackstone Real Estate Partners VI	12,323,720	4,907,906	2007
Blackstone Real Estate Partners VII	80,860,229	15,126,809	2011
Blackstone Real Estate Partners VIII	88,710,288	79,860,956	2015
Blackstone Real Estate Partners Asia II	2,720,680	72,221,054	2017

Blackstone Strategic Partners (formerly Credit Suisse)

Strategic Partners III RE and Strategic Partners IV RE were formed in 2005 and 2008, respectively, for the purpose of purchasing secondary interests of real estate funds. The funds will follow a strategy similar to that of the Strategic Partners private equity funds, in which the SBI is also an investor. Credit Suisse sold the Strategic Partners funds platform to The Blackstone Group in 2013. Blackstone is based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Strategic Partners III RE	2,703,932	9,006	2005
Strategic Partners IV RE	8,085,261	1,216,289	2008

Carlyle Group

Carlyle Realty Partners VIII was formed to make opportunistic real estate investments in the United States. The strategy focuses on sectors less correlated with the economic cycle. The investment professionals dedicated to the strategy are based in Washington, DC, New York, NY, San Francisco, CA, and Los Angeles, CA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Carlyle Realty Partners VIII	0	148,616,174	2017

Colony Advisors

Colony Investors III is a closed-end commingled real estate fund managed by Colony Capital Inc. of Los Angeles, CA. The fund's strategy is to invest in undervalued equity and debt real estate-related assets.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Colony Investors III	4,694,100	0	1997

Landmark Partners

Landmark Real Estate Partners VIII seeks to make secondary investments in various types of real estate and real estate related entities. The Fund intends to be diversified across global geography, fund vintage, property sector, and financial sponsor. Landmark is headquartered in Simsbury, CT, with offices in Boston, MA, New York, NY, and London.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Landmark Real Estate Partners VIII	18,695,237	132,734,021	2017

Lubert Adler

Lubert-Adler Real Estate Fund VII looks to invest in U.S. commercial real estate across the following property types: multifamily, retail, hospitality, and office/industrial. Lubert-Adler has offices in Philadelphia, PA and Atlanta, GA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Lubert-Adler Real Estate Fund VII	30,768,101	42,635,024	2017

Rockpoint

Rockpoint Real Estate Fund V was formed in 2015 to invest in opportunistic real estate transactions in the United States. Rockpoint is headquartered in Boston, MA and has offices in Dallas, TX and San Francisco, CA.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Rockpoint Real Estate Fund V	58,187,692	52,351,419	2015

Rockwood

Rockwood Capital RE Partners X was formed in 2016 to make value add investments in commercial real estate. Rockwood is headquartered in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Rockwood Capital Real Estate Partners X	41,896,945	57,384,396	2016

SilverPeak

Silverpeak Legacy Pension Partners II and III were formed in 2005 and 2007, respectively, to invest in properties, real estate companies and service businesses ancillary to the real estate industry on a global basis. The funds' worldwide headquarters are in New York, NY, with regional headquarters in London and Tokyo. In 2010, the funds were renamed Silverpeak Legacy Pension Partners II and III to reflect the General Partner ownership change after the Lehman Brothers bankruptcy in 2008.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Silverpeak Legacy Pension Partners II	3,086,139	7,640,900	2005
Silverpeak Legacy Pension Partners III	15,655,581	79,673,323	2007

TA Associates Realty

TA Realty Associates Funds VIII, IX, X and XI are closed-end, commingled real estate funds managed by TA Associates Realty of Boston, MA. The funds invest in small to medium sized properties generally diversified by location and type. On-site management of properties is contracted to outside firms. The SBI committed to the funds in 2006, 2008, 2012 and 2015, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Realty Associates Fund VIII	16,788,659	0	2006
Realty Associates Fund IX	610,962	0	2008
Realty Associates Fund X	63,344,429	0	2012
Realty Associates Fund XI	103,644,800	0	2015

Distressed/Opportunistic Managers

Avenue Capital Partners

Avenue Capital is mid-sized global investment firm based in New York, NY. Avenue Energy Opportunities was formed in 2015 to make investments in debt, equity and other obligations of North American energy and utility companies that are experiencing financial distress.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Avenue Energy Opportunities	121,718,100	0	2015
Avenue Energy Opportunities II	63,354,395	35,000,000	2017

BlackRock

The BlackRock Tempus Fund was inherited from the Duluth Teachers Retirement Fund Administration in 2015. The Fund seeks to generate returns by making opportunistic investments in debt and equity. The firm is based in New York, NY.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
BlackRock Tempus Fund	639,937	0	2015

Carlyle Group

Carlyle Strategic Partners IV was formed in 2016. With offices in New York, NY, London and Hong Kong, the fund will invest in middle-market companies experiencing financial, operational or cyclical distress.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Carlyle Strategic Partners IV	14,707,631	87,183,049	2016

CarVal Investors

CVI Global Value Fund, Credit Value Funds I, II, III and IV were formed in 2007, 2010, 2012, 2015, and 2017 respectively. The funds are based in Minneapolis, MN with offices in Beijing, Buenos Aires, London, Copenhagen, Delhi, Luxembourg, Paris, Singapore, Shanghai and Tokyo. The Funds will make investments in loan portfolios, corporate securities, international real estate and real estate loans and special opportunities.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
CVI Global Value Fund	28,085,522	10,000,000	2007
CVI Credit Value Fund I	28,089,785	5,000,000	2010
CVI Credit Value Fund II	69,596,282	7,500,000	2012
CVI Credit Value Fund A III	165,765,825	15,000,000	2015
CVI Credit Value Fund IV	15,340,875	135,000,000	2017

Merced Capital (formerly EBF & Associates)

Based in Minneapolis, MN, Merced Partners II, III, IV, and V expect to invest in securities with strong downside protection from identifiable asset value and compelling return potential from some combination of current income, asset value appreciation, secondary market instrument appreciation, and enterprise value creation or appreciation. Merced Partners II, III, IV and V were formed in 2006, 2010, 2013 and 2017, respectively.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Merced Partners II	287,532	0	2006
Merced Partners III	45,157,314	0	2010
Merced Partners IV	97,894,524	0	2013
Merced Partners V	59,874,376	0	2017

MHR Institutional Partners

MHR is a medium-sized private equity investment firm based in New York, NY. MHR IV was formed in 2015 to invest in distressed companies with the goal of gaining influence or control of the company and creating value through the restructuring process and revenue growth.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
MHR Institutional Partners IV	26,240,384	46,396,136	2015

Oaktree Capital Management

Oaktree Capital Management is a global private equity firm based in Los Angeles, CA. The Oaktree Principal Fund VI was formed in 2015 to invest in the debt or equity of companies experiencing a significant element of distress or dislocation or that are otherwise out of favor. Oaktree will seek to create control positions at attractive valuations which will allow for the maximization of value of the companies after control is obtained. The Oaktree Opportunities Funds X and Xb were formed in 2015 to invest in the debt or equity of companies during periods of financial distress. Oaktree Opportunities Fund Xb will only be invested if the management determines that the investment opportunity exists. Oaktree Special Situations Fund II seeks to make control investments in middle-market companies through the purchase of distressed debt, structured equity investments, and direct equity investments.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Oaktree Principal Fund VI	61,427,694	49,951,405	2015
Oaktree Opportunities Fund X	37,312,470	20,000,000	2015
Oaktree Opportunities Fund Xb	2,500,000	97,500,000	2015
Oaktree Special Situations Fund II	0	100,000,000	2018

Pimco Bravo

The Pimco Bravo funds were inherited from the Duluth Teachers Retirement Fund Administration in 2015. Based in Newport Beach, CA, Pimco is a global investment management firm with a variety of public and private investment products. The Pimco Bravo Funds primarily invest in distressed commercial and residential mortgage credit.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Pimco Bravo OnShore Feeder I	248,943	2,306,448	2015
Pimco Bravo OnShore Feeder II	4,225,781	2,257,050	2015

TSSP

TSSP Adjacent Opportunities Partners seeks to make global credit and credit-related investments, generally in opportunities with significant downside protection and cash yield. Headquartered in San Francisco, the team also has offices in New York, NY, London, Boston, MA, Houston, TX, Dallas, TX, Melbourne and Luxembourg.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
TSSP Adjacent Opportunities Partners	0	50,000,000	2018

Varde Partners

Varde Fund IX, X and XI are limited partnerships formed in 2008, 2010 and 2013, respectively. Based in Minneapolis, MN, the funds will invest in distressed and/or mispriced private and public investments.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Varde Fund IX	3,453,284	0	2008
Varde Fund X	71,122,243	0	2010
Varde Fund XI	214,741,263	0	2013

Wayzata Investment Partners

Wayzata Opportunities Funds I, II, and III were formed in 2005, 2007 and 2012, respectively, for the purpose of making investments in distressed securities where it can expect to exert significant influence on the restructuring process and potentially control the reorganized company. The Funds are based in Wayzata, MN.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
Wayzata Opportunities Fund I	519,166	18,920,000	2005
Wayzata Opportunities Fund II	8,850,819	30,000,000	2007
Wayzata Opportunities Fund III	36,021,421	15,000,000	2012

Stock Distributions Manager

T. Rowe Price

T. Rowe Price, a Baltimore-based money management firm, manages stock distributions from the SBI's private markets limited partnerships. T. Rowe Price has extensive research capabilities in the small capitalization company area. In addition, the firm has a large trading staff with particular expertise in the trading of small capitalization and illiquid stocks.

Fund	Market Value ($)	Unfunded Commitment ($)	Vintage Year
T. Rowe Price	34,082,849	0	N/A

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The State Deferred Compensation Plan (Plan) provides public employees with a tax-sheltered retirement savings program that is a supplemental plan to their primary retirement plan. (In most cases, the primary plan is TRA, PERA, or MSRS.) On June 30, 2018 the market value of the State Deferred Compensation Plan was $7.0 billion.

Program Structure

The State Deferred Compensation Plan offers plan participants three sets of investment options. The first is a set of four actively managed mutual funds, five passively managed mutual funds, a Money Market Fund, and a Stable Value 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.

Actively Managed Options

The Plan offers a range of actively managed options that allows participants the flexibility to create an investment program to meet their needs.

Performance results for the mutual fund investment options for periods ending June 30, 2018 are shown in Figure 31.

- ***Large-Cap Equity***
  This option is a concentrated portfolio of high quality stocks that generally offer current dividends. The fund is expected to outperform the NASDAQ U.S. Dividend Achievers Select Index. The fund currently offered is the Vanguard Dividend Growth Fund.

- ***Small-Cap Equity***
  This option invests primarily in companies with small market capitalizations. The fund is expected to outperform the Russell 2000 over time. T. Rowe Price Small-Cap Stock Fund is the fund currently offered.

- ***Bond Fund***
  This option invests primarily in investment grade securities in the U.S. bond market. The fund is expected to outperform the Bloomberg Barclays U.S. Aggregate Bond Index over time. The fund currently offered is the Dodge & Cox Income Fund.

- ***International Equity***
  This option invests primarily in stocks of companies in developed countries located outside the United States. The fund is expected to outperform the Morgan Stanley Capital International (MSCI) Index of Europe, Australasia and the Far East (EAFE) over time. The fund currently offered is the Fidelity Diversified International Fund.

- ***Money Market Fund***
  This option invests in high quality short-term debt instruments and is expected to outperform the return on 3 month U.S. Treasury Bills. This option is the SIF Money Market Fund invested by State Street Global Advisors (see page 22).

- ***Stable Value Fund***
  The fund is invested in a well-diversified portfolio of high quality fixed income securities. The fund also holds insurance 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, and maintain a relatively stable return profile for the portfolio.

  The option is expected to outperform the return of the three year Constant Maturity Treasury plus 45 basis points (0.45%), over time. Currently, Galliard Capital Management, Inc. manages the option (see page 23).

Passively Managed Options

The plan offers a range of passively managed options that allows participants the flexibility to create a lower cost investment program to meet their needs.

- ***Large-Cap Equity***
  This option is a passive domestic stock portfolio that tracks the S&P 500. The fund currently offered is the Vanguard Institutional Index Plus Fund.

- ***Mid-Cap Equity***
  This option invests in companies with medium market capitalizations that track the CRSP U.S. Mid-Cap Index. The fund currently

offered is the Vanguard Mid-Capitalization Index Institutional Fund.

- ***Balanced Fund***
  This option is a mix of stocks and bonds. The fund is expected to track a weighted benchmark of 60% CRSP U.S. Total Market Index and 40% Bloomberg Barclays U.S. Aggregate Bond Index. The fund currently offered is the Vanguard Balanced Index Fund.

- ***Bond Fund***
  This option invests in a broad range of U.S. fixed income securities. The fund is expected to track the performance of the Bloomberg Barclays U.S. Aggregate Bond Index. The fund currently offered is the Vanguard Total Bond Market Index Fund.

- ***International Equity***
  This option invests in international equities and is expected to track the FTSE Global All Cap ex U.S. Index, an index designed to measure equity market performance in developed and emerging markets, excluding the United States. The fund currently offered is the Vanguard Total International Stock Index Fund.

Minnesota Target Retirement Funds

The plan offers a range of target date funds which are diversified options with allocations that change over time to reduce risk and become more conservative as the target retirement date approaches. The funds are currently offered by State Street Global Advisors (SSgA).

Performance results for the target date fund option for periods ending June 30, 2018 are shown in Figure 32.

Figure 31. State Deferred Compensation Plan (457b Plan) for Periods Ending June 30, 2018

	RETURNS[1]						
	1 Year		3 Years		5 Years		Market
Fund/Benchmark	Actual %	Bmk %	Actual %	Bmk %	Actual %	Bmk %	Value[2] ($ in millions)
Actively Managed							
Vanguard Dividend Growth[3]	10.6	11.9					612.7
T. Rowe Price Small-Cap (Russell 2000)	18.3	17.6	11.9	11.0	13.3	12.5	732.3
Fidelity Diversified Int'l. (MSCI EAFE)	6.0	6.8	4.0	4.9	7.2	6.4	309.1
Dodge & Cox Income Fund (BB Barclays U.S. Aggregate)	0.4	-0.4	2.6	1.7	3.1	2.3	240.2
SIF Money Market (3 Month T-Bills)	1.5	1.4	0.9	0.7	0.6	0.4	76.3
SIF Stable Value (3 year Constant Maturity Treas. +45 basis points)	2.2	2.4	2.1	1.8	2.0	1.6	1,339.8
Passively Managed							
Vanguard Institutional Index (S&P 500)	14.4	14.4	11.9	11.9	13.4	13.4	1,258.8
Vanguard Mid-Cap Index (CRSP US Mid-Cap)	12.1	12.1	9.2	9.2	12.3	12.4	546.7
Vanguard Total Int'l Stock Index (FTSE Global All Cap ex US)	7.1	7.4	5.4	5.3	6.5	6.4	201.0
Vanguard Balanced Index Inst. (60% CRSP US Total Market, 40% BB Barclays U.S. Aggregate)	8.6	8.6	7.7	7.7	8.9	8.9	785.7
Vanguard Tot. Bond Market Index (BB Barclays U.S. Aggregate)	-0.5	-0.4	1.7	1.7	2.2	2.3	209.0
Ameritrade Self Directed Fund							74.9

(1) Returns are reported net of fund operating expenses, but do not include the MSRS and SBI administrative fees.

(2) Market value of SBI participation in fund.

(3) Fund retained September 2016.

Figure 32. State Deferred Compensation Plan (457b Plan) for Periods Ending June 30, 2018

	RETURNS(1)						
	1 Year		3 Years		5 Years		Market
	Actual %	Bmk(2) %	Actual %	Bmk(2) %	Actual %	Bmk %	Value(3) ($ in millions)
MN Target Retirement Funds							
Income Fund	4.0	4.0	3.8	3.8	4.1	4.2	85.1
2020 Fund	4.7	4.7	4.4	4.4	5.3	5.4	116.8
2025 Fund	6.1	6.2	5.5	5.5	6.7	6.7	118.4
2030 Fund	7.7	7.7	6.6	6.6	7.8	7.8	84.5
2035 Fund	8.5	8.6	7.1	7.1	8.3	8.4	65.7
2040 Fund	9.4	9.4	7.5	7.5	8.8	8.9	48.9
2045 Fund	10.1	10.1	7.9	7.9	9.2	9.3	39.9
2050 Fund	10.7	10.7	8.2	8.2	9.5	9.5	30.4
2055 Fund	10.7	10.7	8.2	8.2	9.5	9.5	16.0
2060 Fund	10.7	10.7	8.2	8.2	9.5	9.5	14.6

(1) Returns are reported net of fund operating expenses, but do not include the MSRS administrative fee.

(2) Managed by SSgA, each Fund benchmark is the aggregate of the returns of the Fund's underlying index funds weighted by the Fund's asset allocation.

(3) Market value of SBI participation in fund.

State Deferred Compensation Plan Managers

Dodge & Cox Income Fund

Mandate:	Fixed Income	**Benchmark:**	Bloomberg Barclays U.S. Aggregate Bond Index
Product Net Asset Value/Firm Assets (as of 6/30):	$56.3 billion / $309.3 billion	**# of Holdings:**	1,088
Style:	Core	**Fund/Quant:**	Fundamental
Manager Location:	San Francisco, CA	**Date Funded:**	July 1999

The objective of this fund is to seek a high and stable rate of current income, consistent with long term preservation of capital, with capital appreciation being a secondary consideration. This portfolio invests primarily in investment-grade quality corporate and mortgage bonds, government issues, and, to a lesser extent, fixed income securities rated below investment grade. While it invests primarily in the U.S. bond market, the fund may invest up to 25% of its total assets in U.S. dollar-denominated securities of non-U.S. issuers, including emerging market issuers.

Fidelity Diversified International Fund

Mandate:	International Equity	**Benchmark:**	MSCI EAFE Index
Product Assets/Firm Assets (as of 6/30):	$5.2 billion / $2.6 trillion	**# of Holdings:**	238
Style:	Large-Cap, Developed Countries	**Fund/Quant:**	Fundamental
Manager Location:	Boston, MA	**Date Funded**	July 1999

The goal of this fund is capital appreciation by investing in securities of companies located outside the United States. The fund invests primarily in larger companies located in developed countries. The manager uses a bottom-up stock selection process based on the extensive fundamental research available from the company's many security analysts across the globe. The process seeks to invest in companies with durable earnings, strong competitive position, and improving profitability. Sector and country weightings are reviewed for risk control, preference is given to companies with strong balance sheets which tend to perform better in down markets. As part of the portfolio construction process and quarterly portfolio review, quantitative portfolio analysis is evaluated to examine risks exposures including style factors, sectors and geography. The fund does not employ currency hedging, to provide currency diversification to U.S. based investors. In November 2016 participants invested in the retail mutual fund transitioned into the Commingled Investment Trust (CIT), a lower-cost investment vehicle of the same fund.

