COMPREHENSIVE ANNUAL FINANCIAL REPORT

For Fiscal Year Ended June 30, 2019

MOVING FORWARD

PERA

Public Employees Retirement Association of Minnesota

Pension Trust Funds of the State of Minnesota

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Public Employees Retirement Association of Minnesota

Pension Trust Funds of the State of Minnesota

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2019

Executive Director
Doug Anderson

Prepared by PERA Finance Division.

Member of Government Finance Officers Association of the United States and Canada

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INTRODUCTORY SECTION

2019 Comprehensive Annual Financial Report

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Achievement Awards

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Public Employees Retirement Association of Minnesota

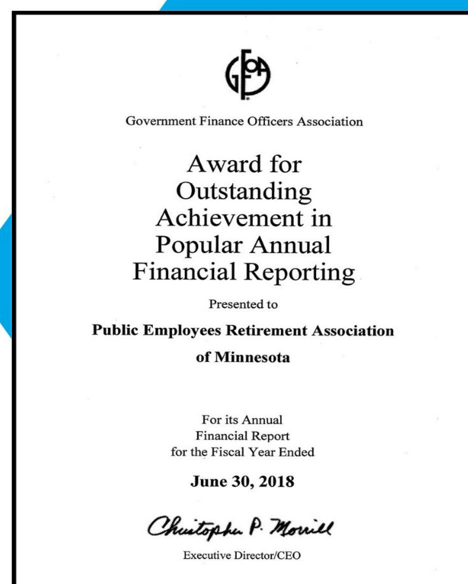
For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

The Government Finance Officers Association (GFOA) recognizes public retirement systems that meet its rigorous reporting standards with its annual Certificate of Achievement for Excellence in Financial Reporting. It is the highest form of recognition for accounting and financial reporting in the public pension sector.



Government Finance Officers Association

Award for Outstanding Achievement in Popular Annual Financial Reporting

Presented to

Public Employees Retirement Association of Minnesota

For its Annual Financial Report for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

PERA received the GFOA Award for its Popular Annual Financial Report.

PPCC

Public Pension Coordinating Council

Recognition Award for Administration 2019

Presented to

Minnesota Public Employees Retirement Association

In recognition of meeting professional standards for
plan administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

President's Report

December 16, 2019

Dear Members, Annuitants, Beneficiaries and Governmental Employers:

On behalf of the Board of Trustees, I am pleased to present the Public Employees Retirement Association (PERA) Comprehensive Annual Financial Report (CAFR) for the year ending June 30, 2019. The report provides financial, investment, actuarial, statistical and other related information about PERA and the plans it administers. Responsibility for the accuracy and completeness of the report rests with PERA.

Duty: As trustees of an 88-year-old institution, it is our duty and our honor to act on behalf of the interests of PERA's beneficiaries-to serve the retirement interests of the people who have served local governmental units throughout the State of Minnesota. During the past year the Trustees have exercised our best efforts to make prudent governance choices that will ensure benefits will be payable for the current and future generations of retirees.

Results: At 88 years old, PERA is a mature pension organization, making it particularly sensitive to changes in the market value of its investments. Because of uncertainty during the year, stock market returns in FY2019 were not as hearty as in the past two years. Nevertheless, PERA saw returns approximating our long-term assumed rate of return. In conjunction with our investment partner, the State Board of Investment, PERA has grown its assets and improved its funded status. All three of PERA's cost-sharing pension plans are comfortably on paths to full funding *before* their State-mandated full funding dates as seen below.

Fiscal Year End 2019 Funding in PERA's

Cost-sharing Pension Plans

	General Plan	Police and Fire Plan	Correctional Plan
Based on actuarial (smoothed) asset value	78.6%	87.4%	96.2%
Based on market value	80.2%	89.3%	98.7%
Expected full funding date	2037	2031	2025
Statutory full funding date	2048	2048	2048

In addition, because of its long-term focus, PERA has been able to make small incremental adjustments to changing financial conditions that have kept the plans affordable for taxpayers. Affordability promotes sustainability of the plans and ensures the continuance of a benefit that will help public employers recruit and retain quality employees.

Looking forward: PERA is in sound health. To keep the funds healthy, the Board is currently working with the Executive Director to refine our values about plan design, funding, and investments. The goal is to move the plans forward in a manner that provides intergenerational equity for both members and taxpayers.

Conclusion: The PERA retirement system is financially sound. Past success points to continued improvement toward full-funding. Participants can be confident that their pension benefits are secure today and will continue to provide an equitable benefit in the future.

Thomas Stanley
President
PERA Board of Trustees

Letter of Transmittal

December 16, 2019

Board of Trustees
Public Employees Retirement Association
of Minnesota
60 Empire Drive, Suite 200 St.
Paul, Minnesota 55103

Dear President and members of PERA Board of Trustees:

On behalf of the management and staff of PERA, it is our pleasure to present the Public Employee Retirement Association of Minnesota's *Comprehensive Annual Financial Report* (CAFR) for the fiscal year ended June 30, 2019. The CAFR should provide useful information for our stakeholders in making a wide variety of decisions concerning the certainty, amount, and timing of PERA's cash flows.

Management is responsible for the completeness and reliability of the information in this report. The following statements have been prepared in conformity with accounting principles generally accepted in the United States of America. The statements also comply with the reporting requirements of *Minnesota State* Statutes 356.20. We believe the enclosed financial statements and disclosures are fairly presented in all material respects. We believe that PERA's internal accounting controls are sufficient to provide reasonable assurance regarding the safekeeping of the PERA's assets and the fair presentation of the financial statements and related schedules. The PERA's financial reports are prepared on the accrual basis of accounting.

The Office of the Legislative Auditor, State of Minnesota, has issued an unmodified opinion on the Public Employees Retirement Association's *Statement of Fiduciary Net Position* as of June 30, 2019, the related *Statement of Changes in Fiduciary Net Position,* and the *Notes to the Financial Statements*. The independent auditor's report is found at the front of the *Financial Section* of this report.

Management's Discussion and Analysis (MD&A) follows the independent auditor's report to provide a narrative introduction, overview, and analysis of PERA's basic financial statements. The MD&A complements this letter of transmittal and should be read in conjunction with it.

Overview of the Association:

In 1931 PERA was established by the Minnesota State Legislature "to provide for the retirement of their members and to provide funds for the beneficiaries of members in the event of death of a member" *(Minnesota State Statutes* 356.001). PERA is a pension trust fund of the State and "must be maintained for the exclusive benefit of the members and the beneficiaries of the members" (*Ibid*.) For more information on plan summaries, see Note 1, Figure 1 of the *Notes to the Financial Statements.*

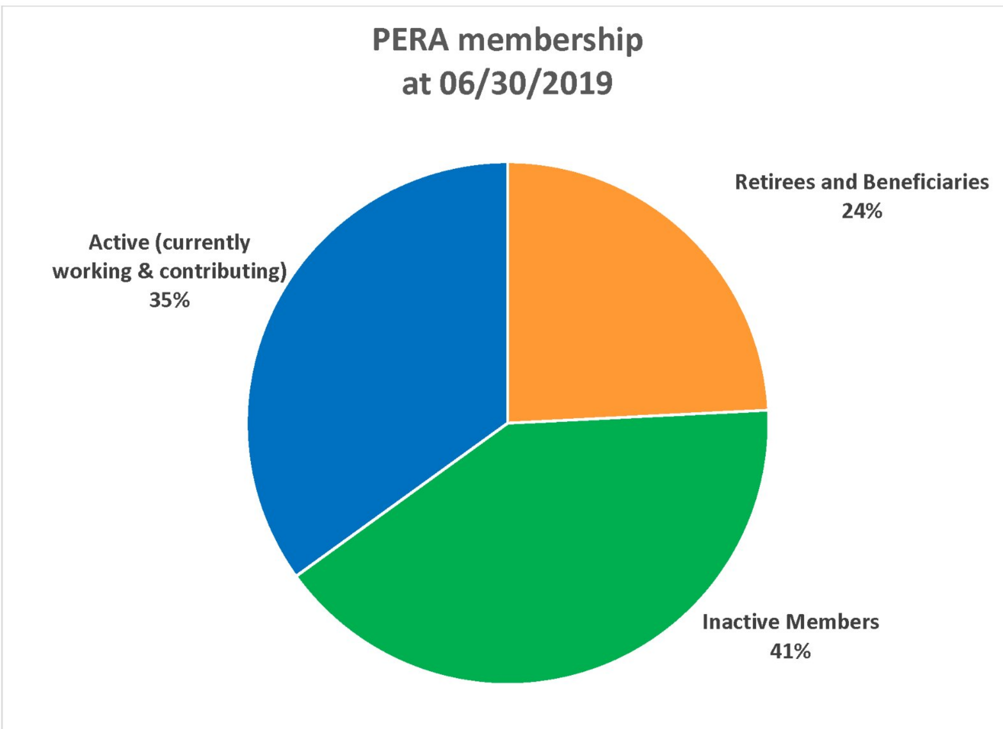
Currently PERA administers five pension plans each of which is accounted for separately:

- Three cost-sharing multiple-employer defined benefit plans: General Employees Plan; Police and Fire Plan; and Correctional Plan.
- One agent multiple-employer defined benefit plan: State Volunteer Firefighter Retirement Plan, and
- One Defined Contribution Plan primarily for elected local officials.

PERA also serves as an administrative agent for local governmental entities that establish a postemployment benefit fund and, in a very limited number of cases for governments that desire to establish a long-term equity investment account with the Minnesota State Board of Investment (SBI).

More than 2,100 local governmental units participate in at least one of the cost-sharing plans. Combined the three cost-sharing plans covered more than 485,000 current and former employees of the participating governmental units. In addition, there were about 4,500 volunteer firefighters covered by the State Volunteer Firefighter Plan at fiscal year end 2019. For more information on membership, see Note 1, Figure 2 of the *Notes to the Financial Statements.*

Members are distributed by employment status as shown in the accompanying chart.



.Mission:

PERA's mission is to:
- Administer and promote sustainable pension plans, and
- Provide services that our members value

Services: In addition to acting as trustee for retirement assets and making benefit payments to retirees and other benefit recipients, PERA provides a variety of services to its members including but not limited to: individual benefit determinations, personal benefit statements, access to preretirement group counseling, and individual retirement benefit counseling. Members can also use the online MY PERA system to check their total accumulated contributions and service credits and use the benefit calculator to estimate their retirement benefits at various ages or dates. We provide educational videos and specialized publications with information on specific topics of interest to members via our website. PERA also staffs a call center from which members and other stakeholders can access information and receive immediate responses to questions.

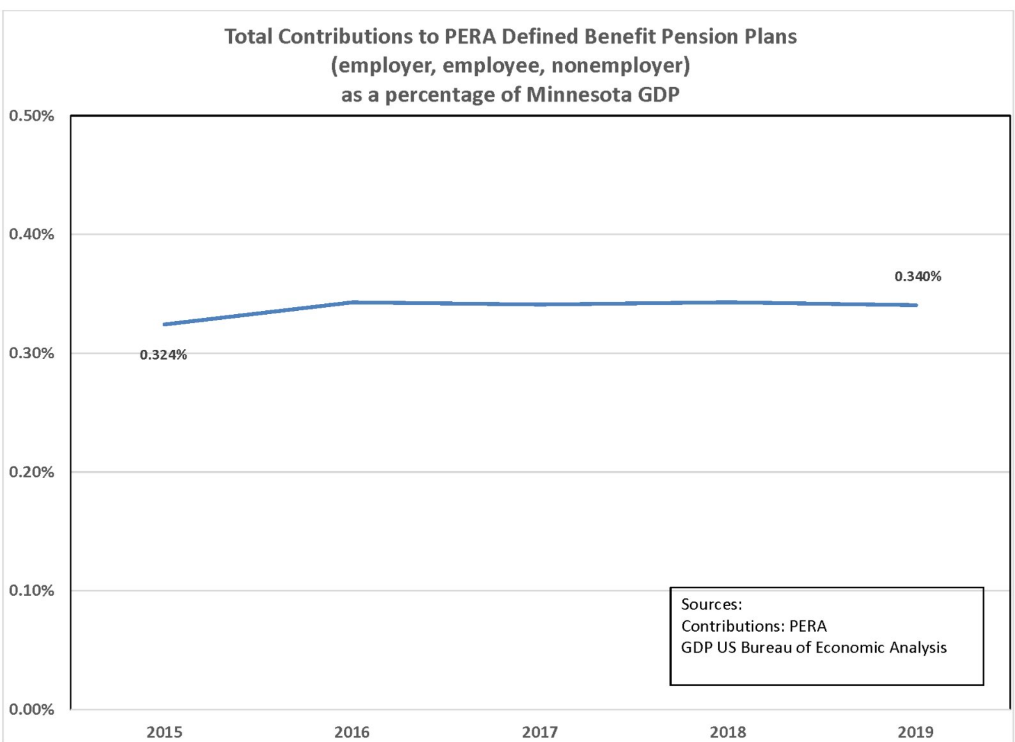
Sustainability of PERA's retirement plans rests on three pillars:

- Funding policies and practice;
- Investment policies and practice; and
- Plan design

Funding: Contributions are a critical component of PERA's funding. Contributions must be affordable for the taxpayer and yet sufficient to fund a meaningful benefit to help attract and retain public employees. Because participating employers are public entities which must annually appropriate budgets, stability of contributions as a percentage of covered payroll has been an important value shaping PERA's funding. As a result, contribution rates tend to change slowly. For more information on contribution rates and trends, see Note 5, Figure 13 of the *Notes to the Financial Statements.*

PERA's has been successful in maintaining fairly consistent contribution rates for members and employers as a portion of payroll. In thirty-five years since 1984, employer contribution rates have increased ten times and employee contributions have increased eight times. One of the employee rate increases and two of the employer rate increases were in response to the funding challenge resulting from the "great recession".

More importantly, the total dollar amount of contributions represent a very affordable and stable percentage of the State's Gross Domestic Product (GDP) at 0.34 percent.



PERA receives a small amount of direct, nonemployer contributions from the State of Minnesota. In fiscal year 2019, the State provided support to PERA as follows:

- $16 million to subsidize the merger of the Minneapolis General Employee Plan with PERA's General Plan
- $13.5 million to help the Police and Fire Plan reach full funding.

Combined, direct aid from the State amounted to less than 1 percent of PERA's total funding in fiscal year 2019.

Contribution rates can be influenced by PERA's Board but they are controlled by the legislature. While not strictly fixed, contribution rates have been change resistant. Therefore while there is negligible risk of non-payment by participating employers, PERA faces funding risk in that it could be difficult for the legislature to change rates quickly, in the event of sudden, adverse economic or business developments as they emerge.

Investments: Investments provide the largest source of funds for PERA's plans. As discussed in the MD&A, PERA's plans generally have negative net cash flow (before investment income): annual cash in-flows from contributions are insufficient to cover out-flows for benefits and expenses.

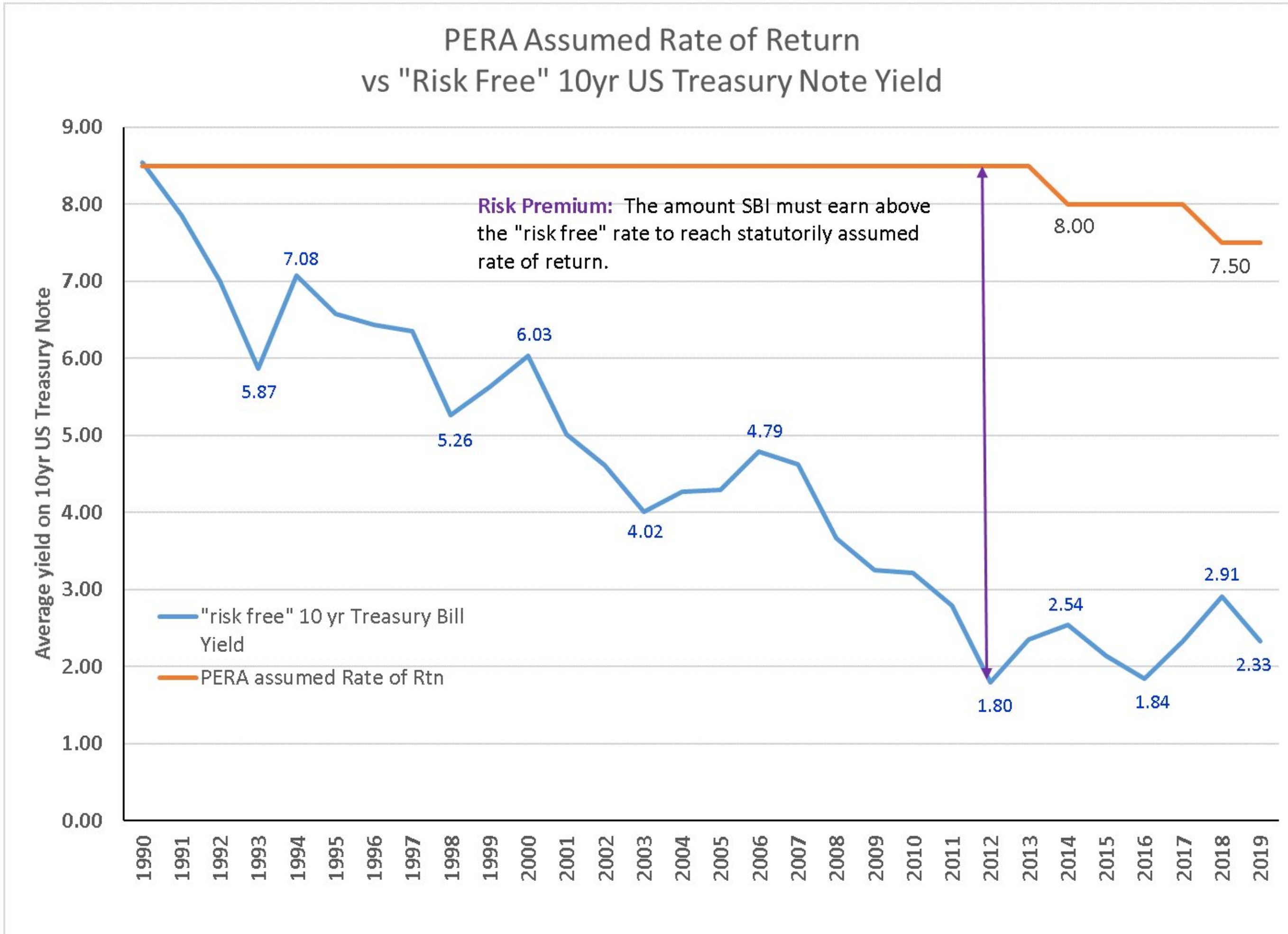
In accordance with *Minnesota Statutes*, Section 353.06, PERA's financial assets are invested by the Minnesota State Board of Investment (SBI). All investments undertaken by SBI are governed by the common law prudent person rule and other standards codified in Chapter 11A of the Minnestoa Statutes. SBI is comprised of the State's elected officers: Governor, State Auditor, Secretary of State, and State's Attorney General.

SBI has one overriding responsibility to ensure that sufficient funds are available to finance promised retirement benefits. Within this context, SBI has established a long-term investment objective to outperform a composite market index weighted to reflect the long-term asset allocation policy. For the year ended June 30, 2019, the Combined Funds produced approximately a 7.3 percent rate of return on invested assets. Actual returns for fiscal year 2019 were just slightly lower than the statutorily assumed rate of return that the PERA's actuaries use to discount future cash flows in order to estimate the total pension liability.

Just as PERA's Board can influence but, not control, contribution rates, the Board can influence, but not control, PERA's investment practices. Given the high dependence upon investment returns to fund pension plans, the volatility of returns is an obvious risk that the Board monitors regularly. In Note 2 of the *Notes to the Financial Statements*, "..allocation policy is the primary determinant of the …long-term investment return and ..risk" and "(d)iversification improves the risk-adjusted return …of the portfolio."

Over the past 20 years, the risk-free rate of return on the US Government ten-year Treasury Note has trended downward. During 1990, PERA's assumed rate of return was equal to the yield on risk-free treasury bills at 8.5 percent. During 1999 the ten-year note yielded an average of 5.6 percent; in 2009 (on the heels of the great recession) it yielded 3.3 percent; and, in 2019 it has averaged 2.3 percent. In order to meet PERA's statutorily assumed rate of return, SBI must earn a premium over the risk-free rate. The risk premium was 2.9 percent in 1999; 5.2 percent in 2009; and, 5.2 percent in 2019. The required risk premium necessarily drives SBI's asset allocation and therefore, the volatility (riskiness) of the returns. Over time, in response to declining risk-free rates, the combined retirement investment portfolio increased its allocation of riskier assets as follows:

Percent of the Combined Retirement Portfolio by Asset type and Year			
Asset type	1999	2009	2019
Alternatives (private markets)	9%	15%	15%
Equities (US and Int'l)	69%	61%	62%
Fixed Income and Cash	22%	24%	23%



Plan design: This is a sustainability dimension that the PERA Board of Trustees can impact directly. It is also the most complex dimension. Plan design determines which of PERA's stakeholders incur what costs and receive what benefits, when, and how. Virtually every change in plan design will impact different stakeholders and will affect them differently.

PERA's Board and management regularly review its plans and recommend adjustments to the legislature to ensure the plans are affordable for the taxpayer, provide reasonable benefits for members, and are equitable across generations.

Measuring Sustainability

There are many factors that can affect sustainability. Among them are the maturity and funding.

Maturity: As pension plans mature its total asset base increases and a larger proportion of its total membership is retired and receiving benefits versus active contributing members. This is not dangerous in itself but, rather, magnifies the financial effects of the normal risks a plan faces. For example, because of the large proportion of at or near retirement, and because of a large asset base and heavy dependence on investment earnings, a mature plan is more sensitive to market downturns or economic shocks and can have more difficulty recovering losses than a less mature plan. With the exception of the Correctional Plan, PERA's cost-sharing plans are mature.

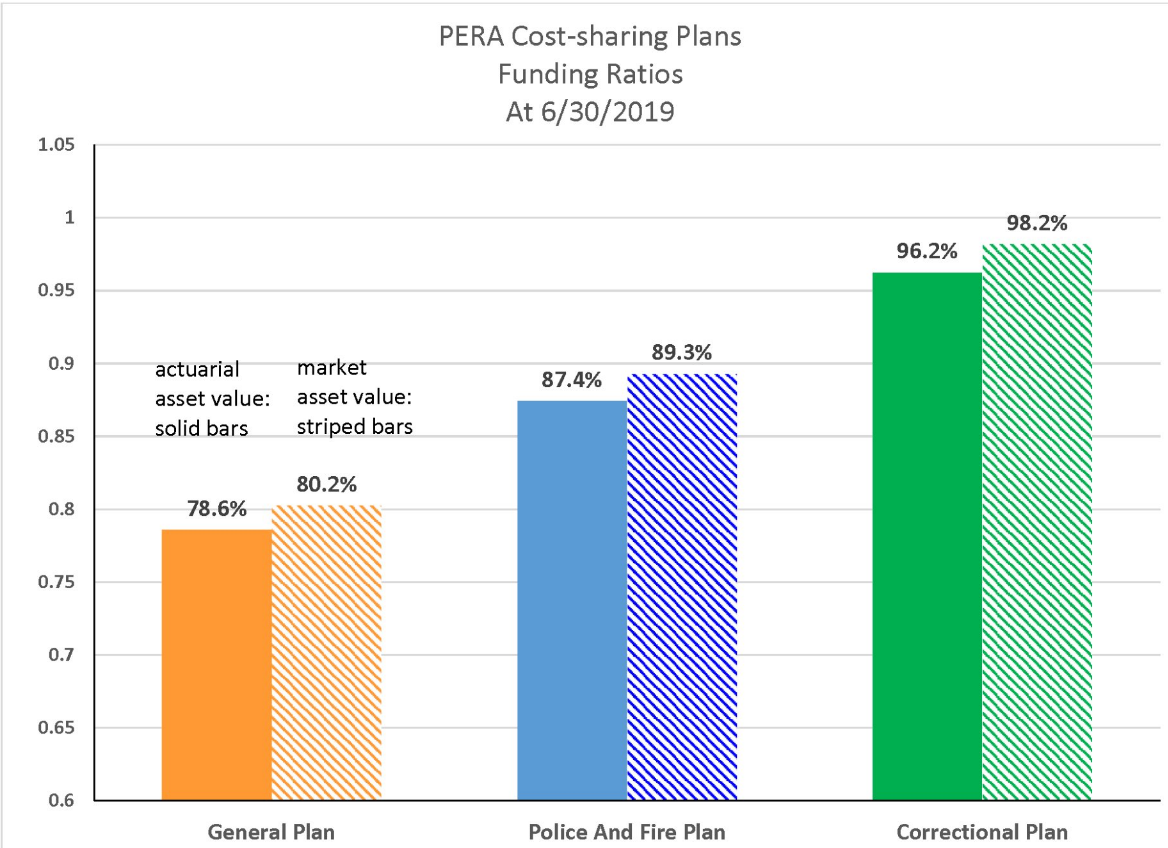
One measure of maturity is the ratio of the number of members drawing benefits versus the number of active contributing members. As discussed in the MD&A, the plans have large number of annuitants compared to active members.

PERA Plan Maturity				
	General Plan	Police and Fire	Corrections	Combined
Retirees and Beneficiaries	105,243	11,031	1,318	117,592
Active (currently working & contributing)	154,130	11,763	3,965	169,858
# of Retirees/active members	2/3	1/1	1/3	2/3

Another measure of plan maturity is the volume of assets to covered payroll. The chart of assets to covered payroll in the MD&A shows a sharp dip in fiscal year 2016 and the flattening of the curve as market returns moderated in fiscal year 2018-2019. Volatility of this ratio is a measure of the degree of market sensitivity PERA experiences.

Plan maturity is not a risk *per se*. Rather, it is an inevitable condition that arises from members aging and investment balances growing. It is a background condition which can affect the magnitude of outcomes of risks facing the plan (such as investment risk, funding risk, etc.).

Funded ratio: This is one measure the Board and management use to monitor pension plan financial health and sustainability. The funded ratio compares a plan's asset value divided by the actuarial determined total pension liability. At the end of fiscal year 2019, the ratio of actuarially valued assets to the total pension liability of the General Employees Fund was 78.6 percent, for the Police and Fire Fund the funded ratio was 87.4 percent, and the Correctional Fund was funded at 96.2 percent. The actuarial value of assets reflects smoothing of the previous five years of asset gains and losses. When measured on a market value of asset basis, the respective funding ratios are slightly higher at 80.2 percent, 89.3 percent, and 98.2 percent.



The funding ratios are determined by calculating the Total Pension Liability (the denominator of the ratio) using the 7.5 percent long-term investment return assumption defined by statute for funding purposes. PERA's historical funding ratios using the actuarial value of assets are shown in the *Schedule of Funding Progress* in the *Actuarial Section* of the report.

The level of plan funding is important. However, the trend of the ratio over time is also necessary for a full understanding of plan sustainability. Ten-year schedules of PERA's historical funding ratios using the actuarial value of assets are shown in the *Schedule of Funding Progress* in the *Actuarial Section* of the report and funding ratio trends on both an actuarial and market basis of asset-valuation are discussed in the MD&A. In general, the trends show improvement that should result in full funding before the statutorily required full-funding dates for all plans.

Legislative and Other Recent Developments

In its fiscal year 2019 session, the Legislature made permanent a phased retirement option (PRO) for PERA members that was set to expire in June 2019. Under the plan members may, with agreement from their employer, receive a retirement benefit while continuing to work a reduced schedule for up to five years. Because the program was already in existence and because it is likely to affect only a small number of members, it is not likely to have a significant impact on PERA's financial condition.

Also in the 2019 Session, the Legislature gave members the option to purchase up to five years' worth of service credit for periods during which they were in active service in the uniformed services. This law should have no impact on PERA's financial condition because the purchase price for service credits is equal to the full actuarially determined cost of the additional benefit.

As discussed more completely in Note 7 of the *Notes to the Financial Statements*, PERA has pursued a focused effort to find non-vested, inactive members whose accounts had become dormant and refund their contributions. Success of the effort can be measured directly from the financial statements which show:

1. Total non-vested, inactive membership *decreased* about 9 percent from about 143,000 in fiscal year 2018 to about 130,000 in fiscal year 2019.
2. Refunds increased by about $25 million from $46 million in fiscal year 2018 to $71 million in 2019 (about a 55 percent increase).

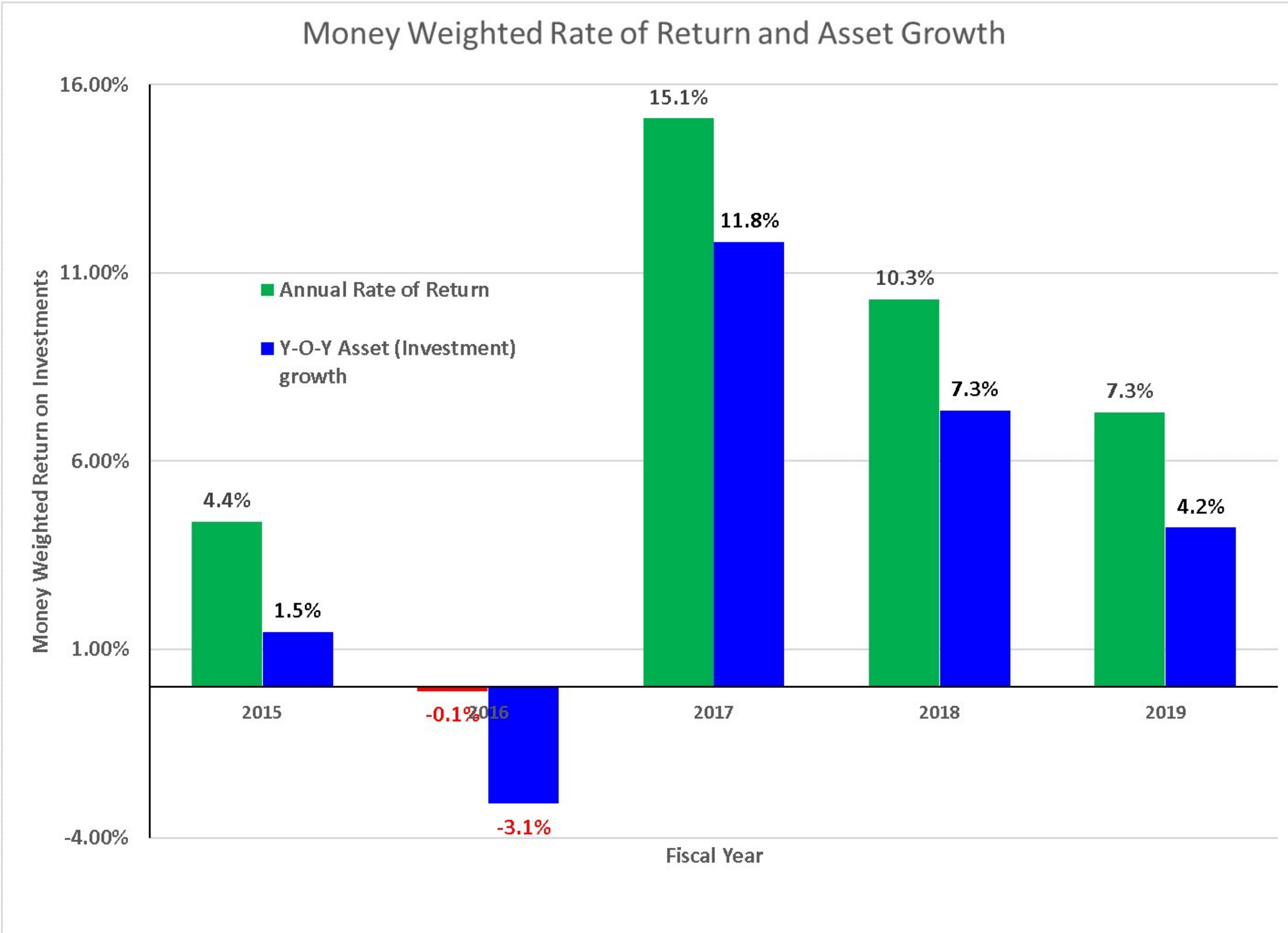
The ultimate financial (Net Position) impact of the program should be negligible because refunds to inactive, non-vested members reduce total assets and total liability by equal amounts.

During fiscal year 2019, PERA started a three- to five-year project to modernize our digital infrastructure to meet stakeholders' changing service needs and to ensure members' data is kept safely.

As part of a comprehensive risk management effort, the Board is refining our funding, investment, and benefit policies by identifying guiding values that will give early warning when action may be required to keep PERA on a sustainable course. The adopted value statements will guide policy by clarifying acceptable outcomes well in advance of the time any action might need to be taken.

Conditions and Outlook

As a mature public pension fund, PERA's plan funding is highly sensitive to changes in investment earnings. The past three years have seen positive market returns and PERA's trust fund assets have grown. However the annual rate of return on investments has been slowing over time. It is reasonable to expect investment returns will fluctuate and, in some years, may even be negative. However, over the long-term if average returns are at or above the assumed rate of return, we will be on a trajectory to be fully funded before the statutory funding date (2048).



Our partner, the SBI, has demonstrated great skill in the past managing investment allocation and risk to generate returns sufficient to support the existing retirement plans. We have confidence the SBI will continue to provide good, risk-adjusted returns for the foreseeable future. Our actuary, Gabriel Roeder and Smith, has done a careful study of market returns and volatility and are of the opinion that our current 7.5 percent assumed rate of investment return is reasonable. Therefore, we are reasonably confident that:

- PERA's funded status will continue to improve;
- We will continue to offer sufficiently attractive retirement benefits to help public employers attract and retain staff;
- At an affordable cost to the taxpayer.

Awards

PERA received national recognition in pension fund administration and disclosure of financial information. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a *Certificate of Achievement for Excellence in Financial Reporting* to PERA for its CAFR for the fiscal year ended June 30, 2018.

