Minnesota State Board of Investment

Statewide Volunteer Firefighter Retirement Plan

July 1, 2019 Investment Prospectus
Managed by the Minnesota State Board of Investment
Available Through the Minnesota Supplemental Investment Fund
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July 1, 2019

I am pleased to present this investment brochure which provides information on the assets, performance, and general descriptions of each of the asset groups that make up the Volunteer Firefighter Account managed by the Minnesota State Board of Investment (SBI). To invest in the Volunteer Firefighter Account your local fire relief association must join the Statewide Volunteer Firefighter Retirement Plan (SVFRP) which is administered by the Minnesota Public Employees Retirement Association (PERA).

Assets in the SVFRP totaled over $107 million and represents the assets of 174 local fire relief associations. This amount is a 21% increase from the previous year of $88 million in assets. The SVFRP return of 7.3% underperformed its custom benchmark return of 7.4% for the one year time period ending June 30, 2019. The custom benchmark represents the performance for each benchmark weighted by the targeted allocation.

The SVFRP uses a balanced asset mix investment approach to provide long-term returns by investing in a diversified mix of domestic stocks, international stocks, fixed income, and money market securities. Remember that general economic and market conditions have a dominant influence on the returns available to any investor. There may be periods in which the returns for the SVFRP may be low or even negative.

At the end of June 30, 2019, the U.S. economy, as measured by real GDP, grew 2.3% from one year earlier and the U.S. labor markets unemployment rate remained near historic lows at 3.7%. During Fiscal 2019 the Federal Reserve increased the federal funds target rate two times by a quarter-point from 2.0% to 2.5%. However, the Fed’s shift to tighter monetary policy was short-lived. A sharp escalation in trade tensions in late 2018 between the United States and its key trading partners, most notably China, dampened consumer and business sentiment globally.

Financial markets in the U.S. were buoyed by the combination of solid GDP growth and the prospect of the Fed shifting its monetary policy stance back to easing mode. Both the domestic equity market and the bond market posted strong positive performance return for the fiscal year ending June 30, 2019. The Russell 3000 Index, a proxy for the U.S. equity markets, returned 9.0% for the year while the U.S. bond market, as measured by the Bloomberg Barclays Capital U.S. Aggregate Bond Index, returned 7.9% over the same period. International equity markets, as represented by MSCI ACWI ex USA Index (net), trailed domestic markets with a 1.3% return for the year.

On behalf of the Board Members, members of the Investment Advisory Council and the SBI staff, I would like to express our gratitude to you for your continued support and participation in the Volunteer Firefighter Account presented in this brochure. The Minnesota State Board of Investment seeks to enhance the management and performance of the assets under its control. If you have any questions regarding the investment policies and procedures presented herein, please contact the Minnesota State Board of Investment at 60 Empire Drive, Suite 355, St. Paul, MN 55103-3555, (651) 296-3328, or via e-mail at minn.sbi@state.mn.us. We welcome your inquiries.

Respectfully submitted,

Mansco Perry III
Executive Director and Chief Investment Officer
State Board of Investment
Commentary and Relative Performance

How Have Stocks, Bonds And Other Investments Performed?

The U.S. stock market, as measured by the Russell 3000 index, increased 9.0% for the year ending June 30, 2019. Within the Russell 3000, growth companies outperformed value companies. The Utilities sector was the best performing sector in the Russell 3000 with a 16.7% return, while the Energy sector was the worst performing sector with a -16.0% return.

The U.S. bond market, as measured by the Bloomberg Barclays U.S. Aggregate Bond Index, returned 7.9% for the fiscal year. Within the bond market, Corporates were the best performers with a 9.8% return for the year and U.S. Treasuries were strong as well with a 5.2% return for the year.