T. Rowe Price Small-Cap Stock Fund

Mandate:	Small-Cap Equity	**Benchmark:**	Russell 2000
Product Assets/Firm Assets (as of 6/30):	\$4.2 billion / \$991.1 billion	**# of Holdings:**	275
Style:	Core	**Fund/Quant:**	Fundamental
Manager Location:	Baltimore, MD	**Date Funded:**	July 1999

The fund seeks to provide long-term capital growth by investing primarily in stocks of small companies. The fund will normally invest at least 80% of its net assets (including any borrowings for investment purposes) in stocks of small companies. The fund defines a small company as one whose market capitalization falls within or below the current range of companies in either the Russell 2000 Index or the S&P Small-Cap 600 Index. When choosing stocks, the fund manager generally looks for one or more of the following characteristics: capable management, attractive business niches, pricing flexibility, sound financial and accounting practices, a potential or demonstrated ability to grow earnings, revenues, and cash flow consistently, and the potential for a catalyst (such as increased investor attention, asset sales, strong business prospects, or a change in management) to cause the stock's price to rise. In September 2016 the T. Rowe Price Institutional Small-Cap Stock Fund replaced the retail mutual fund vehicle.

Vanguard Dividend Growth Fund

Mandate:	Domestic Equity	**Benchmark:**	NASDAQ U.S. Dividend Achievers Select Index
Product Assets/Firm Assets (as of 6/30):	\$32.4 billion / \$5.0 trillion	**# of Holdings:**	45
Style:	Large-Cap, High Dividend Yield	**Fund/Quant:**	Fundamental
Manager Location:	Boston, MA	**Date Funded:**	September 2016

The fund is an actively managed U.S. stock fund and uses the NASDAQ U.S. Dividend Achievers Select Index as its benchmark. The fund investment objective is to provide, primarily, a growing stream of income over time and, secondarily, long-term capital appreciation and current income. The fund invests primarily in stocks that tend to offer current dividends. The fund focuses on high-quality companies that have prospects for long-term total returns as a result of their ability to grow earnings and willingness to increase dividends over time. These stocks typically, but not always, will be undervalued relative to the market and will show potential for increasing dividends. The fund will be diversified across industry sectors.

Vanguard Institutional Index Fund Institutional Plus

Mandate:	Large-Cap Domestic Equity	**Benchmark:**	S&P 500 Index
Product Assets/Firm Assets (as of 6/30):	$232.2 billion / $5.0 trillion	**# of Holdings:**	505
Style:	Core	**Fund/Quant:**	N.A.
Manager Location:	Malvern, PA	**Date Funded:**	July 1999

The passively managed fund tracks the S&P 500 index. The fund employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, which is dominated by the stocks of large U.S. companies. The fund attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index.

Vanguard Mid-Capitalization Index Institutional Fund Plus

Mandate:	Mid-Cap Domestic Equity	**Benchmark:**	CRSP U.S. Mid-Cap Index
Product assets/Firm Assets (as of 6/30):	$94.7 billion / $5.0 trillion	**# of Holdings:**	346
Style:	Core	**Fund/Quant:**	N.A.
Manager Location:	Malvern, PA	**Date Funded:**	January 2004

The fund is passively managed to track the performance of the CRSP U.S. Mid-Cap Index, a broadly diversified index of stocks of medium-size U.S. companies. The fund attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Vanguard Balanced Index Fund Institutional

Mandate:	Diversified Portfolio of 60% stocks and 40% bonds.	**Benchmark:**	Stock allocation: CRSP U.S. Total Market Index Bond allocation: Barclays U.S. Aggregate Bond Index
Product assets/Firm Assets (as of 6/30):	$10.1 billion / $5.0 trillion	**# of Holdings:**	3,495 stock holdings 7,295 bond holdings
Style:	Core	**Fund/Quant:**	N.A.
Manager Location:	Malvern, PA	**Date Funded:**	December 2003

The fund portfolio provides a diversified portfolio of stocks and bonds by investing in a mix of 60 percent stocks and 40 percent bonds. The manager does not change the asset mix. The fund is passively managed with the equity portfolio to track the returns of the CRSP U.S. Total Market Index, which covers all regularly traded U.S. stocks. The bond portfolio is invested to track the returns of the Bloomberg Barclays U.S. Aggregate Float Adjusted Bond Index, which covers virtually all taxable fixed income securities.

Vanguard Total Bond Market Index Fund Institutional Plus

Mandate:	Fixed Income	**Benchmark:**	Bloomberg U.S. Aggregate Float Adjusted Bond Index
Product assets/Firm Assets (as of 6/30):	$195.8 billion / $5.0 trillion	**# of Holdings:**	8,345
Style:	Core	**Fund/Quant:**	N.A.
Manager Location:	Malvern, PA	**Date Funded:**	December 2003

The fund is passively managed to track the performance of the Bloomberg Barclays U.S. Aggregate Float Adjusted Bond index. The manager uses an index sampling technique to invest in investment-grade corporate, U.S. Treasury, international dollar denominated bonds, mortgage-backed and asset-backed securities of varying maturities in order to create a portfolio of intermediate duration like the Bloomberg Barclays U.S. Aggregate Float Adjusted Bond Index, which currently ranges between 5 and 10 years.

Vanguard Total International Stock Index Fund Plus

Mandate:	International Equity	**Benchmark:**	FTSE Global All Cap ex US Index
Product assets/Firm Assets (as of 6/30):	$331.2 billion / $5.0 trillion	**# of Holdings:**	6,283
Style:	Core	**Fund/Quant:**	N.A.
Manager Location:	Malvern, PA	**Date Funded:**	December 2003

The fund is passively managed to track the returns of the FTSE Global All Cap ex U.S. Index, a free-float-adjusted market-capitalization-weighted index designed to measure equity market performance in developed markets and emerging markets, excluding the U.S. The fund invests in small, mid and large cap stocks in the market index and includes more than 5,300 stocks of companies located in 46 countries. The fund invests substantially all of its assets in the common stocks included in its target index. Fund assets are allocated based on each regions weighting in the index.

SIF Money Market Fund Manager

State Street Global Advisors

Mandate:	Cash	**Benchmark:**	90 Day T Bill
Product assets/Firm Assets (as of 6/30):	$53.0 billion / $2.7 trillion	**# of Holdings:**	154
Style:	Short-Term Cash	**Fund/Quant:**	Fundamental
Manager Location:	Boston, MA	**Date Funded:**	July 1999

The Money Market Fund seeks to provide safety of principal, daily liquidity and a competitive yield over the long term. The Fund is not a "money market fund" registered with the Securities and Exchange Commission, and is not subject to the various rules and limitations that apply to such funds. There can be no assurance that the Fund will maintain a stable net asset value.

The Fund invests in a diversified portfolio of U.S. dollar-denominated securities issued or guaranteed by the U.S. Government or its agencies or instrumentalities; debt securities of domestic or foreign corporations; mortgage-backed and other asset-backed securities; taxable and tax-exempt municipal bonds; obligations of international agencies or supranational entities; inflation-indexed bonds; structured notes; loan participations; delayed funding loans and revolving credit facilities; and short-term investments, such as repurchase agreements, bank certificates of deposit, fixed time deposits, and bankers' acceptances.

SIF Stable Value Fund Manager

Galliard Capital Management, Inc.

Mandate:	Stable Value	**Benchmark:**	3 Yr Constant Maturity Treasury Index +0.45%
Product assets/Firm Assets (as of 6/30):	$77.6 billion / $90.4 billion	**# of Holdings:**	3,926
Style:	Core Bond and Insurance Wrappers	**Fund/Quant:**	Fundamental
Manager Location:	Minneapolis, MN	**Date Funded:**	November 1994

Galliard Capital Management manages the Stable Value Fund in the Supplemental Investment Fund. The Stable Value Fund is managed to provide preservation of principal, maintain adequate liquidity to meet potential withdrawals, and produce a level of steady, positive income. The manager invests the Fund in well diversified portfolios of U.S. dollar denominated, investment grade fixed income securities. The manager also invests in investment contracts issued by banks and insurance companies that assure that participants can transact at book value (principal plus accrued interest) as well as maintain a relatively stable return profile for the portfolio regardless of daily market changes. To maintain necessary liquidity, the manager invests a portion of the portfolio in its Stable Return Fund and in cash equivalents. The Stable Return Fund is a large, daily priced fund consisting of a wide range of stable value instruments that is available to retirement plans of all sizes.

Minnesota Target Retirement Funds

State Street Global Advisors

Mandate:	Diversified Portfolio that glides the allocation according to participants retirement age	**Benchmark:**	11 Asset Classes
Product assets/Firm Assets (as of 6/30):	$43.5 billion / $2.8 trillion	**# of Holdings:**	N.A.
Style:	Target Date Funds	**Fund/Quant:**	N.A.
Manager Location:	Boston, MA	**Date Funded:**	July 2011

The MN Target Retirement Funds managed by State Street Global Advisors, seek to offer complete, low cost investment strategies with asset allocations which become more conservative as employees near retirement. Each Fund seeks to achieve its objective by investing in a set of underlying SSgA collective trust funds representing various asset classes. Over time, the allocation to asset classes and funds change according to a predetermined "glide path". (The glide path represents the shifting of asset classes over time and does not apply to the Income Fund.) Each Fund's asset allocation will become more conservative as it approaches its target retirement date. This reflects the need for reduced investment risks as retirement approaches and the need for lower volatility of a portfolio, which may be a primary source of income after retiring.

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NON-RETIREMENT PROGRAM

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Non-Retirement Funds

The State Board of Investment established the various Non-Retirement Funds to provide certain Minnesota public sector entities the opportunity to invest in a U.S. equity fund, a U.S. bond fund, or a money market to facilitate the achievement of its investment objectives. The funds are available to those non-retirement entities that are authorized to invest in these asset classes with the SBI. Currently, all or some of these options are available to designated trust funds, local Other Postemployment Benefit (OPEB) trusts, Qualifying Governmental Entities, and other state and public sector entities. Participants may allocate their investments among one or more funds that are appropriate for their needs and are within the rules and eligibility established for the participating entities (Figure 34).

Investment Options

There are a total of three investment options and each one offers different advantages and risks. As of June 30, 2018, participating plans invested a total of $3.7 billion with the Funds (Figure 33).

Investment Management

Equity Fund
The equity segment is passively managed BNY Mellon Asset Management North America Corporation and tracks the performance of the S&P 500 Index (see page 108).

Bond Fund
The Non-Retirement Bond Fund is actively managed by Prudential Global Investment Management to add incremental value through sector, security and yield curve decisions (see page 109).

The Assigned Risk Bond Fund is actively managed by RBC Global Asset Management to provide cash for the payment of worker compensation claims (see page 106-107).

Money Market Fund
The Money Market Fund provides safety of principal by investing in high-quality short-term money market securities. It is managed by State Street Global Advisors (see page 110).

Figure 33. Non-Retirement Fund Options

Fund Options	Assets as of 6/30/18 (thousands)
Non-Retirement Equity Fund	$2,201,266
Non-Retirement Bond Fund	$1,148,361
Non-Retirement Money Market Fund	$101,405
Assigned Risk Bonds	$254,870
Total Assets Invested*	**$3,705,902**

* Investments exclude $75 million of Met Council OPEB assets managed in a separate investment strategy.

Figure 34. Non-Retirement Funds Participants

Participants

Trusts	Assets (thousands)
Permanent School Fund	$1,391,420
Environmental Trust Fund	1,116,134
Assigned Risk Plan(1)	318,972
Closed Landfill Investment Fund	88,565
IRRRB (Iron Range Resources and Rehabilitation Board)	143,117
Other Trusts*	89,560
Total	**$3,147,769**

(1) The Assigned Risk Plan includes $254,870 invested with an external fixed income manager.

* Duluth Community Investment Trust, Emergency Medical Services, Ethel Currey, Life Time Fish and Wild Life, Metropolitan Landfill Contingency Action Trust, Mitigation Easement Stewardship, Natural Resources Conservation, Saint Louis County Environmental, Water and Soil Conservation Easement, and Winona State.

OPEBs	Assets (thousands)
Anoka County (Irrevocable)	$ 66,544
Duluth	58,531
Metropolitan Council	280,459
Ramsey County (Irrevocable)	74,142
Washington County	57,817
Other OPEBs**	98,692
Total	**$636,185**

** Carver County, City of Eagan, City of Virginia, Crosby-Ironton ISD #182, Fillmore Central Schools #2198, Foley Public Schools ISD #51, Hastings ISD #200, Kingsland ISD #2137, Mendota Heights Eg WSP #197, Metro Mosquito Control District, Mounds View ISD #621, Mt. Iron-Buhl District #712, Ogilvie ISD #333, Roseville District #623, Scott County, Staples Motley #2170, Washington County, and Yellow Medicine ISD #2190.

Qualifying Governmental Entities	Assets (thousands)
City of Woodbury	$3,112

The Permanent School Fund is a trust fund created by the Minnesota State Constitution and is designated as a long-term source of revenue for public schools. Proceeds from land sales, mining royalties, timber sales, lake shore and other leases are invested in the Fund. Income generated by the Fund's assets is appropriated directly to school districts. On June 30, 2018, the market value of the Fund was $1.4 billion.

Investment Objective

The State Board of Investment invests the Permanent School Fund to produce a growing level of spendable income for school districts within the constraints of maintaining adequate portfolio quality and liquidity.

Investment Constraints
The Fund's investment objectives are influenced by the legal provisions under which its investments must be managed. These provisions require that the Fund's principal remain inviolate. Any net realized capital gains from stock or bond investments must be added to the principal. Moreover, if the Fund realizes net capital losses, these losses must be offset against interest and dividend income before such income can be distributed. Finally, all interest and dividend income must be distributed in the year in which it is earned.

Asset Allocation

In order to produce a growing level of spendable income, the Fund has exposure to equities. The current asset allocation is 50% stocks/48% bonds/2% cash.

Prior to fiscal year 1998, the Permanent School Fund had been invested entirely in fixed income securities for more than a decade. While this asset allocation maximized current income, it limited the long-term growth of the Fund and caused the income stream to lose value in inflation adjusted terms, over time.

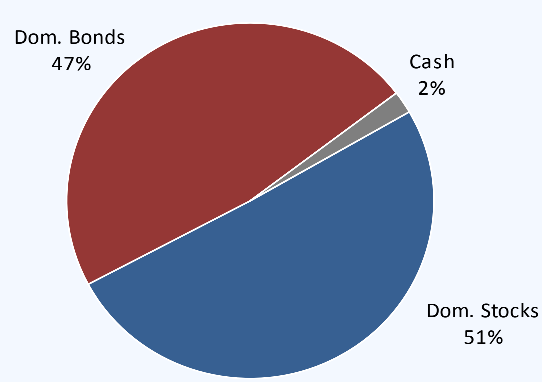
To solve both issues, a proposal to introduce equities to the Fund's asset mix was presented during fiscal year 1997. Since this modification would reduce short-term income and have budgetary implications for the state, the consent of the executive and legislative branches was necessary. It was favorably received by the Legislature and incorporated into the K-12 education finance bill. As a result, the Fund allocation was shifted to a 50% stocks/48% bonds/2% cash allocation during July 1997.

Figure 35 presents the actual asset mix of the Permanent School Fund at the end of fiscal year 2018.

Investment Management

Assets of the Permanent School Fund are invested in the Non-Retirement Equity, Bond and Money Market Funds (see pages 108-110).

Figure 35. Permanent School Fund Asset Mix as of June 30, 2018



Investment Performance

During the fiscal year, the ***stock*** segment of the Permanent School Fund slightly underperformed its benchmark, the S&P 500.

The ***bond*** segment outperformed its benchmark by 0.1 percentage point during the current fiscal year.

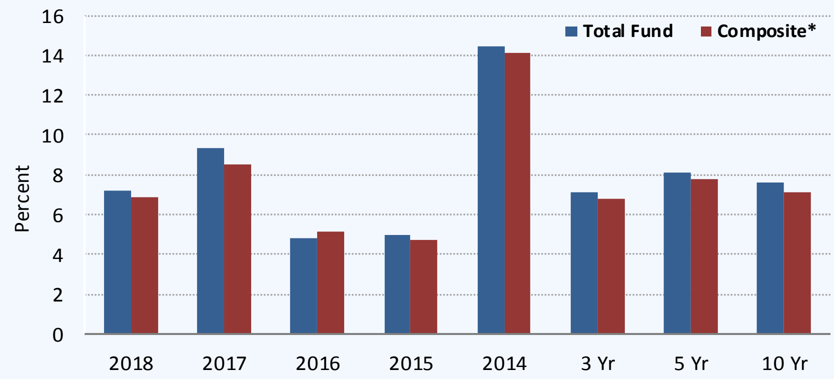
Overall, the Permanent School Fund provided a return of 7.2% for fiscal year 2018, outperforming its composite index by 0.3 percentage point. The Fund outperformed its composite index over the ten year period by 0.5 percentage point.

Total account performance results for the last three, five and ten years are shown in Figure 36.

Spendable income generated by the portfolio over the last five fiscal years is shown below:

Fiscal Year	Millions
2014	$24
2015	$26
2016	$28
2017	$30
2018	$33

Figure 36. **Permanent School Fund Performance For Periods Ending June 30, 2018**



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Total Fund	**7.2%**	**9.3%**	**4.8%**	**5.0%**	**14.4%**	**7.1%**	**8.1%**	**7.6%**
Composite*	6.9	8.5	5.1	4.7	14.1	6.8	7.8	7.1
Stock Segment	**14.3**	**17.9**	**4.0**	**7.5**	**24.5**	**11.9**	**13.4**	**10.2**
S&P 500	14.4	17.9	4.0	7.4	24.6	11.9	13.4	10.2
Bond Segment	**-0.3**	**0.8**	**5.7**	**2.5**	**5.0**	**2.0**	**2.7**	**4.4**
BB Barclays Agg.	-0.4	-0.3	6.0	1.9	4.4	1.7	2.3	3.7

* 50% S&P 500/ 48% Bloomberg Barclays U.S. Aggregate/ 2% 3 Month T-Bills.

The Environmental Trust Fund was established in 1988 by the Minnesota Legislature to provide a long-term, consistent and stable source of funding for activities that protect and enhance the environment. On June 30, 2018, the market value of the Fund was $1.1 billion.

By statute, the State Board of Investment invests the assets of the Environmental Trust Fund. The Legislature funds environmental projects from a portion of the market value of the Fund.

Investment Objective

The Environmental Trust Fund's investment objective is long-term growth in order to produce a growing level of funding within the constraints of maintaining adequate portfolio liquidity.

A constitutional amendment passed in November 1998 continues the mandate that 40% of the net proceeds from the state lottery be credited to the Fund through 2025.

The amendment provides for spending 5.5% of the Fund's market value annually. The amendment eliminated certain accounting restrictions on capital gains and losses as well as the provision that the principal must remain inviolate.

Asset Allocation

After the constitutional amendment was adopted in November 1998, SBI staff worked with the Legislative Citizen Commission on Minnesota Resources to establish an asset allocation policy that is consistent with the Commission's goals for spending and growth of the Fund. The allocation positions the Fund for an appropriate long-term growth potential to meet the Fund's objective to produce a growing level of funding.