The *Certificate of Achievement* is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports. To be awarded a *Certificate of Achievement*, a government unit must publish an easily readable and efficiently organized CAFR. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A *Certificate of Achievement* is valid for one year only. We believe our current report continues to meet the *Certificate of Achievement* program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

The GFOA established Popular Annual Financial Reporting Awards Program (PAFR) in 1991 to encourage governments to extract information from the CAFR and produce a high quality popular annual report specifically designed to be readily accessible and easily understandable. The GFOA awarded PERA the *Award for Outstanding Achievement in Popular Annual Financial Reporting* for the fiscal year ended June 30, 2018.

We are also very pleased to report that PERA received the Public Pension Coordinating Council's (PPCC) Public Pension Standards 2018 Award, in recognition of meeting professional standards for plan administration as set forth in the Public Pension Standards. These standards were developed by a coalition of three associations that represent public pension funds who cover the vast majority of public employees in the U.S. They are intended to reflect minimum expectations for public retirement systems management and administration, and serve as a benchmark by which all defined benefit public plans should be measured. PERA is proud to be a recipient of this award.

Acknowledgements

We wish to thank the Board of Trustees for their leadership and interest in conducting PERA's affairs in a progressive, fiduciarily responsible, and financially sound manner.

We especially wish to thank David Andrews, Controller, and the entire Finance Division for their work on the CAFR. We also wish to thank all the employees at PERA for their consistent, dedicated efforts to serve the interests of our members and other stakeholders.

Respectfully Submitted,

Doug Anderson
Executive Director

Michael Hagerty
Chief Finance Officer

Luis Lugo
Chief Operating Officer

PERA Board of Trustees & Professional Consultants

Board of Trustees

Professional Consultants

Actuary:
Gabriel Roeder Smith & Company

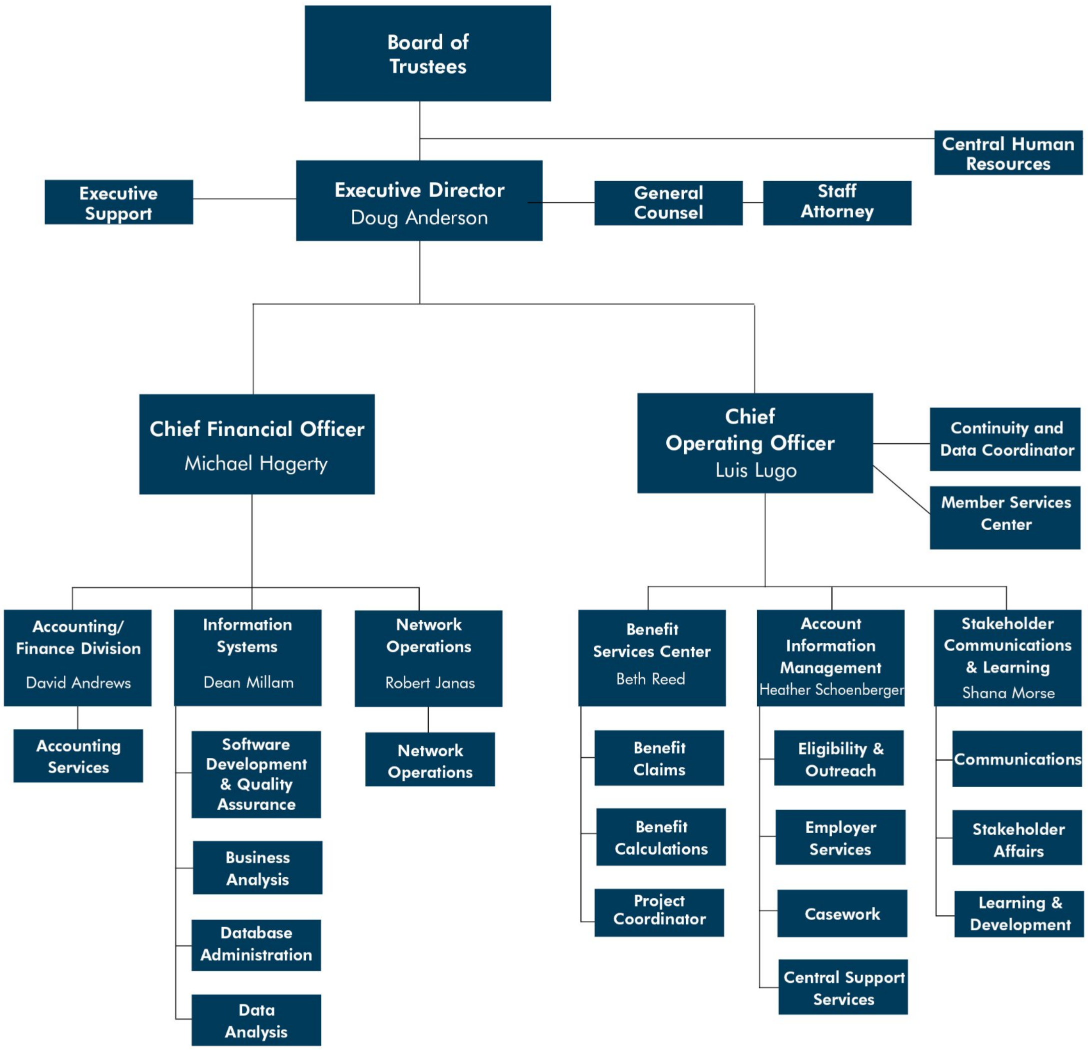
Auditors:
Minnesota Office of the Legislative Auditor
Clifton Larson Allen

Legal Counsel:
Minnesota Office of Attorney General

Medical Advisor:
MMRO - Managed Medical Review Organization

NOTE: PERA invests its funds in various investment pools administered by the Minnesota State Board of Investment (SBI). The SBI retains various investment advisors whose fees are paid by the pool participants, including PERA. A schedule of these advisors and PERA's share of their fees is located on page 111 in the *Investment Section* of this CAFR.

Organization Structure & Key Administrative Staff



Our Mission & Vision

PERA's mission is to administer and promote sustainable retirement plans and provide services that our members value. PERA's vision: PERA will be a recognized leader in efficient and excellent service delivery and plan management.

FINANCIAL SECTION

2019 Comprehensive Annual Financial Report

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OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA • James Nobles, Legislative Auditor

Independent Auditor's Report

Members of the Board of Trustees
Public Employees Retirement Association of Minnesota

Mr. Doug Anderson, Executive Director
Public Employees Retirement Association of Minnesota

Report on the Financial Statements

We have audited the accompanying financial statements of the Public Employees Retirement Association of Minnesota (PERA), which included the Statement of Fiduciary Net Position as of June 30, 2019, the related Statement of Changes in Fiduciary Net Position, and Notes to the Financial Statements, as listed in the Financial Section of the Table of Contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to PERA's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of PERA's internal controls. Accordingly, we express no such opinion.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Room 140 Centennial Building, 658 Cedar Street, St. Paul, Minnesota 55155-1603 • Phone: 651-296-4708 • Fax: 651-296-4712
E-mail: legislative.auditor@state.mn.us • Website: www.auditor.leg.state.mn.us • Minnesota Relay: 1-800-627-3529 or 7-1-1

Members of the Board of Trustees
Mr. Doug Anderson, Executive Director
Page 2

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Public Employees Retirement Association of Minnesota as of June 30, 2019, and the changes in financial position for the fiscal year then ended in conformity with accounting principles generally accepted in the United States of America.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and the other required supplementary information, as listed in the Financial Section of the Table of Contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to Management's Discussion and Analysis and the other required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information Included with the Financial Statements

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise PERA's basic financial statements. The supporting schedules in the Financial Section and the Introductory, Investment, Actuarial, and Statistical Sections, as listed in the Table of Contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supporting schedules, as listed in the Financial Section of the Table of Contents, are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. The supporting schedules have been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supporting schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial, and Statistical Sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we issued our report, also dated December 16, 2019, on our consideration of the Public Employees Retirement Association of Minnesota's internal controls

Members of the Board of Trustees
Mr. Doug Anderson, Executive Director
Page 3

over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope and results of our testing of internal controls over financial reporting and compliance and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

Chris Buse

Christopher Buse, CPA
Deputy Legislative Auditor

Tracy Gebhard

Tracy Gebhard, CPA
Audit Director

December 16, 2019
Saint Paul, Minnesota

Management Discussion and Analysis

The mission of the Public Employees Retirement Association of Minnesota (PERA) is to administer and promote sustainable retirement plans and provide services that our members value. The following *Management's Discussion and Analysis* (MD&A) is provided to help the users of our financial statements make reasonable inferences about PERA's progress in accomplishing its mission. The MD&A and the related basic financial statements provide insight into PERA's overall financial condition and results of operations for the fiscal year ended June 30, 2019. PERA's financial condition is a significant element of plan sustainability.

The following narrative supplements the basic financial statements. It should be read in conjunction with the *Letter of Transmittal* and the *Notes to the Financial Statements* presented elsewhere in this *Comprehensive Annual Financial Report* (CAFR). Readers should also familiarize themselves with the *Annual Actuarial Valuation Report* and periodic *Experience Studies* prepared by our independent actuaries available on our website https://www.mnpera.org/about/financial/ and with the Minnesota State Board of Investment's (SBI) *Comprehensive Performance Report* for June 30, 2019, available on their website at www.mn.gov/sbi/Performance.html.

Overview of PERA and its Financial Statements:

PERA's primary business is to provide income security for persons who retire from covered local government service in the State of Minnesota and their survivors. PERA has two primary product lines: defined benefit retirement plans and a defined contribution plan.

The defined benefit plans focus on making payments whose amount and timing are statutorily determined by the terms of the applicable retirement plan. PERA provides both cost-sharing multiple-employer and agent multiple-employer plans. In the cost-sharing plans, PERA pools the assets and the obligations of the participating government employers. Pooled assets can be used to pay the retirement obligations of any employer in the plan. In the agent plan, PERA pools the assets of participating employers for investment purposes. However, a separate account is maintained for each employer. In essence, the agent plan can be thought of as a bundle of separate retirement plans with their own obligations and assets.

PERA accounts for each defined benefit plan in its own pension trust fund as follows:

Plan name	Type of Plan	Fund type
General Employees Retirement Plan	Cost-sharing multiple-employer	Pension Trust
Police and Fire Plan	Cost-sharing multiple-employer	Pension Trust
Correctional Plan	Cost-sharing multiple-employer	Pension Trust
Statewide Volunteer Firefighter Plan	Agent multiple- employer	Pension Trust

PERA administers a defined contribution plan primarily for local government elected officials. The plan provides benefits that are limited to contributions and related investment earnings.

In accordance with *Minnesota Statutes*, Chapters 118A.09 and 471.6175, PERA acts as either the account or trust administrator for qualifying government entities that have arrangements with the SBI to hold investments for long-term uses or postemployment benefits. PERA accounts for those assets along with the offsetting liabilities, in an agency fund.

Note 1 of the *Notes to the Financial Statements* contains detailed information about the plans.

Basic Financial Statements:

1. The *Statement of Fiduciary Net Position* reports the difference between the assets held in trust and the liabilities owed third parties. As a trust, all of PERA's pension fund net assets are available to pay the plan's pension liabilities. The liability for future benefit payments remains with the employer. The fiduciary net position measures the resources PERA has available to pay benefits as of the fiscal year end. The value of fiduciary net position is integral to actuarial valuations and performance based valuations in order to get a complete understanding of the sustainability of PERA's retirement plans.

The *Statement of Fiduciary Net Position* shows a combined fiduciary net position of $32.2 billion as of June 30, 2019, and is distributed as follows:

• Cost-sharing Multiple-Employer Defined Benefit Plans	$32.0 billion	99.38%
• Agent Multiple-Employer Defined Benefit Plan	$0.1 billion	0.31%
• Defined Contribution Plan	$0.1 billion	0.31%

Considering the cost-sharing multiple-employer product line represents an overwhelming share of PERA's fiduciary net position and the greatest risk to sustainability, the rest of this discussion will focus on PERA's three cost-sharing multiple-employer defined benefit plans. Also, the asset representing PERA's interest in collateral pledged for securities lent is fully offset by the liability to return that collateral, securities lending collateral has a net zero effect on net position. Therefore, securities lending collateral is omitted from the discussion of PERA's assets and liabilities.

Condensed Schedule of Fiduciary Net Position - Cost-Sharing Plans (in thousands)

Assets	General Employees Fund	Police & Fire Fund	Correctional Fund	FY 2019 Combined Total	FY 2018 Combined Total	Change $	Change %
Cash and Cash Equivalents	$628,277	$246,498	$20,842	$895,617	$335,590	$560,027	166.9%
Receivables	50,077	19,164	965	70,206	61,603	8,603	14.0%
Investments	21,767,859	8,584,786	723,152	31,075,797	30,335,747	740,050	2.4%
Capital Assets & Other	6,332	0	0	6,332	6,504	(172)	(2.6%)
Total Assets	**22,452,545**	**8,850,448**	**744,959**	**32,047,952**	**30,739,444**	**1,308,508**	**4.3%**
Liabilities							
Accounts Payable	6,607	5,896	536	13,039	13,055	(16)	(0.1%)
Accrued Compensated Absences	1,012	0	0	1,012	959	53	5.5%
Bonds Payable	3,958	0	0	3,958	4,651	(693)	(14.9%)
Total Liabilities	**11,577**	**5,896**	**536**	**18,009**	**18,665**	**(656)**	**(3.5%)**
Total Net Position	**$22,440,968**	**$8,844,552**	**$744,423**	**$32,029,943**	**$30,720,779**	**$1,309,164**	4.3%

2. The *Statement of Changes in Fiduciary Net Position* reports the changes to PERA's fiduciary net position that happened during the recent fiscal year. Additions to net position include contributions from employers, members, and the State of Minnesota and net investment income. Deductions from net position during the year include benefit payments, refunds of contributions, and administrative expenses.

Condensed Schedule of Changes in Fiduciary Net Position - Cost-Sharing Plans (in thousands)

Additions	General Employees Fund	Police & Fire Fund	Correctional Fund	FY 2019 Combined Total	FY 2018 Combined Total	Change $	Change %
Employer Contributions	$515,444	$174,817	$18,676	$708,937	$677,471	$31,466	4.6%
Member Contributions	424,044	111,762	12,485	548,291	526,858	21,433	4.1%
State Contributions	16,000	13,500	0	29,500	25,000	4,500	18.0%
Investment Income (Loss)	1,547,224	609,512	50,853	2,207,589	2,940,510	(732,921)	(24.9%)
Other Additions	154	54	0	208	115	93	80.9%
Total Additions	**2,502,866**	**909,645**	**82,014**	**3,494,525**	**4,169,954**	**(675,429)**	**(16.2%)**
Deductions							
Benefits	1,536,071	547,699	15,381	2,099,151	2,012,101	87,050	4.3 %
Refunds of Contributions	65,834	$3,283	2,244	71,361	45,855	25,506	55.6 %
Administrative Expenses	13,470	$1,018	361	14,849	13,137	1,712	13.0 %
Total Deductions	**1,615,375**	**552,000**	**17,986**	**2,185,361**	**2,071,093**	**114,268**	**5.5 %**
Increase (Decrease) in Net Position	**$887,491**	**$357,645**	**$64,028**	**$1,309,164**	**$2,098,861**	**($789,697)**	**(37.6%)**

3. The *Notes to the Financial Statements* are an integral part of the basic financial statements and provide additional information that is necessary for understanding the financial statements.

In addition to the *Basic Financial Statements*, the following *Required Supplementary Information* is found after the *Notes to the Financial Statements*:

1) *Schedule of Changes in Net Pension Liabilities and Related Ratios and Notes*
2) *Schedule of Contributions from Employers and Nonemployers and Notes*
3) *Schedule of Investment Returns*

Financial Highlights:

The *Statement of Fiduciary Net Position* presents the value of fiduciary net position.

- Fiduciary net position increased by approximately $1.3 billion or 4.3 percent, from $30.7 billion at prior fiscal year end to $32.0 billion at fiscal year end 2019.

The *Statement of Changes in Fiduciary Net Position* presents how the fiduciary net position changed.

- Contributions to PERA's cost-sharing plans increased $57.3 million or 4.7 percent during the year, from $1.23 billion in fiscal year 2018 to $1.29 billion in fiscal year 2019.
- Benefit payments and refunds of contributions increased $112.5 million or 5.5 percent during the year, from $2.06 billion in fiscal year 2018 to $2.17 billion in fiscal year 2019.
- Refunds, in particular saw a significant change (although not material from the perspective of the statements as a whole) due to PERA's concerted effort to identify dormant accounts and return funds to non-vested, inactive members. Refunds increased by $25.6 million from $45.9 million in fiscal year 2018 to $71.4 million in fiscal year 2019 (approximately 55 percent increase).
- Administrative expenses increased $1.7 million or 13 percent during the year, from $13.1 million in fiscal year 2018 to $14.8 million in fiscal year 2019.
- Net cash flow (contributions less benefit payments and expenses) was negative for fiscal year 2019 at ($898) million compared to ($842) million in fiscal year 2018.
- Net investment income decreased by $732 million, from $2.9 billion in fiscal year 2018 to $2.2 billion in fiscal year 2019. The investment income of $2.2 billion more than offset negative net cash flow to produce the $1.3 billion increase in fiduciary net position.
- Investments earned a money-weighted rate of return of 7.3 percent in fiscal year 2019 versus 10.3 percent in fiscal year 2018.

Other currently known conditions of future significance:

- Total pension liability is an actuarial estimate of the present value of pension benefits already earned by government employees and is disclosed in Note 6 of the *Notes to the Financial Statements*. Combined total pension liability for PERA's three cost-sharing plan employers increased by $1.3 billion during the year, from $37.3 billion at prior fiscal year end to $38.6 billion at fiscal year end 2019.
- Net pension liability is disclosed in Note 6 of the *Notes to the Financial Statements*. Given that both total pension liability and fiduciary net position increased by $1.3 billion, the net pension liability had a slight decrease of $23 million, from prior fiscal year.

Analysis:

Over the long run, a defined benefit plan must balance cash in from contributions and investment income with cash out for benefits and expenses as expressed in the equation:

Contributions + Investment Income = Benefits Paid + Expenses

$$\underbrace{C + I}_{\text{Cash in}} \qquad \underbrace{B + E}_{\text{Cash out}}$$

During any given year, one side of the equation may be larger than the other side. Differences accumulate in the Fiduciary Net Position which is a reserve for paying future benefits.

Changes to Fiduciary Net Position Fiscal Year 2019:

Additions to Net Position come from two sources: Net Cash Flow and Net Investment Income.

Net Cash Flow: using the terms of the basic pension equation net cash flow is defined as:

Contributions - Benefits - Expenses = Net Cash Flow.

As retirement plans mature, the number of members receiving benefits increases relative to the number of active members making contributions. As a result, net cash flow turns negative. However, negative net cash flow by itself is not an alarming fact because the entire point of pension plans is to accumulate an investment portfolio over time which can support later benefit payments.

The General Employees and Police and Fire Plans are “mature” plans. They have been in existence long enough that there is a full generation of beneficiaries drawing benefits from the plans. One typical measure of plan maturity is the number of benefit recipients versus the number of active (contributing) employees. The table below shows PERA’s maturity and net cash flows for the three cost-sharing plans:

Plan Maturity

Plan	Maturity (retirees/ active members)	Net Cash Flow June 30, 2019
General Employees	2/3	($659,733)
Police and Fire	1/1	($251,867)
Correctional	1/3	$13,175

Contributions are the source of net cash flow and come from three sources: participating employers; active, covered employees; and, nonemployer sources. Contributions increased $57.3 million or 4.7 percent during the year, from $1.23 billion in fiscal year 2018 to $1.29 billion in fiscal year 2019.

Schedule of Contributions: FY2019 versus FY2018 (in thousands)

	Employer Contributions	Member Contributions	State Contributions	Total Contributions FY 2019	Total Contributions FY 2018
General Employees Fund	$515,444	$424,044	$16,000	$955,488	$914,242
Police & Fire Fund	174,817	111,762	13,500	300,079	285,260
Correctional Fund	18,676	12,485	0	31,161	29,827
Total Contributions FY 2019	**$708,937**	**$548,291**	**$29,500**	**$1,286,728**	
Total Contributions FY 2018	$667,471	$526,858	$25,000		**$1,229,329**

Employer and Employee Contributions for the three cost-sharing plans are determined by two factors:

1) Covered payroll which, in turn, is determined by two factors:
    a. The number of pension-covered employees times
    b. The average pension eligible compensation per covered employee

2) Contribution rates are set in *Minnesota Statute*s, Chapter 353 and Chapter 353E. These legislatively determined rates are a critical variable in PERA's funding practices.

Covered payroll increased in each of the three funds during fiscal year 2019. Combined, covered payroll for the three plans increased by about $269 million or 3.6 percent. As shown in the table below, the changes in combined total covered payroll were due to:

1) Increased number of active eligible employees (labor volume). Combined active employment in the three funds increased by 1,145 persons and contributed approximately $52 million of the total $269 million increase.

2) Increased average rates of pay for active employees (labor rate). On a combined basis, the change in pay rates for employees contributed approximately $217 million of the total increase in covered payroll.

Schedule of Changes in Covered Members and Payroll - Cost-Sharing Multi-Employer Plans

	FY 2019			FY 2018			FY 2019 percent over (under) FY2018		
	Covered Payroll (in thousands)	Actual Number of Active Employees	Average Pension-Eligible Compensation per Employee	Covered Payroll (in thousands)	Actual Number of Active Employees	Average Pension-Eligible Compensation per Employee	Covered Payroll	Number of Active Employees	Average Pension-Eligible Compensation per Employee
General Employees Fund	$6,523,754	154,130	$42.3	$6,298,815	153,059	$41.2	3.6%	0.7%	2.7%
Police & Fire Fund	1,011,421	11,763	$86.0	976,657	11,673	$83.7	3.6%	0.8%	2.8%
Correctional Fund	214,151	3,965	$54.0	205,077	3,981	$51.5	4.4%	(0.4%)	4.8%
	$7,749,326	**169,858**		**$7,480,549**	**168,713**				

Contribution rates applied to covered payroll for Police and Fire Plan members and employers changed during fiscal year 2019. The rates for the General Employee and Correctional Plans remained the same. Contribution rates for members and employers were as follows:

Retirement Plan Contribution Rates

Effective Date	Contributor	General Employees Fund Basic	General Employees Fund Coordinated	General Employees Fund MERF	Police & Fire Fund	Correctional Fund
01/01/2018	Member	9.10%	6.50%	9.75%	10.80%	5.83%
	Employer	11.78%	7.50%	9.75%	16.20%	8.75%
01/01/2019	Member	9.10%	6.50%	9.75%	11.30%	5.83%
	Employer	11.78%	7.50%	9.75%	16.95%	8.75%
01/01/2020	Member	9.10%	6.50%	9.75%	11.80%	5.83%
	Employer	11.78%	7.50%	9.75%	17.70%	8.75%

Nonemployer contributions from the State of Minnesota are statutorily mandated. The purpose for the mandates are to offset costs PERA incurred in the past and to absorb underfunded local government retirement plans. In total, state contributions to the three cost-sharing defined benefits plans totaled $29.5 million. State nonemployer contributions represented 2.3 percent of contributions and .84 percent of total additions to net position for fiscal year 2019.

Reductions in Net Position are primarily due to benefit payments.

Annual benefit payments from cost-sharing plans in fiscal year 2019 were $2.10 billion. This was about $87 million, or 4.3 percent higher than fiscal year 2018 payments of $2.01 billion. Two factors increased the total amount of benefits paid in fiscal year 2019:

1) Number of recipients: There were 3,871 more benefit recipients in fiscal year 2019 than in fiscal year 2018; a 3.4 percent increase. Of the $87 million increase in benefit payments, approximately $66 million was due to the increased number of persons receiving benefits.

2) Change in average benefit paid per recipient: Combined, postretirement increases to retirees' benefits and higher initial benefits due to underlying wage growth (inflation) for active members, increased total benefit payments by approximately $21 million during the fiscal year 2019.

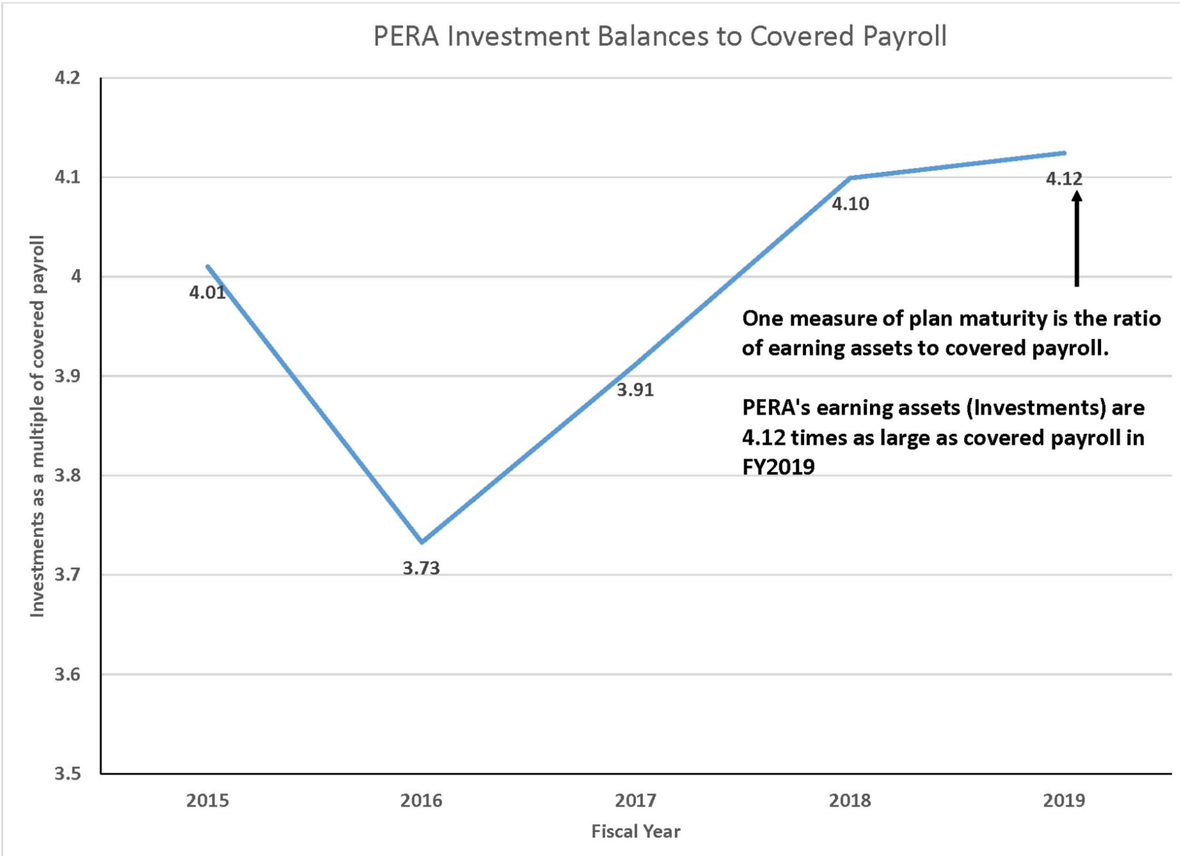
Schedule of Changes in Benefit Payments and Recipients - Cost-Sharing Multi-Employer Plans									
	FY 2019			FY 2018			FY 2019 percent over (under) FY2018		
	Benefit Payments (in thousands)	Number of Benefit Recipients	Average Benefit per Recipient	Benefit Payments (in thousands)	Number of Benefit Recipients	Average Benefit per Recipient	Benefit Payments	Number of Benefit Recipients	Average Benefit per Recipient
General Employees Fund	$1,536,071	105,243	$14.6	$1,470,450	101,772	$14.4	4.5%	3.4%	1.0%
Police & Fire Fund	547,699	11,031	$49.7	528,468	10,756	$49.1	3.6%	2.6%	1.2%
Correctional Fund	15,381	1,318	$11.7	13,183	1,193	$11.1	16.7%	10.5%	5.4%
	$2,099,151	**117,592**		**$2,012,101**	**113,721**				

Note: Police and fire benefit payments appear to be high relative to other plans because members of the Police and Fire Plan do not participate in Social Security's Old Age Security and Disability Insurance program (OASDI). Because they don't participate in Social Security, Police and Firefighter members and their employers pay higher contributions to PERA than non-Police and Fire (P&F) members and, correspondingly, receive a higher benefit.

Net Investment Income:

Net investment income is the largest source of funds for PERA's three cost-sharing plans. One of PERA's key funding policies is that we "pre-fund" retirements. PERA's goal is to fully fund the total pension liability in every plan. To fund its plans, PERA collects and invests contributions over the active work years of its members to amass an investment portfolio sufficiently large to fund benefit payments over the retired lifetimes of the members. Investment income in excess of negative cash flow for the year is retained in the plan and reinvested.

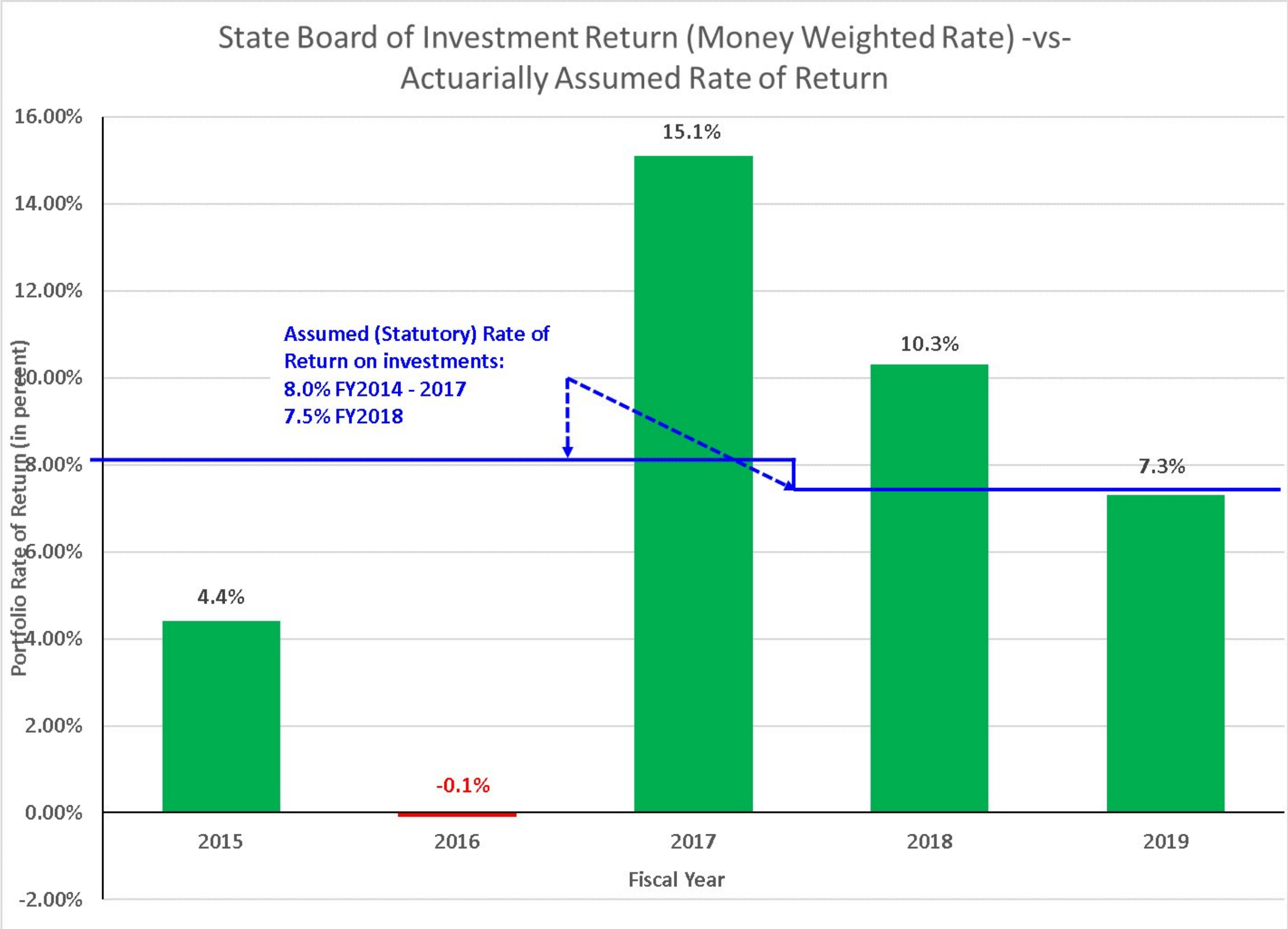
As a pension plan matures during years of positive investment returns, its investment pool will grow and the ratio of its invested assets to covered payroll will increase. As was seen with the ratio of active members to benefit recipients, PERA's plans are mostly mature plans. This fact is also reflected in the ratio of assets to payroll as seen in the accompanying chart. One risk that comes with mature plans is that because of their heavier dependence upon investment income, they are more sensitive to downturns in the markets than less mature plans as can also be seen in the accompanying chart.



Investment income for any year is the rate of return times the volume of invested assets. The rate of return times the average investment balance during the fiscal year generated approximately $2.2 billion in investment income. The excess income above net negative cash flow was reinvested thus growing assets by approximately $1.3 billion or 4.3 percent over the prior fiscal year.