International equity markets returned 1.3% for the year in U.S. dollar terms, as measured by the Morgan Stanley Capital International All Country World Index excluding the United States net of taxes on dividends (MSCI ACWI ex USA Index net), which represents the developed and emerging international markets outside the U.S. The MSCI World ex USA Index (net), which represents only developed international markets had a return of 1.3% for the year. Japan and the United Kingdom, which together comprise over 28% of the index returned -4.2% and -2.2%, respectively. The emerging markets, as measured by the MSCI Emerging Markets Index (net), returned 1.2% for the year in U.S. dollar terms. China, Korea and Taiwan were the largest countries in the index at the end of the fiscal year with a combined weight of 56%. They returned -6.6%, -9.1% and 1.1%, respectively.

How Did The Total Volunteer Firefighter Account Compare For Fiscal Year 2019?

The Volunteer Firefighter Account provided a return of 7.3% for the fiscal year, underperforming the composite index by 0.1 percentage point. The composite index, is comprised of approximately 35% U.S. common equities, 15% international equities, 45% bonds, and 5% cash. The actual performance of the account may be impacted by the size and timing of cash flows.

<table>
<thead>
<tr>
<th>Performance Ending 6/30/19</th>
<th>1 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteer Firefighter Account</td>
<td>7.3%</td>
</tr>
<tr>
<td>Composite Index</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

How Did Each Asset Group Within The Volunteer Firefighter Account Perform For Fiscal Year 2019?

The U.S. Stock Index Fund matched its benchmark, the Russell 3000, for the year.

<table>
<thead>
<tr>
<th>Performance Ending 6/30/19</th>
<th>1 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Stock Index Fund</td>
<td>9.0%</td>
</tr>
<tr>
<td>Russell 3000</td>
<td>9.0%</td>
</tr>
</tbody>
</table>

The Broad International Stock Fund underperformed the international composite index by 0.2 percentage point for the fiscal year. The composite index is comprised of approximately 74% developed markets and 26% emerging markets. Overall, the developed markets managers slightly underperformed and the emerging markets managers tracked their respective indices.

<table>
<thead>
<tr>
<th>Performance Ending 6/30/19</th>
<th>1 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad International Stock Fund</td>
<td>1.1%</td>
</tr>
<tr>
<td>MSCI ACWI ex USA Index (net)</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

The Bond Fund outperformed its benchmark, the Bloomberg Barclays U.S. Aggregate Bond Index, by 0.3 percentage point for the fiscal year.

<table>
<thead>
<tr>
<th>Performance Ending 6/30/19</th>
<th>1 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Fund</td>
<td>8.2%</td>
</tr>
<tr>
<td>BB Barclays U.S. Aggregate</td>
<td>7.9%</td>
</tr>
</tbody>
</table>

The Money Market Fund yield was greater than its benchmark. This gain is similar to the returns for money market accounts offered by mutual funds and banks.

<table>
<thead>
<tr>
<th>Performance Ending 6/30/19</th>
<th>1 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money Market Fund</td>
<td>2.5%</td>
</tr>
<tr>
<td>3 Month U.S. T-Bill</td>
<td>2.3%</td>
</tr>
</tbody>
</table>
Overview

What Is The Minnesota Supplemental Investment Fund?
The Minnesota Supplemental Investment Fund (SIF) is a multi-purpose investment program that offers a range of investment options to state and other public employee groups. Participants, who are not in the Volunteer Firefighter Account, may allocate their investments among one or more funds that are appropriate for their needs and are within the rules and eligibility established by the participating plans. When a local fire relief joins the Statewide Volunteer Firefighter Retirement Plan (SVFRP), the assets are transferred into the Volunteer Firefighter Account which is a balanced fund composed of several SIF options.

What Options Are Available To The Statewide Volunteer Firefighter Retirement Plan?
The Volunteer Firefighter Account is the only investment option available to local firefighter entities participating in the SVFRP. By state law, the Volunteer Firefighter Account is established for the sole purpose of investing the assets of local firefighter entities participating in the SVFRP.