The current long-term asset allocation targets for the Fund are:

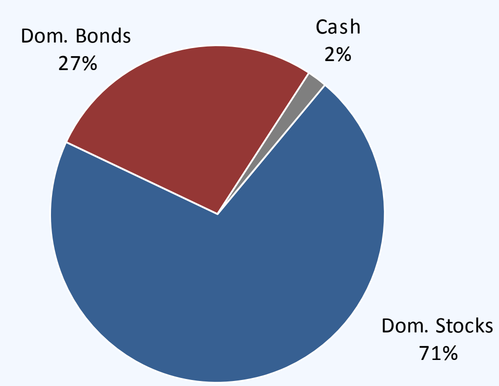
Domestic Stocks	70%
Domestic Bonds	28%
Cash	2%

Figure 37 presents the actual asset mix of the Fund at the end of fiscal year 2018.

Investment Management

The Environmental Trust Fund is invested in the Non-Retirement Equity, Bond and Money Market Funds (see pages 108-110).

Figure 37. Environmental Trust Fund Asset Mix as of June 30, 2018



Investment Performance

During the fiscal year, the ***stock*** segment slightly underperformed its benchmark.

The ***bond*** segment outperformed its benchmark by 0.1 percentage point during the fiscal year.

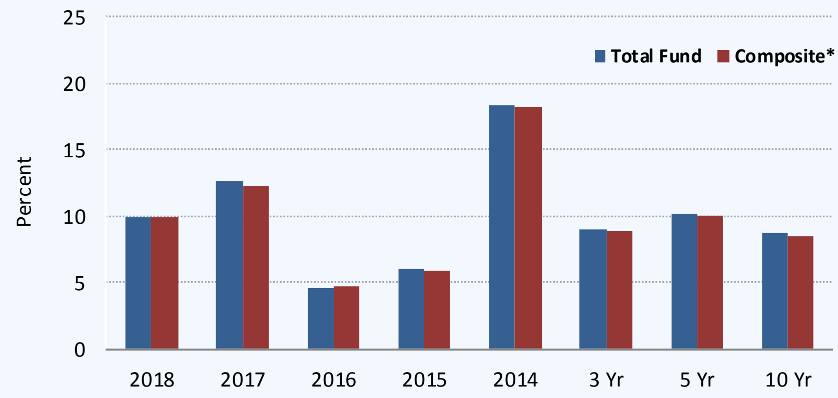
Overall, the Environmental Trust Fund provided a return of 9.9% for fiscal year 2018 and matched its composite index. The Fund outperformed its composite index over the ten year time period by 0.3 percentage point.

Performance results are presented in Figure 38.

Spendable income generated by the Fund over the last five fiscal years is shown below:

Fiscal Year	Millions
2014	$34
2015	$34
2016	$46
2017	$46
2018	$51

Figure 38. Environmental Trust Fund Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Total Fund	**9.9%**	**12.6%**	**4.5%**	**6.0%**	**18.3%**	**9.0%**	**10.1%**	**8.7%**
Composite*	9.9	12.2	4.7	5.8	18.2	8.9	10.0	8.4
Stock Segment	**14.3**	**17.9**	**4.0**	**7.5**	**24.5**	**11.9**	**13.4**	**10.2**
S&P 500	14.4	17.9	4.0	7.4	24.6	11.9	13.4	10.2
Bond Segment	**-0.3**	**0.8**	**5.7**	**2.5**	**5.0**	**2.0**	**2.7**	**4.3**
BB Barclays Agg.	-0.4	-0.3	6.0	1.9	4.4	1.7	2.3	3.7

* Weighted 70% S&P 500/ 28% Bloomberg Barclays U.S. Aggregate/ and 2% 3 month T-Bill.

The Closed Landfill Investment Fund is a trust fund created by the Minnesota Legislature to invest money to pay for the long-term costs of maintaining the integrity of landfills in Minnesota once they are closed. On June 30, 2018 the market value of the Fund was $89 million.

Investment Objective

The investment objective of the Closed Landfill Investment Fund is to increase the market value of the Fund and to reduce volatility in order to meet future expenditure needs.

Asset Allocation

The Fund is invested in a balanced portfolio of domestic stocks (70%) and bonds (30%). Stocks provide the potential for significant capital appreciation, while bonds act as a deflation hedge and provide portfolio diversification. Figure 39 presents the actual asset mix of the Closed Landfill Investment Fund at the end of fiscal year 2018.

Investment Management

Assets of these accounts are invested by the SBI in the Non-Retirement Equity and Bond Funds (see pages 108-109).

Investment Performance

During the fiscal year, the ***stock*** segment of the Closed Landfill Investment Fund slightly underperformed its benchmark, the S&P 500.

The ***bond*** segment outperformed its benchmark by 0.1 percentage point during the current fiscal year.

For fiscal year 2018, the Fund outperformed its composite benchmark by 0.2 percentage point. The fund matched its composite index for the ten year period. Performance results are shown in Figure 40.

Figure 39. Closed Landfill Investment Fund Asset Mix as of June 30, 2018

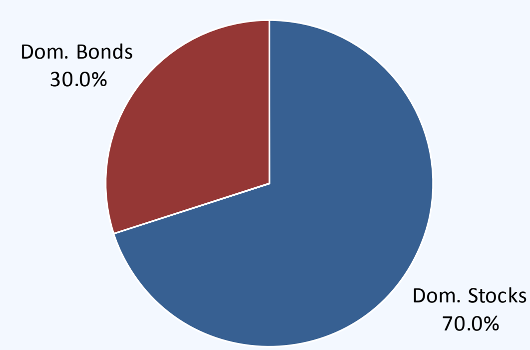
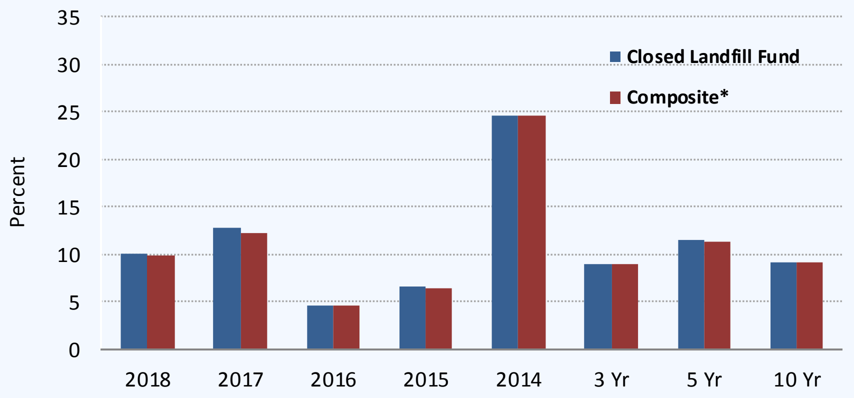


Figure 40. Closed Landfill Investment Fund Performance For Periods Ending June 30, 2018



	2018	2017	2016	2015	2014	Annualized 3 Yr.	5 Yr.	10 Yr.
Total Fund	**10.0%**	**12.7%**	**4.5%**	**6.6%**	**24.5%**	**9.0%**	**11.4%**	**9.2%**
Composite Index*	9.8	12.2	4.6	6.4	24.6	8.9	11.3	9.2
Stock Segment	**14.3**	**17.9**	**4.0**	**7.5**	**24.5**	**11.9**	**13.4**	**10.2**
S&P 500	14.4	17.9	4.0	7.4	24.6	11.9	13.4	10.2
Bond Segment	**-0.3**	**0.8**	**5.7**	**--**	**--**	**2.0**	**--**	**--**
BB U.S. Gov't Intermediate	-0.4	-0.3	6.0	--	--	1.7	--	--

* 70% S&P 500/30% Bloomberg Barclays U.S. Aggregate. Prior to 9/20/14 the fund allocation was 100% domestic equities.

These accounts are the assets set aside by local units of government for the payment of retiree benefits trusteed by the Public Employees Retirement Association. On June 30, 2018, the total market value of these accounts was $636 million.

Under the provisions of *Minnesota Statutes*, Section 471.6175, local units of government, including school districts, may choose PERA as the trustee to administer their postemployment health benefits. Assets of these accounts are invested by the SBI Non-Retirement Equity and Bond Funds (see pages 108 and 109).

As of June 30, 2018, there were 22 entities with OPEB investment accounts invested by the SBI. In total, these accounts represented $636 million. Staff anticipates that the number of these accounts will increase in the future.

Duluth OPEB

The SBI is required to report the returns provided on assets invested by the City of Duluth for this purpose. Duluth made its first investment with the SBI in July 2007. As of June 30, 2018 the market value of the Duluth OPEB Fund was $58.5 million and the returns were as follows:

	1 Yr.	3 Yr.	5 Yr.
Public Equity	14.3%	11.9%	13.4%
Fixed Income	-0.3	2.0	2.7
Total	**10.3%**	**9.1%**	**10.2%**

Duluth is responsible for the asset allocation decisions in this account and as of June 30, 2018, the asset allocation was the following:

	Actual Asset Mix
Public Equity	74.5%
Fixed Income	25.5
Total	**100.0%**

The Minnesota Workers Compensation Assigned Risk Plan was established in 1983 to provide workers' compensation coverage to Minnesota employers rejected by a private insurance carrier. On June 30, 2018, the market value of the Plan's portfolio was $319 million.

The Assigned Risk Plan operates as a non-profit, tax-exempt entity and is administered by the Department of Commerce. The Plan provides disability income, medical expenses, retraining expenses and death benefits with payments being 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 ***bond*** segment is invested to fund the shorter-term liabilities (less than 10 years) and the common stock 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 ***stock*** 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 Stocks	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 41 presents the actual asset mix of the Assigned Risk Plan at the end of fiscal year 2018.

Investment Management

RBC Global Asset Management (U.S.) Inc. (RBC GAM-US) manages the bond segment of the Assigned Risk Plan, and the stock portfolio is currently managed in the Non-Retirement Equity Fund.

Bond Segment

RBC GAM-US uses a fundamental approach in managing the portfolio, with a focus primarily on security selection and secondarily on sector analysis. RBC GAM-US has managed the bond portfolio since July 1991.

Stock Segment

The stock segment is structured to fund the longer-term liabilities of the Plan and is managed by BNY Mellon Asset Management North America Corporation in the Non-Retirement Equity Fund.

Investment Performance

Due to the focus on liability matching, the Assigned Risk Plan's investment portfolio is conservatively structured. While active management is utilized, 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 fixed income component is a custom benchmark which reflects the duration target established for the bond segment (approximately three years).

— The target for the equity component is the S&P 500.

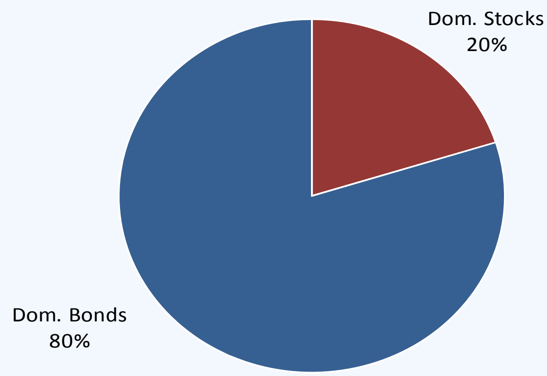
During fiscal year 2018, the ***bond*** segment outperformed its benchmark by 0.1%. The ***stock*** segment underperformed its benchmark by 0.1 percentage point.

Assigned Risk Plan

Overall, the Assigned Risk Plan provided a return of 2.4% for fiscal year 2018, which was 0.2 percentage point above the composite index. For the ten year period, the portfolio outperformed by 0.3 percentage point.

Historical performance results are presented in Figure 42.

Figure 41. Assigned Risk Plan Asset Mix as of June 30, 2018



Fixed Income Manager

RBC Global Asset Management (U.S.) Inc.

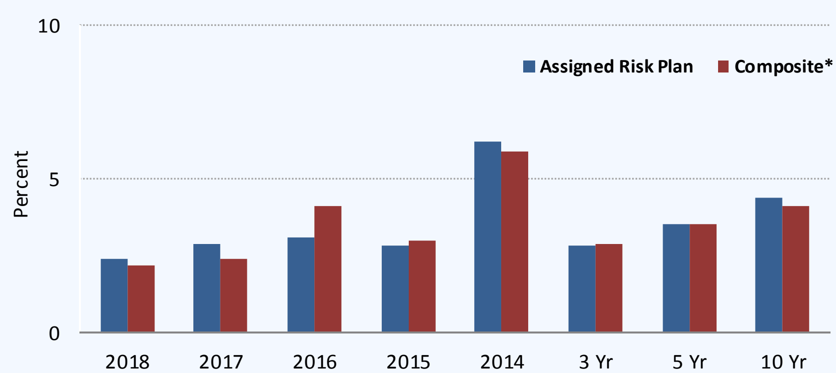
RBC GAM-US manages the fixed income portfolio for the Assigned Risk Plan. The main objective for the portfolio is to provide cash for the payment of workers compensation claims on the required dates. Because of the uncertainty of premium and liability cash flows, the fund is invested conservatively and is benchmarked to the Bloomberg Barclays Intermediate Government Index.

Equity Manager

BNY Mellon Asset Management North America Corporation.

See page 108 for more detail.

Figure 42. Assigned Risk Plan Performance For Periods Ending June 30, 2018



						Annualized		
	2018	2017	2016	2015	2014	3 Yr.	5 Yr.	10 Yr.
Total Fund	**2.4%**	**2.9%**	**3.1%**	**2.8%**	**6.2%**	**2.8%**	**3.5%**	**4.4%**
Composite Index*	2.2	2.4	4.1	3.0	5.9	2.9	2.9	4.1
Stock Segment	**14.3**	**19.6**	**-1.1**	**6.7**	**25.3**	**10.6**	**12.6**	**9.5**
S&P 500	14.4	17.9	4.0	7.4	24.6	11.9	13.4	10.2
Bond Segment	**-0.6**	**-1.1**	**4.0**	**1.7**	**1.5**	**0.8**	**1.1**	**2.9**
BB U.S. Gov't Intermediate	-0.7	-1.2	3.9	1.8	1.5	0.6	1.0	2.4

* Weighted 20% stocks, 80% bonds.

BNY Mellon Asset Management North America Corporation manages the Non-Retirement Equity Fund that is 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, 2018, the total market value of the Non-Retirement Equity Fund was $2.2 billion.

The Non-Retirement Equity Fund is an investment vehicle that provides domestic equity exposure to entities that have received authority to use this vehicle. The types of entities that invest in the Non-Retirement Equity Fund include State and other Trust funds and 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. 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

This fund provides 100% domestic equity exposure.

Investment Management

On December 1, 2017 the management of the fund was transferred from the SBI internal investment staff to BNY Mellon Asset Management North America Corporation. 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.

Investment Performance

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

For fiscal year 2018, the Non-Retirement Equity Fund slightly underperformed its benchmark, the S&P 500 Index. Performance results are shown in Figure 43.

Figure 43. Non-Retirement Equity Fund Performance for Periods Ending June 30, 2018

		Annualized		
	1 Yr.	**3 Yr.**	**5 Yr.**	**10 Yr.**
Non-Retirement Equity Fund*	14.3%	11.9%	13.4%	10.2%
S&P 500 Index	14.4	11.9	13.4	10.2

* Actual returns are calculated net of fees.

Non-Retirement Bond Fund Manager

Prudential Global Investment Management manages the Non-Retirement Bond Fund that is used by various state trust funds such as the Permanent School Fund, Environmental Trust Fund, and Closed Landfill Investment Fund. On June 30, 2018, the total market value of the Non-Retirement Bond Fund was $1.1 billion.

Investment Objectives

The investment objectives for the Non-Retirement Bond Fund are to deliver cumulative returns in excess of 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.

Asset Allocation

The composition of the Fund as of June 30, 2018 is shown in Figure 44. At the end of fiscal year 2018, the Non-Retirement Bond Fund had an effective duration of 5.9 years vs. the benchmark duration of 6.0 years and a yield to maturity of 3.5% vs. the benchmark yield to maturity of 3.3%.

Investment Management

On December 1, 2017 the management of the fund was transferred from the SBI internal staff to Prudential Global Investment Management (PGIM). 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. 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 and mortgage securities.

Current Positioning

Characteristics of the portfolio as of June 30, 2018 are shown in Figure 45. PGIM has the portfolio duration positioned roughly equal to the benchmark, and has modestly reduced its exposure to corporate bonds as the outlook for further spread tightening is diminished.

Investment Performance

The benchmark for the Non-Retirement Bond Fund is the Bloomberg Barclays U.S. Aggregate Bond Index, a broad-based index of investment grade, U.S. dollar denominated, fixed rate taxable bonds. For fiscal year 2018, the Non-Retirement Bond Fund matched its benchmark and outperformed for all other periods. Historical performance results are presented in Figure 46.

Figure 44. Non-Retirement Bond Fund Distribution as of June 30, 2018

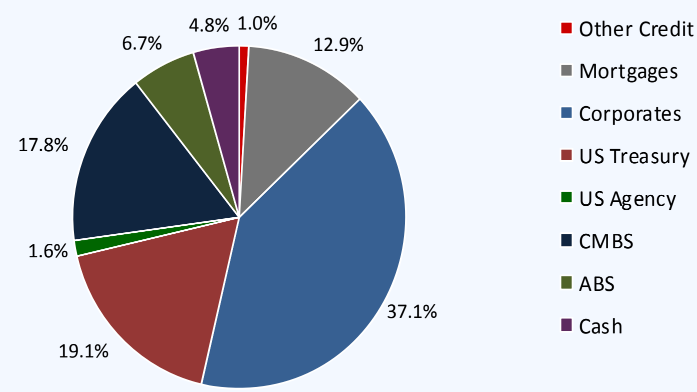


Figure 45. Fixed Income Characteristics for Period Ending June 30, 2018

	Bond Fund	Benchmark
Effective Duration (yrs)	5.92	5.97
Convexity	0.97	0.81
Coupon Rate (%)	3.40	3.16
Yield to Maturity (%)	3.54	3.29
Option Adjusted Spread (bps)	79	50
Rating – Moody's	A1	Aa2

Figure 46. Non-Retirement Bond Fund Performance for Periods Ending June 30, 2018

		Annualized		
	1 Yr.	3 Yr.	5 Yr.	10 Yr.
Non-Retirement Bond Fund	-0.4%	2.0%	2.7%	4.3%
Bloomberg Barclays U.S. Agg.	-0.4%	1.7%	2.3%	3.7%

State Street Global Advisors manages the Non-Retirement Money Market Fund that is used by various state trust funds such as the Permanent School Fund and Environmental Trust Fund. On June 30, 2018, the total market value of the Non-Retirement Money Market Fund was $101 million.

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 funds.

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.

Investment Management

The Non-Retirement Money Market Fund is managed by State Street Global Advisors, the organization that 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.