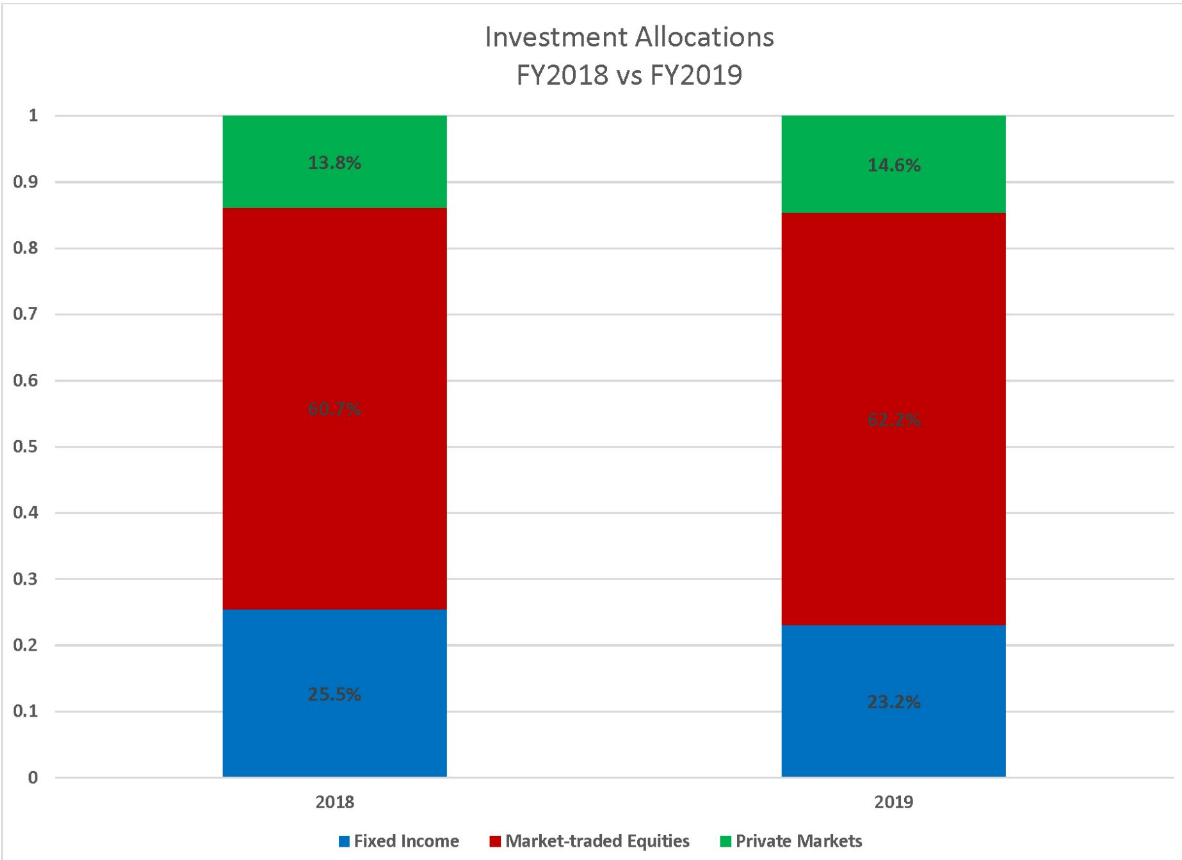
1) The money-weighted rate of return for fiscal year 2019 was 7.3 percent. However, more important than any given year's return is the long-term average return. PERA's independent actuaries have done a study and concluded that it is reasonable to assume that over multi-year periods the actual average rate of return should be approximately equal to the statutory rate of 7.5 percent.

2) The rate of return on PERA's investments have been positive four out of the past five years and have exceeded the statutorily assumed rate of return in two out of the past five years.



According to PERA's investment managers at the SBI, "The SBI's strategic allocation policy is the primary determinant of the asset portfolio's long-term investment return and asset portfolio's risk." (Note 2 of the *Notes to The Financial Statements*). As noted above, during fiscal year 2019, investment income exceeded negative net cash flow and therefore investment pool grew by $1.3 billion. As discussed in Note 2 to the *Financial Statements*, as SBI reinvested funds during the course of fiscal year 2019, they also adjusted portfolio allocations slightly away from fixed income investments in favor of market-traded equities (stocks) and private market investments as shown in the following chart:

Overall Financial Condition:



So what? Is PERA financially better off in fiscal year 2019 than it was in the prior fiscal year? More important, can PERA sustain its plans?

The level and trend of the funded ratio provides the best answer to the questions above. The funded ratio compares the level of net assets reported in PERA's financial statements to the actuaries' estimate of the total pension liability. The funded ratio is the most important single measure of the financial health of PERA's retirement plans. The long-term trend of PERA's funded ratio is positive.

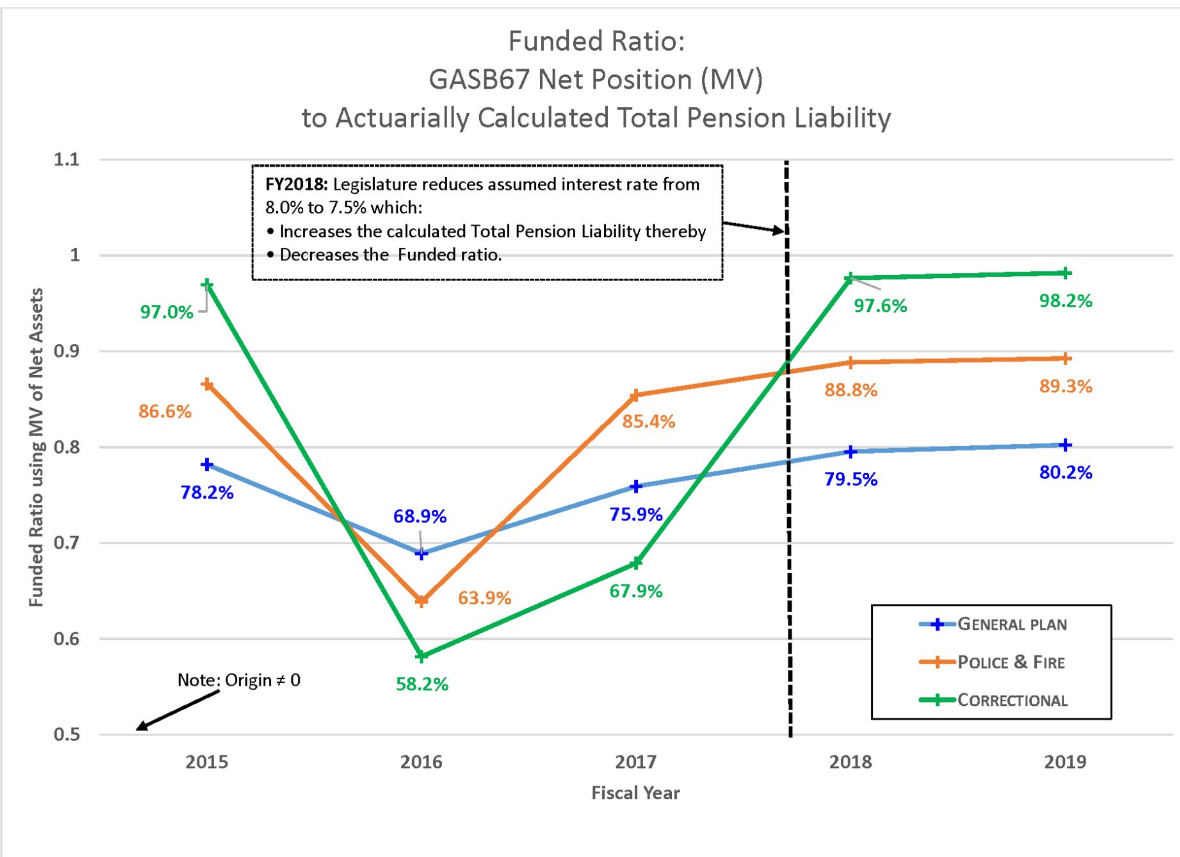
PERA's actuaries prepare two valuation reports each year for the cost-sharing, defined benefit plans: an "accounting" valuation and a "funding" valuation. The accounting valuation is to meet the requirements of the Governmental Accounting Standards Board (GASB) Statement No 67. The funding valuation is to assist the Board of Trustees to assess whether the statutorily determined contribution rates are likely to be sufficient to meet PERA's long-term obligations to pay benefits. Accounting (GASB) funding ratios are more volatile than more traditional actuarial funding ratios. The GASB funding ratios have two sources of volatility built-in:

1) GASB valuations use the market value of assets and,
2) GASB has different requirements on the discount rates used to value the liability for future payments.

Comparative measures of PERA's funding status (asset value versus pension liability) for the past five years are:

Historical Funding Ratios

	General Employees		Police and Fire		Correctional	
	Accounting	Funding	Accounting	Funding	Accounting	Funding
2019	80.2%	78.6%	89.3%	87.4%	98.2%	96.2%
2018	79.5%	78.0%	88.8%	87.1%	97.6%	95.6%
2017	75.9%	77.8%	85.4%	85.2%	67.9%	94.5%
2016	68.9%	75.5%	63.9%	87.7%	58.2%	95.7%
2015	78.2%	76.3%	86.6%	83.6%	97.0%	95.6%



Except for the Correctional Plan which is already virtually 100 percent funded, the trends in the funded status of both the General Employees and Police and Fire Plans are improving toward full-funding. All plans are on trajectories that should allow the funds to meet their full-funding goal years before the statutory required full-funding date of 2048 (*Minnesota Statutes* 356.215, Subdivision 11).

Irrespective of method used to measure funding, PERA's ratios have shown an improving trend over the past five years. There have been, and most likely will be, ups and downs in funding ratio due to valuing assets at market value. Because of the maturity of PERA's plans as measured by assets, management will work with the Board of Directors to ensure PERA uses the full range of tools available in plan design, funding policy, and investment practices to meet its funding goal in a reasonable time-frame.

The GASB has issued several statements that are effective for future fiscal year end dates; some of which will be applicable to PERA. Specifically, GASB has issued *Statement No. 84, "Fiduciary Activities"* that will be effective for fiscal year end June 30, 2020. PERA intends to implement the provisions of this statement for fiscal year 2020.

Additional information about funding and actuarial results are available in the *Notes to the Financial Statements*, the *Required Supplementary Information*, and the *Actuarial Section* of the CAFR. However, the CAFR is not a substitute for the actuarial reports available on PERA's website. The actuarial valuation reports should be read in conjunction with this CAFR.

This financial report is designed to provide a general overview of the Public Employees Retirement Association of Minnesota's finances for all interested parties. An electronic copy of this report is available at: https://www.mnpera.org/about/financial/. Questions or requests for additional information should be directed to the PERA at 60 Empire Drive, Suite 200, St. Paul, Minnesota 55103-2088.

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Statement of Fiduciary Net Position

As of June 30, 2019 (in thousands)

	Defined Benefit Funds		
	General Employees Fund	Police and Fire Fund	Correctional Fund
Assets			
Cash and Cash Equivalents	**$628,277**	**$246,498**	**$20,842**
Receivables			
Accounts Receivable	48,484	19,074	954
Due from Other Funds	1,593	90	11
Total Receivables	**50,077**	**19,164**	**965**
Investments at Fair Value			
U.S. Equity	9,337,193	3,682,393	310,192
Private Markets	3,261,949	1,286,444	108,365
Fixed Income	4,561,068	1,798,789	151,524
International Equity	4,607,649	1,817,160	153,071
Stable Value Fixed	0	0	0
Total Investments	**21,767,859**	**8,584,786**	**723,152**
Securities Lending Collateral	**1,666,916**	**657,397**	**55,377**
Capital Assets			
Equipment Net of Accumulated Depreciation	229	0	0
Property Net of Accumulated Depreciation	6,103	0	0
Total Capital Assets	**6,332**	**0**	**0**
Total Assets	**24,119,461**	**9,507,845**	**800,336**
Liabilities			
Accounts Payable	6,505	4,879	175
Payable to Other Funds	102	1,017	361
Accrued Compensated Absences	1,012	0	0
Bonds Payable	3,958	0	0
Securities Lending Collateral	1,666,916	657,397	55,377
Total Liabilities	**1,678,493**	**663,293**	**55,913**
Net Position Restricted for Pensions	**$22,440,968**	**$8,844,552**	**$744,423**

The accompanying notes are an integral part of the financial statements.

Volunteer Firefighter Fund	Defined Contribution Fund	Agency Fund	Total
$5,269	**$3,872**	**$37,615**	**$942,373**
89	97	0	68,698
0	0	0	1,694
89	**97**	**0**	**70,392**
37,767	46,064	476,395	13,890,004
0	0	0	4,656,758
48,037	15,929	152,918	6,728,265
16,377	3,357	0	6,597,614
0	4,072	0	4,072
102,181	**69,422**	**629,313**	**31,876,713**
0	**0**	**0**	**2,379,690**
0	0	0	229
0	0	0	6,103
0	**0**	**0**	**6,332**
107,539	**73,391**	**666,928**	**35,275,500**
25	36	666,928	678,548
0	214	0	1,694
0	0	0	1,012
0	0	0	3,958
0	0	0	2,379,690
25	**250**	**666,928**	**3,064,902**
$107,514	**$73,141**	**$0**	**$32,210,598**

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2019 (in thousands)

	Defined Benefits Funds		
	General Employees Fund	Police and Fire Fund	Correctional Fund
Additions			
Contributions			
Employer	$515,444	$174,817	$18,676
Member	424,044	111,762	12,485
State of Minnesota	16,000	13,500	0
Total Contributions	**955,488**	**300,079**	**31,161**
Investment Income			
Net Appreciation in Fair Value of Investments	1,557,922	613,729	51,195
Less Investment Expense	(21,363)	(8,423)	(696)
Net Investment Income	**1,536,559**	**605,306**	**50,499**
From securities lending activities:			
Securities Lending Income	57,045	22,497	1,895
Borrower Rebates	(44,039)	(17,368)	(1,463)
Management Fees	(2,341)	(923)	(78)
Net Income from Securities Lending	10,665	4,206	354
Total Net Investment Income	**1,547,224**	**609,512**	**50,853**
Other Additions	**154**	**54**	**0**
Total Additions	**2,502,866**	**909,645**	**82,014**
Deductions			
Benefits	1,536,071	547,699	15,381
Refunds of Contributions	65,834	3,283	2,244
Administrative Expenses	13,470	1,018	361
Total Deductions	**1,615,375**	**552,000**	**17,986**
Net Increase (Decrease) in Net Position	**887,491**	**357,645**	**64,028**
Net Position Restricted for Pensions			
Beginning of year	21,553,477	8,486,907	680,395
End of year	**$22,440,968**	**$8,844,552**	**$744,423**

The accompanying notes are an integral part of the financial statements.

Volunteer Firefighter Fund	Defined Contribution Plan	Total
$1,181	$2,084	$712,202
0	1,957	550,248
3,993	0	33,493
5,174	**4,041**	**1,295,943**
7,887	5,503	2,236,236
(205)	(63)	(30,750)
7,682	5,440	2,205,486
0	0	81,437
0	0	(62,870)
0	0	(3,342)
0	0	15,225
7,682	**5,440**	**2,220,711**
10,916	**0**	**11,124**
23,772	**9,481**	**3,527,778**
4,709	0	2,103,860
0	5,959	77,320
111	214	15,174
4,820	**6,173**	**2,196,354**
18,952	**3,308**	**1,331,424**
88,562	69,833	30,879,174
$107,514	**$73,141**	**$32,210,598**

Notes to the Financial Statements

For the Fiscal Year Ended June 30, 2019

NOTE 1
Plan Description

A) Organization

Established by the Minnesota Legislature in 1931, the Public Employees Retirement Association (PERA) of Minnesota administers pension plans that serve current or former county, school, and local public employees, their survivors and dependents. Retirement plans administered by PERA provide a variety of retirement pensions, survivor, and disability benefits.

PERA's Board of Trustees is responsible for administering these plans in accordance with statutes passed by the Minnesota Legislature and has a fiduciary obligation to PERA's members, their governmental employers, the state, and its taxpayers. PERA's Board of Trustees is composed of 11 members. The state auditor is a member by statute. The governor appoints five trustees. Serving four-year terms, these five trustees represent cities, counties, school boards, retired annuitants, and the general public, respectively. The remaining five board members are elected by the PERA membership at large to serve four-year terms. Three trustees represent the general active membership, one represents Police and Fire Plan members, and one represents benefit recipients.

The board appoints an executive director to serve as chief administrative officer of PERA. With approval of the board, the director develops the annual administrative budget, determines staffing requirements, contracts for actuarial and other services, and directs the day-to-day operations of PERA. The director also serves as a member of the State Investment Advisory Council, which advises the Minnesota State Board of Investment (SBI) on the management and investment of public pension funds and other assets.

PERA is the administrator of five retirement plans. Each plan has specific membership, contribution, vesting, and benefit provisions. With certain statutory exceptions, an employee performing personal services for a governmental employer whose salary is paid, in whole or in part, from revenues derived from taxation, fees, assessments, or other sources, is a member of PERA. Plan participation is dependent on the occupation of the member. The plans, including benefit provisions and the obligation to make contributions, are established and administered in accordance with *Minnesota Statutes*, Chapters 353, 353D, 353E, 353G, and 356. These statutes also define financial reporting requirements.

PERA administers three cost-sharing multiple-employer defined benefit retirement plans: the General Employees Retirement Plan (accounted for in the General Employees Fund), the Public Employees Police and Fire Plan (accounted for in the Police and Fire Fund), and the Public Employees Local Government Correctional Service Retirement Plan, called the Public Employees Correctional Plan (accounted for in the Correctional Fund).

PERA administers one agent multiple-employer defined benefit retirement plan, the Statewide Volunteer Firefighter Retirement Plan (accounted for in the Volunteer Firefighter Fund) and one multiple-employer defined contribution plan, the Public Employees Defined Contribution Plan (accounted for in the Defined Contribution Fund). PERA also administers an agency fund to track the investments of qualifying entities held in an account or trust arrangement with the SBI for future long-term capital plans, long-term obligations, or postemployment benefit costs.

Figure 1 presents a summary of the laws, regulations, and administrative rules governing PERA's five retirement plans and should not be interpreted as a comprehensive explanation thereof. If there is any discrepancy between this summary and the laws governing PERA, the statutes and regulations shall govern. Specific details unique to certain aspects of the plans along with a description of the agency fund follow the summary.

Figure 1: Retirement Plan Summary

	General Employees Plan	Police and Fire Plan	Correctional Plan
STATUTORY AUTHORITY:	• *Minnesota Statutes* Chapters 353 and 356	• *Minnesota Statutes* Chapters 353 and 356	• *Minnesota Statutes* Chapters 353E and 356
DATE ESTABLISHED:	• Basic Plan 1931, Coordinated Plan 1968, and MERF as a separate division in 2010 and merged into the plan in 2015	• 1959	• 1999
TYPE OF PENSION PLAN:	•Cost-sharing multiple-employer defined benefit	•Cost-sharing multiple-employer defined benefit	• Cost-sharing multiple-employer defined benefit
MEMBERSHIP:	• Employees of counties, cities, townships and employees of schools in non-certified positions, and other entities whose revenues are derived from taxation, fees, or assessments	• Police officers and firefighters not covered by a local relief association and all police officers and firefighters hired since 1980 • Effective July 1, 1999 the plan also covers police officers and fire fighters belonging to a local relief association that elected to merge with and transfer assets and administration to PERA	• Correctional officers serving in county and regional adult and juvenile corrections facilities • Participants must be responsible for the security, custody and control of the facilities and their inmates
APPROXIMATE # OF EMPLOYERS:	• 2,100	• 440	• 80

Volunteer Firefighter Plan	Defined Contribution Plan
• *Minnesota Statutes* Chapter 353G and 356 for the lump sum and monthly benefit divisions and *Minnesota Statutes* Chapter 424A for the monthly benefit division	• *Minnesota Statutes* Chapter 353D and Chapter 356
• 2010 for the lump sum division and 2016 for the monthly benefit division	• 1987
• Agent multiple-employer defined benefit	• Multiple-employer defined contribution
• Any municipal volunteer fire department or independent non-profit firefighting corporation	• Elected and appointed local government officials (except elected county sheriffs), city managers, emergency medical service personnel, including physicians, employed by or providing service to any participating public ambulance service who are not covered by another public or private pension and any publicly-operated ambulance service that receives an operating subsidy from a governmental entity and elects to participate in the plan
•175	• 1,100

Figure 1: Retirement Plan Summary (continued)

	General Employees Plan	Police and Fire Plan	Correctional Plan
VESTING:			
	• 3 years for members hired prior to July 1, 2010 • 5 years for members first hired on or after July 1, 2010	• 3 years for members hired prior to July 1, 2010 • Prorated basis from 50% after 5 years up to 100% after 10 years for members first hired on or after July 1, 2010 but before July 1, 2014 • Prorated basis from 50% after 10 years up to 100 percent after 20 years for members first hired on or after July 1, 2014	• 3 years for members hired prior to July 1, 2010 • Prorated basis from 50% after 5 years up to 100% after 10 years for members first hired on or after July 1, 2010
FINAL AVERAGE SALARY:			
	• Average monthly salary over the highest paid 60 consecutive months or all months if less than 60	• Average monthly salary over the highest paid 60 consecutive months or all months if less than 60	• Average monthly salary over the highest paid 60 consecutive months or all months if less than 60
RETIREMENT ANNUITY FORMULAS:			
	• Members hired prior to July 1, 1989, receive the higher of Method 1 or Method 2 formulas. Only Method 2 is used for members hired after June 30, 1989 • Method 1: The accrual rate for Coordinated members is 1.2% for each of the first 10 years of service and 1.7% for each additional year. The rates are 2.2% and 2.7%, respectively, for Basic members • Method 2: The accrual rate for Coordinated members is 1.7% for all years of service, and 2.7% for Basic members • The accrual rates for former MERF members is 2.0% for each of the first 10 years of service and 2.5% for each additional year	• Annuity accrual rate is 3.0% of average salary for each year of credited service	• Annuity accrual rate is 1.9% of average salary for each year of credited service

Volunteer Firefighter Plan	Defined Contribution Plan
•Prorated basis from 40% at 5 years to 100% at 20 years.	• No vesting requirements for member or employer contributions or earnings
N/A	N/A
•Lump-sum division benefits are based on the number of years of service multiplied by a service pension level chosen by the entity sponsoring the fire department from possible levels ranging from $500 per year of service to $10,000 per year of service •Monthly division benefits are determined at the individual plan level	N/A

General Employees Plan

The General Employees Plan encompasses two plans — the PERA Coordinated Plan and the PERA Basic Plan. The Coordinated Plan provides retirement and other benefits in addition to those supplied by Social Security Administration (SSA). The Basic Plan was PERA's original retirement plan and is not coordinated with the SSA. PERA's Basic Plan was closed to new membership in 1968, with the creation of the Coordinated Plan. Today, fewer than five Basic Plan members remain active public employees. The Minneapolis Employees Retirement Fund (MERF) was included in the General Employees Plan in June 2010, as a separate division and was merged into the plan January 1, 2015. A traditional defined benefit plan, MERF was closed to new membership in 1979. It encompasses employees of the City of Minneapolis, the Metropolitan Airports Commission, Minnesota State Colleges and Universities, and non-teaching personnel at Minneapolis schools. Annual state and employer appropriations of $37 million through 2031 ensure the plan remains self-sustaining. The active membership of MERF is also small with less than ten members.

Volunteer Firefighter Plan

Funding is provided through Minnesota Fire State Aid based on insurance premiums and administered by the Minnesota Department of Revenue and, if required, annual funding contributions from the entity associated with the fire department. Additionally, entities are authorized by statute to make voluntary contributions to their account.

Defined Contribution Plan

Officials first elected to a governing body, such as a city council or county board after June 30, 2002, may only participate in PERA's Defined Contribution Plan. Previously, such officials could elect Coordinated Plan participation as an alternative to the Defined Contribution Plan. City managers may participate in the Defined Contribution Plan as an alternative to Coordinated Plan membership.

Agency Fund

PERA accounts for assets of qualifying government entities invested and held in accounts or trust arrangements with the SBI in an agency fund. In accordance with Minnesota Statutes, the agency fund was created in Chapter 471.6175 *Trust for Postemployment Benefits* and expanded in Chapter 118A.09, *Additional Long-term Equity Investment Authority*. The entity's purpose of the arrangement may only be for funds held to pay postemployment benefits (Chapter 471.6175) or for long-term capital plans, long-term obligations, or postemployment benefits (Chapter 118A.09).

Acting as either the account or trust administrator, PERA has established a separate account for each participating entity and charges a fee for reasonable administrative costs. An entity may provide investment direction to PERA, subject to the policies and procedures established by SBI. PERA reports to the entity on the investment returns of the invested funds and on all investment fees or costs incurred. Additionally, PERA complies with its annual reporting requirement to the state auditor. In exercising its duties as administrator, PERA may rely on representations made by the qualifying entity and has no duty to further verify qualifications, use, or intended use of the funds that are invested or withdrawn. As of June 30, 2019, there are 24 participating entities under Chapter 471.6175 and 1 participating entity under Chapter 118A.09.

B) Participating Members

Figure 2 shows membership totals in PERA's multiple-employer defined benefit plans as of June 30, 2019. In addition, the Defined Contribution Plan serves approximately 8,000 members.

Figure 2: PERA Membership — Defined Benefit Plans

	General Employees	Police and Fire	Correctional	Volunteer Firefighter	Total
Retirees and beneficiaries receiving benefits	105,243	11,031	1,318	137	117,729
Terminated employees entitled to benefits/ refunds but not yet receiving them:					
Vested	63,311	1,620	3,374	840	69,145
Non-Vested	126,116	1,145	2,790	0	130,051
Current, active employees:					
Vested	90,724	9,257	2,119	2,216	104,316
Non-Vested	63,406	2,506	1,846	1,301	69,059
Total	**448,800**	**25,559**	**11,447**	**4,494**	**490,300**

C) Benefit Provisions - Cost-sharing Multiple-employer Defined Benefit Retirement Plans

PERA's defined benefit plans are tax qualified plans under Section 401(a) of the Internal Revenue Code. PERA provides retirement and disability benefits to members, as well as survivors upon the death of eligible members.

Retirement benefits are based on a member's highest average salary for 60 consecutive months of allowable service, age, and years of credit at termination of service. A reduced retirement annuity is also available to eligible members seeking early retirement. Members of PERA's defined benefit plans receive one service credit for each month which they are paid. Individuals may earn a maximum of 12 service credits per year. Salary used in retirement and disability benefit calculations is the average monthly salary over an individual's 60 highest-paid consecutive months of public service (high-five salary), or all months of service if less than 60.

Members of the PERA General Employees Plan, Police and Fire Plan, and Correctional Plan may select from several types of retirement benefits.

Single-Life Pension — A single-life pension is a lifetime annuity that ceases upon the death of the retiree. No survivor benefit is payable.

Survivor Options — Upon retirement, members may choose from one of four survivor options. All of these pensions are payable for the lifetime of the retiree. At the time of the retiree's death, the designated survivor begins to receive monthly benefit payments at varying levels for his or her lifetime. Depending on the survivor option chosen by the member, survivor payments are at a 25, 50, 75, or 100 percent level of that received by the member at retirement. Selection of a survivor option will result in a reduced pension benefit from the single-life benefit level. The amount of the reduction depends on the age of both the retiring member and the survivor. Due to the passing of the 2018 Omnibus Retirement Bill, plan assumptions, including mortality and investment expectations, were updated and resulted in minimal changes to survivor option reduction factors.

All PERA plans' survivor factors were updated for benefits beginning July 1, 2019. All survivor pension options incorporate an "automatic bounce back" feature. This returns the amount of the pension to the level of the single-life benefit in the event the designated survivor predeceases the retiree. The cost of this protection is borne by the funds, not by the retiree.

Deferred Pension — A vested member who terminates public service may leave contributions in the fund(s) in which he or she participated and qualify for a pension at retirement age. For members who terminated public service prior to January 1, 2012, the benefit amount calculated as of the date of termination will increase at a rate of 1 percent per year, compounded annually. Benefit increases accrued until December 31, 2018, at which point all benefit increases were discontinued. For members who terminated public service after December 31, 2011, there is no benefit growth.

As of June 30, 2018, if a deferred member returns to the same PERA plan, pension benefit increases will no longer apply to the entire benefit calculation.

Combined Service Annuity — Retiring members may elect to combine service in a PERA-covered position with service in any of the other eligible Minnesota retirement plans and qualify for a retirement benefit from each plan in which they participated. These covered plans are designated by statute. Vested members qualify for a combined service pension if they have six or more months of service in each covered plan and have not begun to receive a benefit from any of the applicable plans. The retirement annuity from each plan must be based upon the allowable service, accrual rates, and average salary in the applicable plan; any exceptions are specified in statute.

Proportionate Annuities — Members who retire at or over their Social Security full retirement age with at least one year of service qualify for a proportionate pension in the applicable Plan. Benefits are based upon the formula of each Plan.

Phased Retirement Option — The Phased Retirement Option (PRO) is a tool that allows employers to meet their workforce needs while employees transition into full retirement. The PRO permits an active member of the General Plan, who is at least age 62, to receive a PERA retirement annuity without a formal termination of employment. However, members must substantially reduce their work hours while participating in the PRO agreement. Availability of positions under this program is at the discretion of the employing unit. Any earnings under the PRO position are not subject to the postretirement annual earnings limits.

Retirement Annuity Formula

General Employees Plan — Method 1 provides that members are eligible for a normal retirement annuity if they are age 65 or over with at least one year of public service or their age plus years of public service equal 90 (Rule of 90) for members who were first hired prior to July 1, 1989. A reduced retirement annuity is payable as early as age 55 with three or more years of service. The reduction is 0.25 percent for each month under age 65. A member with 30 or more years of service may retire at any age with a reduction of 0.25 percent for each month a member is under age 62.

Method 2 provides for a normal retirement annuity at age 65 for members first hired prior to July 1, 1989, or age 66 (the age for unreduced Social Security benefits) for those first hired into public service on or after that date. Early retirement may begin at age 55 with an actuarial reduction for members retiring prior to full retirement age. Members beginning to receive an annuity on or after

July 1, 2019, will have actuarial reduction factors phased in over five years that reflect the true actuarial cost of early retirement. These factors recognize recent updates to plan assumptions, including mortality and investment expectations, as well as the removal of the augmentation subsidy.

Police and Fire Plan — A normal retirement annuity is earned when members meet the following conditions: age 55 and vested, or age plus years of service total at least 90 if first hired prior to July 1, 1989. A reduced retirement annuity is available to members between the ages of 50 and 55. Under legislation enacted in the 2013 legislative session, the reduction for Police and Fire Plan early retirement began increasing incrementally in July 2014, culminating to a 5 percent per year reduction as of July 2019.

Correctional Plan — A normal retirement annuity is earned when members meet the following conditions: age 55 and vested, or age plus years of service total at least 90 if first hired prior to July 1, 1989. Early retirement may begin at age 50 with an actuarial reduction in a member's retirement annuity.

Postretirement Increases

General Employees Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the postretirement increase is equal to 50 percent of the the cost-of-living adjustment (COLA) announced by the SSA, with a minimum increase of at least 1 percent and a maximum of 1.5 percent. Recipients that have been receiving the annuity or benefit for at least a full year as of the June 30 before the effective date of the increase will receive the full increase. For recipients receiving the annuity or benefit for at least one month but less than a full year as of the June 30 before the effective date of the increase will receive a reduced prorated increase. For members retiring on January 1, 2024, or later, the increase will be delayed until normal retirement age (age 65 if hired prior to July 1, 1989, or age 66 for individuals hired on or after July 1, 1989). Members retiring under Rule of 90 are exempt from the delay to normal retirement.

Police and Fire Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the postretirement increase is fixed at 1 percent. Recipients that have been receiving the annuity or benefit for at least 36 months as of the June 30 before the effective date of the increase will receive the full increase. For recipients receiving the annuity or benefit for at least 25 months but less than 36 months as of the June 30 before the effective date of the increase will receive a reduced prorated increase.

Correctional Plan — Annuities, disability benefits, and survivor benefits are increased effective every January 1. Beginning in 2019, the postretirement increase is equal to 100 percent of the COLA announced by SSA, with a minimum increase of at least 1 percent and a maximum of 2.5 percent. If the plan's funding status declines to 85 percent or below for two consecutive years or 80 percent for one year, the maximum will be lowered from 2.5 percent to 1.5 percent. Recipients that have been receiving the annuity or benefit for at least a full year as of the June 30 before the effective date of the increase will receive the full increase. For recipients receiving the annuity or benefit for at least one month but less than a full year as of the June 30 before the effective date of the increase will receive a reduced prorated increase.

The benefit provisions stated in the preceding paragraphs of this section are current provisions and apply to active plan participants. Vested, terminated employees who are entitled to benefits but are not receiving them yet are bound by the provisions in effect at the time they last terminated public service.

D) Benefit Provisions – Volunteer Firefighter Plan

PERA's defined benefit plans are tax qualified plans under Section 401(a) of the Internal Revenue Code. PERA provides service pensions to members and survivor benefits as well, upon the death of plan members.

An active member of the plan is entitled to a service pension when they have been separated from service for at least 30 days, have reached the age of 50, and have completed at least five years of good time service credit with the fire department as a member of the lump-sum retirement division or, if a member of the monthly benefit retirement division, has completed the minimum vesting requirement as specified in the retirement benefit plan document of the former relief association applicable to the fire department.

The service pension from the lump-sum retirement division is based on completed years of service in the department, the service pension level in effect for the department at termination, and the nonforfeitable percentage of the service pension as specified in statute. The service pension from the monthly benefit retirement division is specified in the retirement benefit plan document of the former relief association applicable to the fire department.

E) Benefit Provisions – Defined Contribution Plan

The Defined Contribution Plan is a tax qualified plan under Section 401(a) of the Internal Revenue Code and all contributions by or on behalf of employees are tax deferred until time of withdrawal. Plan benefits depend solely on amounts contributed to the plan plus investment earnings, less administrative expenses. Employer and employee contributions are combined and used to purchase shares in one or more of the seven accounts of the Minnesota Supplemental Investment Fund administered by the SBI. Investment options include the Broad International Stock Fund, U.S. Stock Actively Managed Fund, U.S. Stock Index Fund, Balanced Fund, Bond Fund, Stable Value Fund, and Money Market Fund. PERA receives 2 percent of employer contributions paid during the year, plus 0.25 percent of the assets in each member's account each year for administering the plan.

At the time of retirement or termination, PERA distributes the market value of a member's account to the member or transfers it to another qualified plan or individual retirement account. Upon the member's death, PERA distributes the value of the account to the member's designated beneficiary.

F) Earnings Limitation

Retirees who return to work in a PERA- covered position are subject to the same earnings limitations as Social Security recipients. Benefits are reduced if these limits are exceeded, with the amount held in escrow. The retiree may request repayment of these funds one year after leaving the position. If reemployment extends through the end of a calendar year, the deductions from that year may be reclaimed one year later.