What Asset Classes Are In The Volunteer Firefighter Account?
The Volunteer Firefighter Account invests in both active and passively managed portfolios. As of June 30, 2019, the Volunteer Firefighter Account had over $107 million in assets invested in the Volunteer Firefighter Account made up of the following four Investment options.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Assets as of 6/30/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Equities</td>
<td>$37,766,986</td>
</tr>
<tr>
<td>International Equities</td>
<td>$16,376,833</td>
</tr>
<tr>
<td>Bonds</td>
<td>$48,037,121</td>
</tr>
<tr>
<td>Cash</td>
<td>$5,269,851</td>
</tr>
<tr>
<td><strong>Volunteer Firefighter Account</strong></td>
<td><strong>$107,450,791</strong></td>
</tr>
</tbody>
</table>

1. All investment options are managed by external investment firms identified below.

What Securities Are Owned By The Plan?
A listing is not provided in this Prospectus due to the large number of holdings owned in each of the funds. Please contact the SBI if you would like a complete list of holdings or you can access the list on our website at [http://mn.gov/sbi](http://mn.gov/sbi).

Who Is Responsible For Managing The Assets?
The Minnesota State Board of Investment is responsible for managing the assets of the Volunteer Firefighter Account and determines the investments to be made available to plan participants.

What Is The SBI’s Relationship To PERA?
In broad terms, the SBI acts as an investment manager for PERA while PERA provides a variety of administrative functions with respect to your Plan.

What Are The Administrative Fees And Who Should I Contact With Questions?
SBI’s administrative fees were 0.006% or approximately $0.06 per $1,000 invested, which are deducted after the fund share value has been calculated. PERA’s administrative costs are covered by a deduction of $30 per participant, per year. Any questions about your account or administrative fees should be directed to PERA or the SBI as appropriate.

External Investment Management of Funds

The SBI hires external investment managers to invest the assets for the respective investment options listed below.

International Equities
AQR Capital Management, LLC, Greenwich, CT
Acadian Asset Management LLC, Boston, MA
Columbia Management Investment Advisers LLC, Minneapolis, MN
Earnest Partners LLC, Atlanta, GA
Fidelity Institutional Asset Management LLC, Smithfield, RI
J.P. Morgan Investment Management Inc., New York, NY
Macquarie Investment Management Advisers, Philadelphia, PA
Marathon Asset Management LLP, London, England
Martin Currie Inc., Edinburgh, UK
Mckinley Capital Management, LLC, Anchorage, AK
Morgan Stanley Investment Management Inc., New York, NY
Neuberger Berman Investment Advisers LLC, New York, NY
Pzena Investment Management, LLC, New York, NY
The Rock Creek Group, LP, New York, NY
State Street Global Advisors, Boston, MA

U.S. Equities
BlackRock Institutional Trust Company, N.A., New York, NY

Bonds
BlackRock Financial Management, Inc., New York, NY
Columbia Management Investment Advisers LLC, Minneapolis, MN
Dodge & Cox, San Francisco, CA
Goldman Sachs Asset Management, New York, NY
Neuberger Berman Investment Advisers LLC, Chicago, IL
Pacific Investment Mgmt. Co. LLC, (PIMCO), Newport Beach, CA
Western Asset Management Company, Pasadena, CA

Cash
State Street Global Advisors, Boston, MA
Volunteer Firefighter Account

The Volunteer Firefighter Account (Account) provides a balanced investment program. The objectives of the Account are to provide high returns from capital appreciation and current yield while reducing the chance for large temporary decreases in value. To achieve these objectives, the Account is invested in a mix of domestic equities, international equities, bonds and cash. As of June 30, 2019, the market value of the Account was over $107 million.

What Assets And Allocations Are In The Account?
The account uses four underlying investment options. The assets are listed below with the respective asset allocation targets for each fund:

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Equities</td>
<td>35%</td>
</tr>
<tr>
<td>International Equities</td>
<td>15%</td>
</tr>
<tr>
<td>Bonds</td>
<td>45%</td>
</tr>
<tr>
<td>Cash</td>
<td>5%</td>
</tr>
<tr>
<td>Total Volunteer Firefighter Account</td>
<td>100%</td>
</tr>
</tbody>
</table>

The domestic stock segment is passively managed with the objective to generate high returns that closely approximate the returns of the U.S. stock market as a whole. The fund invests in over 2,700 domestic stocks and is designed to replicate the returns produced by the Russell 3000.