For fiscal year 2018, the Non-Retirement Money Market outperformed its benchmark, the iMoney Net All Taxable Money Fund Average. Performance is shown in Figure 47 below.

Figure 47. Non-Retirement Money Market Fund Performance for Periods Ending June 30, 2018

		Annualized		
	1 Yr.	**3 Yr.**	**5 Yr.**	**10 Yr.**
Non-Retirement Money Market Fund*	1.4%	0.7%	0.5%	0.5%
iMoney Net All Taxable Money Fund Average	1.0	0.4	0.3	0.2

* Actual returns are calculated net of fees.

MINNESOTA
COLLEGE SAVINGS PLAN

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The Minnesota College Savings Plan is an education savings plan designed to help families set aside funds for future college costs. It is established under the provisions of the Internal Revenue Code Section 529, which authorized these types of savings plans to help families meet the costs of qualified colleges nationwide. On June 30, 2018, the market value of the Plan was just over $1.4 billion.

Program Structure

The Minnesota Legislature authorized establishment of the Minnesota College Savings Plan (the Plan) in 1997 and in 2001 the Plan was launched. The State Board of Investment (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. (TFI) to provide administrative, marketing, communication, recordkeeping and investment management services.

Objective

The objective of the Plan is to be competitive in the market place by providing quality investment options with low fees to its participants. The Plan is a direct-sold plan (i.e. may be purchased directly without an investment advisor) and offers nine Age-Based Managed Allocation Options, three Risk-Based Allocation Options and seven Static Investment Options. The Plan has both active and passive management through TIAA's mutual funds. While all options are priced daily, participants may re-allocate their investment twice per calendar year.

Age Based Managed Allocation Option

This investment option seeks to align the investment objective and level of risk to the investment horizon by taking into account the beneficiary's age and the number of years before the beneficiary turns 18 and is expected to enter college. Depending on the beneficiary's age, the assets contributed to this option are placed in one of nine age bands. As the beneficiary ages, assets are moved from one age band to the next. The age bands for younger beneficiaries seek a favorable long-term return by investing in a high level of risk but greater potential for higher returns than more conservative investments. As a beneficiary nears college age, the age bands allocate less to equity and real estate and more to fixed-income and money market securities to preserve capital.

Risk Based Allocation Option

These Investment Options provide a fixed risk level and do not change as the beneficiary ages. There are three separate Risk Based Allocation Options: Aggressive, Moderate and Conservative.

The aggressive option seeks to generate a favorable long-term return by investing in mutual funds that invest primarily in equity securities and, to a lesser extent, invest in debt securities. Approximately 48% of the fund is allocated to U.S. equity securities; 19% to developed international equities; 5% to emerging markets equities; 8% real estate securities; 14% to public, investment-grade, taxable debt securities denominated in U.S. dollars; 4% to inflation-linked bonds and 2% to high yielding debt securities.

The moderate option seeks to provide moderate growth by investing in a balanced mix of domestic and foreign equity securities, fixed income and real estate-related securities. Approximately 36% of the fund is allocated to U.S. equity securities; 14% to developed international equities; 4% to emerging markets equities; 6% real estate securities; 28% to public, investment-grade, taxable debt securities denominated in U.S. dollars; 8% to inflation-linked bonds and 4% to high yielding debt securities.

The conservative allocation option seeks to provide a conservative to moderate total return by investing in mutual funds that invest primarily in debt securities and, to a lesser extent, invests in equity securities. This option also invests in a funding agreement. Approximately 18% of the fund is allocated to U.S. equity securities; 7% to developed international equities; 2% to emerging markets equities; 3% real estate securities; 32% to public, investment-grade, taxable debt securities denominated in U.S. dollars; 9% to inflation-linked bonds; 4% to high yielding debt securities and

25% in a funding agreement issued by TIAA-CREF Life (see the Principal Plus Interest Option below for further detail on the funding agreement).

Static Options

- ***International Equity Index Option***
  This Investment Option seeks to provide a favorable long-term total return, mainly through capital appreciation. Approximately 80% of the fund is allocated to equity securities of issuers located in developed markets and 20% is allocated to equity securities of issuers located in emerging markets.

- ***U.S. and International Equity Option***
  This investment option seeks to provide a favorable long-term total return, mainly from capital appreciation, by allocating primarily in a blend of equity and real estate-related securities.

  Approximately 60% of the fund is allocated to U.S. equity securities, 24% to equity issuers located in developed markets and 6% to equity securities of issuers located in emerging markets and 10% to real estate-related securities.

- ***U.S. Large Cap Equity Option***
  This investment option seeks to provide a favorable long-term total return mainly from capital appreciation. All assets of the fund are invested in an S&P 500 index fund.

- ***Equity and Interest Accumulation Option***
  This investment seeks to provide a moderate long-term total return. Approximately half of its assets are invested in an equity index fund and the other half in a funding agreement.

- ***100% Fixed-Income Option***
  This investment option seeks to provide preservation of capital along with a moderate rate of return through a diversified mix of fixed income investments. Approximately 70% of the fund is allocated to public, investment-grade, taxable bonds denominated in U.S. dollars, and 20% to inflation-linked bonds and 10% is allocated to a high yield fund.

- ***Money Market Option***
  This investment option seeks to provide current income consistent with preserving capital.

  The money market option converted to a "governmental money market fund" in October 2016. As a result, the Fund is limited to U.S. Government securities and will invest at least 99.5% of its total assets in cash, short-term U.S. Government securities and/or repurchase agreements collateralized fully by cash or U.S. Government securities.

- ***Principal Plus Interest Option***
  This investment option seeks to preserve capital and provide a stable return. The contributions into this investment option 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 and allows for the possibility that additional interest may be credited as declared periodically by TIAA-CREF Life.

As of June 30, 2018, the Minnesota College Savings Plan distribution of assets is shown in Figure 48 and performance is shown in Figure 49.

Figure 48. **MN College Savings Plan Assets by Investment Option as of June 30, 2018**

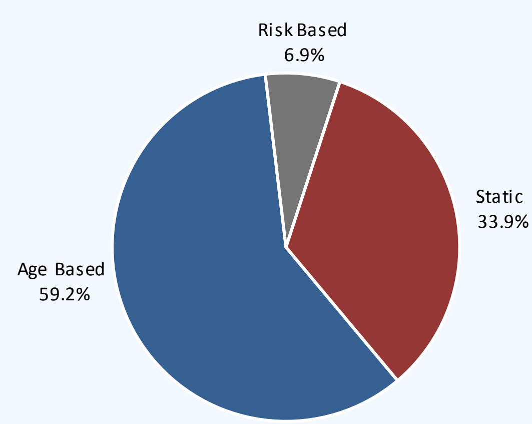

Figure 49. Minnesota State College Savings Plan (529 Plan) for Periods Ending June 30, 2018

	RETURNS[1]				
	1 Year		3 Year		Market
	Actual %	Bmk[2] %	Actual %	Bmk[2] %	Value[3] ($ in millions)
Age Based Managed Allocation Option					
Age Band 0-4 Years	9.4	9.2	8.0	8.0	$30.7
Age Band 5-8 Years	8.0	8.1	7.2	7.3	69.4
Age Band 9-10 Years	6.8	6.9	6.4	6.5	66.9
Age Band 11-12 Years	5.9	5.9	5.7	5.7	99.4
Age Band 13-14 Years	4.8	4.8	4.9	4.9	133.8
Age Band 15 Years	4.0	3.8	4.1	3.9	81.4
Age Band 16 Years	3.6	3.4	3.6	3.4	80.7
Age Band 17 Years	3.1	2.9	3.2	2.9	75.0
Ages 18 Years and Over	2.8	2.5	2.8	2.4	203.4
Risk Based Allocation Option					
Aggressive Allocation	9.4	9.3	7.9	8.0	21.6
Moderate Allocation	6.9	6.9	6.4	6.5	66.6
Conservative Allocation	5.7	5.5	4.1	4.1	10.2
Static Options					
International Equity Index	6.5	7.2	4.9	5.1	4.9
U.S. and International Equity	11.4	11.6	9.3	9.5	305.8
U.S. Large-Cap Equity	14.1	14.4	11.7	11.9	25.4
Equity and Interest Accumulation	8.0	7.9	6.4	6.1	2.8
100% Fixed-Income	-0.1	0.2	1.7	2.0	13.8
Money Market	1.1	0.9	0.5	0.4	11.1
Principal Plus Interest[4]	1.7	1.3	1.5	0.6	117.0

(1) Returns are reported net of investment management fees, Program Management Fees and State Administrative Fees.

(2) Each Fund benchmark is the aggregate of the returns of the Fund's underlying index funds weighted by the Fund's asset allocation.

(3) Market value of SBI participation in fund.

(4) The credit rating of 1.45% for the underlying Funding Agreement was guaranteed through 8/31/17. Effective 9/1/18, the rate increased to 1.7% and was guaranteed through 8/31/18.

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CASH MANAGEMENT AND RELATED PROGRAMS

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The State Board of Investment manages the cash balances of more than 400 state agency accounts with the objectives of preserving capital, meeting state agency liquidity needs, and providing competitive money market returns. On June 30, 2018, the total market value of these accounts was $13.4 billion.

Invested Treasurer's Cash (ITC)

Most of the cash accounts are invested in a short-term pooled fund referred to as the Invested 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.

Approximately $277.6 million of assets are in separately managed dedicated accounts because of special legal restrictions. The vast majority of these assets are related to state or state agency debt issuance including debt service reserves and proceeds.

Investment Objectives

The investment objectives for investing the state cash accounts are to preserve capital, to meet the state's cash needs without the forced sale of securities at a loss, and to provide a level of current income consistent with the goal of preserving capital.

Asset Allocation

The SBI generates current income while preserving capital 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, short-term corporates, and certificates of deposit. The composition of the Pool as of June 30, 2018 is shown in Figure 50. At the end of the fiscal year, the Pool had a current yield of 2.00% and a weighted average maturity of 97 days.

Investment Management

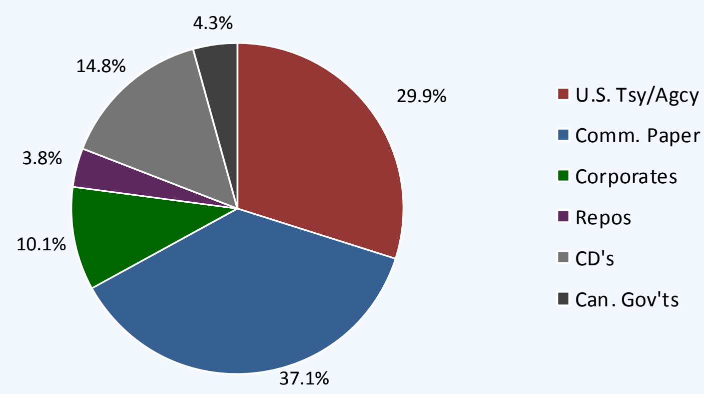
All state cash accounts are managed by SBI investment staff, and most of the assets of the cash accounts are invested in the Invested Treasurer's Cash Pool.

Investment Performance

The SBI measures the performance of the Invested Treasurer's Cash Pool against a benchmark which reflects the maturity structure of the pool.

For fiscal year 2018, the Treasurer's Cash Pool outperformed its benchmark, the iMoneyNet's All Taxable Money Fund Index, by 0.4 percentage point and matched the 3 month T-Bill return. Performance results are shown in Figure 51.

Figure 50. Invested Treasurer's Cash Fund Distribution as of June 30, 2018*



* Totals may not add due to rounding.

Figure 51. Invested Treasurer's Cash Pool Performance for Periods Ending June 30, 2018

		Annualized		
	1 Yr.	**3 Yr.**	**5 Yr.**	**10 Yr.**
Invested Treasurer's Cash Pool*	1.4%	1.0%	0.8%	1.0%
Custom Benchmark**	1.0	0.4	0.3	0.2
3 month T-Bills	1.4	0.7	0.4	0.4

* Actual returns are calculated net of fees.

** The Treasurer's Cash Pool is measured against the iMoneyNet, All Taxable Money Fund Report Average.

Securities Lending Program

The SBI participates in a Securities Lending Program in which securities held by the SBI on behalf of the retirement systems are loaned to banks and security dealers for a daily fee. These loans are fully collateralized. Currently, the SBI's securities lending activity is undertaken by the SBI's master custodian bank, State Street Corporation. State Street generated additional income for the retirement systems of approximately $46.6 million during fiscal year 2018.

Certificate of Deposit Program

The SBI manages a Certificate of Deposit (CD) Program in which it purchases CDs from Minnesota financial institutions. The return SBI receives is based on CD rates quoted in the national market.

The SBI's CD program provides a reliable source of capital to Minnesota financial institutions, regardless of size, many of which do not have access to the national CD market. The Board designed the program so that no single institution is favored in the allocation of assets. Only the cash reserves of the retirement funds are used in the program.

During fiscal year 2018, the SBI purchased $233.1 million of CDs from all Minnesota financial institutions.

Securities Repurchase Program

The SBI created the Securities Repurchase Program to help meet the increased needs of some banks throughout the state.

Under the program, the SBI temporarily buys securities such as Treasuries and Agencies from banks under a repurchase agreement (repo). At the end of the agreement period, the securities are returned to the selling banks ("repurchased") and the bank pays the SBI principal and interest.

The transactions are fully collateralized and range in size from $100,000 to $2 million per institution. For ease of administration, the program uses the same rates, offering dates and maturity dates as the SBI's CD program, and uses only the cash reserves of the retirement funds.

During fiscal year 2018, the SBI purchased $11.8 million in repos from Minnesota financial institutions.

Excess Debt Reserve

The SBI manages excess debt reserve accounts separate from the ITC Pool in order to align with requirements related to the issuance of general obligation bonds.

When the full faith and credit of the state has been pledged for the payment of the state's bonds, the Minnesota Constitution and statutes require the state to have on hand by December 1 of each year an amount sufficient to pay principal and interest on the state's general obligation debt for the next nineteen months. The Tax Return Act of 1986 and the 1986 Internal Revenue Code have established rules surrounding debt issuance, debt service, and yield management.

The SBI complies with these rules by splitting the nineteen months of funds set aside for debt service into two accounts: a "bona fide debt service account" to comply with federal regulations and an "excess reserve account," to comply with the Minnesota Constitution and statutes.

The primary investments used for the reserve accounts are U.S. Treasuries and municipal bonds.

As of fiscal year end 2018, the SBI had $139.7 million invested in the Excess Debt Service Reserve.

POLICY AND
INVESTMENT RESTRICTIONS

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2018 Legislative Update

The 2018 Omnibus Pension Bill introduced sustainability measures similar to those proposed in previous legislative sessions. The bill was signed into law by Governor Dayton after unanimous approval from the Minnesota House and Senate. The bill largely contained changes to the three statewide pension plans: Minnesota State Retirement System (MSRS), Public Employees Retirement Association (PERA) and the Teachers Retirement Association (TRA). The bill reduced the actuarial return assumption for all MSRS, PERA, and TRA administered plans to 7.5% and contained various financial sustainability measures including contribution increases, Cost-of Living Adjustment (COLA) reductions, and direct state aid payments.

The pension bill also contains administrative provisions, including the SBI's proposed amendment authorizing mutual funds as investment options for the Hennepin County Supplemental Retirement Plan. The amendment allows the SBI to offer mutual funds to Hennepin County plan participants in addition to the SBI Supplemental Investment Fund (SIF) options. The SBI would like to offer one, efficient and low cost investment option platform to all Defined Contribution plan participants. The amendment also helps achieve SBI's goal of appropriately separating the defined benefit pension assets from the participant directed defined contribution plan assets to facilitate appropriate changes in either plan.

In a separate bill signed into law by Governor Dayton, the SBI was authorized to invest funds the state received as part of a settlement with 3M.

Sudan Issues

Minnesota Statutes, section 11A.243 concerns the SBI's investment in companies with operations in Sudan. The law requires the SBI to make its best efforts to identify all "scrutinized companies" in which the SBI has direct or indirect stock holdings or could possibly have holdings in the future.

The statute also requires that the SBI communicate with those companies, and divest stocks over a specified period of time if the companies continue their business activities in Sudan.

The SBI receives a list of scrutinized companies from Vigeo Eiris. Staff sends a list of restricted Sudan companies to investment managers quarterly and has required divestment of holdings in compliance with the law. Staff reports to the Board each quarter on its actions to implement the law.

Iran Issues

Minnesota Statutes, section 11A.244, requires the SBI to take a series of steps to identify companies that do business in Iran, communicate with those companies, and divest stock and bonds over a specified period of time if the companies continue their business activities in Iran.

The SBI retains the firm Institutional Shareholder Services, Inc. (ISS) to provide a list of scrutinized companies to implement the law. Staff sends a list of restricted Iran companies to investment managers quarterly and has required divestment of holdings in compliance with the law. Staff reports to the Board each quarter on its actions to implement the law.

Tobacco Issues

At its September 1998 meeting, the Board adopted a resolution that required each active and semi-passive equity manager to divest by September 2001 shares of any company which obtained more than 15% of its revenues from the manufacture of consumer tobacco products. Staff notified each active and semi-passive equity manager of the policy.

Since 2001, the SBI has continued to regularly update the list of restricted tobacco companies and communicate this restricted stock listing to the active and semi-passive equity managers according to this divestment resolution.

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PROXY
SHAREHOLDER INITIATIVES

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Proxies

Shareholder Resolutions

In previous years, the SBI co-sponsored a number of shareholder resolutions. The SBI did not co-sponsor any resolutions during the 2018 proxy season.

As a stockholder the State Board of Investment (SBI) is entitled to participate in corporate annual meetings through direct attendance or by casting its votes by proxy. Through proxy voting, the Board directs company representatives to vote its shares in a particular way on resolutions under consideration at annual meetings. These resolutions range from issues involving the election of corporate directors and ratification of auditors to matters such as merger proposals and corporate social responsibility issues. In effect, as a shareholder the SBI can participate in shaping corporate policies and practices.

The Board recognizes its fiduciary responsibility to cast votes on proxy issues. Except for the shares held by the international managers, the SBI does not delegate the duty to its external investment managers. Rather, the SBI actively votes all shares according to guidelines established by its Proxy Committee.
The Board delegates proxy voting responsibilities to its Proxy Committee which is comprised of a designee of each Board member. The four member Committee meets only if it has a quorum and casts votes on proxy issues based on a majority vote of those present. In the event that it reaches a tie vote or a quorum is not present, the Committee will cast a vote to abstain.

Proxy Voting Guidelines

The Committee has formulated guidelines by which it votes on a wide range of corporate governance and social responsibility issues. Each year the Proxy Committee reviews existing guidelines and determines which issues it will review on a case-by-case basis.

Corporate Governance Issues

The voting guidelines for major corporate governance issues are summarized below:

Routine Matters

In general, the SBI supports management on routine matters such as uncontested election of directors, selection of auditors, and limits on director and officer liability or increases in director and officer indemnification permitted under the laws of the state of incorporation.