The earnings limitation only applies to PERA-covered employment. Self or private employment and elected official service will result in no benefit reduction for retirees. Earnings limits are waived for Coordinated Plan members who begin receiving benefits under a PRO agreement. The Defined Contribution Plan and the Volunteer Firefighter Plan only provide lump-sum benefits, there are no earnings limits.

G) Disability Benefits

Members may be eligible for benefits from PERA if they are unable to work because of a physical or mental disability. Disability is defined by statute, and PERA may require periodic medical examinations of those receiving these benefits. Neither the Defined Contribution Plan nor the Volunteer Firefighter Plan has specific disability benefits.

Disability benefit calculations are based upon years of service and average high-five salary for Coordinated Plan members. For Police and Fire Plan members, there is a minimum duty-related disability benefit of 60 percent of salary. The minimum duty-related disability benefit is 47.5 percent for Correctional Plan members. Disability under any other circumstances results in a minimum benefit of 45 percent of salary for Police and Fire Plan members and 19 percent for Correctional Plan members. A duty-related disability benefit will only be awarded if the disabling event occurred while the member was engaged in hazardous activities inherent to the occupation.

Coordinated Plan members qualify for disability when vested for a retirement benefit and by meeting the statutory definition. Police and Fire Plan and Correctional Plan members qualify by meeting the definition with one or more years of service if disabled outside the line of duty. If disabled in the line of duty, there is no minimum service requirement.

H) Survivor Benefits

PERA also provides survivor benefits for families of members who qualify for such coverage should they die before commencing retirement benefit payments. The qualifications and types of benefits vary with each plan. As of August 1, 2013, Minnesota recognizes same-sex marriage. PERA's governing statutes make no distinction concerning the gender of a spouse, and the agency therefore follows the state's definition of a valid marriage.

A lifetime survivor benefit is available to the surviving spouse of a General Employees Plan, Correctional Plan, or Police and Fire Plan member. For Police and Fire Plan members, this benefit is based on either 50 percent of the average of the full-time monthly base salary rate in effect during the last six months of allowable service or a formula using the member's total years of service, high-five salary, age at death, and age of the spouse. The surviving spouse benefit for General Employees Plan and Correctional Plan members is only based on the formula. This benefit is payable to the spouse of a deceased member for life, even upon remarriage. Automatic lifetime survivor benefits are also available to the spouse of Police and Fire Plan members who suffer total and permanent duty disability. Survivor benefits for other disabled members are only available if the member chooses a survivor option on their disability benefit.

For the surviving spouse of a General Employees Plan or Correctional Plan member, there are alternative term-certain benefits of 10, 15, or 20 years duration. The monthly payment, however,may not exceed 75 percent of the member's average highest 60 months of consecutive salary. Survivor benefits are immediately suspended for any survivor charged with causing the death of a PERA member. The benefit is permanently revoked upon conviction of such a crime.

Dependent children of active or disabled Police and Fire Plan members are eligible for benefits until age 18, or age 23 if full-time students. In this case, the maximum family benefit is 70 percent of the member's average monthly salary. If a General Employees Plan or Correctional Plan member dies and there is no surviving spouse, any children under age 20 qualify to receive a monthly term-certain benefit.

Instead of a monthly benefit, the surviving spouse, if a designated beneficiary, may elect a refund of any remaining employee contributions in the account, plus interest. However, a refund may not be elected if there are dependent children who are eligible for benefits.

The Volunteer Firefighter Plan provides for payment of the member's accrued benefits to a surviving spouse or, if none, to minor children or, finally, the member's estate, based on retirement at age 50. Similarly, the Defined Contribution Plan provides for payment of the account balance to beneficiaries.

I) Refunds

Refunds of contributions are available at any time to members who terminate public service and have not yet begun receiving a pension. The refund includes employee contributions plus interest, compounded annually. The interest rate is dependent on the timeframe in which the member contributions were received. The interest rate applied is 6 percent prior to June 30, 2011; 4 percent July 1, 2011 through June 30, 2018; and 3 percent July 1, 2018, and thereafter. Employer contributions are not refundable to the member or beneficiary.

A refund of employee contributions plus interest may also be elected by the designated beneficiary of a member or former member who dies before reaching retirement. If there is no beneficiary, payment is made to the surviving spouse or, if none, to the estate of the deceased member or former member.

If an annuitant or benefit recipient dies before all employee contributions are paid in the form of a pension or benefit, the remaining balance would be paid in the same manner outlined for beneficiaries. No interest is paid to beneficiaries on the balance in an account if the member was receiving retirement benefits.

NOTE 2

Summary of Significant Accounting Policies

A) Reporting Entity

PERA functions as a separate statutory entity. PERA maintains rights to sue or be sued in its own name and to hold property in its own name. For financial reporting purposes, PERA is considered a pension trust fund of the State of Minnesota and is included in the State's *Comprehensive Annual Financial Report* with its fiduciary funds. PERA does not have any component units.

B) Basis of Presentation and Basis of Accounting

The accompanying financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) that apply to governmental accounting for fiduciary funds. Financial statements for all funds are prepared using the accrual basis of accounting. Employee and employer contributions are recognized as revenues when due, pursuant to formal commitments and statutory requirements. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses. Actual results could differ from those estimates.

C) Cash and Cash Equivalents

For PERA's defined benefit and defined contribution funds, cash includes cash on deposit in the state's treasury, which is commingled with other state funds. Cash on deposit consists of year-end receipts not yet processed as of the investment cutoff on June 30. The majority of PERA's cash is invested as part of an investment pool with the SBI. PERA's investment in the cash pools is reported as a cash equivalent.

D) Receivables

Accounts receivable represents plan member and employer contributions which are received after fiscal year end for services rendered prior to fiscal year end. For the General Employees Fund, the receivable also includes an employer supplemental contribution of $21 million billed in fiscal year 2019 but not due from employers until fiscal year 2020. For the Police and Fire Fund, the receivable includes an employer supplemental contribution of $7.5 million and a $4.5 million direct state aid payment due in fiscal year 2019 but not paid until 2020.

Due from other funds represents the reallocation of administrative expenses, which is done annually in October once the fiscal year's expenses have been finalized.

E) Investments

Investment Policy

The SBI is made up of Minnesota's governor, state auditor, secretary of state, and attorney general. The authority for establishing and amending investment policy decisions is granted to the SBI in *Minnesota Statutes*, Section 11A.04. The legislature has also established a 17-member Investment Advisory Council (IAC) to advise the Board and its staff on investment-related matters. PERA's executive director is a permanent member of the IAC. *Minnesota Statutes*, Section 11A.24, broadly restricts retirement fund investments to obligations and stocks of United States and Canadian governments, their agencies and their registered corporations; short-term obligations of specified high quality; restricted participation as a limited partner in venture capital, real estate or resource equity investments; restricted participation in registered mutual funds; and some qualified foreign instruments. Short-term investment securities include investments that have high credit quality and are highly liquid. The securities have a low-risk, low-return profile and include U.S. Government Treasury bills, bank certificates of deposit, bankers' acceptances, corporate commercial paper, and other money market instruments.

Pursuant to *Minnesota Statutes*, Section 11A.14, the state's retirement plan assets are commingled in various pooled investment accounts, administered by SBI. As of June 30, 2019, the participation shares in the combined retirement fund at fair value totaled approximately 31.7 percent for the General Employees Fund, 12.5 percent for the Police and Fire Fund, and 1.1 percent for the Correctional Fund.

Investments in the pooled accounts, including assets of the Defined Contribution Fund and the Agency Fund, are reported at fair value. Fair value is the proportionate share of the combined market value of the investment portfolio of the SBI investment pool in which the funds participate. All securities within the pools are valued at fair value except for U.S. Government short-term securities and commercial paper, which are valued at market less accrued interest. Accrued interest is recognized as short-term income. Note 3 provides additional disclosures on fair value reporting of investments.

Investment income is recognized as earned. Accrued investment income of the pooled investment accounts is included in participation in the accounts. Gains and losses on sales or exchanges are recognized on the transaction date.

For financial reporting purposes, the cost of security transactions is included in the transaction price. Investment expenses include administrative expenses of the SBI to manage the state's investment portfolio and investment management fees paid to the external money managers and the state's master custodian for pension plan assets. These expenses are allocated to the funds participating in the pooled investment accounts. Information on specific investments owned by the pooled accounts, investment activity, currency risk, interest rate risk, and a detailed schedule of fees and commissions by brokerage firm,along with the number of shares traded, total commissions, and commissions per share for the pooled investment accounts may be obtained from the SBI, 60 Empire Drive, Suite 355, Saint Paul, Minnesota 55103.

The SBI investment policy may be amended by a majority vote of its Board. The policy outlines the investment philosophy and guidelines within which the Combined Fund's investments will be managed.

Description of Significant Investment Policy Changes During the Year

- September 2018, Domestic Equities changed from the Russell 3000 Index as the domestic equity target to Russell 1000 index (large cap) representing a 90 percent domestic equity target and Russell 2000 Index (Small Cap) representing 10 percent of the domestic equity target.
    -Rebalancing guidelines for large-cap remain at plus or minus 10 percent and small cap rebalancing guidelines are at plus or minus 20 percent.

- International Equities changed from the MSCI ACWI ex USA as the international equities target to the MSCI World ex USA index (developed markets) representing 75 percent of the international equities target and the MSCI Emerging Markets Index representing 25 percent of the international equities target.

-Rebalancing guidelines for International Equities - developed markets remain at plus or minus 10 percent and International Equities - private markets rebalancing guidelines are at plus or minus 20 percent.

Asset Allocation

To match the long-term nature of pension obligations, the SBI maintains an asset allocation for the Combined Funds that includes allocations to Public Equities (Domestic and International), Fixed Incomes (Core Bonds and Treasuries), Private Markets, and Cash Equivalents.

As of June 30, 2019, the asset allocation is as follows:

Public Equities		53%
Domestic Equities	*35.5%*	
International Equities	*17.5%*	
Fixed Incomes		20%
Core Bonds	*10.0%*	
Treasuries	*10.0%*	
Private Markets		25%
Cash Equivalents		2%

If the allocation to Private Markets is less than the 25 percent allocation target, the un-invested portion is invested in Public Equities. When the actual asset allocation deviates beyond specified ranges, assets are rebalanced to achieve the long-term allocation targets.

Rate of Return

The SBI's long-term expected rate of return on pension plan investments was determined using a building-block method. Best estimates for expected future real rates of return (expected returns, net of inflation) were developed for each asset class using both long-term historical returns and long-term capital market expectations from a number of investment management and consulting organizations. The asset class estimates and the target allocations were then combined to produce a geometric, long-term expected real rate of return for the portfolio. Inflation expectations were applied to derive the nominal rate of return for the portfolio. The target asset allocation and best estimates of geometric real rates of return for each major asset class included in the plan's target asset allocation as of June 30, 2019 are summarized in **Figure 3**.

Figure 3: Target Asset Allocation and Long-term Expected Real Rate of Return by Asset Class

For the Combined Funds: Asset Class	Target Allocation	Long-term Expected Real Rate of Return (Geometric)
Domestic Equity	35.50%	5.10
Private Markets	25.00%	5.90
Fixed Income	20.00%	0.75
International Equity	17.50%	5.30
Cash Equivalents	2.00%	0.00
	100%	

(1) Domestic Equity includes U.S. Stock Actively Managed, Passively Managed, and the U.S. Stock Index Fund

(2) Private Markets includes the Alternative Investment Pool

(3) Fixed Income includes the Bond Fund, Transition Account, and Treasuries Pool

(4) International Equity includes Broad International Stock Fund

(5) Cash equivalents includes the Defined Benefit Money Market

Statewide Voluntary Firefighter Fund

Asset Class	Target Allocation	Long-term Expected Real Rate of Return (Geometric)
Domestic Equity	35%	5.10
Fixed Income	45%	0.75
International Equity	15%	5.30
Cash Equivalents	5%	0.00
Total	**100%**	

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the actual cash flows that took place during the performance period. Since PERA's various funds have different cash flows throughout the year, they have different money-weighted rates of return. The money-weighted rate of return for each fund is presented in **Figure 4**.

Figure 4: Money-Weighted Rate of Return

Fund	Fiscal Year 2019
General Employees Fund	7.33%
Police and Fire Fund	7.31%
Correctional Fund	7.42%
Volunteer Firefighter Fund	8.11%

F) Capital Assets

Capital assets, generally assets with a cost in excess of $30,000 and a useful life greater than one year, are capitalized at cost at the time of acquisition (see Note 4). Depreciation is computed on a straight-line basis over the estimated useful life of the related assets. The estimated useful lives are 3 to 10 years for furniture and equipment, and 40 years for the building. PERA's threshold for intangible assets is $1,000,000. PERA did not have any intangible assets in fiscal year 2019.

G) Accrued Compensated Absences

PERA's employees accrue vacation leave, sick leave, and compensatory leave at various rates within limits specified in collective bargaining agreements. Accumulated amounts for compensated absences are accrued when incurred. Such leave is liquidated in cash primarily at the time of termination of employment. The total liability at June 30, 2019, is $1,012,000. Of this, $115,100 is considered a short-term liability and $896,900 is considered a long-term liability. The total increased by $53,151 during fiscal year 2019.

H) Administrative Expenses

PERA's administrative expenses are paid during the year from the General Employees Fund. At year-end, a portion of the expenses are allocated to the Police and Fire Fund and the Correctional Fund, based on membership counts. The Defined Contribution Fund reimburses the General Employees Fund to the extent of fees collected for recovery of administrative costs. The Volunteer Firefighter Fund reimburses the General Employees Fund $30 per firefighter. The applicable amounts are reported as expenses and reported on the *Statement of Fiduciary Net Position* as a payable to other funds or due from other funds. Administrative costs are funded from investment income for the defined benefit plans.

NOTE 3
Deposits and Investment Risk Disclosures

A) Fair Value Reporting

GASB Statement No. 72, Fair Value Measurement and Application, sets forth the framework for measuring the fair value of investments based on a hierarchy of valuation inputs. The hierarchy has three levels:

Level 1: Market valuation approach using quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

Level 2: Market valuation approach using inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Inputs for Level 2 include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs derived principally from or corroborated by observable market data by correlation or other means.

Level 3: Unobservable inputs for the asset or liability. Unobservable inputs reflect the SBI's assumptions about the inputs that market participants would use in pricing an asset or liability. Assets classified as a Level 3 typically use the cost approach, income approach, or consensus pricing for a valuation technique.

Net Asset Value (NAV): Investments that do not have a readily determinable fair value are measured using NAV per share (or its equivalent) as a practical expedient, and are not classified in the fair value hierarchy.

Cash and cash equivalents (investments with less than 12 months to maturity) are not leveled per GASB Statement No. 72. Therefore cash and short term investments are not included in **Figure 5**. All non-cash investments, including derivative investments that are not hedging derivatives, are required to be measured at fair value on a recurring basis. The SBI maintains investment pools that participants can invest in; participants own a proportionate share of the investment pools. The fair value of the investment pools is priced daily by the SBI custodian, when a daily price is available, by using independent pricing sources.

In **Figure 5**, Level 3 investments primarily consist of assets where the asset is distressed, or there is not an active market. The fair value of the assets measured at NAV have been determined using the March 31, 2019, values, adjusted for cash flows. The investments measured at NAV are typically not eligible for redemption. Distributions are received as underlying investments when the funds are liquidated, which occur over the life of the investment.

Figure 5: Fair Value of PERA Investments
As of June 30, 2019 (in thousands)

Equity Investments	Fair Value	Level 1	Level 2	Level 3
Common Stock	$18,926,500	$18,922,418	$3,972	$110
Real Estate Investment Trust	593,179	593,179	0	0
Other Equity	685,986	487,175	46,671	152,140
Equity Total	**20,205,665**	**20,002,772**	**50,643**	**152,250**
Fixed Income Investments				
Government Issues	4,062,534	0	4,051,462	11,072
Corporate Bonds	1,165,250	0	1,165,250	0
Mortgage-Backed Securities	1,310,859	0	1,295,348	15,511
Asset-Backed Securities	256,710	0	238,266	18,444
Other Debt Instruments	9,379	0	9,379	0
Fixed Income Total	**6,804,732**	**0**	**6,759,705**	**45,027**
Investment Derivatives - Options	(373)	(373)	0	0
Total Investments by Fair Value	**$27,010,024**	**$20,002,399**	**$6,810,348**	**$197,277**

Investments Measured at the Net Asset Value (in thousands)	NAV	Percent of NAV	Number of Investments	Unfunded Commitments
Private Equity	$2,861,832	62%	150	$3,120,385
Real Estate	372,564	8%	26	608,677
Resource	897,050	20%	36	420,822
Yield Oriented	464,947	10%	36	482,898
NAV total	**$4,596,393**	**100%**		**$4,632,782**

The SBI has 57 investments that are valued at NAV that are currently in the liquidation mode, totaling 3 percent of the NAV value. The majority of the remaining value of investments in liquidation mode will be returned to the SBI within a time period of three to five years. PERA's proportionate share of the unfunded commitments (funds committed to an investment but not yet transferred to the General Partner (Investor)) valued at NAV total $4,632,782,000.

The following are explanations of investment types listed in **Figure 5**.

Equity Investments

Common Stock: Securities representing equity ownership in a corporation, providing voting rights, and entitling the holder to a share of the company's success through dividents and/or capital appreciation.

Real Estate Investment Trust (REIT): An investment pool established by a group of investors for the purpose of investing in real estate or mortgages. REITs are generally exempt from federal taxes, provided that 95 percent of earned income is distributed and that the various investors are not treated differently.

Other Equity: Includes Preferred Stock, Depository Receipts, Limited Partnerships Units, Common Stock Units, and Mutual Funds.

Fixed Income Investments

Asset-Backed Securities: Bonds or notes backed by financial assets, including auto loans and credit card receivables.

Mortgage-Backed Securities: An asset-backed security that is secured by a mortgage or collection of mortgages. The mortgages are sold to a government agency or investment bank that will package the loans together into a security that can be purchased by investors.

Corporate Bonds: Debt obligations issued by corporations as an alternative to offering equity ownership by issuing stock. Like most municipal bonds and Treasuries, most corporate bonds pay semi-annual interest and promise to return the principal when the bonds mature. Maturities range from 1 to 30 years.

Government Issue: Securities or bonds issued by any of the 50 states, the territories and their sub- divisions, counties, cities, towns, villages and school districts, agencies (such as authorities and special districts created by the states), and certain federally-sponsored agencies such as local housing authorities.

Other Debt Instruments: Includes Short Term Investment Funds (STIF) type instruments.

Investment Derivatives: Options -- Futures. A contract that gives the holder the right to buy from or sell to the writer a specified amount of securities at a specified price, good for a specified period of time.

Investments Measured at Net Asset Value (NAV)

Private Equity: The private equity investment strategy is to establish and maintain a broadly diversified private equity portfolio composed of investments that provide diversification by industry type, stage of corporate development and location. The SBI has 150 Private Equity investments representing 62 percent of the NAV value.

Real Estate: The real estate investment strategy calls for the establishment and maintenance of ,a broadly diversified real estate portfolio composed 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. The SBI has 26 Real Estate investments representing 8 percent of the NAV value.

Resource Funds: The strategy for resource investments is to establish and maintain a port- folio of resource investment vehicles that provide an inflation hedge and additional diversification. Resource investments will include oil and gas investments and energy service industry investments that are diversified by geographic area as well as by type. The SBI has 36 Resource Funds' investments representing 20 percent of the NAV value.

Yield Oriented: The strategy for yield-oriented investments is to target funds that typically provide a current return and may have an equity component. Structures such as subordinated debt investments and mezzanine investments are typical yield-oriented investments. The SBI has 36 Yield Oriented Funds' investments representing 10 percent of the NAV value.

B) Custodial Credit Risk

Custodial credit risk for cash deposits and investments is the risk that, in the event of a bank or custodian failure, PERA will not be able to recover the value of its investments or collateral securities. *Minnesota Statutes*, Section 9.031, requires that cash deposits be secured by depository insurance or a combination of depository insurance and collateral securities held in the state's name by an agent of the state. Such insurance and collateral shall be in amounts sufficient to ensure that deposits do not exceed 90 percent of the sum of the insured amount and the market value of the collateral. Throughout fiscal year 2019, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all PERA deposits, eliminating exposure to custodial credit risk.

C) Credit Risk

Credit risk is the risk that an issuer or counterparty to an investment will be unable to fulfill its obligations to the holder of the investment. The SBI has policies designed to minimize credit risk. They may invest funds in governmental obligations provided the issue is backed by the full faith and credit of the issuer or the issue is rated among the top four quality rating categories by a nationally recognized rating agency. They may invest funds in corporate obligations provided the issue is rated among the top four quality categories by a nationally recognized rating agency. They may also invest in unrated corporate obligations or in corporate obligations that are not rated among the top four quality categories provided that:

-The aggregate value of these obligations may not exceed 5 percent of the fund for which the state board is investing;

-Participation is limited to 50 percent of a single offering; and

-Participation is limited to 25 percent of an issuer's obligations.

The SBI may also invest in bankers' acceptances, deposit notes of U.S. banks, certificates of deposit, mortgage securities, and asset-backed securities rated in the top four quality categories by a nationally recognized rating agency. Commercial paper must be rated in the top two quality categories.

PERA's share of SBI's exposure to credit risk, based on the lower of Moody's or S&P Quality Ratings for debt securities and short-term investments, is shown in **Figure 6**. If a security is rated by only Moody's or S&P that rating will be used. Agency securities consist of implicitly guaranteed investments of the U.S. Government.

Figure 6: Credit Risk Exposure (in thousands)

Quality Rating	Fair Value as of June 30, 2019
AAA	$309,774
AA	5,130,376
A	191,729
BBB	712,061
BB	367,478
B	24,700
CCC	11,473
CC	6,798
C	1,277
D	319
Unrated Agency	0
Unrated Corporate	1,358,456
Total	$8,114,441

D) Concentration of Credit Risk

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. The SBI determined concentration of credit risk based on security identification number. PERA does not have exposure to a single issuer that equals or exceeds 5 percent of the overall portfolio and, therefore, there is no material concentration of credit risk.

E) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt investments could adversely affect the fair value of an investment. The SBI does not have a policy on interest rate risk. Debt securities are held in external investment pools and PERA's share has the weighted average maturities shown in **Figure 7.**

Figure 7: Interest Rate Risk

Security	Weighted Average Maturity (in years)
Short-Term Investment Securities	0.47
Foreign Country Bonds	2.86
Mortgage-Backed Securities	4.40
Asset-Backed Securities	6.37
Collateralized Mortgage Obligations	7.54
Yankee Bonds	7.81
Agency Securities	8.05
Corporate Debt Obligations	10.02
U.S. Treasuries	13.37
Municipal Debt Obligations	18.31
Preferred Stock	21.36

F) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates between the U.S. dollar and foreign currencies could adversely affect the fair value of an investment. Most foreign currency risk resides within the SBI's international equity investment holdings. In order to reduce foreign currency risk, the SBI has developed the following policies. Government obligations, including guaranteed or insured issues of the International Bank for Reconstruction and Development, the Inter-American Development Bank, the Asian Development Bank, and the African Development Bank, must pay interest and principal in U.S. dollars. The principal and interest of obligations of corporations, including those corporations incorporated or organized under the laws of the Dominion of Canada or any province thereof, must also be paid in U.S. dollars. PERA's share of foreign security investments at June 30, 2019, was distributed among the currencies shown in **Figure 8.**

Figure 8: Foreign Currency Risk (fair value in thousands)

Currency	Cash	Equity	Fixed Income
Euro Currency	$3,721	$1,902,228	$1,939
Japanese Yen	11,855	992,059	0
Pound Sterling	1,216	752,735	4,573
Hong Kong Dollar	3,550	480,552	0
Canadian Dollar	2,879	454,680	11,214
Swiss Franc	40	398,292	0
Australian Dollar	1,250	309,275	0
South Korean Won	201	166,769	0
New Taiwan Dollar	186	147,144	0
Swedish Krona	30	113,456	0
Brazilian Real	16	98,887	0
Danish Krone	13	83,675	0
South African Rand	57	71,566	0
Singapore Dollar	104	67,320	0
Indian Rupee	86	46,664	0
Indonesian Rupiah	280	39,721	0
Mexican Peso	102	36,224	0
Thailand Baht	34	35,851	0
Norwegian Krone	13	32,267	0
New Israeli Sheqel	149	21,862	0
Malaysian Ringgit	45	20,476	0
Polish Zloty	29	16,821	0
Hungarian Forint	145	15,275	0
Yuan Renminbi	(3,024)	17,737	0
Philippine Peso	11	13,154	0
Turkish Lira	7	12,918	0
New Zealand Dollar	68	10,201	0
Czech Koruna	23	7,555	0
Chilean Peso	38	7,293	0
Uae Dirham	12	5,876	0
Qatari Rial	0	5,198	0
Yuan Renminbi Offshore	3,274	0	0
Egyptian Pound	0	2,637	0
Colombian Peso	1	2,457	0
Romanian Leu	0	1,731	0
Moroccan Dirham	0	0	0
Total	**$26,411**	**$6,390,556**	**$17,726**

G) Derivative Financial Instruments

On behalf of PERA, the SBI invests in various types of derivative financial instruments. Derivatives are defined as any financial arrangement between two parties that has value based on or derived from future price fluctuations. The derivative financial instruments that the SBI enters into include futures, options, stock warrants and rights, currency forwards, and synthetic guaranteed investment contracts.

Minnesota Statutes, Section 11A.24, provides that any agreement for put and call options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. This provision applies to foreign currency forward contracts used to offset the currency risk of a security. All other derivatives are exchange-traded. The purpose of the SBI derivative activity is to equitize cash in the portfolio, to adjust the duration of the portfolio, or to off-set current futures positions.

The fair value balances and notional amounts (or face value) at June 30, 2019, classified by derivative instrument type (futures, options, currency forward contracts, and stock warrants and rights), and the changes in fair value for fiscal year 2019, are shown in **Figure 9.** Explanations of each derivative instrument type are presented below.

Figure 9: Derivative Financial Instruments (in thousands)

Derivative Investment Type Futures:	Changes in Fair Value During Fiscal Year 2019	Fair Value at June 30, 2019	Notional Amount
Equity Futures–Long	($1,358)	$0	$3,017
Equity Futures–Short	($246)	$0	($32)
Fixed Income Futures–Long	$41,991	$0	$788,566
Fixed Income Futures–Short	($37,571)	$0	($643,018)
Options:			
Futures Options Bought	($2,541)	$268	$603
Futures Options Written	$1,865	($642)	($2,305)
Foreign Currency Forwards	($1,289)	$162	$205,799
Stock Warrants and Rights:			
Stock Warrants	$74	$156	$87
Stock Rights	$270	$544	$1,301

Derivative Investment Type

Futures: Futures are contract commitments to purchase (asset) or sell (liability) at a future date. The net change in the values of futures contracts is settled on a regular basis and gains and losses are included in investment income.

Options: Options are contracts that give buyers or sellers the right to buy (calls) or sell (puts) a security at a predetermined price on a future date. Gains and losses result from variances in the market value of the security that is the subject of the contract that occur prior to or on the contract specified date. The gains and losses are included in investment income.

Currency Forward Contracts: Foreign currency forward contracts are used to manage portfolio foreign currency risk. The provisions of the contract vary based on what is negotiated between the two parties to the contract.

Stock Warrants and Rights: Stock warrants, similar to options, are the right to purchase shares of a stock at a certain price by a certain date. They usually have a longer term before expiration, e.g. five years or more. When stock warrants are exercised, new shares are issued by the company. Rights are the same but are issued to current stock owners to enable them to retain their relative ownership share. Gains and losses from the sale or exercise of stock warrants and rights are included in investment income.

The SBI maintains a fully benefit-responsive synthetic guaranteed investment contract for the Supplemental Investment Fund - Fixed Interest Account. The investment objective of the Fixed Interest Account is to protect investors from loss of their original investment and to provide a competitive interest rate. On June 30, 2019, the Fixed Interest Account portfolio of well-diversified high quality investment grade fixed income securities had a fair value of $1,589,082,988 that is $30,619,079 in excess of the value protected by the wrap contract. The Fixed Income Account also includes liquid investment pools with a combined fair value of $27,176,432.

Risks

The SBI is exposed to credit risk through the counterparties in foreign currency forward contracts used to offset the currency risk of a security. PERA's proportionate share of the maximum loss that the SBI would have recognized as of June 30, 2019, if all counterparties failed to perform as contracted is $1,180,532.

H) Securities Lending

PERA does not own specific securities, but instead owns shares in pooled funds invested by the SBI. The SBI is authorized to enter into securities lending transactions in accordance with *Minnesota Statutes*, Chapter 356A.06, Subd. 7 and has, pursuant to a *Securities Lending Authorization Agreement*, authorized State Street Bank and Trust Company (State Street) to lend its securities to broker-dealers and banks pursuant to a form of loan agreement. The amounts shown on the financial statements are PERA's proportionate share of securities loaned, collateral pledged, and loan income that resulted from the lending activity of the investment managers, retained by the SBI, of these investment pools. The types and amounts of securities loaned are presented in **Figure 10.**

Figure 10: Securities Loaned (in thousands)

Investment Type	Amount as of June 30, 2019
Domestic Equities	$2,469,530
Domestic Corporate Bonds	306,477
International Equities	170,742
US Government Bonds	339,808
Total	**$3,286,557**

During the fiscal year, State Street lent, at the direction of the SBI, certain securities held by State Street as custodian and received cash or other collateral including securities issued or guaranteed by the United States government. State Street does not have the ability to pledge or sell collateral securities delivered absent a borrower default. Borrowers were required to deliver collateral for each loan equal to at least 100 percent of the market value of the loaned securities.

Pursuant to the *Securities Lending Authorization Agreement*, State Street had an obligation to indemnify the SBI in the event of default by a borrower. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year that resulted in a declaration or notice of default of the borrower.

During the fiscal year, the SBI and the borrowers maintained the rights to terminate securities lending transactions upon notice. The cash collateral received on each loan was invested in a collective investment pool. As of June 30, 2019, the investment pool had an average duration of 14.42 days and an average weighted final maturity of 83.43 days for USD collateral. Because the loans were terminable at will, their duration did not generally match the duration of the investments made with cash collateral. On June 30, 2019, the SBI had no credit risk exposure to borrowers. The market value of collateral held and the fair value of securities on loan from the SBI as of June 30, 2019 was $3,377,606,000 and $3,286,557,000 respectively. Cash collateral of $2,379,690,000 is reported on the *Statement of Fiduciary Net Position* as an asset. Liabilities resulting from these securities lending transactions are also reported on the *Statement of Fiduciary Net Position.*

NOTE 4 Capital Assets, Building and Land

Capital assets are presented on the June 30, 2019, *Statement of Fiduciary Net Position* at historical cost, net of accumulated depreciation, as summarized in **Figure 11**. There were no significant leases as of June 30, 2019.

Figure 11: Capital Assets (in thousands)

	Balance June 30, 2018	Additions	Disposals	Balance June 30, 2019
Capital Assets, not being depreciated:				
Land	**$170**	**$0**	**$0**	**$170**
Capital Assets, being depreciated:				
Building (includes generator)	10,893	0	0	10,893
Equipment, Furniture & Fixtures	1,668	0	0	1,668
Total Capital Assets being depreciated	**12,561**	**0**	**0**	**12,561**
Less Accumulated Depreciation for:		**Increase**	**Decrease**	
Building (includes generator)	(4,691)	(269)	0	(4,960)
Equipment, Furniture & Fixtures	(1,536)	(95)	192	(1,439)
Total Accumulated Depreciation	**(6,227)**	**(364)**	**192**	**(6,399)**
Total Capital Assets, Net of Accumulated Depreciation on the Statement of Fiduciary Net Position	**$6,504**	**($364)**	**$192**	**$6,332**

Legislation was passed in 1999 allowing PERA, the Minnesota Teacher's Retirement Association (TRA) and the Minnesota State Retirement System (MSRS) to purchase land and construct a 140,000 square foot building to house all three retirement systems. Ownership of the facility is prorated based on the amount of square footage each retirement system occupies in the building. PERA's ownership share is 36.5 percent. PERA's share of the cost to purchase the 4.3 acres of land was $170,308.

In June 2000, the State of Minnesota, under the authority of the Commissioner of Finance (currently known as Minnesota Management and Budget), issued revenue bonds totaling $29 million on behalf of the three retirement systems to pay for the construction of the facility. In August 2012, the remaining bonds were refunded with the proceeds of a new, lower interest rate bond issue. The new bonds are secured by the value of the total assets of the largest defined benefit plans in the three statewide retirement systems. Through the issuance of the refunding bonds, which received a AAA rating, the bond term was reduced by five years and the present value of the savings to the retirement systems was $9,582,538. PERA's portion of the savings was $3,497,626.

Figure 12 shows the debt service amounts for which PERA is directly responsible. Pursuant to the joint and several liability clauses in the bond sale official statement, in the event of default, PERA could be liable for the entire remaining outstanding principal and premium balances of the bonds, plus the interest accrued for the month of June, totaling $11,392,000. Bonds payable on the *Statement of Fiduciary Net Position* is PERA's share of outstanding debt at the current ownership interest. It includes the principal balance as of June 30, 2019, the premium balance as of June 30, 2019, and interest accrued for the month of June. PERA has no lines of credit or assets pledged as collateral for debt.

Figure 12: Debt Repayment Schedule by Fiscal Year

Fiscal Year	Principal	Interest	Premium	Total
2020	$651,525	$62,062	$47,548	$761,135
2021	669,775	51,259	45,320	766,354
2022	684,375	40,154	43,029	767,558
2023	698,975	28,807	40,689	768,471
2024	673,425	17,218	24,319	714,962
2025	365,000	6,052	8,548	379,600
	$3,743,075	**$205,552**	**$209,453**	**$4,158,080**

Total Unpaid Principal, 06/30/19	$3,743,075
Total Unpaid Premium, 06/30/19	209,453
Accrued Interest, June 2019	5,172
Total Bonds Payable on Statement of Fiduciary Net Position	**$3,957,700**

NOTE 5

Contribution Requirements

Minnesota Statutes, Chapters 353, 353E, 353G, and 356 set the rates for employer and employee contributions. Contribution rates are shown in **Figure 13**.