The international stock segment is managed in a variety of styles: active, semi-passive and passive management. The objective of the fund is to earn a high rate of return by investing in stocks outside of the U.S. The Fund’s benchmark is the MSCI ACWI ex USA Index (net). The majority of the fund is invested in large, developed international markets such as Japan, the United Kingdom, Canada, France, Germany and Australia, with a portion invested in developing countries, or emerging markets, which include Asia, Latin America, Eastern Europe, the Middle East and Africa.

The fixed income segment is actively managed and seeks to earn returns over the Bloomberg Barclays Aggregate Bond Index. The fund invests in high quality corporate bonds, mortgage securities and U.S. Government issues.

The cash segment is invested in a short-term fund of high-quality money market instruments. The fund’s performance is measured against the 90-Day Treasury Bill.

How Will This Account Perform Over Time?
The Volunteer Firefighter Account is a balanced or diversified investment program in one account. As with any investment program that includes stocks and bonds, the Account will provide returns that vary with changes in the market. Market value growth and dividend income from the domestic and international stock holdings can provide higher returns than bonds and cash investments. The international stock holdings add a measure of diversification to the domestic stock holdings as various international markets can perform differently. While returns on bonds are often lower than returns on stocks, the bond returns tend to be more stable and can provide some protection against wide swings in stock market returns.

Who Manages The Account?
See page 4 for a listing of the investment managers.

How Is The Value Of This Account Determined?
Participating entities own shares in the Account, much like you would in a mutual fund. The share value is determined daily and is based on the market value of the entire account. Any dividend or interest income is reinvested in the Account at the time it is earned. Investment returns reflect all realized and unrealized gains and losses generated by the Account.

What Is The Past Investment Performance Of This Account?
The graph below shows how $1,000 would have grown over the past five years had it been invested in the Volunteer Firefighter Account. Cumulatively, $1,000 would have grown to $1,318.

The table below displays the fund’s actual share values and returns for the last five years. The annualized (annual compounded) return during this five year period was 5.7%.

<table>
<thead>
<tr>
<th>Fiscal Year Ending June 30</th>
<th>Share Value</th>
<th>Rate of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>$15.45</td>
<td>3.0</td>
</tr>
<tr>
<td>2016</td>
<td>$15.75</td>
<td>1.9</td>
</tr>
<tr>
<td>2017</td>
<td>$17.34</td>
<td>10.1</td>
</tr>
<tr>
<td>2018</td>
<td>$18.43</td>
<td>6.3</td>
</tr>
<tr>
<td>2019</td>
<td>$19.79</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Investment Management Fees
The rate of return for this fund is calculated after investment management fees are deducted. The annual fund investment management fees over the last fiscal year was 0.077% or approximately $0.77 per $1,000 invested.
Volunteer Firefighter plans must follow the appropriate individual statutes in determining the amount invested in any eligible fund(s). (See Minnesota Statutes, Chapter 353G.)

**How To Open A Plan Account (Plan)**

All Volunteer Firefighters will need to contact PERA to open a Plan. PERA will then forward the Plan information to SBI. Once the Plan is setup, the SBI will send the credentials and instructions for accessing and using the Plan website. The website will give the Plan online access to your Plan’s current balance, posted/pending transactions, and statements.

**Contribution, Withdrawal And Transfers**

All contributions, withdrawals, and transfers must be requested through PERA, the plan administrator. Please contact PERA for the required forms.

**Investment Option**

Volunteer Firefighter Account

**Administrative Fees**

PERA’s Administrative Fees are deducted directly from the Plan’s funds on an annual basis. SBI’s Administrative fees are deducted directly from the Plan’s funds on a quarterly basis.

**Investment Management Fees**

There are no “front-end” or “back-end” loads charged on contributions, withdrawals or transfers in Funds. All transactions are made using the daily share value established for each Fund.

Investment Management Fees are deducted from the investment earnings in each Fund before the share value for the Fund is computed. These deductions will vary from Fund to Fund and from year to year depending on the actual management costs incurred.