Shareholder Rights Issues

In general, the SBI opposes proposals that would restrict shareholder ability to effect change. Such proposals include instituting super-majority requirements to ratify certain actions or events, creating classified boards, barring shareholders from participating in the determination of the rules governing the board's actions (e.g. quorum requirements and the duties of directors), prohibiting or limiting shareholder action by written consent, and granting certain stockholders superior voting rights over other stockholders.

In general, the SBI supports proposals that preserve or enhance shareholder rights to effect change. Such proposals include requiring shareholder approval of poison pill plans, repealing classified boards, adopting secret balloting of proxy votes, reinstating cumulative voting, and adopting anti-greenmail provisions.

Executive Compensation

In general, the SBI supports efforts to have boards of directors comprised of a majority of independent directors, to have compensation committees made up entirely of independent directors, and to have executive compensation linked to a company's long-term performance.

Buyout Proposals

In general, the SBI supports friendly takeovers and management buyouts.

Special Cases

The Proxy Committee evaluates hostile takeovers, contested elections of directors, and re-capitalization plans on a case-by-case basis.

Social Responsibility Issues

The voting guidelines for major social responsibility issues are shown below:

Northern Ireland

The SBI supports resolutions that call for the adoption of the MacBride Principles as a means to encourage equal employment opportunities in Northern Ireland.

Tobacco and Liquor

In general, the SBI supports a variety of tobacco and liquor related resolutions including those that call for corporations to limit their promotion of tobacco and liquor products and to report on their involvement in tobacco issues.

Environmental Protection
In general, the SBI supports resolutions that require a corporation to report or disclose to shareholders company efforts in the environmental arena.

Other Social Responsibility Issues
In general, the SBI supports proposals that require a company to report or disclose to shareholders company efforts concerning a variety of social responsibility issues. In the past, these reporting resolutions have included issues such as affirmative action programs, animal testing procedures and nuclear plant safety procedures.

Summary of FY 2018 Proxy Proposals

During fiscal year 2018 the SBI voted proxies for approximately 2,000 U.S. corporations.

Environmental, social, and governance (ESG) issues continue to make up a large portion of shareholder proposals voted on by the SBI. The 2018 proxy season was notable for the rare occurrence of several first-time proposals receiving majority shareholder support. These particular proposals focused on issues of heightened public concern such as the opioid epidemic and gun violence. Climate change related proxy issues continue to be common and corporate reporting on the issue has increased significantly for companies in the energy and utilities sectors. Issues related to human capital management, such as harassment, gender and racial pay equity, are also of increasing interest to investors.

On the topic of executive compensation, the overall number of advisory votes that did not receive majority shareholder support increased significantly from 2017 to 2018. Major areas of concern during the year were pay packages with front-loaded mega grants and pay packages that are guaranteed even in cases of misconduct. Other notable changes were the new disclosure requirement of CEO to median employee pay ratio, and the elimination of Section 162(m) tax deductions by the Tax Cut and Jobs Act. The impact of these changes will be more apparent in coming years.

In keeping with the trend of the past several years, there was a decline in total number of shareholder proposals submitted to U.S. companies. Part of the decline is attributed to increased investor dialogue with issuers as a means to effect change rather than through a proxy ballot. Another continuing trend is that shareholder proposals submitted by pension funds continue to receive the highest average of support relative to other shareholders.

Mandate on Northern Ireland

Requirements
The SBI is responsible for implementing certain statutory provisions concerning its investments in U.S. companies with operations in Northern Ireland. The statute requires the State Board of Investment (SBI) to:

— Annually compile a list of U.S. corporations with operations in Northern Ireland in which the SBI invests.

— Annually determine whether those corporations have taken affirmative action to eliminate religious or ethnic discrimination. The statute lists nine goals modeled after the MacBride Principles.

— Sponsor, co-sponsor and support resolutions that encourage U.S. companies to pursue affirmative action in Northern Ireland, where feasible.

The statute does not require the SBI to divest existing holdings in any companies and does not restrict future investments by the SBI.

Implementation
The SBI uses the services of ISS to monitor corporate activity in Northern Ireland. In June 2018, the SBI held stocks or bonds in 104 of 187 corporations identified by ISS as having operations in Northern Ireland.

Shareholder Resolutions
The SBI did not file any shareholder resolutions for the 2018 proxy season regarding the MacBride Principles. Shareholder activity has been greatly reduced over the last several years due to the fact that many companies have signed the Principles.

ACCOUNTING INFORMATION

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NOTES TO THE FINANCIAL SCHEDULES
JUNE 30, 2018

Financial Report Background:
The State Board of Investment (SBI) is the investment management vehicle for numerous retirement and non-retirement funds. The funds are separated by legal requirements and grouped into four major investment types: the Retirement Funds, the Non-Retirement Funds, the Assigned Risk Plan, and Other Funds Under Management. The SBI's goal is to maximize returns for each investment type given the appropriate level of risk. For each investment type, the funds are further broken down and reported by the entity responsible for the financial accounting and presentation of the funds. The information provided by the SBI is audited in conjunction with the audit of the reporting entities.

Retirement Funds: The Retirement Funds consist of funds administered by Teachers Retirement Association (TRA), Public Employees Retirement Association (PERA), Minnesota State Retirement System (MSRS), and Local Volunteer Fire Relief Associations. A list of plan participants is provided in a schedule beginning on page 136. Comprehensive Financial Reports are prepared by the respective agencies. These reports can be obtained by contacting TRA at (800) 657-3669, PERA at (800) 652-9026, MSRS at (800) 657-5757.

The Supplemental Investment Fund (SIF) is an investment option within the retirement funds that is available to various groups of participants according to state statute. SBI provides a financial schedule on the SIF as required by statute.

Non-Retirement Funds: The Non-Retirement Funds represent investment vehicles for Trusts and OPEBs. A listing of the Trusts and OPEBs is provided in the participation schedule on page 154. The Comprehensive Financial Reports for the OPEBs are prepared by PERA and are available by calling (800) 652-9026. The Comprehensive Financial Reports for the Trusts are prepared by Minnesota Management and Budget and are available by calling (800) 627-3529.

Assigned Risk Plan: The Assigned Risk Plan is a dedicated governmental fund for which the SBI is the investment vehicle for the assets made available for investment. The Comprehensive Financial Reports can be obtained from Minnesota Management and Budget by calling (800) 627-3529.

Other Funds Under Management: The Other Funds Under Management are the assets the State has made available for investment with SBI. The financial statement presented for the Other Funds represent the investment information at the State Board of Investment. The SBI grouped the financial information for the Other Funds into four major categories: Invested Treasurer's Cash, Debt Service, Housing Finance, and Public Facilities. The detailed financial statements, supporting schedules, and further breakdown of Debt Service, Housing Finance, and Public Facilities can be found in the State's Comprehensive Annual Financial Report available from Minnesota Management and Budget at (800) 627-3529.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Financial Reporting: The SBI reporting requirements changed under the legislation passed during the 2012 legislative session. References in *Minnesota Statutes,* Section 11A.07, subdivision 4 and 11A.14, subdivision 14 to fund and participant annual statements prepared in accordance with generally accepted accounting principles were deleted. These requirements were deemed redundant to statements prepared for the State of Minnesota's Comprehensive Financial Statements and those of PERA, MSRS, and TRA retirement systems.

As required by state statute the SBI has prepared schedules for the SIF, a schedule of participation for all pooled investments, and a schedule of external manager fees.

<u>Authorized Investments:</u> *Minnesota Statutes*, Section 11A.24 authorizes investments to obligations and stocks of the U.S. and Canadian governments, their agencies and their registered corporations; short-term obligations of specified high quality; international securities; participation as a limited partner in venture capital, real estate or resource equity investments; and participation in registered mutual funds.

<u>Security Valuation:</u> All securities are valued at fair value except for U.S. Government short-term securities and commercial paper, which are valued at fair value less accrued interest. Accrued short-term interest is recognized as income as part of "Short-Term Gain". For long-term fixed income securities, SBI uses the Financial Times Interactive Data Services valuation system. This service provides prices for both actively traded and privately placed bonds. For equity securities, SBI uses a valuation service provided by Reuters. The basis for determining the fair value of investments that are not based on market quotations may include audited financial statements, analysis of future cash flows, and independent appraisals.

<u>Recognition of Security Transactions:</u> Security transactions are accounted for as of the date the securities are purchased or sold.

<u>Income Recognition:</u> Pool dividend income is recorded on the ex-dividend date. Pool interest and dividend income are accrued monthly. Short-term interest is accrued monthly and is presented as "Accrued Short-Term Gain."

<u>Amortization of Fixed Income Securities:</u> Premiums and discounts on fixed income purchases are amortized over the remaining life of the security using the "Effective Interest Method."

State Board of Investment
Retirement Fund - Supplemental Investment Accounts
Schedule of Net Position
As of June 30, 2018
Amounts in (000)'s

	Stable Value Fund	Money Market Fund	Bond Fund
Assets			
Short Term Investments			
Stable Value Fixed Interest	$ 1,553,733		
Money Fund		$ 404,024	
Fixed Income Investments			
Bond Pool			$ 171,065
Equity Investments			
Domestic Stock Pool			
International Stock Pool			
Total Investments	$ 1,553,733	$ 404,024	$ 171,065
Liabilities			
Accrued Investment Expense	$ 916		$ 38
Net Supplemental Position Assets Held in Trust	$ 1,552,817	$ 404,024	$ 171,027

Unaudited

Balanced Fund	U.S. Stock Index Fund	U.S. Stock Activiely Managed Fund	Broad International Stock Fund	Volunteer Fire Fighter Account	Total Supplemental Investment Fund
					$ 1,553,733
$ 21,583				$ 4,153	429,760
153,753				40,111	364,929
268,592	$ 614,527	$ 259,912		31,161	1,174,192
			$ 195,969	12,906	208,875
$ 443,928	$ 614,527	$ 259,912	$ 195,969	$ 88,331	$ 3,731,489
$ 38	$ 7	$ 121	$ 106	$ 16	$ 1,242
$ 443,890	$ 614,520	$ 259,791	$ 195,863	$ 88,315	$ 3,730,247

Unaudited

State Board of Investment
Retirement Fund - Supplemental Investment Accounts
Schedule of Changes in Net Position
For the Fiscal Year Ended June 30, 2018
Amounts in (000)'s

	Stable Value Fund	Money Market Fund	Bond Fund
Investment Income			
Interest, Dividends and Other	$ 3,945	$ 6,072	$ 11,180
Net Increase in Fair Value of Investments	$ 34,002		42
Total Investment Income (Loss)	$ 37,947	$ 6,072	$ 11,222
Expenses			
Administrative Expenses	$ (87)	$ (22)	$ (9)
Investment Expenses	(3,789)		(150)
Total Expenses	$ (3,876)	$ (22)	$ (159)
Net Income - Supplemental Investments	$ 34,071	$ 6,050	$ 11,063
Participant Transactions			
Additions	$ 63,474	$ 67,742	$ 14,346
Withdrawals	(109,053)	(53,585)	(9,162)
Net Participant Transactions	$ (45,579)	$ 14,157	$ 5,184
Total Change in Assets	$ (11,508)	$ 20,207	$ 16,247
Net Supplemental Investment Assets Held in Trust:			
Beginning of Fiscal Year	1,564,325	383,817	154,780
End of Fiscal Year	$ 1,552,817	$ 404,024	$ 171,027

Unaudited

Balanced Fund	U.S. Stock Index Fund	U.S. Stock Activiely Managed Fund	Broad International Stock Fund	Volunteer Fire Fighter Account	Total Supplemental Investment Fund
$ 110	$ (5,305)	$ (5,796)	$ 1,013	$ 62	$ 11,281
36,186	81,965	40,494	13,503	4,811	211,003
$ 36,296	$ 76,660	$ 34,698	$ 14,516	$ 4,873	$ 222,284
$ (25)	$ (34)	$ (14)	$ (11)	$ (114)	$ (316)
(148)	(28)	(542)	(433)	(64)	(5,154)
$ (173)	$ (62)	$ (556)	$ (444)	$ (178)	$ (5,470)
$ 36,123	$ 76,598	$ 34,142	$ 14,072	$ 4,695	$ 216,814
$ 27,920	$ 23,121	$ 16,859	$ 12,051	$ 12,635	$ 238,148
(23,233)	(44,507)	(20,296)	(9,398)	(4,434)	(273,668)
$ 4,687	$ (21,386)	$ (3,437)	$ 2,653	$ 8,201	$ (35,520)
$ 40,810	$ 55,212	$ 30,705	$ 16,725	$ 12,896	$ 181,294
403,080	559,308	229,086	179,138	75,419	3,548,953
$ 443,890	$ 614,520	$ 259,791	$ 195,863	$ 88,315	$ 3,730,247

Unaudited

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Combined Retirement Funds			
Correctional Employees Retirement Fund		$ 15,702,947	$ 269,839,671
Highway Patrolmen's Retirement Fund		9,202,049	176,846,696
Judges Retirement Fund		3,441,568	48,708,277
Public Employee Corrections		7,622,300	165,170,959
Public Employee Police & Fire Fund		86,545,461	2,060,634,454
Public Employees Retirement Fund		233,286,011	5,230,419,866
State Employees Retirement Fund		142,943,622	3,224,133,951
Teacher's Retirement Fund		352,441,643	5,399,613,576
		$ 851,185,601	$ 16,575,367,450
Fire Relief Funds			
Alaska		$ 1,876	$ 13,361
Almelund		110,788	68,848
Amboy			11,168
Argyle		4,249	30,268
Arrowhead		1,592	31,302
Askov		2,681	19,100
Audubon		20,200	266,850
Austin		26,313	187,450
Avon			
Backus			
Bagley		7,665	88,382
Balsam		11,943	81,799
Battle Lake		27,934	198,996
Beardsley		214	51,339
Beaver Creek			22,328
Bemidji		145,811	1,419,671
Bertha		6,241	44,459
Bigfork		1,150	8,195
Bird Island		4,851	34,560
Blackduck			
Blooming Prairie		4,856	84,159
Bloomington			65,711,468
Boyd		1,315	9,370
Brimson		7,364	55,445
Brooklyn Park		235,519	1,677,786
Brooten			
Buffalo Fire		17,371	14,155
Buffalo Lake		8,480	60,410
Carlton		2,249	56,068

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
$ 153,550,552	$ 461,137,206	$ 213,318,620	$ 1,113,548,996
100,633,383	302,218,690	139,804,103	$ 728,704,921
27,717,083	83,239,055	38,505,763	$ 201,611,746
93,989,679	282,265,660	130,573,984	$ 679,622,582
1,172,591,185	3,521,480,775	1,629,010,655	$ 8,470,262,530
2,976,338,046	8,938,423,289	4,134,847,730	$ 21,513,314,942
1,834,672,397	5,509,820,414	2,548,801,682	$ 13,260,372,066
3,072,614,313	9,227,563,622	4,268,601,857	$ 22,320,835,011
$ 9,432,106,638	$ 28,326,148,711	$ 13,103,464,394	$ 68,288,272,794
	$ 94,697		$ 109,934
	356,427		$ 536,063
	98,139		$ 109,307
	128,889		$ 163,406
	103,114		$ 136,008
	91,672		$ 113,453
	289,926		$ 576,976
	917,952		$ 1,131,715
	96,449		$ 96,449
	27,442		$ 27,442
	165,085		$ 261,132
	392,896		$ 486,638
	347,628		$ 574,558
	162,109	$ 42,016	$ 255,678
	44,395		$ 66,723
	1,610,309	504,976	$ 3,680,767
	205,712		$ 256,412
	287,844	21,260	$ 318,449
	167,471		$ 206,882
	18,559	36,320	$ 54,879
	161,742		$ 250,757
	68,734,285	23,622,362	$ 158,068,115
	43,721		$ 54,406
	95,252	14,096	$ 172,157
	9,831,967	313,581	$ 12,058,853
	418,813		$ 418,813
	191,363		$ 222,889
	402,425		$ 471,315
	202,688	27,562	$ 288,567

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Ceylon		$ 5,829	$ 41,525
Chatfield		74,090	79,366
Cherry		5,622	40,051
Chisago City		25,100	179,226
Chokio		11,687	83,253
Clarissa			39,327
Clarkfield		9,620	113,209
Clear Lake		467,902	53,856
Cloquet (Perch Lake)		2,452	184,058
Columbia Heights			355,348
Coon Rapids		86,569	1,708,906
Cotton		1,379	38,138
Courtland		44,570	26,828
Cyrus			31,688
Dakota		4,709	82,634
Dawson		15,400	109,703
Dayton Fire		65,503	76,955
Deer Creek		5,081	36,196
Dover		31,530	88,744
East Grand Forks		51,199	364,728
Edgerton		17,207	122,576
Edina		26,881	1,960,479
Elbow Lake		10,217	72,785
Excelsior			1,630,510
Eyota		118,094	131,565
Fairmont		60,611	431,778
Fergus Falls		30,641	1,059,713
Forest Lake		15,554	110,802
Franklin			
Ghent			8,139
Glencoe			
Glenville		10,920	88,224
Glenwood		11,791	204,519
Golden Valley		57,424	831,067
Gonvick		3,828	27,272
Good Thunder		9,139	65,107
Goodland		580	4,132
Grand Meadow		6,854	71,353
Grey Eagle		12,045	85,803
Hackensack		16,751	213,877

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 321,349		$ 368,703
	203,236	$ 26,376	$ 383,068
	280,195		$ 325,868
	684,184	229,880	$ 1,118,390
	145,436	37,712	$ 278,088
	81,321		$ 120,648
	163,783		$ 286,612
	263,103		$ 784,861
	268,217	37,105	$ 491,832
	1,554,814		$ 1,910,162
	1,077,317		$ 2,872,792
	218,938	35,960	$ 294,415
	46,866		$ 118,264
	77,387	16,312	$ 125,387
	157,497		$ 244,840
	261,010		$ 386,113
	392,005		$ 534,463
	290,270		$ 331,547
	218,565	49,425	$ 388,264
	637,147		$ 1,053,074
	453,598		$ 593,381
	5,429,236		$ 7,416,596
	294,603	32,254	$ 409,859
	2,945,723	1,589,343	$ 6,165,576
	128,654		$ 378,313
	754,276		$ 1,246,665
	1,255,341	86,197	$ 2,431,892
	234,020		$ 360,376
	292,165		$ 292,165
	41,391	7,124	$ 56,654
	346,647		$ 346,647
	210,915	74,249	$ 384,308
	533,982		$ 750,292
	2,351,924	472,021	$ 3,712,436
	138,080		$ 169,180
	307,345		$ 381,591
	37,729		$ 42,441
	339,300		$ 417,507
	149,890	44,906	$ 292,644
	208,463	154,245	$ 593,336