Figure 13: Retirement Plan Contribution Rates

		General Employees Fund				
Effective Date	**Contributor**	**Basic**	**Coordinated**	**MERF**	**Police & Fire Fund**	**Correctional Fund**
01/01/2018	Member	9.10%	6.50%	9.75%	10.80%	5.83%
	Employer	11.78%	7.50%	9.75%	16.20%	8.75%
01/01/2019	Member	9.10%	6.50%	9.75%	11.30%	5.83%
	Employer	11.78%	7.50%	9.75%	16.95%	8.75%
01/01/2020	Member	9.10%	6.50%	9.75%	11.80%	5.83%
	Employer	11.78%	7.50%	9.75%	17.70%	8.75%

Legislation was passed in 2018 to extend the full funding date for the General Employees Plan, Police and Fire Plan, and Correctional Plan to 2048. The legislation also increased both employee and employer contribution rates in the Police and Fire Plan. Employee rates increase from 10.80 percent of pay to 11.30 percent and employer rates increase from 16.20 percent to 16.95 percent on January 1, 2019. On January 1, 2020, employee rates increase to 11.80 percent and employer rates increase to 17.70 percent. As a result of these changes, contribution rates in the General Employees Plan and the Police and Fire Plan are now sufficient to fund the plan by the full funding date of 2048. Contribution rates in the Correctional Plan are not yet sufficient to fully fund the plan by the full funding dates of 2048. The actuarially required contributions are expressed as a level percentage of covered payroll and are determined using an individual entry-age actuarial cost method.

Beginning in fiscal year 2014, the State of Minnesota was also required to begin contributing $9 million to the Police and Fire Fund each year. This state aid will continue until the fund is 90 percent funded, or until the State Patrol Plan (administered by the Minnesota State Retirement System) is 90 percent funded, whichever occurs later. In addition, the state will pay $4.5 million on October 1, 2018, and October 1, 2019, in direct state aid. Thereafter, by October 1 of each year, the state will pay $9 million until full funding is reached or July 1, 2048, whichever is earlier.

The MERF was fully merged into the General Employees Fund in fiscal year 2015. Supplemental contribution amounts were recalculated after the merger based on the amount of MERF's unfunded liability as of the merger date. The State of Minnesota will be contributing $16 million and the MERF employers will be contributing $21 million on September 15, 2019, and annually thereafter, to the General Employees Fund.

Minnesota Statutes, Section 353D.03, specifies contribution rates for those who participate in the Defined Contribution Plan. An eligible elected official or physician who decides to participate contributes 5 percent of salary, which is matched by the employer. For ambulance service personnel, employer contributions are determined by the employer, and for salaried employees must be a fixed percentage of salary. Employer contributions for volunteer personnel may be a unit value for each call or period of alert duty. Employees who are paid for their services may elect to make member contributions in an amount not to exceed the employer share.

Employer required contributions are calculated annually for each employer in the Volunteer Firefighter Plan. If fire state aid (based on income generated from insurance policies) plus expected investment income are not enough to cover the expected normal cost of benefits during the next calendar year, an employer contribution is calculated and payable by the end of the next calendar year.

NOTE 6
Net Pension Liability of Employers and Nonemployer Contributing Entity

The components of the Net Pension Liability (NPL) of the cost-sharing defined benefit plans for participating employers and the State of Minnesota (a nonemployer contributing entity in the General Employees Fund) as of June 30, 2019, calculated in accordance with GASB Statement No. 67, are shown in **Figure 14.**

Figure 14: Net Pension Liability Components (in thousands)

	General Employees Fund	Police and Fire Fund	Correctional Fund
Total Pension Liability (A)	$27,969,744	$9,909,153	$758,268
Fund Fiduciary Net Position (B)	(22,440,968)	(8,844,552)	(744,423)
Net Pension Liability (A-B)	$5,528,776	$1,064,601	$13,845
Fund Fiduciary Net Position as a Percentage of the **Total Pension Liability (B/A)**	**80.2%**	**89.3%**	**98.2%**

A) Actuarial Methods and Assumptions

The total pension liability for each of the cost-sharing defined benefit plans was determined by an actuarial valuation as of June 30, 2019, using the entry age normal actuarial cost method. Inflation is assumed to be 2.5 percent for the General Employees Plan, Police and Fire Plan, and the Correctional Plan. Salary growth assumptions in the General Employees Plan range in annual increments from 11.25 percent after one year of service, to 3.25 percent after 26 years of service. In the Police and Fire Plan, salary growth assumptions range from 12.25 percent after one year of service to 3.25 percent after 25 years of service. In the Correctional Plan, salary growth assumptions range from 8.5 percent at age 20 to 3.5 percent at age 65. Mortality rates for all plans are based on RP-2014 mortality tables. The tables are adjusted slightly to fit PERA's experience.

Actuarial assumptions for the General Employees Plan are reviewed every four to six years. The most recent four-year experience study for the General Employees Plan was completed in 2019. The most recent four-year experience study for the Police and Fire Plan was completed in 2016. The most recent five-year experience study for the Correctional Plan, prepared by a former actuary, was completed in 2012. Economic assumptions were updated in 2014 based on a review of inflation and investment return assumptions.

B) Discount Rate

The discount rate used to measure the total pension liability in 2019 was 7.5 percent. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and employers will be made at rates set in *Minnesota Statutes*. Based on these assumptions, the fiduciary net positions of the General Employees Fund, the Police and Fire Fund, and the Correctional Fund were projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

C) Sensitivity Analysis

Figure 15 presents the Net Pension Liability (Asset) of employers and the State of Minnesota for PERA's cost-sharing defined benefit plans as of June 30, 2019, calculated using the current discount rate of 7.5 percent, as well as what each plan's net pension liability would be if it were calculated using a discount rate that is one percent lower and one percent higher than the current rate.

Figure 15: Sensitivity Analysis (in thousands)

Net Pension Liability (Asset) at Different Discount Rates

	General Employees Fund		Police and Fire Fund		Correctional Fund	
1% Decrease	6.50%	$9,089,010	6.50%	$2,327,020	6.50%	$147,559
Current Discount Rate	7.50%	$5,528,776	7.50%	$1,064,601	7.50%	$13,845
1% Increase	8.50%	$2,589,095	8.50%	$20,601	8.50%	($93,148)

NOTE 7

Other Notes

A) New Asset Transfers

The Volunteer Firefighter Plan was created by the Minnesota Legislature in 2009. The plan is an agent multiple-employer defined benefit retirement plan. Sixteen fire departments joined the plan in fiscal year 2019, bringing the total number of fire departments in the Volunteer Firefighter Plan to 175. The amount of assets transferred, $10,916,134, is shown as an "Other Addition" in *PERA's Statement of Changes in Fiduciary Net Position*. Each fire department has a separate account and retains its own assets and liabilities.

B) Participating Pension Plan

All employees of PERA are covered by the General Employees Coordinated Plan and eligible for the plan provisions described in Note 1.D. *Minnesota Statute* Section 353.27 sets the rates for employee and employer contributions. These statutes are established and amended by the Minnesota Legislature. Contribution rates were shown previously in **Figure 13**. Total covered payroll for PERA employees during fiscal year 2019 was approximately $7.0 million.

Employer pension contributions for PERA employees for the fiscal years ending June 30, 2019, 2018, and 2017 were $526,135, $512,920, and $481,841, respectively. Employer contributions were equal to the required contributions for each year as set by state statute. Employer contributions paid by PERA on behalf of these employees are funded by General Employees Fund investment income.

C) Abandoned Accounts

Beginning in fiscal year 2019, PERA initiated a significant effort to locate terminated non-vested members to advise them of their rights to withdraw their employee contributions. *Minnesota Statute* 356.65, states that inactive, non-vested members can either apply for their refund within five years after their last member contribution was made or their member contributions and interest are cancelled and credited to the public pension fund. In total, PERA plans to address approximately 60,000 terminated non-vested members with no known service in another public pension plan.

During fiscal year 2019, external communication was developed informing approximately 35,000 terminated non-vested members of their refund options. Members who returned refund applications were paid out approximately $30 million for the fiscal year ending June 30, 2019. Approximately 7,300 nonresponsive member accounts were canceled and the funds credited back into the pension fund totaling roughly $3.8 million for the fiscal year ending June 30, 2019.

D) GASB Pronouncements

During the fiscal year, PERA implemented GASB *Statement No. 88, Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements.* The statement established additional notes to the financial statements for debt disclosures. The implementation of this statement resulted in an additional comment in *Note 4, Capital Assets, Building and Land* to disclose that PERA had no other debt or assets pledged other than the bond issued to construct PERA's office building in 2001.

Schedule of Changes in Net Pension Liability and Related Ratios *

Required Supplementary Information (unaudited, in thousands)

General Employees Fund

	Fiscal Year 2019	Fiscal Year 2018
Total Pension Liability		
Service Cost	$494,737	$513,422
Interest on the Total Pension Liability	1,991,061	1,948,853
Change of Benefit Terms	0	(79,217)
Difference between Expected and Actual Experience	104,946	8,763
Assumption Changes	(120,162)	(262,228)
Benefit Payments	(1,536,071)	(1,470,450)
Refund Payments	(65,834)	(42,589)
Net Change in Total Pension Liability	868,677	616,554
Total Pension Liability--Beginning	27,101,067	26,484,513
Total Pension Liability--Ending (a)	27,969,744	27,101,067
Plan Fiduciary Net Position		
Contributions--Employer	515,444	488,819
Contributions--Member	424,044	409,423
Contributions--Nonemployer Contributing Entity	16,000	16,000
Net Investment Income	1,547,224	2,063,582
Benefit Payments	(1,536,071)	(1,470,450)
Refund Payments	(65,834)	(42,589)
Administrative Expenses	(13,470)	(11,943)
Other **	154	56
Net Change in Plan Fiduciary Net Position	887,491	1,452,898
Plan Fiduciary Net Position--Beginning	21,553,477	20,100,579
Plan Fiduciary Net Position--Ending (b)	22,440,968	21,553,477
Net Pension Liability (a)-(b)	$5,528,776	$5,547,590
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	80.23%	79.53%
Covered Payroll	$6,523,754	$6,298,815
Net Pension Liability as a Percentage of Covered Payroll	84.75%	88.07%

*This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.

**Restated 2016 & 2017 for rounding and other differences; no effect on Plan Fiduciary Net Position.

Fiscal Year			
2017	2016	2015	2014
$471,706	$434,551	$421,602	$388,391
1,921,869	1,839,388	1,712,534	1,591,756
0	0	1,147,198	0
280,527	(647,197)	(348,383)	96,123
(853,320)	2,119,742	0	645,499
(1,413,448)	(1,359,176)	(1,235,303)	(1,109,866)
(37,234)	(37,209)	(35,655)	(38,264)
370,100	2,350,099	1,661,993	1,573,639
26,114,413	23,764,314	22,102,321	20,528,682
26,484,513	26,114,413	23,764,314	22,102,321
477,888	459,978	435,115	382,251
400,204	375,291	353,765	334,495
6,000	6,000	0	0
2,682,901	(20,851)	777,504	2,760,854
(1,413,448)	(1,359,176)	(1,235,303)	(1,109,866)
(37,234)	(37,209)	(35,655)	(38,264)
(11,292)	(11,350)	(10,367)	(9,861)
411	671	891,914	605
2,105,430	(586,646)	1,176,973	2,320,214
17,995,149	18,581,795	17,404,822	15,084,608
20,100,579	17,995,149	18,581,795	17,404,822
$6,383,934	$8,119,264	$5,182,519	$4,697,499
75.90%	68.91%	78.19%	78.75%
$6,156,985	$5,773,708	$5,549,255	$5,351,920
103.69%	140.62%	93.39%	87.77%

Notes to Schedule of Changes in Net Pension Liabilities and Related Ratios

General Employees Fund

2019 Changes

Changes in Actuarial Assumptions

-The morality projection scale was changed from MP-2017 to MP-2018.

Changes in Plan Provisions

-The employer supplemental contribution was changed prospectively, decreasing from $31 million to $21 million per year. The State's special funding contribution was changed prospectively, requiring $16 million due per year through 2031.

2018 Changes

Changes in Actuarial Assumptions

-The morality projection scale was changed from MP-2015 to MP-2017.

-The assumed benefit increase was changed from 1 percent per year through 2044 and 2.5 percent per year thereafter to 1.25 percent per year.

Changes in Plan Provisions

-The augmentation adjustment in early retirement factors is eliminated over a five-year period starting July 1, 2019, resulting in actuarial equivalence after June 30, 2024.

-Interest credited on member contributions decreased from 4 percent to 3 percent, beginning July 1, 2018.

-Deferred augmentation was changed to 0.00 percent, effective January 1, 2019. Augmentation that has already accrued for deferred members will still apply.

-Contribution stabilizer provisions were repealed.

-Postretirement benefit increases were changed from 1 percent per year with a provision to increase to 2.5 percent upon attainment of 90 percent funding ratio to 50 percent of the Social Security Cost-of-Living Adjustment, not less than 1 percent and not more than 1.5 percent, beginning January 1, 2019.

-For retirements on or after January 1, 2024, the first benefit increase is delayed until the retiree reaches normal retirement age; does not apply to Rule of 90 retirees, disability benefit recipients, or survivors.

-Actuarial equivalent factors were updated to reflect revised mortality and interest assumptions.

2017 Changes

Changes in Actuarial Assumptions

-The combined service annuity (CSA) loads were changed from 0.80 percent for active members and 60 percent for vested and non-vested deferred members. The revised CSA load are now 0 percent for active member liability, 15 percent for vested deferred member liability, and 3 percent for non-vested deferred member liability.

-The assumed postretirement benefit increase rate was changed for 1 percent per year for all years to 1 percent per year through 2044 and 2.50 percent per year thereafter.

Changes in Plan Provisions

-The State's contribution for the Minneapolis Employees Retirement Fund equals $16,000,000 in 2017 and 2018, and $6,000,000 thereafter.

-The Employer Supplemental Contribution for the Minneapolis Employees Retirement Fund changed from $21,000,000 to $31,000,000 in calendar years 2019 to 2031. The state's contribution changed from $16,000,000 to $6,000,000 in calendar years 2019 to 2031.

2016 Changes:

Changes in Actuarial Assumptions

-The assumed postretirement benefit increase rate was changed from 1 percent per year through 2035 and 2.50 percent per year thereafter to 1 percent per year for all years.

-The assumed investment return was changed from 7.90 percent to 7.50 percent. The single discount rate changed from 7.90 percent to 7.50 percent.

-Other assumptions were changed pursuant to the experience study June 30, 2015. The assumed future salary increases, payroll growth, and inflation were decreased by 0.25 percent to 3.25 percent for payroll growth and 2.50 percent for inflation.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2015 Changes:

Changes in Actuarial Assumptions

-The assumed postretirement benefit increase rate was changed from 1 percent per year through 2030 and 2.5 percent per year thereafter to 1 percent per year through 2035 and 2.5 percent per year thereafter.

Changes in Plan Provisions:

-On January 1, 2015, the Minneapolis Employees Retirement Fund was merged into the General Employees Fund, which increased the total pension liability by $1.1 billion and increase the fiduciary plan net position by $892 million. Upon consolidation, state and employer contributions were revised; the State's contribution of $6 million, which meets the special funding situation definition, was due September 2015.

Schedule of Changes in Net Pension Liability and Related Ratios *

Required Supplementary Information (unaudited, in thousands)

Police and Fire Fund

	Fiscal Year	
	2019	2018
Total Pension Liability		
Service Cost	$209,098	$203,131
Interest on the Total Pension Liability	703,640	682,903
Change of Benefit Terms	0	(50,771)
Difference between Expected and Actual Experience	14,491	21,720
Assumption Changes	(19,898)	(42,807)
Benefit Payments	(547,699)	(528,468)
Refund Payments	(3,283)	(1,902)
Net Change in Total Pension Liability	356,349	283,806
Total Pension Liability--Beginning	9,552,804	9,268,998
Total Pension Liability--Ending (a)	9,909,153	9,552,804
Plan Fiduciary Net Position		
Contributions--Employer	174,817	170,781
Contributions--Member	111,762	105,479
Contributions--Nonemployer Contributing Entity	13,500	9,000
Net Investment Income	609,512	813,966
Benefit Payments	(547,699)	(528,468)
Refund Payments	(3,283)	(1,902)
Administrative Expenses	(1,018)	(886)
Other	54	58
Net Change in Plan Fiduciary Net Position	357,645	568,028
Plan Fiduciary Net Position--Beginning	8,486,907	7,918,879
Plan Fiduciary Net Position--Ending (b)	8,844,552	8,486,907
Net Pension Liability (a)-(b)	$1,064,601	$1,065,897
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	89.26%	88.84%
Covered Payroll	$1,011,421	$976,657
Net Pension Liability as a Percentage of Covered Payroll	105.26%	109.14%

*This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.

Fiscal Year

2017	2016	2015	2014
$318,401	$194,352	$187,959	$169,124
616,740	658,198	648,233	598,165
0	0	0	0
37,292	(375,575)	(221,112)	1,813
(2,300,201)	2,650,350	0	323,945
(512,379)	(498,608)	(481,330)	(452,462)
(2,119)	(2,391)	(1,953)	(1,633)
(1,842,266)	2,626,326	131,797	638,952
11,111,264	8,484,938	8,353,141	7,714,189
9,268,998	11,111,264	8,484,938	8,353,141
166,329	156,065	144,317	132,632
101,984	95,172	88,733	81,213
9,000	9,000	9,000	9,000
1,058,942	(8,949)	317,556	1,158,389
(512,379)	(498,608)	(481,330)	(452,462)
(2,119)	(2,391)	(1,953)	(1,633)
(992)	(906)	(803)	(798)
24	3	84	18
820,789	(250,614)	75,604	926,359
7,098,090	7,348,704	7,273,100	6,346,741
7,918,879	7,098,090	7,348,704	7,273,100
$1,350,119	$4,013,174	$1,136,234	$1,080,041
85.43%	63.88%	86.61%	87.07%
$944,296	$881,222	$845,076	$820,333
142.98%	455.41%	134.45%	131.66%

Notes to Schedule of Changes in Net Pension Liabilities and Related Ratios

Police and Fire Plan

2019 Changes

Changes in Actuarial Assumptions

-The morality projection scale was changed from MP-2017 to MP-2018.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2018 Changes

Changes in Actuarial Assumptions

-The morality projection scale was changed from MP-2016 to MP-2017.

Changes in Plan Provisions

-Postretirement benefit increases were changed to 1.00 percent for all years, with no trigger.

-An end date of July 1, 2048 was added to the existing $9 million state contribution.

-New annual state aid will equal $4.5 million in fiscal years 2019 and 2020, and $9 million thereafter until the plan reaches 100 percent funding, or July 1, 2048, if earlier.

-Member contributions were changed from 10.8 percent to 11.3 percent of pay, effective January 1, 2019 and 11.8 percent of pay, effective January 1, 2020.

-Employer contributions were changed from 16.2 percent to 16.95 percent of pay, effective January 1, 2019 and 17.7 percent of pay, effective January 1, 2020.

-Interest credited on member contributions decreased from 4 percent to 3 percent, beginning July 1, 2018.

-Deferred augmentation was changed to 0 percent, effective January 1, 2019. Augmentation that has already accrued for deferred members will still apply.

-Actuarial equivalent factors were updated to reflect revised mortality and interest assumptions.

2017 Changes

Changes in Actuarial Assumptions

-Assumed salary increases were changed as recommended in the June 30, 2016 experience study. The net effect is proposed rates that average 0.34 percent lower than the previous rates.

-Assumed rates of retirement were changed, resulting in fewer retirements.

-The combined service annuity (CSA) load was 30 percent for vested and non-vested, deferred members. The CSA has been changed to 33 percent for vested members and 2 percent for non-vested members.

-The base mortality table for healthy annuitants was changed from the RP-2000 fully generational table to the RP-2014 fully generational table (with a base year of 2006), with male rates adjusted by a factor of 0.96. The mortality improvement scale was changed from Scale AA to Scale MP-2016. The base mortality table for disabled annuitants was changed from the RP-2000 disabled mortality table to the mortality tables assumed for healthy retirees.

-Assumed termination rates were decreased to 3 percent for the first three years of service. Rates beyond the select period of three years were adjusted, resulting in more expected terminations overall.

-Assumed percentage of married female members was decreased from 65 percent to 60 percent.

-Assumed age difference was changed from separate assumptions for male members (wives assumed to be three years younger) and female members (husbands assumed to be four years older) to the assumption that males are two years older than females.

-The assumed percentage of female members electing joint and survivor annuities was increased.

-The assumed postretirement benefit increase rate was changed from 1 percent for all years to 1 percent per year through 2064 and 2.5 percent thereafter.

-The single discount rate was changed from 5.6 percent per annum to 7.5 percent per annum.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2016 Changes:

Changes in Actuarial Assumptions

-The assumed postretirement benefit increase rate was changed from 1 percent per year through 2037 and 2.5 percent per year thereafter to 1 percent per year for all future years.

-The assumed investment return was changed from 7.9 percent to 7.5 percent.

-The single discount rate changed from 7.9 percent to 5.6 percent.

-The assumed future salary increases, payroll growth, and inflation were decreased by 0.25 percent to 3.25 percent for payroll growth and 2.5 percent for inflation.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2015 Changes:

Changes in Actuarial Assumptions

-The assumed postretirement benefit increase rate was changed from 1 percent per year through 2030 and 2.5 percent per year thereafter to 1 percent per year through 2037 and 2.5 percent per year thereafter.

Changes in Plan Provisions:

-The postretirement benefit increase to be paid after the attainment of the 90 percent funding threshold was changed from inflation up to 2.5 percent, to a fixed rate of 2.5 percent.

Continued

Schedule of Changes in Net Pension Liabilities and Related Ratios*

Required Supplementary Information (unaudited, in thousands)

Correctional Fund

	Fiscal Year 2019	2018
Total Pension Liability		
Service Cost	$30,362	$45,378
Interest on the Total Pension Liability	52,741	53,811
Change of Benefit Terms	0	(66,822)
Difference between Expected and Actual Experience	(1,846)	1,018
Assumption Changes	(2,206)	(209,457)
Benefit Payments	(15,381)	(13,183)
Refund Payments	(2,244)	(1,364)
Net Change in Total Pension Liability	61,426	(190,619)
Total Pension Liability--Beginning	696,842	887,461
Total Pension Liability--Ending (a)	758,268	696,842
Plan Fiduciary Net Position		
Contributions--Employer	18,676	17,871
Contributions--Member	12,485	11,956
Contributions--Nonemployer Contributing Entity	0	0
Net Investment Income	50,853	62,962
Benefit Payments	(15,381)	(13,183)
Refund Payments	(2,244)	(1,364)
Administrative Expenses	(361)	(308)
Other	0	1
Net Change in Plan Fiduciary Net Position	64,028	77,935
Plan Fiduciary Net Position--Beginning	680,395	602,460
Plan Fiduciary Net Position--Ending (b)	744,423	680,395
Net Pension Liability (a)-(b)	$13,845	$16,447
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (b)/(a)	98.17%	97.64%
Covered Payroll	$214,151	$205,077
Net Pension Liability as a Percentage of Covered Payroll	6.47%	8.02%

* This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.

	Fiscal Year			
	2017	2016	2015	2014
	$49,202	$25,950	$25,098	$26,488
	47,336	40,605	37,043	33,955
	0	0	0	0
	(3,516)	382	(7,892)	(5,327)
	(66,147)	310,332	0	(34,168)
	(11,033)	(9,381)	(7,777)	(6,711)
	(1,478)	(982)	(1,057)	(1,105)
	14,364	366,906	45,415	13,132
	873,097	506,191	460,776	447,644
	887,461	873,097	506,191	460,776
	17,489	16,490	15,736	15,054
	11,666	11,008	10,472	10,030
	0	0	0	0
	78,363	209	20,373	69,451
	(11,033)	(9,381)	(7,777)	(6,711)
	(1,478)	(982)	(1,057)	(1,105)
	(330)	(290)	(247)	(236)
	0	(2)	(1)	(1)
	94,677	17,052	37,499	86,482
	507,783	490,731	453,232	366,750
	602,460	507,783	490,731	453,232
	$285,001	$365,314	$15,460	$7,544
	67.89%	58.16%	96.95%	98.36%
	$200,103	$188,816	$179,623	$172,041
	142.43%	193.48%	8.61%	4.39%

Notes to Schedule of Changes in Net Pension Liabilities and Related Ratios

Correctional Plan

2019 Changes

Changes in Actuarial Assumptions

-The morality projection scale was changed from MP-2017 to MP-2018.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2018 Changes

Changes in Actuarial Assumptions

-The single discount rate was changed from 5.96 percent per annum to 7.50 percent per annum.

-The morality projection scale was changed from MP-2016 to MP-2017.

-The assumed post-retirement benefit increase was changed from 2.50 percent per year to 2.00 percent per year.

Changes in Plan Provisions

-The augmentation adjustment in early retirement factors is eliminated over a five-year period starting July 1, 2019, resulting in actuarial equivalence after June 30, 2024.

-Interest credited on member contributions decreased from 4.00 percent to 3.00 percent, beginning July 1, 2018.

-Deferred augmentation was changed to 0.00 percent, effective January 1, 2019. Augmentation that has already accrued for deferred members will still apply.

-Postretirement benefit increases were changed from 2.50 percent per year with a provision to reduce to 1.00 percent if the funding status declines to a certain level, to 100 percent of the Social Security Cost of Living Adjustment, not less than 1.00 percent and not more than 2.50 percent, beginning January 1, 2019. If the funding status declines to 85.00 percent for two consecutive years or 80.00 percent for one year, the maximum increase will be lowered to 1.50 percent.

-Actuarial equivalent factors were updated to reflect revised mortality and interest assumptions.

2017 Changes

Changes in Actuarial Assumptions

-The base mortality table for healthy annuitants was changed from the RP-2000 fully generational table to the RP-2014 fully generational table (with a base year of 2006), with male rates adjusted by a factor of 0.96. The mortality improvement scale was changed from Scale AA to Scale MP-2016, and is applied to healthy and disabled members. The base mortality table for disabled annuitants was changed from the RP-2000 disabled mortality table to the RP-2014 disabled annuitant mortality table (with future mortality improvement according to MP-2016).

-The combined service annuity (CSA) load was 30.00 percent for vested and non-vested, deferred members. The CSA has been changed to 35.00 percent for vested members and 1.00 percent for non-vested members.

-The single discount rate was changed from 5.31 percent per annum to 5.96 percent per annum.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2016 Changes:

Changes in Actuarial Assumptions

-The assumed investment return was changed from 7.90 percent to 7.50 percent. The single discount rate changed from 7.90 percent to 5.31 percent.

-The assumed future salary increases, payroll growth, and inflation were decreased by 0.25 percent to 3.25 percent for payroll growth and 2.5 percent for inflation.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

2015 Changes:

Changes in Actuarial Assumptions

-There have been no changes since the prior valuation.

Changes in Plan Provisions

-There have been no changes since the prior valuation.

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (unaudited, in thousands)

General Employees Fund

Year Ended June 30	Actuarially Determined Contribution (A)	Statutorily Determined Contribution (B)	Actual Contributions (C)	Contribution Deficiency (Excess) (A)-(C)	Covered Payroll (D)	Actual Contribution as a % of Covered Payroll (C)/(D)
2019	$453,401	$531,444	$531,444	($78,043)	$6,523,754	8.15%
2018	$609,725	$504,819	$504,819	$104,906	$6,298,815	8.01%
2017	$615,083	$483,888	$483,888	$131,195	$6,156,985	7.86%
2016	$542,151	$465,978	$465,978	$76,173	$5,773,708	8.07%
2015	$523,017	$435,115	$435,115	$87,902	$5,549,255	7.84%
2014	$476,321	$382,251	$382,251	$94,070	$5,351,920	7.14%
2013	$430,773	$372,652	$372,652	$58,121	$5,246,928	7.10%
2012	$371,295	$368,037	$368,037	$3,258	$5,142,592	7.16%
2011	$321,782	$357,596	$357,596	($35,814)	$5,079,429	7.04%
2010	$443,548	$342,678	$342,678	$100,870	$4,804,627	7.13%

Notes to Schedule of Contributions

Required Supplementary Information

Methods and Assumptions

The following methods and assumptions are used to calculate actuarially determined contributions for this fiscal ending June 30, 2019.

Valuation Date:	June 30, 2018
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	30 years
Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.50%
Payroll Growth Rate:	3.25%
Salary Increases:	3.25% to 11.25%, including inflation
Investment Rate of Return:	7.50%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2016 valuation pursuant to an experience study of the period 2008 - 2014.
Mortality:	RP-2014 annuitant generational mortality table, projected with scale MP-2017 from a base year of 2014, white collar adjustment, set forward two years for males and rates adjusted by a factor of 0.90 for females.
Cost-of-Living Increase:	The plan is assumed to pay a 1.25% postretirement benefit increase for all future years.

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (unaudited, in thousands)

Police and Fire Fund

Year Ended June 30	Actuarially Determined Contribution (A)	Statutorily Determined Contribution (B)	Actual Contributions (C)	Contribution Deficiency (Excess) (A)-(C)	Covered Payroll (D)	Actual Contribution as a % of Covered Payroll (C)/(D)
2019	$173,459	$188,317	$188,317	($14,858)	$1,011,421	18.62%
2018	$193,183	$179,781	$179,781	$13,402	$976,657	18.41%
2017	$165,252	$175,329	$175,329	($10,077)	$944,296	18.57%
2016	$189,375	$165,065	$165,065	$24,310	$881,222	18.73%
2015	$197,325	$153,317	$153,317	$44,008	$845,076	18.14%
2014	$163,985	$141,632	$141,632	$22,353	$820,333	17.27%
2013	$189,254	$125,995	$125,995	$63,259	$796,188	15.82%
2012	$152,369	$121,891	$121,891	$30,478	$794,417	15.34%
2011	$124,284	$109,604	$109,604	$14,680	$775,806	14.13%
2010	$150,220	$107,066	$107,066	$43,154	$740,101	14.47%

Notes to Schedule of Contributions

Required Supplementary Information

Methods and Assumptions

The following methods and assumptions are used to calculate actuarially determined contributions for this fiscal year ending June 30, 2019.

Valuation Date: June 30, 2018

Actuarial Cost Method: Entry Age Normal

Amortization Method: Level percentage of payroll, closed

Remaining Amortization Period: 30 years

Asset Valuation Method: 5-year smoothed market, no corridor

Inflation: 2.50%

Payroll Growth Rate: 3.25%

Salary Increases: 3.25% to 12.25%, including inflation

Investment Rate of Return: 7.50%

Retirement Age: Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2011 - 2015.

Mortality: RP-2014 annuitant generational mortality table, projected with mortality improvement scale MP-2017, from a base year of 2006. Male rates adjusted by a factor of 0.96.

Cost-of-Living Increase: The plan is assumed to pay a 1.00% postretirement benefit increase for all future years.

Continued

Schedule of Contributions from Employers and Nonemployers

Required Supplementary Information (unaudited, in thousands)
(Continued from previous page)

Correctional Fund

Year Ended June 30	Actuarially Determined Contribution (A)	Statutorily Determined Contribution (B)	Actual Contributions (C)	Contribution Deficiency (Excess) (A)-(C)	Covered Payroll (D)	Actual Contribution as a % of Covered Payroll (C)/(D)
2019	$19,466	$18,676	$18,676	$790	$214,151	8.72%
2018	$19,031	$17,871	$17,871	$1,160	$205,077	8.71%
2017	$17,269	$17,489	$17,489	($220)	$200,103	8.74%
2016	$16,446	$16,490	$16,490	($44)	$188,816	8.73%
2015	$13,759	$15,736	$15,736	($1,977)	$179,623	8.76%
2014	$14,606	$15,054	$15,054	($448)	$172,041	8.75%
2013	$14,207	$14,498	$14,498	($291)	$164,820	8.80%
2012	$12,473	$14,320	$14,320	($1,847)	$164,340	8.71%
2011	$12,183	$14,289	$14,289	($2,106)	$165,077	8.66%
2010	$12,273	$14,170	$14,170	($1,897)	$154,777	9.16%

Notes to Schedule of Contributions

Required Supplementary Information

Methods and Assumptions

The following methods and assumptions are used to calculate actuarially determined contributions for this fiscal year ending June 30, 2019.

Valuation Date:	June 30, 2018
Actuarial Cost Method:	Entry Age Normal
Amortization Method:	Level percentage of payroll, closed
Remaining Amortization Period:	30 years
Asset Valuation Method:	5-year smoothed market, no corridor
Inflation:	2.50%
Payroll Growth Rate:	3.25%
Salary Increases:	3.50% to 8.50%, including inflation
Investment Rate of Return:	7.50%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2012 valuation pursuant to an experience study of the period 2006 - 2011 prepared by a former actuary.
Mortality:	RP-2014 annuitant generational mortality table, projected with mortality improvement scale MP-2017, from a base year of 2006. Male rates adjusted by a factor of 0.96.
Cost-of-Living Increase:	The plan is assumed to pay a 2.00% postretirement benefit for all years.

Schedule of Investment Returns

Required Supplementary Information (unaudited)

Rate of Return for Combined Funds

Year	General Employees Fund	Police and Fire Fund	Correctional Fund	Volunteer Firefighter Fund
2019	7.33 %	7.31 %	7.42%	8.11%
2018	10.47 %	10.48 %	10.35%	5.83%
2017	15.23 %	15.22 %	15.22%	10.31%
2016	(0.07)%	(0.09)%	0.08%	2.82%
2015	4.45 %	4.46 %	4.42%	2.83%
2014	18.66 %	18.66 %	18.56%	13.12%

The annual money-weighted rate of return for each plan is net of investment expense.

This schedule is intended to show information for ten years; additional years will be displayed as the information becomes available.