Please refer to page 4 of this Prospectus for investment management fee information for the Volunteer Firefighter Account.

**Reporting**

Monthly reports and other correspondence from the SBI will be e-mailed to the contact person at the e-mailed address provided to PERA at time of account setup. Monthly reports display current balances, performance and transaction detail that occurred during the month.

**PERA Contact Information:**

David Andrews  
Public Employees Retirement Association  
60 Empire Drive, Suite 200  
St. Paul, MN 55103-2088  
TEL (651) 201-2648  
FAX (651) 297-2547  
Email: david.andrews@mnpera.org

**SBI Contact Information:**

Shirley Baribeau  
Minnesota State Board of Investment  
60 Empire Drive, Suite 355  
St. Paul, MN 55103-3555  
TEL (651) 296-3328  
FAX (651) 296-9572  
Email: shirley.baribeau@state.mn.us
About the State Board of Investment

Board Members
The State Board of Investment (SBI), in conjunction with SBI staff and the Investment Advisory Council (IAC), 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’s membership is specified in the Minnesota Constitution and is composed of the officers listed below. The Board’s duties, powers, and investment authority are contained in Minnesota Statutes, Chapter 11A.

Governor Tim Walz
State Auditor Julie Blaha
Secretary of State Steve Simon
Attorney General Keith Ellison

Investment Advisory Council
The Legislature has established an Investment Advisory Council to advise the Board and its staff on investment related matters. The Board appoints ten members experienced in finance and investments. The Commissioner of Minnesota Management and 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.

Gary Martin, Chair Chief Investment Officer Macalester College
Kim Faust, Vice Chair Vice President and Treasurer Fairview Health Services
Malcolm W. McDonald (Emeritus) Director & Corporate Secretary, Retired Space Center, Inc.
Denise Anderson Governor’s Appointee Active Employee Representative
Doug Anderson Executive Director Public Employees Retirement Association
Dennis Duerst President, 3M Investment Management Corp 3M Company
Myron Frans Commissioner Minnesota Management and Budget
Susanna Gibbons Managing Director, Carlson Funds Enterprise Carlson School of Management, UMN
Morris Goodwin, Jr. Sr. Vice President and CFO American Public Media Group
Peggy Ingison Governor’s Appointee Retiree Member Representative
Erin Leonard Executive Director Minnesota State Retirement System
Dan McConnell Business Manager Building & Construction Trades/Counsel of Mpls.
Nancy Orr Chief Investment Officer Fiduciary Counselling, Inc.
Carol Peterfeso Chief Treasurer and Investment Officer University of St. Thomas
Jay Stoffel Executive Director Teachers Retirement Association
Shawn Wischmeier Chief Investment Officer Margaret A. Cargill Philanthropies

Executive Director and Staff
To carry out its mission, SBI retains an executive director, an internal investment staff and external investment managers to execute its policies.

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

Directors
Patricia Ammann, Director, Investment Services and Operations
Paul T. Anderson, Director, Financial Services and Operations
Andrew Krech, Director, Private Markets and Asset Allocation
John Mulé, Director, Legal, Legislative Policy and Shareholder Services
Erol Sonderegger, Director, Public Markets, Cash Management Services and Risk Management

Investment Staff
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
Jeffrey Weber, Investment Officer

Administrative Staff
Kailee Anderson, Accounting Officer
Shirley Barbeau, Controller
Kathy Leisz, Information Technology Specialist 3
Melissa Mader, Office Admin. Specialist, Senior
William J. Nicol, Investment Accounting Specialist
Kelly Nordstrom, Office Admin. Specialist, Intermediate
Namada Ramaswami, Accounting Officer, Senior
Iryna Shafir, Compliance Analyst
The Minnesota Supplemental Investment Fund is managed by the Minnesota State Board of Investment

Board Members:

Governor Tim Walz
State Auditor Julie Blaha
Secretary of State Steve Simon
Attorney General Keith Ellison

Executive Director and Chief Investment Officer:

Mansco Perry III

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