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Hanover Regular		$ 29,366	$ 488,040
Hanover Special		971	14,809
Hanska		11,032	20,824
Harmony		2,877	20,497
Hawley		167	
Hayward		340,525	32,941
Hector		40,728	290,138
Herman			35,834
Hokah		70,083	10,045
Holdingford		999	7,117
Holland		2,271	62,336
Jacobson		9,770	19,949
Kandiyohi		6,164	105,283
Kelsey			22,466
Kerkhoven		3,549	79,921
Kiester			22,683
Kilkenny		7,542	53,727
La Crescent		10,287	91,626
La Salle		1,079	7,689
Lafayette		10,858	82,393
Lake City		53,373	391,110
Lakeville			
Leroy		5,741	64,023
Lewiston		8,075	57,522
Littlefork		9,548	68,019
Long Lake		98,754	703,502
Lonsdale		5,424	38,642
Lowry			
Lyle		3,427	24,413
Mable		27,279	27,065
Madison		5,564	39,619
Madison Lake		1,452	10,342
Maple Hill		13,441	139,978
Mapleton		2,236	35,717
Mapleview		4,698	82,239
Maplewood			745,959
Marietta		4,064	28,950
Marine St. Croix		138,583	168,066
Maynard		7,232	51,518
McDavitt		4,366	40,595

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 365,451		$ 882,857
	12,087		$ 27,867
	207,175		$ 239,031
	133,499	$ 44,891	$ 201,764
	148,498		$ 148,665
	186,093	30,994	$ 590,553
	506,845		$ 837,711
	132,034	27,831	$ 195,699
	19,587		$ 99,715
	58,846		$ 66,962
	126,434	94,512	$ 285,553
	118,077	40,448	$ 188,244
	348,642		$ 460,089
	40,350	24,708	$ 87,524
	203,890		$ 287,360
	72,999		$ 95,682
	441,500		$ 502,769
	746,898		$ 848,811
	71,703		$ 80,471
	313,938	24,283	$ 431,472
	688,818		$ 1,133,301
	6,018,840	493,173	$ 6,512,013
	71,440		$ 141,204
	297,734		$ 363,331
	439,037		$ 516,604
	1,228,954		$ 2,031,210
	409,393	114,734	$ 568,193
	139,333		$ 139,333
	133,406	8,947	$ 170,193
	56,576	19,935	$ 130,855
	290,686		$ 335,869
	45,535	17,259	$ 74,588
	167,271		$ 320,690
	115,882		$ 153,835
	188,186	35,638	$ 310,761
	3,888,784	363,144	$ 4,997,887
	193,009		$ 226,023
	293,596		$ 600,245
	89,997		$ 148,747
	157,463	13,866	$ 216,290

Unaudited

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
McGrath		$ 1,263	$ 21,066
McIntosh		2,256	16,069
Medford		2,259	110,860
Medicine Lake			204,909
Menahga		9,185	213,448
Mendota Heights		17,738	670,973
Milan		3,743	50,729
Minneota		3,298	50,993
Minnetonka		431,891	3,709,354
Morristown		24,288	173,020
Morse-Fall Lake		25,119	71,499
Murdock		1,892	13,475
Myrtle		60,875	68,354
Nassau		1,678	62,790
New Brighton			1,345,640
New Germany		12,967	92,377
New Ulm			
New York Mills		7,757	55,257
Nicollet		17,951	99,485
Nodine		69,014	34,838
North Branch		3,109	22,148
Northfield		846,670	808,501
Northrop		4,747	33,820
Oronoco		5,390	38,400
Owatonna		152,195	396,414
Pequot Lakes		21,197	375,492
Pine Island		20,398	181,343
Pipestone		9,707	69,149
Plymouth			2,886,163
Randolph		19,568	139,398
Red Lake Falls Regular		5,948	42,373
Red Lake Falls Special			
Redwood Falls			53,386
Renville		4,442	74,667
Robbinsdale		364,810	164,693
Rose Creek		942	6,711
Roseau			
Rosemount		576,074	347,568
Roseville			2,646,817
Ruthton		25,322	16,625

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 32,647		$ 54,976
	192,171		$ 210,496
	409,009	$ 43,552	$ 565,680
	678,346	305,088	$ 1,188,343
	114,299		$ 336,932
	1,837,354	338,207	$ 2,864,272
	181,984		$ 236,456
	110,644	15,136	$ 180,071
	5,374,713	948,154	$ 10,464,112
	1,003,205		$ 1,200,513
	314,363		$ 410,981
	110,233	20,308	$ 145,908
	119,408		$ 248,637
	244,501	47,928	$ 356,897
	2,459,047		$ 3,804,687
	161,375		$ 266,719
	529,790		$ 529,790
	96,529		$ 159,543
	467,549	133,284	$ 718,269
	172,686	22,996	$ 299,534
	200,721	30,836	$ 256,814
	4,293,377	626,900	$ 6,575,448
	181,989		$ 220,556
	246,274		$ 290,064
	941,643	326,258	$ 1,816,510
	541,391		$ 938,080
	484,065		$ 685,806
	361,690		$ 440,546
			$ 2,886,163
	658,033	66,335	$ 883,334
	84,322		$ 132,643
		9,139	$ 9,139
			$ 53,386
	207,834		$ 286,943
	1,228,323	105,336	$ 1,863,162
	55,602	5,137	$ 68,392
	2,629		$ 2,629
	1,622,593		$ 2,546,235
	8,526,337	616,608	$ 11,789,762
	140,053		$ 182,000

Unaudited

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Saint Clair		$ 12,949	$ 105,248
Saint Peter		2,474	18,383
Sandstone		616	4,390
Savage		116,805	832,091
Sherburn		23,998	170,956
Silver Bay		14,710	104,793
Starbuck		4,649	33,120
Stewart		7,309	52,066
Sturgeon Lake			9,069
Tofte		5,447	38,801
Truman		2,137	57,244
Two Harbors		11,624	263,479
Tyler		12,736	90,730
Verndale			
Viking Fire		3,258	12,781
Warroad Area		27,854	226,028
Watkins Fire		16,725	70,067
Williams		28,750	61,527
Willow River			8,263
Woodbury		355,028	4,522,589
Woodstock		3,376	25,598
Wrenshall			69,942
Wykoff		6,246	44,496
Wyoming		18,222	263,514
Zumbro Falls		15,965	72,190
	$ -	$ 6,353,537	$ 107,812,143
Other Retirement Funds			
MSRS - Empower	$ 1,549,853,554	$ 415,786,366	$ 202,018,399
PERA DCP	3,879,333	3,466,729	14,987,367
Saint Paul Teachers Retirement			
	$ 1,553,732,887	$ 419,253,095	$ 217,005,766
PERA Voluntary Share			
Aitkin Fire		$ 50,666	$ 489,324
Albert Lea		12,284	118,634
Alborn		7,902	76,320
Alden		10,043	96,998
Ashby		23,342	225,435
Aurora		11,834	114,289

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 892,428		$ 1,010,625
	504,299	$ 130,645	$ 655,801
	7,669		$ 12,675
	1,453,588		$ 2,402,484
	298,644		$ 493,598
	576,489	28,813	$ 724,805
	269,736	11,056	$ 318,561
	180,513		$ 239,888
	94,240		$ 103,309
	215,430		$ 259,678
	241,046		$ 300,427
	429,522	149,146	$ 853,771
	158,496		$ 261,962
	45,484		$ 45,484
	39,482	6,326	$ 61,847
	382,206		$ 636,088
	358,149	74,819	$ 519,760
	206,613		$ 296,890
	147,515		$ 155,778
	6,204,745	1,876,066	$ 12,958,428
	180,516		$ 209,490
	77,647	17,319	$ 164,908
	77,731		$ 128,473
	252,251		$ 533,987
	288,016	25,636	$ 401,807
$ -	$ 176,622,563	$ 34,810,673	$ 325,598,916
	$ 688,864,321	$ 85,611,520	$ 2,942,134,160
	44,000,814	3,449,345	$ 69,783,588
	233,543,243	72,097,761	$ 305,641,004
$ -	$ 966,408,378	$ 161,158,626	$ 3,317,558,752
	$ 380,146	$ 157,442	$ 1,077,578
	92,165	38,171	$ 261,254
	59,291	24,556	$ 168,069
	75,356	31,210	$ 213,607
	175,136	72,535	$ 496,448
	88,789	36,773	$ 251,685

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Barnum		$ 17,780	$ 171,717
Barrett		8,219	79,379
Belview		10,884	105,113
Benson		20,963	202,461
Biwabik Fire		13,179	127,284
Biwabik Township		12,680	122,458
Blomkest		10,099	97,536
Brandon		17,266	166,753
Breitung		16,380	158,197
Brevator		9,743	94,099
Bricelyn		22,263	215,018
Brook Park		12,697	122,627
Browerville		18,318	176,913
Brownsville		11,848	114,424
Buyck		5,349	51,662
Cambridge Fire		40,321	389,416
Canby		28,323	273,540
Carsonville		11,161	107,793
Center City		19,192	185,356
Central Lakes		2,431	23,477
Clarks Grove		8,307	80,223
Clifton		22,809	220,285
Colvill		6,875	66,394
Colvin		4,368	42,186
Cosmos		15,126	146,087
Cottage Grove		129,606	1,251,722
Crane Lake		8,237	79,551
Crookston		36,404	351,583
Culver		4,878	47,109
Dalbo Fire Department		21,920	211,702
De Graff		2,978	28,761
Delavan		11,245	108,604
Dent		17,594	169,917
Eagle's Nest		1,582	15,279
Echo Fire		13,677	132,091
Elbow Tulaby		6,487	62,648
Ellsburg		6,300	60,841
Elmore		13,529	130,663
Ely		24,857	240,066
Embarrass		12,477	120,500

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 133,404	$ 55,251	$ 378,152
	61,668	25,540	$ 174,806
	81,660	33,821	$ 231,478
	157,288	65,143	$ 445,855
	98,884	40,954	$ 280,301
	95,136	39,402	$ 269,676
	75,774	31,383	$ 214,792
	129,547	53,654	$ 367,220
	122,900	50,901	$ 348,378
	73,104	30,277	$ 207,223
	167,044	69,183	$ 473,508
	95,266	39,456	$ 270,046
	137,440	56,922	$ 389,593
	88,894	36,817	$ 251,983
	40,135	16,622	$ 113,768
	302,530	125,296	$ 857,563
	212,508	88,013	$ 602,384
	83,743	34,683	$ 237,380
	144,000	59,639	$ 408,187
	18,239	7,554	$ 51,701
	62,324	25,812	$ 176,666
	171,135	70,878	$ 485,107
	51,580	21,363	$ 146,212
	32,774	13,574	$ 92,902
	113,492	47,004	$ 321,709
	972,439	402,747	$ 2,756,514
	61,802	25,596	$ 175,186
	273,138	113,124	$ 774,249
	36,598	15,158	$ 103,743
	164,467	68,116	$ 466,205
	22,344	9,254	$ 63,337
	84,372	34,944	$ 239,165
	132,005	54,672	$ 374,188
	11,870	4,916	$ 33,647
	102,619	42,501	$ 290,888
	48,670	20,157	$ 137,962
	47,266	19,576	$ 133,983
	101,509	42,041	$ 287,742
	186,503	77,242	$ 528,668
	93,614	38,771	$ 265,362

Unaudited

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Emmons		$ 21,619	$ 208,798
Evergreen		1,838	17,755
Fairfax		18,832	181,878
Federal Dam		7,711	74,474
Forada		27,520	265,783
Fredenberg		12,871	124,306
French		8,274	79,911
Frost		9,273	89,555
Geneva		11,304	109,177
Gilbert		11,626	112,281
Gnesen		13,659	131,918
Goodview Fire		22,633	218,587
Grand Lake		24,287	234,558
Grand Marais		20,936	202,194
Granite Falls		25,862	249,771
Greenwood		32,360	312,533
Hardwick		8,410	81,219
Henning		22,267	215,057
Hermantown		75,473	728,913
Hewitt		7,624	73,629
Hill City		11,294	109,079
Hills		11,866	114,601
Hitterdal		12,148	117,328
Hollandale		6,564	63,396
Houston		25,196	243,340
Hovland Fire Department		9,328	90,087
Hoyt Lakes		14,731	142,271
Industrial Township		18,401	177,710
Isanti		122,275	1,180,917
Kabetogama		12,721	122,863
Kelliher		11,799	113,958
Kettle River		5,724	55,280
Lake Bronson		9,704	93,716
Lakeland		18,186	175,642
Lancaster		7,108	68,648
Lester Prairie		20,588	198,834
LeSueur		58,903	568,877
Lexington		29,084	280,888
Lino Lakes Fire		10,615	102,514
Linwood		41,203	397,936

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 162,211	$ 67,182	$ 459,810
	13,794	5,713	$ 39,100
	141,298	58,520	$ 400,528
	57,857	23,962	$ 164,004
	206,481	85,517	$ 585,301
	96,571	39,996	$ 273,744
	62,081	25,712	$ 175,978
	69,574	28,815	$ 197,217
	84,817	35,128	$ 240,426
	87,229	36,127	$ 247,263
	102,485	42,445	$ 290,507
	169,816	70,331	$ 481,367
	182,223	75,470	$ 516,538
	157,081	65,057	$ 445,268
	194,042	80,365	$ 550,040
	242,801	100,559	$ 688,253
	63,098	26,133	$ 178,860
	167,073	69,195	$ 473,592
	566,278	234,531	$ 1,605,195
	57,201	23,691	$ 162,145
	84,741	35,097	$ 240,211
	89,031	36,873	$ 252,371
	91,150	37,751	$ 258,377
	49,251	20,398	$ 139,609
	189,047	78,296	$ 535,879
	69,987	28,986	$ 198,388
	110,528	45,776	$ 313,306
	138,059	57,179	$ 391,349
	917,432	379,965	$ 2,600,589
	95,450	39,532	$ 270,566
	88,532	36,666	$ 250,955
	42,946	17,787	$ 121,737
	72,806	30,154	$ 206,380
	136,453	56,514	$ 386,795
	53,331	22,088	$ 151,175
	154,470	63,976	$ 437,868
	441,950	183,039	$ 1,252,769
	218,216	90,377	$ 618,565
	79,641	32,984	$ 225,754
	309,149	128,038	$ 876,326

Unaudited

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Lutsen		$ 12,323	$ 119,014
Lynd		4,627	44,685
Mahtomedi		87,188	842,048
Mahtowa		12,361	119,378
Manchester		9,538	92,118
Mayer		39,952	385,853
McGregor		38,300	369,901
McKinley		5,741	55,442
Melrose		28,960	279,688
Middle River		8,687	83,898
Milaca		29,917	288,936
Miltona		10,101	97,559
Montrose		45,325	437,740
Mountain Iron		16,796	162,212
Newfolden		9,438	91,153
Normanna		4,276	41,298
North Star		4,637	44,788
Northhome		8,639	83,439
Northland Fire		4,239	40,936
Norwood-Young America		36,223	349,835
Oak Grove		73,477	709,635
Oakdale		151,200	1,460,271
Ogilvie		13,734	132,644
Osakis		44,209	426,968
Ottertail		25,738	248,577
Palisade		11,527	111,326
Palo		17,689	170,836
Parkers Prairie		21,510	207,745
Pennock		17,449	168,519
Pequaywan Lake		5,631	54,387
Pickwick Fire		587	5,673
Pike Sandy Britt		16,889	163,115
Plato Fire		19,013	183,622
Porter		31,670	305,863
Princeton		63,578	614,031
Raymond		17,223	166,339
Rice Lake		20,836	201,233
Russell		7,925	76,538
Sabin Elmwood Fire		17,717	171,109
Sacred Heart		7,297	70,471

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
$	92,460	$ 38,293	$ 262,090
	34,715	14,378	$ 98,405
	654,171	270,933	$ 1,854,340
	92,743	38,411	$ 262,893
	71,565	29,639	$ 202,860
	299,762	124,150	$ 849,717
	287,369	119,017	$ 814,587
	43,071	17,839	$ 122,093
	217,284	89,991	$ 615,923
	65,178	26,994	$ 184,757
	224,469	92,966	$ 636,288
	75,792	31,390	$ 214,842
	340,072	140,845	$ 963,982
	126,019	52,192	$ 357,219
	70,815	29,329	$ 200,735
	32,084	13,288	$ 90,946
	34,795	14,411	$ 98,631
	64,822	26,847	$ 183,747
	31,802	13,171	$ 90,148
	271,780	112,561	$ 770,399
	551,302	228,328	$ 1,562,742
	1,134,456	469,849	$ 3,215,776
	103,049	42,679	$ 292,106
	331,703	137,379	$ 940,259
	193,114	79,981	$ 547,410
	86,487	35,820	$ 245,160
	132,719	54,967	$ 376,211
	161,393	66,843	$ 457,491
	130,919	54,222	$ 371,109
	42,252	17,499	$ 119,769
	4,407	1,825	$ 12,492
	126,721	52,483	$ 359,208
	142,652	59,081	$ 404,368
	237,619	98,413	$ 673,565
	477,029	197,567	$ 1,352,205
	129,226	53,520	$ 366,308
	156,334	64,748	$ 443,151
	59,461	24,626	$ 168,550
	132,931	55,055	$ 376,812
	54,747	22,674	$ 155,189

Unaudited

State Board of Investment
Retirement Plans Participation
As of June 30, 2018

	Stable Value Fund	Money Market Fund	Bond Fund
Saint Francis		$ 34,592	$ 334,089
Saint Leo Fire		9,898	95,593
Saint Paul Park		36,112	348,763
Scandia		32,022	309,262
Scandia Valley		18,596	179,595
Schroeder		9,362	90,413
Shevlin		16,173	156,200
Silver Lake		17,184	165,959
Solway (Main)		6,615	63,884
Solway(Cloquet)		13,750	132,800
Spring Grove		11,279	108,930
Spring Lake Park		758,990	7,330,236
Stephen		15,090	145,734
Sunburg		11,467	110,749
Tower		11,246	108,611
Twin Valley		15,417	148,891
Ulen		12,560	121,301
Vadnais Heights		75,380	728,013
Vermilion Lake		13,285	128,302
Vesta		7,480	72,245
Victoria		56,066	541,476
Vining		5,874	56,732
Waconia		64,399	621,957
Waite Park		36,208	349,690
Warba - Feeley - Sago		10,830	104,597
Watertown		60,123	580,662
Wells		24,519	236,800
Willmar		75,573	729,880
Winnebago		24,626	237,836
Wolf Lake		11,350	109,621
Wood Lake		9,074	87,632
Wright		9,632	93,026
	$ -	$ 4,153,179	$ 40,110,919
Total Pool Participation	$ 1,553,732,887	$ 1,280,945,412	$ 16,940,296,278