Statement of Changes in Assets and Liabilities— Agency Fund

For the Fiscal Year Ended June 30, 2019 (in thousands)

	Beginning Balance 07/01/2018	Additions	Deductions	Ending Balance 06/30/2019
ASSETS				
Cash and Cash Equivalents	$52,397	$61,648	$76,430	$37,615
Investments				
Bond Pool	155,086	14,398	16,566	152,918
Index Stock Pool	429,640	152,873	106,118	476,395
Total Assets	**$637,123**	**$228,919**	**$199,114**	**$666,928**
LIABILITIES				
Accounts Payable	$637,123	$228,919	$199,114	$666,928
Total Liabilities	**$637,123**	**$228,919**	**$199,114**	**$666,928**

Schedule of Investment Expenses

For the Fiscal Year Ended June 30, 2019 (in thousands)

	General Employees	Police & Fire Plan	Correctional Plan	SVF	DCP	Total
Source of Expenses						
Outside Money Managers–Equities	$16,196	$6,386	$527	$33	$34	$23,176
Outside Money Managers–Fixed Income	3,585	1,413	117	45	25	5,185
Minnesota State Board of Investment	1,229	484	40	127	4	1,884
AON Investment	163	64	6	0	0	233
QED Consulting	100	40	3	0	0	143
Other Investments	0	0	0	0	0	0
Pension Consulting Alliance	90	36	3	0	0	129
Total Investment Expenses	**$21,363**	**$8,423**	**$696**	**$205**	**$63**	**$30,750**

A *Schedule of Investment Fees* paid to money managers is provided in the *Investment Section* of this report.

Schedule of Payments to Consultants

For the Fiscal Year Ended June 30, 2019 (in thousands)

Individual or Firm Name	Fee Paid	
Actuary		
Gabriel Roeder Smith & Co.	$251	**251**
Financial Services		
Clifton Larson Allen LLP	100	
MMB / OLA Audit Fees	114	
SVF Audit Fees Multiple Auditors	111	**325**
Legal		
Attorney General	16	**16**
Management Consultants		
Election America Inc	65	
MINNCOR	14	
Mid Amer Business Systems Inc	10	
LexisNexis Risk Data Mgmt	9	
Pension Benefit Information LLC	7	
Royal Mechanical Inc	3	
US Bank	3	
Other	14	**125**
Medical Evaluations		
MMRO	352	
MMB	9	
Office of Administrative Hearings	17	**378**
System Development		
Accenture	320	
Works Computing Inc	7	
Teachers Retirement Association	1	**328**
Total Professional Service Fees		**$1,423**

Schedule of Administrative Expenses

For the Fiscal Year Ended June 30, 2019 (in thousands)

Personnel Expenses:		
Staff Salaries	$9,551	
Part-Time, Seasonal Labor	80	
Other Benefits	78	
Total Personnel Expenses		**9,709**
Professional Services:		
Actuary	251	
Financial	325	
Legal	16	
Management Consultants	125	
Medical Evaluations	378	
System Development	328	
Total Professional Services		**1,423**
Communications		
Mail & Telephone Services	841	
Printing & Advertising	119	
Total Communications		**960**
Office Building & Maintenance		
Building	437	
Depreciation - Building	270	
Bond Interest	72	
Total Office Building & Maintenance		**779**
Other:		
Depreciation - Equipment	(97)	
Employee Development	269	
Equipment Maintenance	1,556	
Indirect Costs	96	
Operating Costs	52	
Supplies & Materials	339	
Travel	88	
Total Other		**2,303**
Total Administrative Expenses		**$15,174**
Allocation of Administrative Expenses:		
Defined Benefit Plans		
Public Employees Retirement Fund	$13,470	
Public Employees Police and Fire Fund	1,018	
Public Employees Correctional Fund	361	
Statewide Volunteer Firefighter	111	
Defined Contribution Plan		
Defined Contribution Fund	214	
Total Administrative Expenses		**$15,174**

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INVESTMENT SECTION

2019 Comprehensive Annual Financial Report

MOVING FORWARD

Creating A Secure Retirement

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Investment Report

MINNESOTA STATE BOARD OF INVESTMENT

60 Empire Drive
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St. Paul, MN 55103
(651) 296-3328

Fax: (651) 296-9572

E-mail:
minn.sbi@state.mn.us

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INVESTMENT AUTHORITY

The assets of the Public Employees Retirement Association (PERA) are invested along with the assets of the Teachers Retirement Association and the Minnesota State Retirement System under the direction and authority of the State Board of Investment (SBI) in accordance with Minnesota Statutes, Chapters 11A and 356A. The SBI includes Minnesota's governor, auditor, secretary of state and attorney general. The Legislature has established a 17-member Investment Advisory Council (IAC) to advise the SBI and its staff on investment related matters. PERA's executive director is a member of the IAC.

INVESTMENT POLICY

Investment policy states that the SBI will operate within standard investment practices of the prudent person. The SBI is to "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." (See M.S., section 11A.09.) The SBI is authorized to own government obligations, corporate obligations, various short-term obligations, corporate stocks, venture capital interests, resource investments, and real estate interests subject to specific constraints. (See M.S., section 11A.24.) In particular, pension fund assets are to be invested for the exclusive benefit of the members of the fund.

INVESTMENT OBJECTIVES AND PERFORMANCE

PERA's pension contributions from employees and employers are invested in the Combined Funds. The Combined Funds include the assets of active and retired public employees who participate in the defined benefit plans administered by PERA, the Minnesota State Retirement System, and the Minnesota Teachers Retirement Association. PERA does not own any underlying assets, but instead owns a participation in the pooled Combined Funds. Because these assets normally accumulate for thirty to forty years, SBI's objective is to take advantage of the long investment time horizon offered by equities and alternative assets in order to meet its actuarial return target and ensure that sufficient funds are available to finance promised benefits at the time of retirement. The 2018 Legislature reduced the actuarial interest rate assumption for PERA to 7.5%.

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The long term objectives of the Combined Funds are:

- Provide returns that are 3-5 percentage points greater than inflation over the latest 20-year period; and
- Outperform a composite market index weighted in a manner that reflects the actual asset mix of the Combined Funds over the latest 10-year period.

Consistent with these objectives, the SBI maintains a long-term strategic asset allocation policy target for the Combined Funds as follows:

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

Based on values on June 30, 2019, the Combined Funds returned 4.4 percentage points above the CPI over the last 20 years and returned 0.4 percentage point above the composite index over the past 10 years. Investment returns ranked in the top 12th percentile over the past five years and in the top 7th percentile over the past 10 years, compared to other public and corporate plans with over $1 billion in assets in the Trust Universe Comparison Service.

INVESTMENT PRESENTATION

Investment returns were prepared using time-weighted rate of return methodology based upon fair market value, net of investment expenses.

Respectfully submitted,

Mansco Perry III
Executive Director
Minnesota State Board of Investment
November 12, 2019

Investment Results

Fund Performance

Fund	Rates of Return (Annualized) FY 2019	3-Year	5-Year	10-Year	20-Year
Combined Funds (Active/Retiree)*	7.3%	10.9%	7.3%	10.9%	6.5%
Combined Composite Market Index	7.6%	10.5%	7.3%	10.5%	6.4%

* Percentages are net of all management fees.

Note: All composite indices are composed of the following market indicators, weighted according to asset allocation:

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

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

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

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

Investment Returns by Sector

Performance of Asset Pools (Net of Fees)

	Rates of Return (Annualized) FY 2019	3-Year	5-Year	10-Year	20-Year
Domestic Equity	8.5%	14.3%	10.0 %	14.7%	6.0%
Domestic Equity Benchmark	8.9%	14.0%	10.2 %	14.7%	6.1%
Fixed Income	8.2%	3.0%	3.4 %	5.0%	5.3%
Fixed Income Benchmark	7.9%	2.3%	2.9 %	3.9%	4.9%
International Equity	1.1%	9.3%	2.6 %	7.0%	4.8%
International Equity Benchmark	1.3%	9.4%	2.2 %	6.5%	4.4%
Private Markets	10.4%	14.9%	10.4 %	12.5%	12.6%
Private Equity	14.4%	17.6%	14.3 %	15.9%	13.5%
Private Credit	10.6%	14.2%	13.2 %	13.4%	12.5%
Resources	0.9%	10.2%	(1.8)%	5.5%	15.5%
Real Estate	9.1%	9.6%	11.3 %	8.6%	8.8%

Note: Investment returns were calculated using a time-weighted rate of return.

Continued

Investment Results

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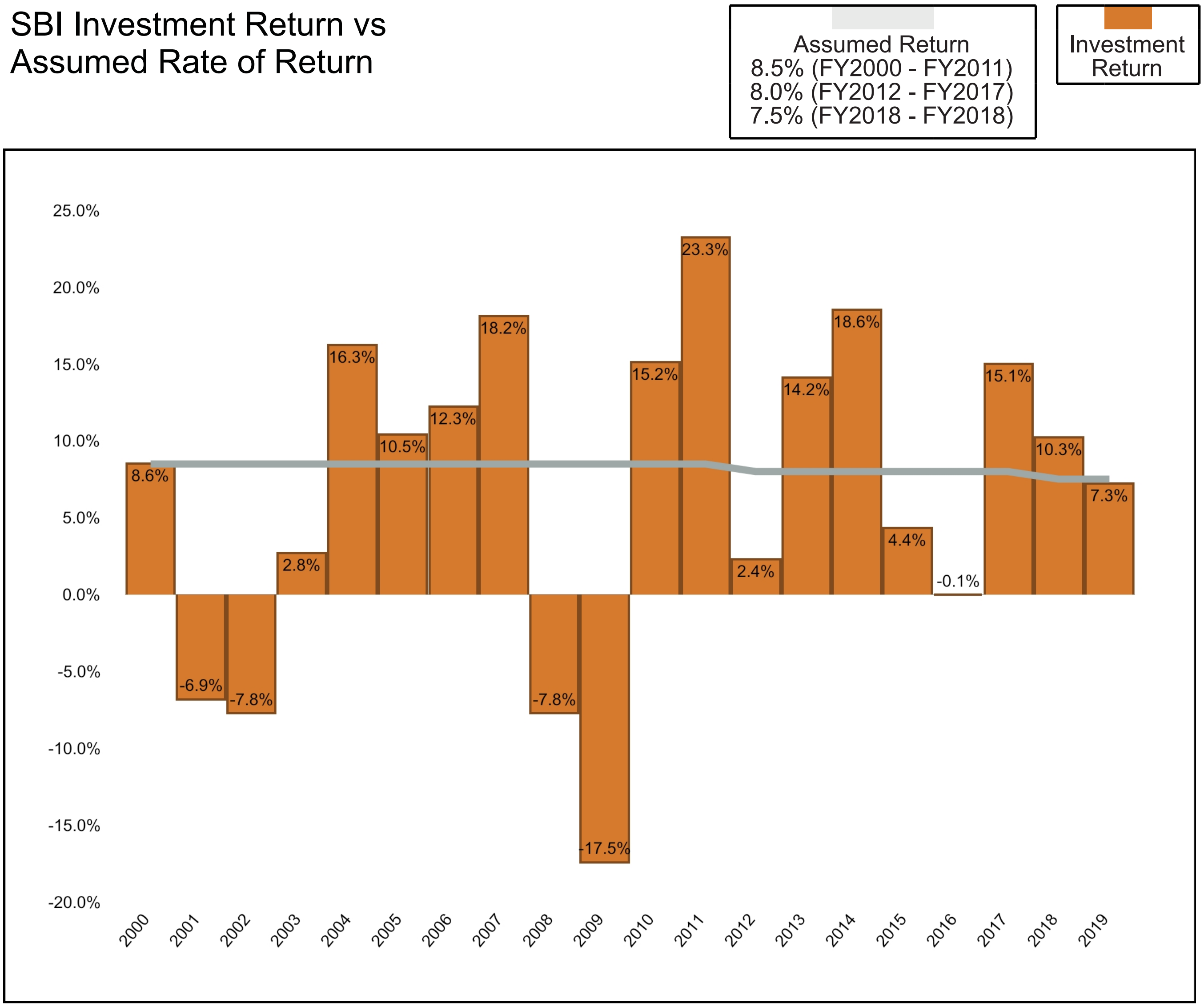
SBI Investment Return vs
Assumed Rate of Return



The State Board of Investment (SBI) has exceeded its assumed rate of return 11 of the past 20 years. Over those 20 years, the SBI has had annualized investment earnings of 6.5 percent.

TUCS Ranking

Percentage Ranking: 1 Year — 41st 3 Year —5th 5 Year — 12th 10 year —7th

Note: Comparison is with public and corporate pension plans greater than $1 billion, gross of fees.

Asset Allocation

As of June 30, 2019

Investment Type	Combined Funds: Actual Asset Mix	Combined Funds: Long - term Policy Target
U.S. Equity	41.7%	35.5%
International Equity	20.6%	17.5%
Fixed Income	20.4%	20.0%
Private Markets	14.5%	25.0%
Cash Equivalents	2.8%	2.0%
Total	100%	100%

Percentages are net of all management fees.

List of Largest Assets Held

June 30, 2019

Top Ten Equity Holdings (By Fair Value)

Security	Fair Value (In millions)	% of Portfolio
Microsoft Corporation	$424.82	1.37%
Apple Inc.	$379.99	1.22%
Amazon.com Inc.	$357.59	1.15%
Facebook Inc. Class A Shares	$206.82	0.67%
Berkshire Hathaway Inc. Class B Shares	$169.49	0.55%
JP Morgan Chase & Co.	$163.25	0.53%
Johnson & Johnson	$155.27	0.50%
Visa, Inc. Class A Shares	$149.82	0.48%
Alphabet Inc. Class A Shares	$143.84	0.46%
Alphabet Inc. Class C Shares	$138.13	0.44%

Top Ten Fixed Income Holdings (By Fair Value)

Security	Fair Value (In millions)	% of Portfolio	Maturity Date	Coupon %
U.S. Treasure N/B	$141.04	0.45%	02/15/2048	3.000%
U.S. Treasure N/B	$124.42	0.40%	11/15/2027	2.250%
U.S. Treasure N/B	$123.84	0.40%	9/30/2024	2.125%
U.S. Treasure N/B	$112.99	0.36%	2/15/2027	2.250%
U.S. Treasure N/B	$105.21	0.34%	06/30/2025	2.750%
U.S. Treasure N/B	$85.59	0.28%	11/15/2042	2.750%
U.S. Treasure N/B	$78.54	0.25%	11/15/2043	3.750%
U.S. Treasure N/B	$77.06	0.25%	5/15/2025	2.125%
U.S. Treasure N/B	$75.96	0.24%	08/15/2025	2.000%
U.S. Treasure N/B	$63.80	0.21%	05/15/2043	2.875%

PERA's assets are commingled in various pooled investment accounts administered by the State Board of Investment. PERA does not own specific values of the underlying assets. The percentages shown are those of the total pooled accounts. The fair value amounts are based on PERA's participation in the pools. Information on investment activity, a listing of specific investments owned by the pooled accounts and a schedule of fees and commissions can be obtained from the Minnesota State Board of Investment.

Investment Summary at Fair Value

For Fiscal Year Ended June 30, 2019 (in thousands)

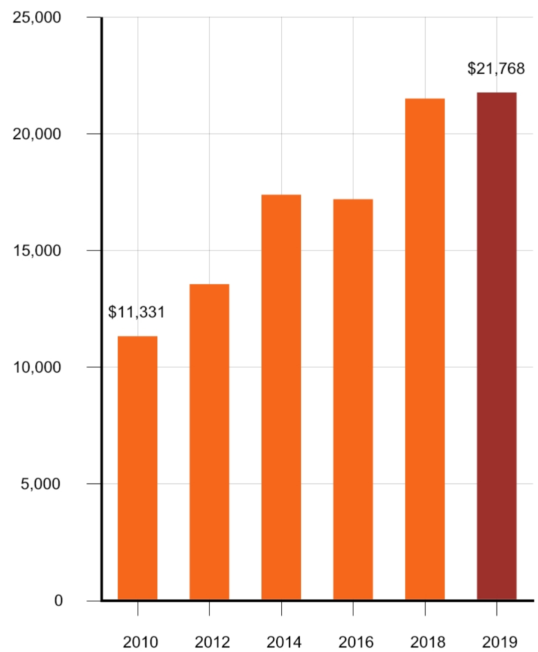
	2019 Beginning Fair Value	2019 Ending Fair Value	Percent of Total Fair Value
General Employees Fund			
Pooled Accounts			
U.S. Equity*	$8,938,423	$9,337,193	43%
Private Markets	2,976,338	3,261,949	15%
Fixed Income	5,230,420	4,561,068	21%
International Equity	4,134,848	4,607,649	21%
Total Pooled Accounts	**$21,280,029**	**$21,767,859**	**100%**
Police and Fire Fund			
Pooled Accounts			
U.S. Equity*	$3,521,480	$3,682,393	43%
Private Markets	1,172,591	1,286,444	15%
Fixed Income	2,060,635	1,798,789	21%
International Equity	1,629,011	1,817,160	21%
Total Pooled Accounts	**$8,383,717**	**$8,584,786**	**100%**
Correctional Fund			
Pooled Accounts			
U.S. Equity*	$282,266	$310,192	43%
Private Markets	93,990	108,365	15%
Fixed Income	165,171	151,524	21%
International Equity	130,574	153,071	21%
Total Pooled Accounts	**$672,001**	**$723,152**	**100%**
Volunteer Firefighter Fund			
Volunteer Firefighter Account			
U.S. Equity*	$31,161	$37,767	37%
Fixed Income	40,111	48,037	47%
International Equity	12,906	16,377	16%
Total Pooled Accounts	**$84,178**	**$102,181**	**100%**

*The U.S. Stock Actively Managed Pool and U.S. Stock Index Pool have been combined and reported as U.S. Equity.
Beginning fiscal year 2019, Money Market Pool is included with Cash and Cash Equivalents.

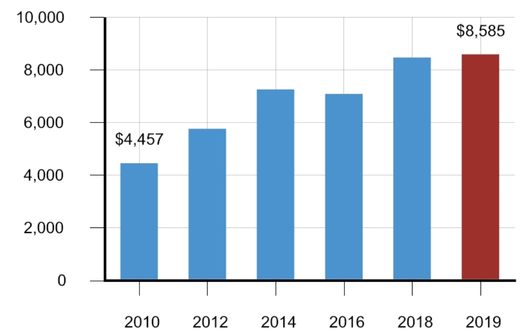
Fair Value of Investments

Last 10 Years (in millions)

General Employees Fund



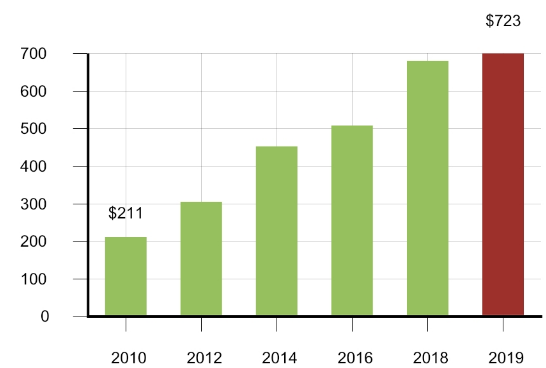
Police and Fire Fund



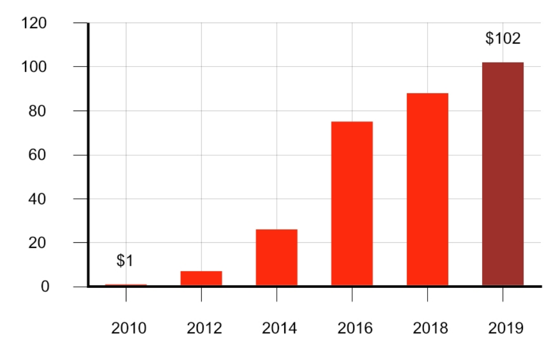
General Employees Fund
Minneapolis Employees Retirement Fund was merged into the General Employees Fund on January 1, 2015.

For comparison purposes, both funds are combined on this illustration.

Correctional Fund



Volunteer Firefighter Fund



Schedule of Investment Fees

For Fiscal Year Ended June 30, 2019 (in thousands)

SBI & Consultants:	
State Board of Investment	$1,884
AON Investment	233
QED Consulting	143
Other Investments	0
Pension Consulting Alliance	129
Total	**2,389**

Outside Money Managers:	
Active Domestic Equity:	
Barrow Hanley	314
Earnest Partners	223
Goldman Equity	1,002
Hotchkis and Wiley	879
LSV Asset	435
Martingale	735
Peregrine Capital	892
Sands Capital	557
Winslow Capital	350
Zevenbergen Capital	626
Arrowpoint Asset Management LLC	868
Hood River Capital Management LLC	848
Rice Hall James & Associates LLC	716
Wellington Management Company LLP	674
Total	**9,119**

Passive Domestic Equity:	
Blackrock	**61**

Passive Domestic Equity Large Cap:	
Blackrock Passive	**406**

Passive Domestic Equity Small Cap:	
Blackrock Passive	**8**

Semi Passive Equity	
Blackrock	463
JP Morgan	643
Total	**1,106**

Domestic Bonds:	
Columbia	489
Blackrock Financial Mgmt	376
Dodge & Cox	657
Goldman Sachs	493
Neuberger	230
Pimco	1,029
Western Asset Management	601
Total	**3,875**

Global Equity:	
Acadian Asset	694
State Street Emerging	221
AQR Capital Management	721
Fidelity Investments GPK2	580
JP Morgan Fleming	447
Earnest Partners, LLC	846
Macquarie/Delaware Investments	747
Martin Currie, Inc.	776
Marathon Asset	786
McKinley Capital	482
Morgan Stanley Dean Witter	1,794
Neuberger Berman Investment	1,021
Pzena Investment Management	980
Rock Creek	1,583
Columbia Investments	487
State Street	311
Total	**12,476**

Treasury Protection Pool:	
Blackrock Financial	435
Goldman Sachs	455
Neuberger	411
Total	**1,301**

Fixed Interest:	
Galliard Capital Management	**9**
Total Investment Fees	**$30,750**

PERA's assets are commingled in various pooled investment accounts administered by the State Board of Investment (SBI). The SBI uses outside money managers and consultants to invest the assets. The amounts in this schedule represent PERA's share of fees paid to SBI, and fees paid by SBI to consultants and money managers. A listing of commissions paid to brokers by the money managers can be obtained from SBI.

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ACTUARIAL SECTION

2019 Comprehensive Annual Financial Report

GRS Retirement Consulting

P: 800.521.0498 | F: 763.432.5842 | www.grsconsulting.com

November 19, 2019

Board of Trustees
Public Employees Retirement
Association of Minnesota (PERA)
60 Empire Drive, Suite 200
St. Paul, Minnesota 55103-2088

Dear Members of the Board:

We have previously prepared and presented to you our annual actuarial valuation of the General Employees Retirement Plan, the Public Employees Police and Fire Plan, and the Local Government Correctional Service Retirement Plan as of July 1, 2019. In order to gain a full understanding of the actuarial condition of the plans, it is important to read and understand the full actuarial reports and potentially other relevant information in addition to this CAFR. The actuarial reports are available on PERA's website, along with online copies of this and previous CAFRs. Reading this Comprehensive Annual Financial Report (CAFR) is not a substitute for reading the actuarial reports.

Valuation Results

The fundamental financing objective of the fund is to establish contribution rates which will remain approximately level as a percentage of active member payroll from generation to generation and meet the required deadline for full funding. The results of the valuations for funding purposes are summarized in the following table. For all plans, because the valuations smooth asset returns over five years, the actuarial value of assets is lower than the market value of assets. The funding ratios and contribution sufficiencies/(deficiencies) on both bases are presented in the following table.

	Accrued Liability Funding Ratio		Contribution Sufficiency/ (Deficiency) (% of Pay)		
Plan	Actuarial Value of Assets	Market Value of Assets	Actuarial Value of Assets	Market Value of Assets	Statutory Amortization Date
General	78.58%	80.23%	1.25%	1.66%	2048
Police/Fire	87.41%	89.26%	2.74%*	3.78%*	2048
Correctional	96.22%	98.17%	(0.25)%	0.12%	2048

* *Based on a current snapshot of statutory contributions; does not reflect additional contribution increases to be phased in over the next year.*

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All of the plans currently have a contribution sufficiency on a Market Value of Assets basis. A contribution sufficiency means that the fund is expected to meet the goal of full funding by the statutory amortization date.

The funded ratio measurements shown above are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations (of transferring the obligations to an unrelated third party in an arm's length market value transaction). The measurements also are dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future required contributions will be different from those calculated in the actuarial reports due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement of 100% would not be synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).

The following changes were recognized this year in the funding valuations for all plans:

- The mortality improvement scale was updated from MP-2017 to MP-2018.

GRS performed a brief review of the basic financial and membership data provided to us by the association as of June 30, 2019, and determined that the data appears reasonable in comparison to last year. We have relied upon the data as submitted in performing the actuarial valuation and preparing trend data schedules. The actuarial cost method and the assumptions related to asset valuation, investment return, earnings progression and active member payroll growth are specified by State Statute. All other assumptions are based on actual experience with changes recommended by the actuary, adopted by the PERA Board, and approved by the Legislative Commission on Pensions and Retirement (LCPR). The assumptions and methods meet the parameters established by Actuarial Standards of Practice.

In a 2019 analysis of long-term rate of investment return and inflation assumptions, GRS determined that an investment return assumption of 7.50% was reasonable. Please see our experience study report for the General Employees Retirement Plan dated June 27, 2019 for additional information. This report also concluded that the probability of exceeding the current 7.50% assumption over 10 years is 44%. If capital market assumptions decline from present levels, the 7.50% return assumption might not comply with actuarial standards for the July 1, 2020 valuation.

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

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Board of Trustees
November 19, 2019
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The actuary prepared the following supporting schedules in the Actuarial Section of the CAFR:

- Schedule of Funding Progress;
- Determination of Contribution Sufficiency;
- Determination of Actuarial Value of Assets; and
- Schedule of Changes in Unfunded Actuarial Accrued Liabilities

All other supporting schedules in the Actuarial Section, along with the Schedule of Changes in Net Pension Liabilities and Related Ratios and the Schedule of Contributions from Employers and Non-employers in the Financial Section of the CAFR were prepared by PERA based on information included in the actuary's annual valuation.

To the best of our knowledge and belief, the valuations were performed in accordance with generally accepted actuarial principles and procedures, current Governmental Accounting Standards Board (GASB) pronouncements, the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the LCPR. In our opinion, the results of the valuations reflect the actuarial position of the plans on an ongoing basis under the prescribed assumptions, methods, and procedures.

Brian B. Murphy and Bonita J. Wurst are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. In addition, Mr. Murphy meets the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

Respectfully submitted,

Brian B. Murphy

Brian B. Murphy, FSA, EA, FCA, MAAA, PhD

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, FCA, MAAA

BBM/BJW:sc

PERA implemented *GASB Statement No. 67* in fiscal year 2014, which requires pension plans to calculate and disclose a net pension liability in financial statement footnote disclosures using a fairly specific set of actuarial methods and assumptions. The schedules found in the *Actuarial Section* of this *Comprehensive Annual Financial Report* (CAFR), on the other hand, are based on actuarial assumptions and methods specified by *Minnesota Statutes* or approved by the Legislative Commission on Pensions and Retirement to determine funding requirements. The actuarial assumptions are based on experience studies of PERA's demographics for each plan conducted by PERA's actuary.

While some of the actuarial assumptions used for GASB financial reporting purposes are the same as the actuarial assumptions used for funding purposes, there are a few differences. For example, when calculating the net pension liability for reporting purposes, the fair value of assets is used in accordance with *GASB Statement No. 67.* When calculating the unfunded actuarial accrued liability for funding purposes, the actuarial value of assets (smoothed over a 5-year period) is used in accordance with *Minnesota Statutes*.

The actuarial assumptions used in the funding actuarial valuations are set in statute or approved by the Legislative Commission on Pensions and Retirement. PERA's actuary uses the funding actuarial assumptions disclosed on the following pages when preparing the financial reporting actuarial valuations. The *Summary of Actuarial Assumptions and Methods* are listed on the following pages along with the year adopted for each plan.

A summary of plan provisions is available in the *Notes to the Financial Statements*. The responsibility for establishing and maintaining a funding policy rests with the Minnesota Legislature.

General Employees Plan

The following assumptions were used in valuing the liabilities and benefits under the plan. All actuarial assumptions are prescribed by *Minnesota Statutes*, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. Unless otherwise noted, the assumptions prescribed are based on the last experience study, dated June 30, 2015. An experience study for the 2014-2018 period was issued on June 27, 2019. This report recommended changes to economic and demographic assumptions, expected to be effective at a future date. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

Summary of Actuarial Assumptions and Methods

Actuarial Cost Method	Entry Age Normal, with costs allocated as a level percentage of payroll. Actuarial gains (losses) reduce (increase) the unfunded actuarial accrued liability. (1960)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	7.5% per annum. (2018)
Benefit increases after retirement	1.25% per annum. (2018)
Salary increases	Reported salary at valuation date increased according to the rate table, to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year. (2018)
Inflation	2.5% per year. (2018)
Payroll growth	3.25% per year. (2018)
Mortality rates	
Healthy pre-retirement	RP-2014 Employee Mortality Table, adjusted for white collar and mortality improvements using projection scale MP-2018, from a base year of 2014. Rates are set forward one year for males and set back one year for females. (2019)
Healthy post-retirement	RP-2014 Healthy Annuitant Mortality Table, adjusted for white collar and mortality improvements using projection scale MP-2018, from a base year of 2014. Rates are set forward two years for males. Female rates are multiplied by a factor of 0.90. (2019)
Disabled retirees	RP-2014 Disabled Mortality Table, adjusted for mortality improvements using projection scale MP-2018, from a base year of 2014. Rates are set forward one year for males and set forward six years for females. (2019) The RP-2014 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rates for ages 50 to 120. We have extended the annuitant mortality table as needed for members younger than age 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older than age 80 by deriving rates based on the annuitant table.
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the tables. Members who have attained the highest assumed retirement age are assumed to retire in one year. (2016)
Withdrawal	Service-related rates based on experience; see table of sample rates. (2016)
Disability	Age-related rates based on experience; see table of sample rates. (2016)
Allowance for combined service annuity	Liabilities for former members are increased by 15.0% for vested members and 3.0% for non-vested members to account for the effect that some participants have eligibility for a Combined Service Annuity. (2017)

* Year in parenthesis is the date of adoption.

General Employees Plan

Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)
Refund of contributions	Account balances accumulate interest until normal retirement dates at the rates described in the Summary of Plan Provisions and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred	Members receiving deferred annuities (including current benefits terminated deferred members) are assumed to begin receiving benefits at Normal Retirement.
Percentage married	80% of male and 70% of female active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Males are assumed to have a beneficiary three years younger, while females are assumed to have a beneficiary two years older. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows: Males: 10% elect 25% Joint & Survivor option 15% elect 50% Joint & Survivor option 10% elect 75% Joint & Survivor option 35% elect 100% Joint & Survivor option Females: 10% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 15% elect 100% Joint & Survivor option Remaining married members and unmarried members are assumed to elect the Straight Life option. Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrements are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.
Pay Increases	Pay increases are assumed to happen at the beginning of the year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.

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General Employees Plan

	Percentage of Members Dying Each Year*					
	Healthy		Healthy		Disability	
	Post-Retirement Mortality		Pre-Retirement Mortality		Mortality	
Age in 2019	Male	Female	Male	Female	Male	Female
20	0.04%	0.01%	0.03%	0.01%	0.07%	0.12%
25	0.05%	0.03%	0.04%	0.02%	0.27%	0.29%
30	0.08%	0.05%	0.04%	0.02%	0.64%	0.53%
35	0.12%	0.08%	0.04%	0.03%	1.11%	0.81%
40	0.17%	0.11%	0.05%	0.03%	1.52%	1.06%
45	0.22%	0.14%	0.08%	0.05%	1.79%	1.25%
50	0.31%	0.18%	0.13%	0.08%	2.02%	1.46%
55	0.43%	0.25%	0.21%	0.13%	2.35%	1.80%
60	0.61%	0.36%	0.37%	0.20%	2.79%	2.29%
65	0.93%	0.59%	0.66%	0.29%	3.37%	3.02%
70	1.51%	0.91%	1.13%	0.47%	4.19%	4.25%
75	2.55%	1.51%	1.96%	0.81%	5.57%	6.33%
80	4.54%	2.65%	3.54%	1.43%	7.92%	9.47%
85	8.44%	4.81%	7.41%	3.48%	11.86%	14.03%
90	15.30%	8.83%	13.81%	8.25%	18.14%	20.66%

* Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. If the rates were not adjusted as described, we would not expect the valuation results to be materially different.