Unaudited

Alternative Investment Pool	U.S. Stock	Broad International Stock Fund	Total
	$ 259,547	$ 107,495	$ 735,723
	74,264	30,757	$ 210,512
	270,947	112,216	$ 768,038
	240,259	99,506	$ 681,049
	139,524	57,786	$ 395,501
	70,240	29,091	$ 199,106
	121,349	50,258	$ 343,980
	128,930	53,398	$ 365,471
	49,630	20,555	$ 140,684
	103,170	42,729	$ 292,449
	84,626	35,049	$ 239,884
	5,694,720	2,358,536	$ 16,142,482
	113,218	46,890	$ 320,932
	86,039	35,634	$ 243,889
	84,378	34,946	$ 239,181
	115,671	47,906	$ 327,885
	94,237	39,029	$ 267,127
	565,580	234,242	$ 1,603,215
	99,675	41,282	$ 282,544
	56,126	23,245	$ 159,096
	420,662	174,222	$ 1,192,426
	44,074	18,254	$ 124,934
	483,187	200,118	$ 1,369,661
	271,668	112,514	$ 770,080
	81,259	33,654	$ 230,340
	451,105	186,831	$ 1,278,721
	183,966	76,192	$ 521,477
	567,030	234,842	$ 1,607,325
	184,770	76,525	$ 523,757
	85,163	35,271	$ 241,405
	68,080	28,196	$ 192,982
	72,270	29,931	$ 204,859
$ -	$ 31,161,402	$ 12,905,873	$ 88,331,373
$ 9,432,106,638	$ 29,500,341,054	$ 13,312,339,566	$ 72,019,761,835

Unaudited

State Board of Investment
Non Retirement Funds Participation Schedule
As of June 30, 2018
Amounts In (000)'s

	Non-Retirement Cash Pool	Non-Retirement Bond Pool	Non-Retirement Equity Pool	Total Non-Retirement
Permanent School	$ 28,090	$ 660,069	$ 703,261	$ 1,391,420
Environmental Trust	$ 21,255	$ 303,256	$ 791,623	$ 1,116,134
Other Trusts:				
Assigned Risk [(1)]			$ 64,103	$ 64,103
City of Woodbury			3,112	$ 3,112
Closed Landfill		$ 26,545	62,019	$ 88,564
Duluth Community Investment Trust		5,851	17,669	$ 23,520
Emergency Med SVC	$ 80	544	906	$ 1,530
Ethel Currey		572	1,003	$ 1,575
Iron Range Resources		53,405	89,712	$ 143,117
Life Time Fish &Wild Life	512	7,596	19,428	$ 27,536
Metro Landfill Contingency Action		3,036	6,898	$ 9,934
Mitigation Easement Stewardship		15	36	$ 51
Natural Resources Conservation		356	808	$ 1,164
Saint Louis County Environmental		8,439	10,664	$ 19,103
Water & Soil Conservation Easement		119	270	$ 389
Winona State		1,707	3,053	$ 4,760
	$ 592	$ 108,185	$ 279,681	$ 388,458
PERA OPEB:				
Anoka County (Irrevocable)			$ 66,544	$ 66,544
Carver County		$ 1,267	5,578	$ 6,845
City of Eagan			16,812	$ 16,812
City of Virginia			1,516	$ 1,516
Crosby-Ironton ISD#182	$ 83	2	3,370	$ 3,455
Duluth		14,952	43,580	$ 58,532
Fillmore Central Schools #2198	351			$ 351
Foley ISD#51		952	1,279	$ 2,231
Hastings ISD#200	2,669			$ 2,669
Kingsland ISD#2137			253	$ 253
Mendota Hgts Eg WSP#197	101	6,965		$ 7,066
Metro Mosquito Control District		231	3,087	$ 3,318
Metropolitan Council	35,307	75,067	170,084	$ 280,458
Mounds View ISD#621	5,263	6,685	11,378	$ 23,326
Mt. Iron-Buhl District #712		2,014		$ 2,014
Ogilvie ISD#333	220			$ 220
Ramsey County	6,891	15,384	51,868	$ 74,143
Roseville District#623		9,614		$ 9,614
Scott County		10,434	7,205	$ 17,639
Staples Motley #2170	27	498	283	$ 808
Washington County		11,020	46,797	$ 57,817
Yellow Medicine ISD#2190	556			$ 556
	$ 51,468	$ 155,085	$ 429,634	$ 636,187
Total Pool Participation	$ 101,405	$ 1,226,595	$ 2,204,199	$ 3,532,199

[(1)]The Assigned Risk Plan excludes $254,870 invested with an external fixed income manager.

Unaudited

External Stock and Bond Managers' Fees

Total Payments for Fiscal Year 2018

Domestic Equity Active Managers		
ArrowMark Colorado Holdings, LLC	$	1,534,491
Barrow, Hanley, Mewhinney & Strauss, LLC		620,342
Earnest Partners, LLC		429,384
Goldman Sachs Asset Management, L.P.		2,205,768
Hood River Capital Management, LLC		1,730,689
Hotchkis and Wiley Capital Management, LLC		2,377,353
LSV Asset Management		1,491,057
Martingale Asset Management, L.P.		1,853,665
McKinley Capital Management, LLC		514,240
Peregrine Capital Management		2,145,816
Rice Hall James & Associates, LLC		1,513,072
Sands Capital Management, LLC		1,261,072
Wellington Management Company LLP		1,472,354
Winslow Capital Management, LLC		653,583
Zevenbergen Capital Investments LLC		1,712,350
Domestic Equity Semi-Passive Managers		
BlackRock Institutional Trust Company, N.A.		1,017,301
J.P. Morgan Investment Management Inc.		1,562,428
Domestic Equity Passive Manager		
BlackRock Institutional Trust Company, N.A. (Passive R3000)		505,964
BlackRock Institutional Trust Company, N.A. (Passive R1000)		568,241
Fixed Income Active Managers		
Columbia Threadneedle Investments		1,158,171
Dodge & Cox		1,756,282
Pacific Investment Management Company LLC (PIMCO)		2,896,822
Western Asset Management Company		1,472,340
Fixed Income Semi-Passive Managers		
BlackRock Financial Management, Inc.		1,075,515
Goldman Sachs Asset Management		1,663,408
Neuberger Berman Investment Advisers LLC		668,132
Treasury Portfolio Managers		
BlackRock Financial Management, Inc.		383,773
Goldman Sachs Asset Management		403,634
Neuberger Berman Investment Advisers LLC		371,118

External Stock and Bond Managers' Fees

Total Payments for Fiscal Year 2018

International Active Developed Markets Managers		
Acadian Asset Management LLC	$	1,807,067
Columbia Threadneedle Investments		1,275,185
Fidelity Institutional Asset Management LLC		1,291,173
J.P. Morgan Investment Management Inc.		1,237,118
Marathon Asset Management LLP		2,800,965
McKinley Capital Management, LLC		1,295,032
International Semi Passive Developed Markets Managers		
AQR Capital Management, LLC		1,886,074
Fidelity Institutional Asset Management LLC		1,209,516
State Street Global Advisors		38,140
International Passive Developed Markets Manager		
State Street Global Advisors		677,834
International Active Emerging Markets Managers		
Earnest Partners LLC		2,016,930
Macquarie Investment Management Advisers		1,763,943
Martin Currie Inc.		1,857,152
Morgan Stanley Investment Management Inc.		4,441,056
Neuberger Berman Investment Advisers LLC		2,456,273
Pzena Investment Management, LLC		2,308,643
The Rock Creek Group, LLC		2,394,166
International Passive Emerging Markets Manager		
State Street Global Advisors		565,957
Supplemental Fixed Interest Account		
Galliard Capital Management, Inc.		3,788,705
Assigned Risk Plan		
RBC Global Asset Management (U.S.) Inc.		252,341
Non-Retirement Managers		
BNY Mellon Asset Management North America Corporation		54,478
Prudential Global Investment Management, Inc. (PGIM)		668,297

Trading Data

Commissions and Trading Volume
By Broker for Fiscal Year 2018

	Stock $ Volume	Stock $ Commission	Bond $ Volume	Bond $ Commission	Short Term $ Volume
ABEL NOSER CORP	$ 4,219,486	$ 4,899	$ -	$ -	$ -
ABG SECURITIES	$ 469,676	$ 353	$ -	$ -	$ -
ACADEMY SECURITIES INC	$ 767,975	$ 179	$ -	$ -	$ -
ALLEN & COMPANY	$ 9,092,732	$ 3,260	$ -	$ -	$ -
AMBIT CAPITAL PRIVATE LIMITED	$ 396,784	$ 477	$ -	$ -	$ -
AMERICAS/DEUTSCHE BANK AG LONDON	$ 88,742	$ 16	$ -	$ -	$ -
AMHERST PIERPONT SECURITIES LLC	$ -	$ -	$ 132,451,648	$ -	$ 5,671,581
APEX CLEARING CORPORATION	$ 7,865	$ 96	$ -	$ -	$ -
AQUA SECURITIES	$ 554,756	$ 370	$ -	$ -	$ -
AXIS CAPITAL LIMITED	$ 71,594	$ 144	$ -	$ -	$ -
B.RILEY & CO.,	$ 9,100,896	$ 8,560	$ -	$ -	$ -
BANCO ESPIRITO SANTO DE INVEST	$ -	$ -	$ 20,207	$ -	$ -
BANCO ITAU SA	$ 10,325,187	$ 14,720	$ -	$ -	$ -
BANCO PACTUAL	$ 4,663,678	$ 8,070	$ -	$ -	$ -
BANCO SANTANDER CENTRAL HISPANO	$ 9,506,074	$ 13,816	$ -	$ -	$ -
BANK OF AMERICA	$ 7,480,861	$ 8,966	$ 38,778,705	$ -	$ 20,500,000
BANK OF MONTREAL, CHICAGO BRANCH	$ -	$ -	$ -	$ -	$ 108,000,000
BANK OF NEW YORK	$ 15,590	$ 39	$ 373,336,917	$ -	$ 54,000,000
BANK OF NOVA SCOTIA - SCUSA	$ 187,857	$ 444	$ -	$ -	$ -
BARCLAYS	$ 523,297,795	$ 818,873	$ 3,557,100,545	$ 164	$ 54,117,570,596
BARRINGTON RESEARCH ASSOCIATES	$ 3,911,033	$ 4,479	$ -	$ -	$ -
BATLIVALA+KARANI SECS INDIA PVT. LTD	$ 1,014,564	$ 709	$ -	$ -	$ -
BB&T SECURITIES	$ -	$ -	$ 11,775,903	$ -	$ -
BBVA/SECURITIES	$ -	$ -	$ 1,130,529	$ -	$ -
BERENBERG	$ 1,446,517	$ 704	$ -	$ -	$ -
BLAYLOCK ROBERT VAN LLC	$ 690,319	$ 81	$ -	$ -	$ -
BLOOMBERG TRADEBOOK LLC	$ 33,250,497	$ 19,270	$ -	$ -	$ -
BMO CAPITAL MARKETS	$ 56,286,788	$ 17,867	$ 448,070,686	$ -	$ 22,000,000
BNP PARIBAS	$ 70,597,104	$ 50,886	$ 866,928,216	$ -	$ 57,458,742,779
BNY CAPITAL MARKETS	$ -	$ -	$ 122,454	$ -	$ -
BNY CLEARING SERVICES LLC (BNY)	$ -	$ -	$ 61,995,443	$ -	$ -
BNY CONVERGEX LJR	$ 4,291,240	$ 7,836	$ -	$ -	$ -
BNY MELLON/NOMURA INT'L PLC REPO	$ -	$ -	$ 2,602,364	$ -	$ -
BNY/SUNTRUST CAPITAL MARKETS	$ -	$ -	$ 8,937,971	$ -	$ -
BNYMELLON/RE BGC FINANCIAL LP M/M	$ -	$ -	$ -	$ -	$ 68,000,000
BONY + VINNING SPARKS IBG L P	$ -	$ -	$ 1,365,890	$ -	$ -
BONY MELLON/SOC GEN	$ -	$ -	$ 347,090,552	$ -	$ -
BONY/TORONTO DOMINION SECURITIES INC	$ -	$ -	$ 385,827,144	$ -	$ 194,818,879
BRADESCO	$ 7,041,323	$ 14,001	$ -	$ -	$ -
BREAN CAPITAL LLC	$ -	$ -	$ 16,476,017	$ -	$ -
BROADCORT CAPITAL CORP	$ 741,454	$ 329	$ -	$ -	$ -
BTG	$ 8,176,457	$ 17,245	$ -	$ -	$ -
BTIG LLC	$ 24,480,899	$ 25,735	$ -	$ -	$ -
BUCKINGHAM RESEARCH	$ 9,914,639	$ 8,616	$ -	$ -	$ -
CABRERA CAPITAL	$ 9,652,657	$ 17,431	$ -	$ -	$ -
CAIXA D'ESTALVIS I PENSIONS DE	$ -	$ -	$ 8,785,163	$ -	$ -
CALYON SECURITIES (USA) INC.	$ -	$ -	$ 719,290	$ -	$ -
CANACCORD	$ 21,591,873	$ 17,055	$ -	$ -	$ -
CANTOR FITZGERALD	$ 90,423,635	$ 26,409	$ 1,584,797,011	$ -	$ 5,135,484
CAP GUARDIAN BROKER	$ 869,307	$ 587	$ -	$ -	$ -
CAPITAL INSTITUTIONAL SVCS INC EQUITIES	$ 103,023,013	$ 88,548	$ -	$ -	$ -
CARNEGIE INVESTMENT BANK AB	$ 4,624,742	$ 6,896	$ -	$ -	$ -
CHEEVERS & CO.	$ 5,153,637	$ 83	$ -	$ -	$ -
CHINA INTERNATIONAL	$ 1,846,682	$ 2,763	$ -	$ -	$ -
CIBC WORLD MARKETS	$ 24,754,806	$ 5,411	$ 9,785,866	$ -	$ -
CIMB SECURITIES	$ 7,211,544	$ 11,381	$ -	$ -	$ -
CITADEL	$ -	$ -	$ 522,420,067	$ -	$ -
CITATION GROUP	$ 21,142,351	$ 5,443	$ -	$ -	$ -
CITIBANK	$ 8,828,943	$ 6,797	$ 920,270	$ -	$ 353,316,749
CITIGROUP	$ 5,588,132,081	$ 863,585	$ 4,700,279,182	$ 2,831	$ 42,966,073,448
CL SECURITIES TAIWAN COMPANY LIMITED	$ 7,127,315	$ 9,406	$ -	$ -	$ -
CLSA	$ 58,041,990	$ 43,168	$ -	$ -	$ -
COMMERZBANK AG	$ -	$ -	$ 6,453,529	$ -	$ -
CONCORDIA SA CVMCC	$ 779,482	$ 1,563	$ -	$ -	$ -
CONVENCAO S/A CORRETORA DE VALORES	$ 1,574,952	$ 1,575	$ -	$ -	$ -

Trading Data

Commissions and Trading Volume
By Broker for Fiscal Year 2018

	Stock $ Volume	Stock $ Commission	Bond $ Volume	Bond $ Commission	Short Term $ Volume
CONVERGEX LLC	$ 15,389,799	$ 25,361	$ -	$ -	$ -
CORNERSTONE MACRO LLC	$ 464,525	$ 672	$ -	$ -	$ -
CORPCAPITAL CORREDORES DE BOLSA SA	$ 62,682	$ 125	$ -	$ -	$ -
COWEN	$ 508,037,058	$ 330,111	$ -	$ -	$ -
CPR PARIS	$ 139,774	$ 573	$ -	$ -	$ -
CRAIG - HALLUM	$ 30,471,855	$ 42,348	$ -	$ -	$ -
CREDIT AGRICOLE SECURITIES (USA) INC	$ 236,203	$ 676	$ 328,183,827	$ -	$ -
CREDIT LYONNAIS	$ 33,634,271	$ 26,918	$ -	$ -	$ -
CREDIT SUISSE	$ 1,258,641,776	$ 232,003	$ 9,438,523,015	$ 419	$ 13,738,836,938
CS FIRST BOSTON	$ 13,345,160	$ 16,340	$ -	$ -	$ -
CSFB	$ 5,580,489	$ 3,909	$ -	$ -	$ -
CUTTONE & CO.	$ 180,482	$ 120	$ -	$ -	$ -
D.A. DAVIDSON	$ 926,878	$ 1,352	$ -	$ -	$ -
DAIWA	$ 20,779,056	$ 20,060	$ 84,211,998	$ -	$ -
DANSKE BANK A.S	$ 373,601	$ 448	$ 11,189,725	$ -	$ -
DAVIDSON D.A. + COMPANY INC.	$ 33,165,116	$ 45,777	$ 3,308,247	$ -	$ -
DAVY STOCKBROKERS	$ 4,579,331	$ 3,537	$ -	$ -	$ -
DBTC AMERICA/PNC BANK, N.A.-SECS.CO	$ -	$ -	$ 16,025,253	$ -	$ -
DEUTSCHE BANK	$ 733,984,538	$ 205,590	$ 1,540,273,582	$ -	$ 170,149,569
DEUTSCHE EQ IN	$ 997,445	$ 986	$ -	$ -	$ -
DEUTSCHE MORGAN	$ 1,403,845	$ 1,670	$ -	$ -	$ 18,032,829,000
DEUTSCHE SECURITIES	$ 12,685,961	$ 12,654	$ -	$ -	$ -
DNB NOR MARKETS CUSTODY DNB NORBANK ASA	$ 371,178	$ 223	$ -	$ -	$ -
DOLAT CAPITAL MARKETS LTD	$ 122,214	$ 61	$ -	$ -	$ -
DOUGHERTY & COMPANY LLC	$ 18,331,582	$ 15,133	$ -	$ -	$ -
DREXEL HAMILTONLLC	$ 891,977	$ 788	$ -	$ -	$ -
DSP MERRILL LYNCH LTD	$ 7,762,555	$ 2,934	$ -	$ -	$ -
DUNCAN WILLIAMS INC	$ -	$ -	$ 11,045,741	$ -	$ -
DZ BANK AG DEUTSCHE ZENTRAL GENOSSE PLAT	$ -	$ -	$ 1,066,631	$ -	$ -
ECONOMIC ANALYSIS ASSOCIATE INC	$ -	$ -	$ -	$ -	$ 999,968
EDELWEISS SECURITIES PVT. LTD	$ 128,554	$ 154	$ -	$ -	$ -
EXANE S.A.	$ 56,207,979	$ 48,859	$ -	$ -	$ -
FBR CAPITAL MARKETS & CO.	$ 9,390,159	$ 24,272	$ -	$ -	$ -
FEDERAL RESERVE BANK OF BOSTON	$ -	$ -	$ 212,009	$ -	$ -
FIDELITY CAPITAL MARKETS	$ 144,013,973	$ 25,992	$ -	$ -	$ -
FIFTH THIRD SECURITIES, INC	$ -	$ -	$ 339,625	$ -	$ -
FIRST ANALYSIS SECURITIES CORP	$ 1,176,801	$ 1,300	$ -	$ -	$ -
FIRST TENNESSEE	$ -	$ -	$ 13,563,513	$ -	$ -
FIS BROKERAGE & SECURITIES SERVICES LLC	$ 16,198,471	$ 2,357	$ -	$ -	$ -
FLOW CORRETORA DE MERCADORIAS LTDA.	$ 3,586,451	$ 4,828	$ -	$ -	$ -
FRANK RUSSELL SEC/BROADCORT CAP CLEARING	$ 15,053,478	$ 24,460	$ -	$ -	$ -
FTN FINANCIAL SECURITIES	$ -	$ -	$ 3,301,627	$ -	$ -
GMP SECURITIES LTD.	$ 4,095,410	$ 4,176	$ -	$ -	$ -
GOLDMAN SACHS	$ 902,078,517	$ 557,856	$ 4,544,225,968	$ 588,551	$ 77,886,883
GOODBODY STOCKBROKERS	$ 703,098	$ 501	$ -	$ -	$ -
GORDON HASKETT CAPITAL CORP	$ 2,056,532	$ 5,556	$ -	$ -	$ -
GREEN STREET ADVISORS	$ 741,916	$ 862	$ -	$ -	$ -
GUGGENHEIM CAPITAL MARKETS LLC	$ 1,280,292	$ 417	$ -	$ -	$ -
HANWHA SECURITIES SEOUL	$ 10,025,577	$ 9,604	$ -	$ -	$ -
HEIGHT SECURITIES, LLC	$ 1,642,387	$ 350	$ -	$ -	$ -
HIBERNIA SOUTHCOAST CAPITAL INC	$ 2,518,328	$ 3,371	$ -	$ -	$ -
HILLTOP SECURITIES	$ -	$ -	$ 20,475,152	$ -	$ -
HONGKONG AND SHANGHAI BANKING CORP	$ 2,477,544	$ 4,334	$ -	$ -	$ -
HSBC	$ 98,105,397	$ 74,964	$ 121,746,688	$ -	$ 39,254,890,000
ICBC	$ 4,107,680	$ 7,086	$ -	$ -	$ -
ICBCFS LLC	$ -	$ -	$ 85,863,024	$ -	$ 87,638,442
ICICI BROKERAGE SERVICES	$ 7,244,595	$ 1,466	$ -	$ -	$ -
IMPERIAL CAPITAL LLC	$ 2,026,025	$ 2,071	$ -	$ -	$ -
INDIA INFOLINE LTD	$ 598,018	$ 1,063	$ -	$ -	$ -
INDUSTRIAL AND COMMERCIAL BANK	$ 905,918	$ 644	$ -	$ -	$ -
ING	$ 1,498,656	$ 1,500	$ 5,543,144	$ -	$ -
INSTINET	$ 441,365,195	$ 166,016	$ -	$ -	$ -
INTERMONTE SIM S.P.A	$ 1,187,719	$ 1,779	$ -	$ -	$ -
INTL FCSTONE FINANCIAL INC.	$ 51,269	$ 121	$ 12,515,188	$ -	$ -
INV ADMINNOMS	$ 17,448	$ 5	$ -	$ -	$ -

Commissions and Trading Volume
By Broker for Fiscal Year 2018

	Stock $ Volume	Stock $ Commission	Bond $ Volume	Bond $ Commission	Short Term $ Volume
INVESTEC	$ 6,805,888	$ 6,987	$ -	$ -	$ -
INVESTMENT TECHNOLOGY	$ 152,909,890	$ 65,263	$ -	$ -	$ -
IPOPEMA SECURITIES S.A.	$ 438,566	$ 659	$ -	$ -	$ -
IPS BROKERAGE INC	$ 2,074,670	$ 1,121	$ -	$ -	$ -
IS YATIRIM MENKUL DEGERLER AS	$ 195,268	$ 391	$ -	$ -	$ -
ISI GROUP INC	$ 25,328,392	$ 19,238	$ -	$ -	$ -
ITG	$ 93,793,052	$ 34,716	$ -	$ -	$ -
JANNEY MONTGOMERY, SCOTT INC	$ 823,616	$ 2,176	$ 1,523,464	$ -	$ -
JEFFERIES	$ 360,766,415	$ 159,449	$ 395,416,486	$ 353	$ 79,794,744
JMP SECURITIES	$ 21,990,168	$ 18,395	$ -	$ -	$ -
JOH. BERENBERG, GOSSLER & CO. KG	$ 8,785,484	$ 8,321	$ -	$ -	$ -
JONESTRADING INSTITUTIONAL SERVICES LLC	$ 38,308,797	$ 30,520	$ -	$ -	$ -
JP MORGAN	$ 852,644,643	$ 511,054	$ 9,339,676,068	$ 24,355	$ 65,705,024,216
JPMCB/HSBC BANK	$ -	$ -	$ 4,055,910	$ -	$ -
KCG AMERICAS LLC	$ 40,401,772	$ 7,161	$ -	$ -	$ -
KEEFE BRUYETTE + WOODS INC	$ 14,475,618	$ 15,974	$ -	$ -	$ -
KEPLER EQUITIES PARIS	$ 6,738,054	$ 8,836	$ -	$ -	$ -
KEYBANC CAPITAL MARKETS INC	$ 65,813,387	$ 54,426	$ 91,139,518	$ -	$ -
KEYBANK NATIONAL ASSOCIATION	$ 215,172	$ 1,532	$ -	$ -	$ -
KGS ALPHA CAPITAL MARKETS, LLC	$ -	$ -	$ 16,194,303	$ -	$ -
KIM ENG SECURITIES (HK) LTD.	$ 44,676	$ 74	$ -	$ -	$ -
KING, CL, & ASSOCIATES, INC	$ 3,857,251	$ 5,046	$ -	$ -	$ -
KNIGHT CAPITAL AMERICAS, L.P.	$ 2,404,778	$ 853	$ -	$ -	$ -
KNIGHT SECURITIES INTERNATIONAL	$ 3,505,700	$ 2,628	$ -	$ -	$ -
KOREA INVESTMENT AND SECURITIES CO., LTD	$ 162,590	$ 154	$ -	$ -	$ -
KOTAK SECURITIES LTD	$ 1,903,971	$ 3,804	$ -	$ -	$ -
LADENBURG THALMAN + CO	$ 4,664,423	$ 2,986	$ -	$ -	$ -
LEERINK PARTNERS LLC	$ 3,608,335	$ 1,907	$ -	$ -	$ -
LIQUIDNET	$ 199,989,415	$ 124,801	$ -	$ -	$ -
LLOYDS BANK CORPORATE MARKETS PLC	$ -	$ -	$ 12,700,000	$ -	$ -
LONGBOW SECURITIES LLC	$ 10,173,166	$ 10,764	$ -	$ -	$ -
LOOP CAPITAL MARKETS	$ 37,126,657	$ 24,778	$ 139,699,138	$ -	$ 35,601,443
LUMINEX TRADING	$ 9,165,551	$ 656	$ -	$ -	$ -
MACQUARIE	$ 133,754,953	$ 143,133	$ -	$ -	$ -
MAINFIRST BANK	$ 1,367,227	$ 1,077	$ -	$ -	$ -
MARKETAXESS CORP	$ -	$ -	$ 15,253,947	$ -	$ -
MAXIM GROUP	$ 2,379,919	$ 1,489	$ -	$ -	$ -
MELLON BANK CAPITAL MARKETS INVEST ACCT	$ -	$ -	$ 1,962,467	$ -	$ -
MERRILL LYNCH	$ 1,159,819,523	$ 517,035	$ 9,767,807,755	$ 85,044	$ 47,004,732,927
MESIROW FINANCIAL INC	$ -	$ -	$ 191,878	$ -	$ -
MILLENNIUM ADVISORS LLC	$ -	$ -	$ 3,842,257	$ -	$ -
MILLER TABAK ROBERTS SECS LLC	$ -	$ -	$ 2,743,328	$ -	$ -
MIRAE ASSET DAEWOO CO., LTD.	$ 5,082,753	$ 7,942	$ -	$ -	$ -
MISCHLER FINANCIAL GROUP, INC-EQUITIES	$ -	$ -	$ 182,687	$ -	$ -
MITSUBISHI UFJ	$ 4,421,644	$ 3,235	$ 151,170,274	$ -	$ -
MIZUHO	$ 26,313,133	$ 27,807	$ 711,787,949	$ -	$ 254,775,530
MKM PARTNERS LLC	$ 3,542,520	$ 3,231	$ -	$ -	$ -
MND PARTNERS	$ 2,450,548	$ 1,794	$ -	$ -	$ -
MORGAN STANLEY	$ 719,041,340	$ 284,175	$ 5,069,786,778	$ 3,663	$ 50,811,408
MOTILAL OSWAL SECURITIES LIMITED	$ 3,743,299	$ 4,560	$ -	$ -	$ -
MUFG UNION BANK, N.A./MMI/PIMS/IPA	$ -	$ -	$ -	$ -	$ 65,000,000
NATIONAL FINANCIAL SERVICES	$ 13,457,962	$ 13,866	$ 29,605,952	$ -	$ 70,000,000
NBC CLEARING SERVICES INCORPORATED	$ 3,150,192	$ 750	$ -	$ -	$ -
NBCN CLEARING INC.	$ -	$ -	$ 7,806,060	$ -	$ -
NEEDHAM AND COMPANY LLC	$ 15,156,940	$ 17,590	$ -	$ -	$ -
NESBITT BURNS	$ 12,579,936	$ 8,596	$ 4,961,600	$ -	$ -
NH INVESTMENT AND SECURITIES CO.,LTD.	$ 865,648	$ 1,728	$ -	$ -	$ -
NOBLE INTERNATIONAL INVESTMENTS INC.	$ 3,720,637	$ 2,233	$ -	$ -	$ -
NOMURA	$ 4,997,817	$ 6,964	$ 2,647,912,213	$ -	$ 459,133,017
NORDEA BANK AB (PUBL), FINNISH BRANCH	$ 4,009,744	$ 2,537	$ -	$ -	$ -
NORTHERN TRUST BROKERAGE INSTITUTION	$ 114,318	$ 31	$ -	$ -	$ -
NORTHLAND SECURITIES INC.	$ 9,872,051	$ 8,452	$ -	$ -	$ -
NUMIS SECURITIES LIMITED	$ 1,437,346	$ 751	$ -	$ -	$ -
O NEIL, WILLIAM AND CO. INC/BCC CLRG	$ 1,508,884	$ 4,619	$ -	$ -	$ -
ODDO ET CIE	$ 10,166,382	$ 7,553	$ -	$ -	$ -

Commissions and Trading Volume
By Broker for Fiscal Year 2018

	Stock $ Volume	Stock $ Commission	Bond $ Volume	Bond $ Commission	Short Term $ Volume
OLIVETREE USA LLC	$ 595,360	$ 553	$ -	$ -	$ -
OPPENHEIMER + CO. INC.	$ 16,851,902	$ 21,656	$ 2,104,291	$ -	$ -
PAREL	$ 212,780	$ 180	$ -	$ -	$ -
PAVILION GLOBAL MARKETS LTD	$ 41,476	$ 10	$ -	$ -	$ -
PENSERRA SECURITIES	$ 45,473,687	$ 20,469	$ -	$ -	$ -
PERSHING	$ 96,597,492	$ 59,157	$ 2,084,371,956	$ 389,859	$ 620,470,743
PETERS AND CO LIMITED	$ 51,724	$ 104	$ -	$ -	$ -
PIERPONT SECURI	$ -	$ -	$ 35,991,565	$ -	$ -
PIPER JAFFRAY	$ 61,664,674	$ 58,400	$ -	$ -	$ -
PNC SECURITIES	$ -	$ -	$ 2,126,564	$ -	$ -
PREBON (AMEX)	$ -	$ -	$ -	$ -	$ 27,000,000
R W PRESSPRICH + CO INC	$ -	$ -	$ 3,632,610	$ -	$ -
R.B.C. DOMINION SECURITIES CORPORATION	$ 2,279,810	$ 36	$ -	$ -	$ -
RABOBANK NEDERLAND	$ -	$ -	$ 1,066,456	$ -	$ -
RAYMOND JAMES	$ 46,785,294	$ 53,722	$ 27,527,805	$ -	$ -
RBC	$ 170,788,453	$ 75,218	$ 1,390,641,415	$ -	$ 38,465,884
RBS	$ -	$ -	$ 192,388,113	$ -	$ -
REDBURN	$ 12,136,785	$ 9,702	$ -	$ -	$ -
RENAISSANCE MACRO SECURITIES, LLC	$ 231,300	$ 196	$ -	$ -	$ -
RENCAP SECURITIES INC	$ 7,315,395	$ 10,716	$ -	$ -	$ -
ROBERT W. BAIRD CO.INCORPORATED	$ 78,441,199	$ 88,206	$ 64,948,314	$ -	$ -
ROSENBLATT SECURITIES INC.	$ 4,229,230	$ 4,979	$ -	$ -	$ -
ROTH CAPITAL PARTNERS LLC	$ 5,462,869	$ 6,887	$ -	$ -	$ -
ROYAL BANK OF CANADA	$ 3,256,731	$ 4,209	$ -	$ -	$ -
ROYAL BANK OF SCOTLAND PLC	$ -	$ -	$ -	$ -	$ 54,603,179,000
S.S KANTILAL ISHWARLAL SECURITIES	$ 3,312,093	$ 2,932	$ -	$ -	$ -
SAMSUNG SECURITIES CO LTD	$ 255,681	$ 179	$ -	$ -	$ -
SANDLER ONEILL	$ 18,172,731	$ 22,171	$ 3,593,199	$ -	$ -
SANFORD C BERNS	$ 307,787,534	$ 119,222	$ -	$ -	$ -
SANTANDER INVESTMENT	$ -	$ -	$ 2,895,321	$ -	$ -
SCOTIA CAPITAL	$ 8,765,828	$ 3,255	$ 387,259,131	$ -	$ -
SCOTIA MCLEOD INC	$ 646,485	$ 210	$ -	$ -	$ -
SCOTIABANK EURO	$ -	$ -	$ 14,565,284	$ -	$ -
SEAPORT GROUP	$ 11,767,592	$ 12,560	$ 10,772,352	$ -	$ -
SG AMERICAS SECURITIES LLC	$ 187,884,739	$ 238,222	$ 158,962,810	$ -	$ 24,898,646
SG ASIA SECURITIES (INOIA) PVT LTD	$ 1,341,018	$ 518	$ -	$ -	$ -
SG SECURITIES (LONDON) LTD.	$ 57,896	$ 35	$ -	$ -	$ -
SG SECURITIES HK	$ 9,654,011	$ 4,106	$ -	$ -	$ -
SIDOTI + COMPANY LLC	$ 19,444,637	$ 18,944	$ -	$ -	$ -
SJ LEVINSON & SONS LLC	$ 30,723,321	$ 5,471	$ -	$ -	$ -
SKANDINAVISKA ENSKILDA	$ 2,251,278	$ 1,485	$ -	$ -	$ -
SMBC NIKKO	$ 16,249,273	$ 12,403	$ 32,882,924	$ -	$ -
SOCIETE GENERALE LONDON BRANCH	$ 78,663,585	$ 55,291	$ -	$ -	$ -
SPARK CAPITAL ADVISORS (INDIA) PRIV LTD	$ 1,068,807	$ 1,286	$ -	$ -	$ -
STANDARD CHARTERED BANK, LONDON	$ -	$ -	$ 2,062,000	$ -	$ -
STATE STREET	$ 732,371,962	$ 114,090	$ 26,780,677	$ -	$ 1,474,841,030
STEPHENS, INC.	$ 45,550,664	$ 62,309	$ 19,819,441	$ -	$ -
STIFEL NICOLAUS	$ 67,220,942	$ 80,772	$ 61,797,796	$ -	$ -
STUART FRANKEL + CO INC	$ 2,023,956	$ 1,250	$ -	$ -	$ -
SUMRIDGE PARTNERS LLC	$ -	$ -	$ 3,399,918	$ -	$ -
SUNTRUST	$ 26,707,082	$ 26,101	$ 16,477,174	$ -	$ -
SVENSKA HANDELSBANKEN	$ 373,221	$ 559	$ -	$ -	$ -
TD SECURITIES	$ -	$ -	$ 59,593,668	$ -	$ -
TELSEY ADVISORY	$ 18,361,128	$ 36,399	$ -	$ -	$ -
THE HONGKONG AND SHANGHAI BANK	$ 8,774,484	$ 12,571	$ -	$ -	$ -
THE VERTICAL TRADING GROUP	$ 2,933,498	$ 2,832	$ -	$ -	$ -
TOKYO MITSUBISHI INTERNATIONAL	$ 56,285	$ 34	$ -	$ -	$ -
TORONTO DOMINION	$ 7,782,018	$ 5,116	$ 109,735,655	$ -	$ -
U.S. BANK N.A./CP	$ -	$ -	$ 5,040,010	$ -	$ 39,000,000
UBS	$ 900,039,396	$ 446,802	$ 772,439,143	$ 4,102	$ 70,781,247
UNICREDIT BANK AG (HYPOVEREINSBANK)	$ -	$ -	$ 1,102,000	$ -	$ -
UNION TRUST CO. OF MARYLAND	$ -	$ -	$ -	$ -	$ 18,999,872
US BANCORP INVESTMENTS INC	$ -	$ -	$ 42,249,590	$ -	$ 21,500,000
VANDHAM SECURITIES CORP	$ 563,385	$ 707	$ -	$ -	$ -
VIRTU	$ 394,730,454	$ 97,232	$ -	$ -	$ -

Trading Data

Commissions and Trading Volume
By Broker for Fiscal Year 2018

	Stock $ Volume	Stock $ Commission	Bond $ Volume	Bond $ Commission	Short Term $ Volume
WALL STREET ACCESS	$ 5,222,067	$ 878	$ -	$ -	$ -
WEDBUSH MORGAN	$ 21,426,545	$ 28,984	$ -	$ -	$ -
WEEDEN + CO.	$ 143,894,384	$ 67,987	$ -	$ -	$ -
WELLS FARGO	$ 76,665,059	$ 30,415	$ 2,021,256,642	$ -	$ 877,401,422
WESTERN INTERNATIONAL SECURITIES	$ 13,195,412	$ 16,575	$ -	$ -	$ -
WILLIAM BLAIR & COMPANY L.L.C	$ 34,877,895	$ 26,568	$ 858,412	$ -	$ -
WILLIAMS CAPITAL GROUP LP (THE)	$ 452,970	$ 113	$ -	$ -	$ -
WOLFE TRAHAN SECURITIES	$ 401,382	$ 231	$ -	$ -	$ -
WOOD AND COMPANY	$ 124,376	$ 158	$ -	$ -	$ -
XP INVESTIMENTOS CCTVM SA	$ 1,012,322	$ 607	$ -	$ -	$ -
YAPI VE KREDI BANKASI A.S.	$ 86,000	$ 69	$ -	$ -	$ -
YUANTA SECURITIES COMPANY LIMITED	$ 567,113	$ 1,269	$ -	$ -	$ -
GRAND TOTAL	$ 19,057,858,879	$ 8,294,609	$ 65,303,547,791	$ 1,099,341	$ 398,278,471,444

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