	Disability Retirement	
Age	Male	Female
20	0.01%	0.01%
25	0.01%	0.01%
30	0.01%	0.01%
35	0.03%	0.02%
40	0.05%	0.04%
45	0.08%	0.05%
50	0.15%	0.10%
55	0.34%	0.16%
60	0.53%	0.28%
65	0.00%	0.00%
70	0.00%	0.00%

General Employees Plan

Year	Salary Scale Increase
1	11.25%
2	8.25%
3	6.75%
4	5.75%
5	5.25%
6	4.95%
7	4.65%
8	4.55%
9	4.45%
10	4.25%
11	4.00%
12	3.85%
13	3.75%
14	3.65%
15	3.65%
16	3.60%
17	3.55%
18	3.50%
19	3.50%
20	3.50%
21	3.50%
22	3.45%
23	3.35%
24	3.35%
25	3.35%
26+	3.25%

	% Withdrawals	
Year	Male	Female
1	25.00%	25.00%
2	20.00%	20.00%
3	15.00%	15.00%
4	10.00%	11.00%
5	9.00%	10.00%
6	7.00%	9.00%
7	5.50%	7.50%
8	5.00%	6.50%
9	4.50%	5.50%
10	4.00%	5.00%
11	3.25%	4.25%
12	3.00%	4.00%
13	2.75%	3.75%
14	2.50%	3.50%
15	2.50%	3.25%
16	2.25%	3.00%
17	2.00%	2.75%
18	1.75%	2.50%
19	1.50%	2.50%
20	1.50%	2.25%
21	1.50%	2.25%
22	1.50%	2.25%
23	1.00%	2.00%
24	1.00%	2.00%
25	1.00%	1.75%
26	1.00%	1.75%
27	1.00%	1.50%
28	1.00%	1.50%
29	1.00%	1.50%
30+	1.00%	1.50%

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Police and Fire Plan

The following assumptions were used in valuing the liabilities and benefits under the plan. All actuarial assumptions are prescribed by Minnesota Statutes, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. Unless otherwise noted, the assumptions prescribed are based on the last experience study, dated August 30, 2016. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

Actuarial Cost Method	Entry Age Normal, with costs allocated as a level percentage of payroll. Actuarial gains (losses) reduce (increase) the unfunded actuarial accrued liability. (1960)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	7.5% per annum. (2018)
Benefit increases after retirement	1.00% for all years, no trigger. (2018)
Salary increases	Reported salary at valuation date increased according to the rate table, to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year. (2018)
Inflation	2.50% per year. (2018)
Payroll growth	3.25% per year. (2018)
Mortality rates	
Healthy pre-retirement	RP-2014 employee generational mortality table projected with mortality improvement scale MP-2018, from a base year 2006. (2019)
Healthy post-retirement	RP-2014 annuitant generational mortality table projected with mortality improvement scale. MP-2018 from a base year of 2006. Male rates are adjusted by a factor of 0.96. (2019)
Disabled retirees	RP-2014 annuitant generational mortality table, improvement scale MP-2018 from a base year of 2006. Male rates are adjusted by a factor of 0.96. (2019) The RP-2014 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rate for ages 50 to 120. We have extended the annuitant mortality table as needed for members younger than age 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older than age 80 by deriving rates based on the annuitant table.
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the rate table. Members who have attained the highest assumed retirement age are assumed to retire in one year. (2016)
Withdrawal	Select and Ultimate rates based on actual experience. Ultimate rates after the third year are shown in rate table. Select rates in the first three years are: (2011)

Year	Select Withdrawal Rates
1	3.00%
2	3.00%
3	3.00%

Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.

* Year in parenthesis is the date of adoption.

Allowance for combined service annuity	Liabilities for former members are increased by 33.0% for vested members and 2.0% for non-vested members to account for the effect of some participants having eligibility for a Combined Service Annuity. (2017)
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)
Refund of contributions	Account balances accumulate interest until normal retirement date and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 55.
Percentage married	85% of male and 60% of female active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Males are assumed to be two years older than females. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows: Males: 10% elect 25% Joint & Survivor option 20% elect 50% Joint & Survivor option 20% elect 75% Joint & Survivor option 35% elect 100% Joint & Survivor option Females: 20% elect 25% Joint & Survivor option 20% elect 50% Joint & Survivor option 10% elect 75% Joint & Survivor option 20% elect 100% Joint & Survivor option Remaining married members and unmarried members are assumed to elect the Straight Life option. Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrements are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.
Pay Increases	Pay increases are assumed to happen at the beginning of the year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.

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Police and Fire Plan

Age in 2019	Percentage of Members Dying Each Year*					
	Healthy Post-Retirement Mortality		Healthy Pre-Retirement Mortality		Disability Mortality	
	Male	Female	Male	Female	Male	Female
20	0.04%	0.02%	0.04%	0.02%	0.04%	0.02%
25	0.07%	0.04%	0.06%	0.02%	0.07%	0.04%
30	0.10%	0.07%	0.06%	0.03%	0.10%	0.07%
35	0.15%	0.13%	0.07%	0.04%	0.15%	0.13%
40	0.22%	0.19%	0.08%	0.05%	0.22%	0.19%
45	0.28%	0.22%	0.11%	0.07%	0.28%	0.22%
50	0.40%	0.28%	0.17%	0.11%	0.40%	0.28%
55	0.56%	0.39%	0.28%	0.18%	0.56%	0.39%
60	0.79%	0.59%	0.50%	0.28%	0.79%	0.59%
65	1.14%	0.86%	0.89%	0.39%	1.14%	0.86%
70	1.68%	1.31%	1.44%	0.64%	1.68%	1.31%
75	2.66%	2.15%	2.39%	1.10%	2.66%	2.15%
80	4.47%	3.68%	4.04%	1.94%	4.47%	3.68%
85	7.82%	6.58%	7.94%	5.14%	7.82%	6.58%
90	13.76%	11.70%	14.50%	11.28%	13.76%	11.70%

*Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. If the rates were not adjusted as described, we would not expect the valuation results to be materially different.

Age	Withdrawal Rates After Third Year		Disability Retirement	
	Male	Female	Male	Female
20	3.00%	3.00%	0.11%	0.11%
25	2.60%	2.60%	0.13%	0.13%
30	2.10%	2.10%	0.16%	0.16%
35	1.60%	1.60%	0.19%	0.19%
40	1.25%	1.25%	0.29%	0.29%
45	1.25%	1.25%	0.54%	0.54%
50	0.00%	0.00%	1.04%	1.04%
55	0.00%	0.00%	2.03%	2.03%
60	0.00%	0.00%	0.00%	0.00%

Police and Fire Plan

Age	Retirement
50	10.00%
51	7.00%
52	7.00%
53	10.00%
54	10.00%
55	25.00%
56	22.50%
57	22.50%
58	22.50%
59	20.00%
60	22.50%
61	25.00%
62	30.00%
63	30.00%
64	30.00%
65	50.00%
66	50.00%
67	50.00%
68	50.00%
69	50.00%
70+	100.00%

Salary Scale	
Year	Increase
1	12.25%
2	10.50%
3	8.75%
4	7.75%
5	6.25%
6	5.75%
7	5.25%
8	5.00%
9	4.75%
10	4.50%
11	4.25%
12	4.15%
13	4.05%
14	3.95%
15	3.85%
16	3.75%
17	3.75%
18	3.75%
19	3.75%
20	3.75%
21	3.65%
22	3.55%
23	3.45%
24	3.35%
25+	3.25%

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Correctional Plan

The following assumptions were used in valuing the liabilities and benefits under the plan. All actuarial assumptions are prescribed by *Minnesota Statutes*, the Legislative Commission on Pensions and Retirement (LCPR), or the Board of Trustees. These parties are responsible for selecting the assumptions used for this valuation. Unless noted otherwise, the assumptions prescribed are based on the last experience study, dated February 2012 prepared by a former actuary. The mortality assumption is based on the Public Employees Police and Fire Plan experience study, dated August 30, 2016. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated October 2016.

Actuarial Cost Method	Entry Age Normal, with costs allocated as a level percentage of payroll. Actuarial gains (losses) reduce (increase) the unfunded actuarial accrued liability. (1999)*
Asset Valuation Method	Fair market value smoothed over 5 years. (2008)
Investment return	7.5% per annum. (2018)
Benefit increases after retirement	2.00% per annum. (2018)
Salary increases	Reported salary at valuation date increased according to the rate table, to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for members with less than one year of service earned during the year. (2018)
Inflation	2.5% per year. (2018)
Payroll growth	3.25% per year. (2018)
Mortality rates	
Healthy Pre-retirement	RP-2014 employee generational mortality table projected with mortality improvement scale MP-2018, from a base year of 2006. (2019)
Healthy Post-retirement	RP-2014 annuitant generational mortality table projected with mortality improvement scale MP-2018 from a base year of 2006. Male rates are adjusted by a factor of 0.96. (2019)
Disabled retirees	RP-2014 annuitant generational mortality table projected with mortality improvement scale MP-2018 from a base year of 2006. Male rates are adjusted by a factor of 0.96. (2019) The RP-2014 employee mortality table as published by the Society of Actuaries (SOA) contains mortality rates for ages 18 to 80 and the annuitant mortality table contains mortality rates for ages 50 to 120. We have extended the annuitant mortality table as needed for members younger than age 50 who are receiving a benefit by deriving rates based on the employee table and the juvenile table. Similarly, we have extended the employee table as needed for members older than age 80 by deriving rates based on the annuitant table.
Retirement	Members retiring from active status are assumed to retire according to the age related rates shown in the rate table.
Withdrawal	Members who have attained the highest assumed retirement age are assumed to retire in one year. (2016) Select and Ultimate rates based on actual experience. Ultimate rates after the third year are shown in rate table. Select rates in the first three years are: (2011)

Year	Select Withdrawal Rates
1	25%
2	20%
3	15%

* Year in parenthesis is the date of adoption.

Correctional Plan

Disability	Age-related rates based on experience; see table of sample rates. All incidences are assumed to be duty-related.
Allowance for combined service annuity	Liabilities for former members are increased by 35.0% for vested members and 1.0% for non-vested members to account for the effect of some participants having eligibility for a Combined Service Annuity. (2017)
Administrative expenses	Prior year administrative expenses expressed as percentage of prior year projected payroll. (1989)
Refund of contributions	Account balances accumulate interest until normal retirement date and are discounted back to the valuation date. All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Commencement of deferred benefits	Members receiving deferred annuities (including current terminated deferred members) are assumed to begin receiving benefits at age 55.
Percentage married	85% of active members are assumed to be married. Actual marital status is used for members in payment status.
Age of spouse	Females are assumed to be three years younger than their male spouses. For members in payment status, actual spouse date of birth is used, if provided.
Eligible children	Retiring members are assumed to have no dependent children.
Form of payment	Married members retiring from active status are assumed to elect subsidized joint and survivor form of annuity as follows: Males: 5% elect 25% Joint & Survivor option 10% elect 50% Joint & Survivor option 10% elect 75% Joint & Survivor option 35% elect 100% Joint & Survivor option Females: 5% elect 25% Joint & Survivor option 5% elect 50% Joint & Survivor option 5% elect 75% Joint & Survivor option 5% elect 100% Joint & Survivor option Remaining married members and unmarried members are assumed to elect the Straight Life option. Members receiving deferred annuities (including current terminated deferred members) are assumed to elect a straight life annuity.
Eligibility testing	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Decrement operation	Withdrawal decrements do not operate during retirement eligibility. Decrements are assumed to occur mid-fiscal year.
Service credit accruals	It is assumed that members accrue one year of service credit per year.
Pay Increases	Pay increases are assumed to happen at the beginning of the fiscal year. This is equivalent to assuming that reported earnings are pensionable earnings for the year ending on the valuation date.

Continued

(Continued from previous page)

Correctional Plan

Age in 2019	Percentage of Members Dying Each Year*					
	Healthy Post-Retirement Mortality		Healthy Pre-Retirement Mortality		Disability Mortality	
	Male	Female	Male	Female	Male	Female
20	0.04%	0.02%	0.04%	0.02%	0.04%	0.02%
25	0.07%	0.04%	0.06%	0.02%	0.07%	0.04%
30	0.10%	0.07%	0.06%	0.03%	0.10%	0.07%
35	0.15%	0.13%	0.07%	0.04%	0.15%	0.13%
40	0.22%	0.19%	0.08%	0.05%	0.22%	0.19%
45	0.28%	0.22%	0.11%	0.07%	0.28%	0.22%
50	0.40%	0.28%	0.17%	0.11%	0.40%	0.28%
55	0.56%	0.39%	0.28%	0.18%	0.56%	0.39%
60	0.79%	0.59%	0.50%	0.28%	0.79%	0.59%
65	1.14%	0.86%	0.89%	0.39%	1.14%	0.86%
70	1.68%	1.31%	1.44%	0.64%	1.68%	1.31%
75	2.66%	2.15%	2.39%	1.10%	2.66%	2.15%
80	4.47%	3.68%	4.04%	1.94%	4.47%	3.68%
85	7.82%	6.58%	7.94%	5.14%	7.82%	6.58%
90	13.76%	11.70%	14.50%	11.28%	13.76%	11.70%

* Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. If the rates were not adjusted as described, we would not expect the valuation results to be materially different.

Age	Withdrawal Rates		Disability Retirement	
	Male	Female	Male	Female
20	14.70%	14.20%	0.04%	0.04%
25	14.70%	14.20%	0.06%	0.06%
30	9.10%	11.40%	0.10%	0.08%
35	6.00%	8.60%	0.18%	0.11%
40	4.40%	6.90%	0.23%	0.18%
45	3.40%	4.30%	0.34%	0.39%
50	2.40%	3.10%	0.55%	0.70%
55	1.40%	2.20%	0.88%	1.18%
60	0.10%	0.20%	1.41%	2.41%
65	0.00%	0.00%	1.67%	2.67%

Correctional Plan

Age	Retirement
50	3.00%
51	2.00%
52	2.00%
53	2.00%
54	5.00%
55	20.00%
56	8.00%
57	8.00%
58	8.00%
59	8.00%
60	15.00%
61	15.00%
62	30.00%
63	30.00%
64	30.00%
65	40.00%
66	40.00%
67	40.00%
68	40.00%
69	40.00%
70+	100.00%

Salary Scale	
Age	Increase
20	8.50%
25	7.25%
30	6.25%
35	5.75%
40	5.25%
45	4.50%
50	4.50%
55	4.25%
60	3.75%
65	3.50%
70+	3.50%

Schedule of Funding Progress

Last 10 Years (in thousands, unaudited)

General Employees Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/2019	$21,979,022	$27,969,744	$5,990,722	78.58%	$6,523,754	91.8%
06/30/2018	$21,129,746	$27,101,067	$5,971,321	77.97%	$6,298,815	94.8%
06/30/2017	$19,916,322	$25,615,722	$5,699,400	77.75%	$6,156,985	92.6%
06/30/2016	$18,765,863	$24,848,409	$6,082,546	75.52%	$5,773,708	105.3%
06/30/2015	$17,974,439	$23,560,951	$5,586,512	76.29%	$5,549,255	100.7%
06/30/2014	$15,644,540	$21,282,504	$5,637,964	73.51%	$5,351,920	105.3%
06/30/2013	$14,113,295	$19,379,769	$5,266,474	72.82%	$5,246,928	100.4%
06/30/2012	$13,661,682	$18,598,897	$4,937,215	73.45%	$5,142,592	96.0%
06/30/2011	$13,455,753	$17,898,849	$4,443,096	75.18%	$5,079,429	87.5%
06/30/2010	$13,126,993	$17,180,956	$4,053,963	76.40%	$4,804,627	84.4%

Police and Fire Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/2019	$8,661,613	$9,909,153	$1,247,540	87.41%	$1,011,421	123.3%
06/30/2018	$8,320,094	$9,552,804	$1,232,710	87.10%	$976,657	126.2%
06/30/2017	$7,840,549	$9,199,208	$1,358,659	85.23%	$944,296	143.9%
06/30/2016	$7,385,777	$8,417,621	$1,031,844	87.74%	$881,222	117.1%
06/30/2015	$7,076,271	$8,460,477	$1,384,206	83.64%	$845,076	163.8%
06/30/2014	$6,525,019	$8,151,328	$1,626,309	80.05%	$820,333	198.2%
06/30/2013	$5,932,945	$7,304,032	$1,371,087	81.23%	$796,188	172.2%
06/30/2012	$5,797,868	$7,403,295	$1,605,427	78.31%	$794,417	202.1%
06/30/2011	$5,274,602	$6,363,546	$1,088,944	82.89%	$775,806	140.4%
06/30/2010	$5,188,339	$5,963,672	$775,333	87.00%	$740,101	104.8%

Correctional Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
6/30/2019	$729,570	$758,268	$28,698	96.22%	$214,151	13.4%
6/30/2018	$666,012	$696,842	$30,830	95.58%	$205,077	15.0%
6/30/2017	$595,366	$629,870	$34,504	94.52%	$200,103	17.2%
6/30/2016	$529,879	$553,840	$23,961	95.67%	$188,816	12.7%
6/30/2015	$475,963	$498,052	$22,089	95.56%	$179,623	12.3%
6/30/2014	$410,489	$426,508	$16,019	96.24%	$172,041	9.3%
6/30/2013	$346,778	$381,179	$34,401	90.98%	$164,820	20.9%
6/30/2012	$306,454	$343,199	$36,745	89.29%	$164,340	22.4%
6/30/2011	$274,704	$284,593	$9,889	96.53%	$165,077	6.0%
6/30/2010	$242,019	$248,867	$6,848	97.25%	$154,777	4.4%

Solvency Test

Last 10 Years (in thousands)

General Employees Plan

	Actuarial Accrued Liability For:				Portion of Accrued Liabilities Covered by Valuation Assets		
Valuation Date	Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)	Valuation Assets	1	2	3
6/30/2019	$3,346,315	$17,944,118	$6,679,311	$21,979,022	100%	100%	10.3%
6/30/2018	$3,239,795	$17,185,254	$6,676,018	$21,129,746	100%	100%	10.6%
6/30/2017	$3,148,413	$15,800,416	$6,666,893	$19,916,322	100%	100%	14.5%
6/30/2016	$3,018,468	$15,706,371	$6,123,570	$18,765,863	100%	100%	0.7%
6/30/2015	$2,915,621	$14,666,626	$5,978,704	$17,974,439	100%	100%	6.6%
6/30/2014	$2,827,447	$12,614,999	$5,840,058	$15,644,540	100%	100%	3.5%
6/30/2013	$2,739,037	$11,432,882	$5,207,850	$14,113,295	100%	99%	0.0%
6/30/2012	$2,644,948	$10,785,022	$5,168,927	$13,661,682	100%	100%	4.5%
6/30/2011	$2,548,609	$10,195,812	$5,154,428	$13,455,753	100%	100%	13.8%
6/30/2010	$2,420,862	$9,713,177	$5,046,917	$13,126,993	100%	100%	19.7%

Police and Fire Plan

	Actuarial Accrued Liability For:				Portion of Accrued Liabilities Covered by Valuation Assets		
Valuation Date	Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)	Valuation Assets	1	2	3
06/30/19	$923,025	$6,271,401	$2,714,727	$8,661,613	100%	100%	54.0%
06/30/18	$877,470	$6,021,677	$2,653,657	$8,320,094	100%	100%	53.5%
06/30/17	$821,166	$5,744,606	$2,633,436	$7,840,549	100%	100%	48.4%
06/30/16	$769,533	$5,279,381	$2,368,707	$7,385,777	100%	100%	56.4%
06/30/15	$715,501	$5,310,721	$2,434,255	$7,076,271	100%	100%	43.1%
06/30/14	$662,732	$5,190,447	$2,298,149	$6,525,019	100%	100%	29.2%
06/30/13	$647,401	$4,635,133	$2,021,498	$5,932,945	100%	100%	32.2%
06/30/12	$609,387	$4,654,847	$2,139,061	$5,797,868	100%	100%	24.9%
06/30/11	$571,695	$3,801,239	$1,990,612	$5,274,602	100%	100%	45.3%
06/30/10	$531,676	$3,547,230	$1,884,766	$5,188,339	100%	100%	58.9%

Correctional Plan

	Actuarial Accrued Liability For:				Portion of Accrued Liabilities Covered by Valuation Assets		
Valuation Date	Active Member Contribution (1)	Current Retirees and Beneficiaries(2)	Active Members (Employer Financed) Portion (3)	Valuation Assets	1	2	3
06/30/19	$89,874	$369,015	$299,379	$729,570	100%	100%	90.4%
06/30/18	$86,410	$326,339	$284,093	$666,012	100%	100%	89.1%
06/30/17	$84,107	$280,963	$264,800	$595,366	100%	100%	87.0%
06/30/16	$81,675	$228,642	$243,523	$526,879	100%	100%	88.9%
06/30/15	$77,771	$194,694	$225,587	$475,963	100%	100%	90.2%
06/30/14	$75,492	$154,273	$196,743	$410,489	100%	100%	91.9%
06/30/13	$70,603	$134,069	$176,507	$346,778	100%	100%	80.5%
06/30/12	$66,254	$117,016	$159,929	$306,454	100%	100%	77.0%
06/30/11	$62,736	$88,904	$132,953	$274,704	100%	100%	92.6%
06/30/10	$56,834	$74,405	$117,628	$242,019	100%	100%	94.2%

Schedule of Active Members Valuation Data

Last 10 Years

General Employees Plan

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/19	154,130	$6,523,754,000	$42,326	2.9%
06/30/18	153,059	$6,298,815,000	$41,153	2.2%
06/30/17	152,867	$6,156,985,000	$40,277	3.8%
06/30/16	148,745	$5,773,708,000	$38,816	1.9%
06/30/15	145,650	$5,549,255,000	$38,100	2.0%
06/30/14	143,343	$5,351,920,000	$37,336	(0.5%)
06/30/13	139,763	$5,246,928,000	$37,542	1.7%
06/30/12	139,330	$5,142,592,000	$36,909	1.7%
06/30/11	139,952	$5,079,429,000	$36,294	6.0%
06/30/10	140,389	$4,804,627,000	$34,224	2.7%

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Police and Fire Plan

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/19	11,763	$1,011,421,000	$85,983	2.8%
06/30/18	11,673	$976,657,000	$83,668	2.1%
06/30/17	11,522	$944,296,000	$81,956	6.0%
06/30/16	11,398	$881,222,000	$77,314	2.1%
06/30/15	11,157	$845,076,000	$75,744	0.4%
06/30/14	10,879	$820,333,000	$75,405	3.6%
06/30/13	10,940	$796,188,000	$72,778	(0.5%)
06/30/12	10,865	$794,417,000	$73,117	2.5%
06/30/11	10,880	$775,806,000	$71,306	6.0%
06/30/10	11,002	$740,101,000	$67,270	1.2%

Correctional Plan

Valuation Date	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
06/30/19	3,965	$214,151,000	$54,010	4.8%
06/30/18	3,981	$205,077,000	$51,514	(1.1%)
06/30/17	3,842	$200,103,000	$52,083	5.6%
06/30/16	3,827	$188,816,000	$49,338	1.4%
06/30/15	3,692	$179,623,000	$48,652	1.9%
06/30/14	3,603	$172,041,000	$47,749	1.2%
06/30/13	3,493	$164,820,000	$47,186	(0.7%)
06/30/12	3,460	$164,340,000	$47,497	1.0%
06/30/11	3,510	$165,077,000	$47,030	7.0%
06/30/10	3,521	$154,777,000	$43,958	5.6%

Schedule of Retirees and Beneficiaries

Last 10 Years

General Employees Plan

Year Ended	Added to Rolls: Number Added	Added to Rolls: Annual Allowances	Removed from Rolls: Number Removed	Removed from Rolls: Annual Allowances	Year-End Total: Number	Year-End Total: Annual Allowances	% Change in Annual Allowances	Average Annual Allowances
06/30/19	6,842	$122,035,019	3,371	$57,475,656	105,243	$1,563,218,267	4.3%	$14,853
06/30/18	6,878	$114,687,040	3,307	$55,454,136	101,772	$1,498,658,904	4.1%	$14,726
06/30/17	7,132	$117,947,000	3,219	$53,791,000	98,201	$1,439,426,000	4.7%	$14,658
06/30/16	6,783	$110,107,000	3,087	$52,933,000	94,288	$1,375,270,000	4.3%	$14,586
06/30/15*	10,537	$241,065,000	3,079	$54,630,000	90,592	$1,318,096,000	16.5%	$14,550
06/30/14	6,700	$104,862,000	2,649	$40,605,000	83,134	$1,131,661,000	6.0%	$13,612
06/30/13	6,166	$92,483,000	2,618	$40,328,000	79,083	$1,067,404,000	5.1%	$13,497
06/30/12	6,145	$87,604,000	2,431	$36,693,000	75,535	$1,015,249,000	5.3%	$13,441
06/30/11	5,717	$81,013,000	2,370	$36,249,000	71,821	$964,338,000	4.9%	$13,427
06/30/10	4,692	$79,514,000	2,277	$34,332,000	68,474	$919,574,000	5.2%	$13,430

*MERF merged with the General Employees Plan effective January 1, 2015.

Police and Fire Plan

Year Ended	Added to Rolls: Number Added	Added to Rolls: Annual Allowances	Removed from Rolls: Number Removed	Removed from Rolls: Annual Allowances	Year-End Total: Number	Year-End Total: Annual Allowances	% Change in Annual Allowances	Average Annual Allowances
06/30/19	606	$37,676,147	331	$15,535,284	11,031	$558,326,548	4.1%	$50,614
06/30/18	474	$28,399,145	297	$13,622,460	10,756	$536,185,685	2.8%	$49,850
06/30/17	517	$31,389,000	290	$12,513,000	10,579	$521,409,000	3.8%	$49,287
06/30/16	447	$25,711,000	304	$13,615,000	10,352	$502,533,000	2.5%	$48,545
06/30/15	431	$31,109,000	261	$11,409,000	10,209	$490,437,000	4.2%	$48,040
06/30/14	736	$43,581,000	276	$11,214,000	10,039	$470,737,000	7.4%	$46,891
06/30/13	442	$27,616,000	269	$10,645,000	9,579	$438,370,000	4.0%	$45,764
06/30/12	1,786	$82,541,000	228	$9,640,000	9,406	$421,399,000	20.9%	$44,801
06/30/11	527	$23,608,000	220	$8,333,000	7,848	$348,498,000	4.6%	$44,406
06/30/10	368	$24,314,000	189	$7,308,000	7,541	$333,223,000	5.4%	$44,188

Correctional Plan

Year Ended	Added to Rolls: Number Added	Added to Rolls: Annual Allowances	Removed from Rolls: Number Removed	Removed from Rolls: Annual Allowances	Year-End Total: Number	Year-End Total: Annual Allowances	% Change in Annual Allowances	Average Annual Allowances
06/30/19	137	$2,395,199	12	$162,096	1,318	$16,421,053	15.7%	$12,459
06/30/18	134	$2,471,430	26	$318,480	1,193	$14,187,950	17.9%	$11,893
06/30/17	142	$2,365,000	24	$329,000	1,085	$12,035,000	20.4%	$11,092
06/30/16	118	$1,645,000	15	$146,000	967	$9,999,000	17.6%	$10,340
06/30/15	121	$1,722,000	26	$336,000	864	$8,500,000	19.5%	$9,838
06/30/14	96	$1,131,000	17	$274,000	769	$7,114,000	13.7%	$9,251
06/30/13	100	$1,125,000	17	$180,000	690	$6,257,000	17.8%	$9,068
06/30/12	96	$1,048,000	17	$168,000	607	$5,312,000	19.9%	$8,751
06/30/11	92	$866,000	5	$68,000	528	$4,432,000	22.0%	$8,394
06/30/10	60	$707,000	5	$96,000	441	$3,634,000	20.2%	$8,240

Determination of Contribution Sufficiency

As of June 30, 2019 (in thousands)

	General Employees Plan		Police and Fire Plan		Correctional Plan	
	Percent of Payroll	Dollar Amount	Percent of Payroll	Dollar Amount	Percent of Payroll	Dollar Amount
A.Statutory Contributions - M.S. Chapter 353						
1. Employee Contributions	6.50%	$434,548	11.55%	$119,876	5.83%	$13,873
2. Employer Contributions	7.50%	501,397	17.33%	179,814	8.75%	20,821
3. Employer Supplemental	0.31%	21,000	0.00%	0	0.00%	0
4. Minneapolis Police Contributions	0.00%	0	0.43%	4,490	0.00%	0
5. Minneapolis Fire Contributions	0.00%	0	0.31%	3,189	0.00%	0
6. State of Minnesota	0.24%	16,000	1.30%	13,500	0.00%	0
7. Total	14.55%	$972,945	30.92%	$320,869	14.58%	$34,694
B.Actuarially Determined Contributions - M.S. Chapter 356						
1. Normal Cost						
a. Retirement Benefits	5.55%	$371,015	15.17%	$157,448	8.47%	$20,155
b. Disability Benefits	0.23%	15,390	3.45%	35,807	2.71%	6,449
c. Survivor Benefits	0.10%	6,685	0.70%	7,265	0.21%	500
d. Deferred Retirement Benefits	1.30%	86,915	1.49%	15,465	2.04%	4,854
e. Refunds	0.57%	38,107	0.11%	1,142	0.51%	1,214
f. Total	7.75%	518,112	20.92%	217,127	13.94%	33,172
2.Amortization of Supplemental Contribution UAAL	5.34%	356,978	7.16%	74,313	0.72%	1,713
3. Allowance for Administrative Expenses	0.21%	14,038	0.10%	1,038	0.17%	405
4. Total	13.30%	$889,128	28.18%*	$292,478	14.83%*	$35,290
C. Contribution Sufficiency/ (Deficiency) (A.8 - B.4)	1.25%	$83,817	2.74%	$28,391	(0.25%)	($596)
Projected annual payroll for fiscal year beginning July 1, 2019		$6,684,972		$1,037,888		$237,958
*The required contribution on a market value of assets basis of payroll is	12.89%		27.14%		14.46%	

Determination of Actuarial Value of Assets

As of June 30, 2019 (in thousands)

General Employees Plan

Fair value of assets available for benefits (a)				**$22,440,968**
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2019	($44,547)	80%	($35,637)	
Year ended June 30, 2018	479,963	60%	287,978	
Year ended June 30, 2017	1,266,388	40%	506,555	
Year ended June 30, 2016	(1,484,753)	20%	(296,950)	
Total unrecognized return (b)				**461,946**
Actuarial Value of Assets (a-b)				**$21,979,022**

Police and Fire Plan

Fair value of assets available for benefits (a)				**$8,844,552**
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2019	($17,561)	80%	($14,049)	
Year ended June 30, 2018	190,293	60%	114,176	
Year ended June 30, 2017	500,621	40%	200,248	
Year ended June 30, 2016	(587,179)	20%	(117,436)	
Total unrecognized return (b)				**182,939**
Actuarial Value of Assets (a-b)				**$8,661,613**

Correctional Plan

Fair value of assets available for benefits (a)				**$744,423**
Calculation of unrecognized return	**Original Amount**	**% Not Recognized**	**Unrecognized Return**	
Year ended June 30, 2019	$(671)	80%	($537)	
Year ended June 30, 2018	14,166	60%	8,500	
Year ended June 30, 2017	37,088	40%	14,835	
Year ended June 30, 2016	(39,723)	20%	(7,945)	
Total unrecognized return (b)				**14,853**
Actuarial Value of Assets (a-b)				**$729,570**

Schedule of Changes in Unfunded Actuarial Accrued Liabilities (UAAL)

For the Fiscal Year Ended June 30, 2019 (in thousands)

	General Employees Plan	Police and Fire Plan	Correctional Plan
A. UAAL at Beginning of Year (7/1/18)	**$5,971,321**	**$1,232,710**	**$30,830**
B. Change Due to Interest Requirements and Current Rate of Funding			
1. Normal Cost and Expenses	508,207	210,116	30,723
2. Contributions	(955,488)	(300,079)	(31,161)
3. Interest on A, B1, and B2	431,076	89,080	2,296
C.Expected UAAL at End of Year (A+B)	**5,955,116**	**1,231,827**	**32,688**
D. Increase (Decrease) Due to Actuarial Losses (Gains)Because of Experience Deviations from Expected*			
1. Age and Service Retirements	17,986	7,895	(604)
2. Disability Retirements	(469)	5,787	(1,800)
3. Death-in-Service Benefits	(8,230)	(2,584)	(156)
4. Withdrawals	(32,767)	625	(1,893)
5. Salary Increases	70,237	(2,608)	(316)
6. Investment Income	64,797	22,176	437
7. Mortality of Annuitants	(37,052)	(1,624)	904
8. Other Items	81,266	5,944	1,644
E. UAAL at End of Year Before Plan Amendments and Changes in Actuarial Assumptions (C+D)	**6,110,884**	**1,267,438**	**30,904**
F. Change in UAAL Due to Change in Plan Provisions	0	0	0
G. Change in UAAL Due to Change in Actuarial Assumptions and Methods	(120,162)	(19,898)	(2,206)
H. Change in Unfunded Actuarial Accrued Liability Due to Changes in Miscellaneous Methodology	0	0	0
I. UAAL at End of Year 6/30/2019 (E+F+G+H)	**$5,990,722**	**$1,247,540**	**$28,698**

* Explanatory Notes

1. If members retire earlier than assumed, there is a loss; if later, a gain.
2. If more members take a disability than assumed, there is a loss; if fewer, a gain.
3. If fewer active members die than assumed, there is a loss; if more, a gain.
4. If fewer members terminate employment than assumed, there is a loss; if more, a gain.
5. If there are larger salary increases than assumed, there is a loss; if smaller, a gain.
6. If there is a smaller investment return than assumed, there is a loss; if larger, a gain.
7. If benefit recipients live longer than assumed, there is a loss; if less, a gain.
8. Miscellaneous gains and losses.

STATISTICAL SECTION

2019 Comprehensive Annual Financial Report

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Introduction

November 20, 2019

The *Statistical Section* provides additional historical perspective, context, and detail in order to promote a more comprehensive understanding of PERA's financial statements, note disclosures, and supplemental information. In addition, multi-year trend financial and operating information provided in this section is intended to facilitate understanding of how the agency's financial position and performance has changed over time.

Financial trend information includes a ten-year *Schedule of Changes in Fiduciary Net Position*. This schedule provides the history of additions and deductions for each fund and allows the reader to see the rate of growth for each addition and deduction type. The *Benefits and Refunds by Type* schedule shows the types of benefit payments and refunds paid out over the last ten years. These two schedules show the changes to the fund balances and the reasons for those changes over the past ten years.

Membership information includes statistics about our active, deferred, and retired members. The section includes a *Summary of Membership* for each fund including the ten-year counts of active and non-active members. The *Schedule of New Retirees and Initial Benefits Pai*d for our defined benefit plans, followed by a *Schedule of Benefit Recipients by Type* give more detailed information about the starting benefit payment and the type of benefit selected. In addition, the schedule includes information about how many annuitants chose a joint and survivor option.

Principal Participating Employers shows the top ten participating employers in each plan compared to the top ten employers from ten years ago. In addition, information is displayed on how to view the full-listing of all participating employers and the contributions submitted to PERA. The final schedule, *Privatized Employers*, lists the privatized employers per Minnesota Statute Chapter 325F.

The information contained in this section was produced by PERA's actuary and from internal data sources.

David Andrews

David Andrews
Accounting Director

Schedule of Changes in Fiduciary Net Position

Last 10 Fiscal Years (in thousands)

General Employees Fund*

	2019	2018	2017	2016
Additions				
Employer Contributions	$515,444	$488,819	$477,888	$459,978
Member Contribution	424,044	409,423	400,204	375,291
State Contributions	16,000	16,000	6,000	6,000
Investment Income	1,547,224	2,063,582	2,682,901	(20,851)
Other	154	56	411	431
Total Additions to Fiduciary Net Position	2,502,866	2,977,880	3,567,404	820,849
Deductions				
Benefits	1,536,071	1,470,450	1,413,448	1,359,176
Refunds	65,834	42,589	37,234	37,209
Administrative Expenses	13,470	11,943	11,292	11,110
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	1,615,375	1,524,982	1,461,974	1,407,495
Change in Fiduciary Net Position	**$887,491**	**$1,452,898**	**$2,105,430**	**($586,646)**

* The Minneapolis Employees Retirement Fund merged into the General Employees Retirement Fund on 01/01/2015
The General Fund has been restated to include Minneapolis Employees Retirement Fund for the ten year schedule

Police and Fire Fund

	2019	2018	2017	2016
Additions				
Employer Contributions	$174,817	$170,781	$166,329	$156,065
Member Contribution	111,762	105,479	101,984	95,172
State Contributions	13,500	9,000	9,000	9,000
Investment Income	609,512	813,966	1,058,942	(8,949)
Other	54	58	24	3
Total Additions to Fiduciary Net Position	909,645	1,099,284	1,336,279	251,291
Deductions				
Benefits	547,699	528,468	512,379	498,608
Refunds	3,283	1,902	2,119	2,391
Administrative Expenses	1,018	886	992	906
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	552,000	531,256	515,490	501,905
Change in Fiduciary Net Position	**$357,645**	**$568,028**	**$820,789**	**($250,614)**

Correctional Fund

	2019	2018	2017	2016
Additions				
Employer Contributions	$18,676	$17,871	$17,489	$16,490
Member Contributions	12,485	11,956	11,666	11,008
Investment Income	50,853	62,962	78,363	209
Other	0	1	0	0
Total Additions to Fiduciary Net Position	82,014	92,790	107,518	27,707
Deductions				
Benefits	15,381	13,183	11,033	9,381
Refunds	2,244	1,364	1,478	982
Administrative Expenses	361	308	330	292
Other	0	0	0	0
Total Deductions from Fiduciary Net Position	17,986	14,855	12,841	10,655
Change in Fiduciary Net Position	**$64,028**	**$77,935**	**$94,677**	**$17,052**

2015	2014	2013	2012	2011	2010
$435,265	$413,677	$404,099	$399,660	$362,701	$347,476
353,765	334,865	328,359	321,976	311,882	304,652
21,575	24,000	24,000	22,750	22,750	9,000
777,621	2,906,811	2,011,862	338,616	2,790,228	1,645,496
281	644	8	771	479	241
1,588,507	3,679,997	2,768,328	1,083,773	3,488,040	2,306,865
1,301,396	1,244,332	1,189,398	1,141,353	1,094,669	1,053,399
35,706	38,311	35,922	39,743	38,396	28,797
10,377	10,007	10,028	9,822	9,981	10,711
0	0	23	0	0	1,571
1,347,479	1,292,650	1,235,371	1,190,918	1,143,046	1,094,478
$241,028	**$2,387,347**	**$1,532,957**	**($107,145)**	**$2,344,994**	**$1,212,387**

2015	2014	2013	2012	2011	2010
$144,317	$132,632	$125,995	$121,891	$109,604	$107,065
88,733	81,213	76,434	76,264	73,702	71,736
9,000	9,000	0	0	0	0
317,556	1,158,389	806,742	156,926	1,024,981	602,177
84	18	24	488,521	1	0
559,690	1,381,252	1,009,195	843,602	1,208,288	780,978
481,330	452,462	431,726	386,208	342,219	326,041
1,953	1,633	2,020	1,524	2,012	1,493
803	798	755	855	762	753
0	0	0	0	0	0
484,086	454,893	434,501	388,587	344,993	328,287
$75,604	**$926,359**	**$574,694**	**$455,015**	**$863,295**	**$452,691**

2015	2014	2013	2012	2011	2010
$15,736	$15,054	$14,498	$14,320	$14,289	$14,170
10,472	10,030	9,609	9,581	9,624	9,442
20,373	69,451	44,378	7,846	50,343	24,745
0	0	0	0	0	0
46,581	94,535	68,485	31,747	74,256	48,357
7,777	6,711	5,757	4,809	4,026	3,353
1,057	1,105	1,177	1,332	1,338	714
247	236	209	229	229	222
0	1	0	0	0	0
9,081	8,053	7,143	6,370	5,593	4,289
$37,500	**$86,482**	**$61,342**	**$25,377**	**$68,663**	**$44,068**

Schedule of Changes in Fiduciary Net Position

Last 10 Fiscal Years (in thousands) (continued from previous page)

Volunteer Firefighter Fund

	2019	2018	2017	2016
Additions				
Employer Contributions	$1,181	$938	$716	$332
State Contribution	3,993	3,522	2,659	1,811
Investment Income	7,682	4,681	6,409	1,325
Other (mainly initial transfer of assets)	10,916	8,048	14,206	20,401
Total Additions to Fiduciary Net Position	23,772	17,189	23,990	23,869
Deductions				
Benefits	4,709	4,161	2,700	1,644
Administrative Expenses	111	70	61	132
Total Deductions from Fiduciary Net Position	4,820	4,231	2,761	1,776
Change in Fiduciary Net Position	**$18,952**	**$12,958**	**$21,229**	**$22,093**

Defined Contribution Fund

	2019	2018	2017	2016
Additions				
Employer Contributions	$2,084	$2,036	$1,822	$1,965
Member Contributions	1,957	1,911	1,739	1,779
Investment Income	5,440	6,490	7,274	999
Other	0	0	7	2
Total Additions to Fiduciary Net Position	9,481	10,437	10,842	4,745
Deductions				
Refunds	5,959	4,326	5,233	3,755
Administrative Expenses	214	211	137	189
Total Deductions from Fiduciary Net Position	6,173	4,537	5,370	3,944
Change in Fiduciary Net Position	**$3,308**	**$5,900**	**$5,472**	**$801**

2015	2014	2013	2012	2011	2010
$226	$414	$291	$118	$150	$7
1,430	900	361	153	41	0
880	2,623	1,082	254	242	(8)
4,667	7,953	7,984	3,076	2,450	791
7,203	11,890	9,718	3,601	2,883	790
1,221	1,096	838	279	119	25
86	71	38	21	8	1
1,307	1,167	876	300	127	26
$5,896	**$10,723**	**$8,842**	**$3,301**	**$2,756**	**$764**

2015	2014	2013	2012	2011	2010
$1,850	$1,755	$1,734	$1,674	$1,622	$1,582
1,698	1,628	1,612	1,547	1,496	1,480
2,681	8,004	5,625	1,263	6,726	3,710
0	0	0	0	0	1
6,229	11,387	8,971	4,484	9,844	6,773
3,489	2,800	3,399	2,128	2,596	1,817
186	171	152	144	129	211
3,675	2,971	3,551	2,272	2,725	2,028
$2,554	**$8,416**	**$5,420**	**$2,212**	**$7,119**	**$4,745**

Benefit & Refunds by Type

Defined Benefit Plans - Last 10 Fiscal Years (in thousands)

General Employees Fund*

	2019	2018	2017	2016
Benefits by Type				
Retirement	$1,373,267	$1,307,364	$1,250,427	$1,195,640
Survivor	142,187	141,781	141,449	140,630
Disability	20,617	21,305	21,572	22,906
Total	$1,536,071	$1,470,450	$1,413,448	$1,359,176
Refund by Type				
Separation	$43,723	$30,981	$27,513	$27,601
Death	812	582	508	505
Interest/Employer	21,299	11,026	9,213	9,103
Total	$65,834	$42,589	$37,234	$37,209

* The Minneapolis Employees Retirement Fund merged into the General Employees Retirement Fund on 01/01/2015. The General Fund has been restated to include Minneapolis Employees Retirement Fund for the ten year schedule

Police and Fire Fund

	2019	2018	2017	2016
Benefits by Type				
Retirement	$432,012	$416,652	$403,053	$391,952
Survivor	60,873	59,438	58,568	58,119
Disability	54,814	52,378	50,758	48,537
Total	$547,699	$528,468	$512,379	$498,608
Refund by Type				
Separation	$2,117	$1,444	$1,599	$1,540
Death	29	0	52	0
Interest/Employer	1,137	458	468	851
Total	$3,283	$1,902	$2,119	$2,391

Correctional Fund

	2019	2018	2017	2016
Benefits by Type				
Retirement	$12,287	$10,357	$8,555	$6,954
Survivor	617	529	437	372
Disability	2,477	2,297	2,041	2,055
Total	$15,381	$13,183	$11,033	$9,381
Refund by Type				
Separation	$1,617	$1,049	$1,129	$792
Death	0	35	45	0
Interest/Employer	627	280	304	190
Total	$2,244	$1,364	$1,478	$982

Volunteer Firefighter Fund

	2019	2018	2017	2016
Benefits by Type				
Retirement	$762	$607	$554	$279
Survivor	58	49	51	23
Lump Sum Benefit	3,889	3,505	2,095	1,342
Total	$4,709	$4,161	$2,700	$1,644

2015	2014	2013	2012	2011	2010
$1,137,897	$1,081,088	$1,027,325	$1,083,809	$1,034,793	$1,010,376
141,178	140,423	138,485	33,342	33,871	14,609
22,321	22,821	23,588	24,202	26,005	28,414
$1,301,396	$1,244,332	$1,189,398	$1,141,353	$1,094,669	$1,053,399
$26,179	$27,962	$25,885	$27,723	$25,350	$19,288
731	551	727	752	504	378
8,796	9,798	9,310	11,268	12,542	9,131
$35,706	$38,311	$35,922	$39,743	$38,396	$28,797

2015	2014	2013	2012	2011	2010
$379,068	$353,620	$336,220	$327,956	$289,796	$274,751
56,523	54,462	52,827	18,268	14,518	14,120
45,739	44,380	42,679	39,984	37,905	37,170
$481,330	$452,462	$431,726	$386,208	$342,219	$326,041
$1,423	$1,179	$1,243	$1,079	$1,275	$955
0	0	31	6	2	0
530	454	746	439	735	538
$1,953	$1,633	$2,020	$1,524	$2,012	$1,493

2015	2014	2013	2012	2011	2010
$5,528	$4,427	$3,518	$2,790	$2,081	$1,627
278	240	180	23	23	19
1,971	2,044	2,059	1,996	1,922	1,707
$7,777	$6,711	$5,757	$4,809	$4,026	$3,353
$821	$844	$857	$1,060	$997	$572
29	0	48	10	0	5
207	261	272	262	341	137
$1,057	$1,105	$1,177	$1,332	$1,338	$714

2015	2014	2013	2012	2011	2010
$0	$0	$0	$0	$0	$0
0	0	0	0	0	0
1,221	1,096	838	279	119	25
$1,221	$1,096	$838	$279	$119	$25

Summary of Membership

Defined Benefit Plans — Last 10 Years

General Employees Fund

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2019	154,130	105,243	63,311	126,116	448,800
2018	153,059	101,772	61,066	138,768	454,665
2017	152,867	98,201	52,274	138,335	441,677
2016	148,745	94,288	52,516	132,416	427,965
2015	145,650	90,592	51,605	125,366	413,213
2014	143,434	83,134	48,505	121,018	396,091
2013	139,763	79,083	45,946	119,509	384,301
2012	139,330	75,535	44,354	115,287	374,506
2011	139,952	71,821	45,325	109,630	366,728
2010	140,389	68,474	45,151	126,027	380,041

Police and Fire Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2019	11,763	11,031	1,620	1,145	25,559
2018	11,673	10,756	1,580	1,188	25,197
2017	11,522	10,579	1,506	1,134	24,741
2016	11,398	10,352	1,490	1,059	24,299
2015	11,157	10,209	1,560	995	23,921
2014	10,879	10,039	1,481	975	23,374
2013	10,940	9,579	1,388	988	22,895
2012	10,865	9,406	1,303	971	22,545
2011	10,880	7,848	1,335	870	20,933
2010	11,002	7,541	1,315	930	20,788

Correctional Plan

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2019	3,965	1,318	3,374	2,790	11,447
2018	3,981	1,193	3,165	2,811	11,150
2017	3,842	1,085	2,933	2,624	10,484
2016	3,827	967	2,755	2,359	9,908
2015	3,692	864	2,620	2,139	9,315
2014	3,603	769	2,380	1,936	8,688
2013	3,493	690	2,232	1,816	8,231
2012	3,460	607	2,091	1,727	7,885
2011	3,510	528	1,981	1,624	7,643
2010	3,521	441	1,895	1,605	7,462

Volunteer Firefighter Plan*

Fiscal Year	Active	Benefit Recipients	Terminated Vested	Terminated Non-Vested	Total
2019	3,517	137	840	0	4,494
2018	3,256	86	751	0	4,093
2017	2,753	75	560	0	3,388
2016*	1,639	79	928	0	2,646

*The first monthly benefit division participant joined the Volunteer Firefighter Plan on January 1, 2016

Schedule of New Retirees and Initial Benefit Paid

Defined Benefit Plans – Last 10 Years

General Employees Plans

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
2019							
Average monthly benefit	$158	$339	$627	$969	$1,301	$1,784	$3,147
Average high five salary	$4,104	$2,813	$3,165	$3,525	$3,752	$4,250	$5,489
Number of retirees	749	1,007	966	885	801	769	1,304
2018							
Average monthly benefit	$164	$331	$599	$921	$1,213	$1,804	$3,018
Average high five salary	$4,145	$2,755	$3,008	$3,435	$3,600	$4,222	$5,304
Number of retirees	691	867	846	880	806	788	1,224
2017							
Average monthly benefit	$154	$333	$614	$866	$1,195	$1,761	$2,956
Average high five salary	$4,170	$2,719	$3,076	$3,283	$3,586	$4,130	$5,190
Number of retirees	630	795	836	841	718	758	1,125
2016							
Average monthly benefit	$142	$317	$576	$864	$1,193	$1,802	$2,877
Average high five salary	$3,772	$2,731	$2,896	$3,189	$3,496	$4,171	$5,080
Number of retirees	619	875	821	776	793	810	1,187
2015							
Average monthly benefit	$139	$309	$571	$866	$1,134	$1,781	$2,771
Average high five salary	$3,714	$2,500	$2,830	$3,236	$3,422	$4,109	$4,911
Number of retirees	579	901	864	808	814	813	1,174
2014							
Average monthly benefit	$139	$308	$588	$808	$1,199	$1,750	$2,809
Average high five salary	$3,716	$2,563	$2,953	$3,027	$3,534	$4,009	$4,963
Number of retirees	628	853	848	791	807	758	1,218
2013							
Average monthly benefit	$145	$303	$546	$823	$1,188	$1,677	$2,737
Average high five salary	$3,499	$2,529	$2,777	$3,074	$3,456	$3,914	$4,895
Number of retirees	581	791	758	726	778	675	1,088
2012							
Average monthly benefit	$133	$290	$535	$795	$1,116	$1,710	$2,608
Average high five salary	$3,545	$2,427	$2,713	$2,992	$3,270	$3,953	$4,712
Number of retirees	645	807	812	657	778	615	1,070
2011							
Average monthly benefit	$123	$273	$507	$758	$1,143	$1,625	$2,550
Average high five salary	$3,348	$2,290	$2,553	$2,845	$3,365	$3,873	$4,686
Number of retirees	563	763	698	626	664	508	1,074
2010							
Average monthly benefit	$116	$266	$498	$748	$1,110	$1,608	$2,432
Average high five salary	$3,371	$2,263	$2,573	$2,891	$3,280	$3,743	$4,466
Number of retirees	405	585	583	521	593	436	853

Police and Fire Plan

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
2019							
Average monthly benefit	$375	$1,419	$2,580	$3,662	$4,802	$6,252	$8,085
Average high five salary	$4,587	$5,526	$6,377	$7,087	$7,448	$7,840	$8,582
Number of retirees	20	23	22	33	79	108	110
2018							
Average monthly benefit	$838	$1,654	$2,418	$3,188	$4,726	$6,239	$7,705
Average high five salary	$4,969	$5,272	$5,798	$6,380	$7,170	$7,857	$8,149
Number of retirees	15	14	32	30	69	84	64
2017							
Average monthly benefit	$583	$1,370	$2,133	$3,512	$4,321	$5,990	$8,096
Average high five salary	$5,387	$4,615	$5,277	$6,523	$6,772	$7,575	$8,426
Number of retirees	18	25	24	34	59	98	74
2016							
Average monthly benefit	$565	$1,363	$2,130	$3,152	$4,403	$5,649	$7,322
Average high five salary	$6,026	$5,244	$5,110	$6,023	$6,821	$7,171	$7,613
Number of retirees	20	17	18	30	59	91	44
2015							
Average monthly benefit	$278	$1,559	$2,202	$3,290	$4,232	$5,791	$7,394
Average high five salary	$5,703	$5,563	$5,631	$6,172	$6,553	$7,299	$7,401
Number of retirees	16	16	27	33	56	81	47
2014							
Average monthly benefit	$375	$1,358	$2,081	$3,070	$4,479	$5,611	$6,952
Average high five salary	$4,290	$4,612	$5,379	$5,815	$6,730	$7,018	$7,233
Number of retirees	17	33	37	63	93	205	135
2013							
Average monthly benefit	$639	$1,322	$1,949	$2,941	$4,299	$5,407	$7,163
Average high five salary	$6,439	$4,978	$4,830	$5,533	$6,274	$6,741	$7,350
Number of retirees	8	18	19	23	47	96	60
2012							
Average monthly benefit	$565	$1,028	$1,980	$3,201	$4,110	$5,244	$6,670
Average high five salary	$5,666	$3,733	$5,307	$5,986	$6,136	$6,517	$6,987
Number of retirees	22	20	21	31	56	95	84
2011							
Average monthly benefit	$406	$1,340	$2,019	$2,837	$4,117	$5,189	$6,590
Average high five salary	$4,976	$5,685	$5,189	$5,288	$6,101	$6,489	$6,885
Number of retirees	11	13	23	22	76	74	109
2010							
Average monthly benefit	$342	$760	$1,709	$2,869	$3,829	$5,261	$6,214
Average high five salary	$4,262	$3,685	$4,378	$5,326	$5,709	$6,499	$6,598
Number of retirees	9	12	15	26	49	71	70

Schedule of New Retirees and Initial Benefit Paid

Defined Benefit Plans – Last 10 Years

Correctional Plan*

	Years of Credited Service						
	0 - 4	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 +**
2019							
Average monthly benefit	$269	$595	$990	$1,917			
Average high five salary	$3,947	$3,760	$4,447	$5,497			
Number of retirees	26	15	20	62			
2018							
Average monthly benefit	$287	$644	$1,112	$1,963			
Average high five salary	$4,176	$3,799	$4,860	$5,823			
Number of retirees	15	12	27	61			
2017							
Average monthly benefit	$340	$703	$1,088	$1,749			
Average high five salary	$4,463	$4,099	$4,601	$5,524			
Number of retirees	15	17	29	58			
2016							
Average monthly benefit	$201	$552	$1,107	$1,513			
Average high five salary	$3,930	$3,655	$4,713	$4,928			
Number of retirees	13	21	20	48			
2015							
Average monthly beneift	$501	$758	$1,106	$1,510			
Average high five salary	$4,436	$3,924	$4,364	$5,218			
Number of retirees	15	21	30	37			
2014							
Average monthly beneift	$668	$706	$1,200				
Average high five salary	$3,938	$3,960	$4,797				
Number of retirees	17	23	43				
2013							
Average monthly beneift	$254	$686	$1,193				
Average high five salary	$3,296	$3,904	$4,891				
Number of retirees	17	16	54				
2012							
Average monthly beneift	$295	$683	$1,079				
Average high five salary	$2,930	$3,629	$4,697				
Number of retirees	12	15	52				
2011							
Average monthly beneift	$369	$580	$976				
Average high five salary	$3,436	$3,548	$4,572				
Number of retirees	18	12	40				
2010							
Average monthly beneift	$476	$508	$835				
Average high five salary	$3,571	$3,847	$4,215				
Number of retirees	9	14	27				

*The Correctional Plan was established July 1, 1999.

Volunteer Firefighter Plan**

	Years Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
2019							
Average monthly benefit			$323		$975		
Average high five salary**							
Number of retirees			2		3		
2018							
Average monthly benefit			$447		$156		$1,260
Average high five salary**							
Number of retirees			1		10		1
2017							
Average monthly benefit					$722		
Average high five salary**							
Number of retirees					3		
2016*							
Average monthly benefit		$166	$357	$561	$771	$975	
Average high five salary**							
Number of retirees		1	10	13	48	3	

** The first monthly benefit division employer joined the Volunteer Firefighter Plan on January 1, 2016.
*** The monthly benefit is based on years of service, not salary.

Schedule of Benefit Recipients by Type

As of June 30, 2019

General Employees Plans

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit				Option Selected					
		A	B	C	D	1	2	3	4	5	6
$1 - $250	22,175	20,373	414	1,203	185	14,329	6,007	336	873	444	186
251 - 500	16,830	15,242	269	1,075	244	10,527	4,086	340	1,126	585	166
501 - 750	12,324	11,023	198	891	212	7,413	2,911	308	1,008	518	166
751 - 1000	9,353	8,386	146	636	185	5,424	2,203	310	881	436	99
1001 - 1250	7,491	6,686	106	550	149	4,038	1,880	288	753	456	76
1251 - 1500	5,970	5,279	97	453	141	3,034	1,538	287	681	367	63
1501 - 1750	4,918	4,383	89	345	101	2,378	1,258	304	591	318	69
1751 - 2000	4,204	3,789	57	282	76	1,955	1,088	275	569	269	48
2001 - 2250	3,615	3,269	42	245	59	1,546	954	241	547	275	52
2251 - 2500	3,062	2,745	42	233	42	1,245	834	194	507	231	51
2501 - 2750	2,645	2,390	41	183	31	1,027	770	169	404	213	62
2751 - 3000	2,217	2,034	25	142	16	894	599	165	324	167	68
3001 - 3250	1,819	1,656	22	129	12	689	536	133	263	138	60
3251 - 3500	1,546	1,394	30	110	12	601	422	103	239	123	58
3501 - 3750	1,234	1,114	17	96	7	418	406	75	201	93	41
3751 - 4000	1,009	914	15	75	5	348	298	65	185	73	40
4001 - 4250	862	776	12	72	2	293	244	56	162	64	43
4251 - 4500	677	610	4	63	0	217	223	42	127	45	23
4501 - 4750	608	554	4	48	2	191	202	35	104	48	28
4751 - 5000	470	413	8	47	2	153	123	44	85	34	31
5001 - 5250	388	339	4	44	1	129	122	30	57	35	15
5251 - 5500	334	290	4	40	0	107	115	24	62	19	7
5501 - 5750	279	248	0	30	1	97	77	24	49	22	10
5751 - 6000	221	196	2	23	0	70	60	15	51	16	9
6001 - 6250	182	162	1	19	0	53	60	13	34	13	9
6251 - 6500	130	112	1	17	0	40	40	10	25	10	5
6501 - 6750	108	103	0	5	0	30	24	10	32	6	6
6751 - 7000	91	75	2	14	0	35	29	7	15	3	2
Over 7000	481	420	3	58	0	127	131	48	120	34	21
Totals	105,243	94,975	1,655	7,128	1,485	57,408	27,240	3,951	10,075	5,055	1,514

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% Joint & Survivor
C Survivor of Benefit Recipient	**3** 75% Joint & Survivor
D Disability	**4** 50% Joint & Survivor
	5 25% Joint & Survivor
	6 Other (Death, Term-certain, Children's Benefits, etc.)

Police and Fire Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit					Option Selected					
		A	B	C	D	E	1	2	3	4	5	6
$1 - $250	155	129	8	17	1	0	56	71	6	9	6	7
251 - 500	157	130	4	22	1	0	57	66	0	18	8	8
501 - 750	140	109	9	20	0	2	50	52	9	14	6	9
751 - 1000	159	119	6	31	3	0	59	40	6	25	20	9
1001 - 1250	157	94	7	51	4	1	45	48	2	27	20	15
1251 - 1500	169	97	10	53	6	3	47	45	14	17	21	25
1501 - 1750	220	106	18	86	7	3	51	42	16	30	10	71
1751 - 2000	263	127	22	96	10	8	61	58	10	48	15	71
2001 - 2250	265	126	21	84	24	10	74	60	9	55	6	61
2251 - 2500	315	147	34	77	37	20	70	88	17	49	16	75
2501 - 2750	364	171	33	102	21	37	96	84	23	56	15	90
2751 - 3000	687	182	128	301	18	58	97	107	27	63	13	380
3001 - 3250	438	271	17	66	13	71	120	127	40	78	15	58
3251 - 3500	433	274	13	44	5	97	137	118	44	60	23	51
3501 - 3750	511	329	21	49	14	98	154	160	41	68	27	61
3751 - 4000	519	338	16	53	13	99	160	151	44	71	31	62
4001 - 4250	524	373	13	32	19	87	155	150	56	78	32	53
4251 - 4500	492	376	9	26	17	64	124	132	58	96	30	52
4501 - 4750	584	478	8	35	16	47	146	147	73	90	33	95
4751 - 5000	527	447	5	32	10	33	120	153	66	96	33	59
5001 - 5250	556	484	11	25	7	29	145	118	79	106	37	71
5251 - 5500	489	397	4	18	43	27	111	92	70	91	25	100
5501 - 5750	822	784	1	7	7	23	115	87	62	116	36	406
5751 - 6000	307	272	5	10	11	9	77	87	46	64	25	8
6001 - 6250	302	273	4	6	5	14	79	74	50	68	29	2
6251 - 6500	242	224	2	4	3	9	59	68	35	59	20	1
6501 - 6750	224	209	1	6	3	5	62	70	31	46	14	1
6751 - 7000	175	163	0	3	3	6	44	54	20	47	10	0
Over 7000	835	803	2	12	9	9	231	213	131	184	74	2
Totals	11,031	8,032	432	1,368	330	869	2,802	2,762	1,085	1,829	650	1,903

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% Joint & Survivor
C Survivor of Benefit Recipient	**3** 75% Joint & Survivor
D Non-Duty Disability	**4** 50% Joint & Survivor
E Line-of-Duty Disability	**5** 25% Joint & Survivor
	6 Other

Schedule of Benefit Recipients by Type

As of June 30, 2019 (continued from previous page)

Correctional Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit					Option Selected					
		A	B	C	D	E	1	2	3	4	5	6
$1 - $250	185	169	5	8	3	0	110	50	6	11	8	0
251 - 500	154	145	1	6	2	0	84	44	2	17	7	0
501 - 750	171	140	9	8	14	0	80	62	10	12	5	2
751 - 1000	192	162	3	8	19	0	83	71	11	17	8	2
1001 - 1250	157	139	1	2	11	4	68	57	11	11	9	1
1251 - 1500	129	111	2	2	9	5	70	30	5	16	7	1
1501 - 1750	106	90	0	4	2	10	48	39	5	4	10	0
1751 - 2000	85	74	3	1	3	4	42	23	3	10	5	2
2001 - 2250	68	50	1	0	1	16	32	24	1	5	5	1
2251 - 2500	25	11	0	0	0	14	13	6	1	4	1	0
2501 - 2750	26	12	1	0	0	13	14	8	0	1	2	1
2751 - 3000	13	8	0	0	0	5	8	3	0	0	2	0
3001 - 3250	2	2	0	0	0	0	1	1	0	0	0	0
3251 - 3500	4	2	1	0	0	1	1	0	1	0	1	1
3501 - 3750	1	1	0	0	0	0	1	0	0	0	0	0
Totals	1,318	1,11	27	39	64	72	655	418	56	108	70	11

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 100% Joint & Survivor
C Survivor of Benefit Recipient	**3** 75% Joint & Survivor
D Non-Duty Disability	**4** 50% Joint & Survivor
E.Line-of-Duty Disability	**5** 25% Joint & Survivor
	6 Other

Volunteer Firefighter Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Benefit			Option Selected		
		A	B	C	1	2	3
$1 - $250	26	18	8	0	18	2	6
251 - 500	23	21	2	0	8	9	6
501 - 750	28	21	7	0	11	12	5
751 - 1000	57	57	0	0	13	41	3
Over 1000	3	3	0	0	0	2	1
Totals	137	120	17	0	50	66	21

Type of Benefit	Option Selected
A Retirement	**1** Single Life
B Survivor of Active Member	**2** 75% Joint & Survivor
C Survivor of Benefit Recipient	**3** 50% Joint & Survivor

Principal Participating Employers

Defined Benefit Plans – Top 10 Listing

General Employees Fund*

FY 2019

Employer Name	Active Members	% of Total Active Members
Hennepin County	7,874	5.01%
Hennepin Healthcare System	5,569	3.54%
Minneapolis Special ISD-1	5,306	3.38%
City of Minneapolis	3,653	2.32%
Ramsey County	3,466	2.20%
St. Paul ISD - 625	3,009	1.91%
Anoka-Hennepin ISD-11	2,846	1.81%
City of St Paul	2,487	1.58%
Rosemount ISD - 196	1,963	1.25%
Osseo ISD-279	1,793	1.14%

FY 2010

Employer Name	Active Members	% of Total Active Members
Hennepin County	6,919	4.84%
Minneapolis School District	4,378	3.06%
Hennepin Healthcare System	4,020	2.81%
Ramsey County	3,454	2.42%
City of Minneapolis	3,265	2.28%
Anoka-Hennepin School District	2,734	1.91%
St. Paul School District	2,647	1.85%
City of St Paul	2,181	1.53%
Anoka County	1,874	1.31%
Rosemount School District	1,874	1.31%

Police and Fire Plan*

FY 2019

Employer Name	Active Members	% of Total Active Members
City of Minneapolis	1,313	10.77%
City of St Paul	1,019	8.36%
Hennepin County	313	2.57%
City of Duluth	278	2.28%
City of Rochester	242	1.99%
Ramsey County	222	1.82%
Hennepin Healthcare System	194	1.59%
Metropolitan Council	194	1.59%
City of St Cloud	177	1.45%
Metropolitan-Airports Commission	145	1.19%

FY 2010

Employer Name	Active Members	% of Total Active Members
City of Minneapolis	1,314	11.65%
City of St Paul	1,036	9.18%
Hennepin County	326	2.89%
City of Duluth	285	2.53%
City of Rochester	230	2.04%
Ramsey County	227	2.01%
City of St Cloud	168	1.49%
Wright County	141	1.25%
Hennepin Healthcare System	138	1.22%
Metropolitan Airports Commission	133	1.18%

*For a complete employer list, visit mnpera.org. Look for the Employer Contribution Reconciliations in the Employer Resource Center in the GASB Toolkit.

Continued

Principal Participating Employers

Defined Benefit Plans – Top 10 Listing (continued from previous page)

Correctional Plan*

FY2019

Employer	Active Members	% of Total Active Members
Ramsey County	549	13.70%
Hennepin County	506	12.63%
Anoka County	235	5.87%
Sherburne County	145	3.62%
Dakota County	113	2.82%
Clay County	109	2.72%
Olmsted County	108	2.70%
Prairie Lakes Detention Center	90	2.25%
Stearns County	87	2.17%
Washington County	82	2.05%

FY2010

Employer	Active Members	% of Total Active
Hennepin County	514	14.45 %
Ramsey County	418	11.75 %
Anoka County	212	5.96 %
Sherburne County	117	3.29 %
Olmsted County	114	3.21 %
Dakota County	95	2.67 %
Stearns County	86	2.42 %
Washington County	81	2.28 %
Prairie Lakes Detention Center	88	2.25 %
Scott County	75	2.11 %

Volunteer Firefighter Plan*

FY2019

Employer	Active Members	% of Total Active Members
City of Cottage Grove	62	1.45%
City of Vadnais Heights Volunteer Fire Department	57	1.33%
City of Oak Grove	53	1.24%
City of Victoria	51	1.19%
City of Willmar	45	1.05%
City of White Bear Lake	42	0.98%
City of International Falls	41	0.96%
Oakdale Fire Department	40	0.93%
City of Benson	39	0.91%
City of Montrose	39	0.91%
Isanti Area Joint Fire District	39	0.91%

FY2010

Employer	Active Members	% of Total Active Members
Ottertail City	27	23.68%
Alborn Township	23	20.18%
Twin Valley City	21	18.42%
Manchester City	16	14.04%
North Star Township	16	14.04%
DeGraff City	11	9.65%

*For a complete employer list, visit mnpera.org. Look for the Employer Contribution Reconciliations in the Employer Resource Center in the GASB Toolkit.

Privatized Employers

Below is a list of privatized employers per *Minnesota Statute* Chapter 325F.

- Ridgeview Medical Center
- City of Glencoe Regional Health Center
- Sanford Hospital Luverne
- St Paul Arena Company
- WWWRRR
- Ramsey County
- Fair Oaks Lodge
- Benedictine Living Community of St Peter
- Essentia Bridges Medical Center
- Renville Health Services
- Cannon Falls Med Center - Mayo Health
- Pennington County Oakland Park Nursing
- Lakeside Health Care Center
- Oak Terrace Health Care Center
- City of Lakefield Colonial Nursing Home
- Cornerstone Nursing & Rehab Center
- Hutchinson Area Health Care
- Sanford Regional Hospital Worthington
- Willmar Medical Services Llp
- Lakeland Medical Center
- Chris Jensen Nursing Home Llc
- Weiner Hospital, City Of Marshall
- Cedarview Care Center
- Traverse Care Center
- Lake County Sunrise Home
- Harmony River Living Center
- Pheasant Country Home Care
- Sanford Health Wheaton Medical Center
- Centracare Health System - Sauk Centre
- Essentia Health Virginia Llc
- Centracare Health - Paynesville
- Sibley Medical Center
- Allina Rice County District 1 Hospital
- Willmar Medical Services Llp
- City of Willmar Rice Memorial Hospital
- Redwood Area Hospital

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