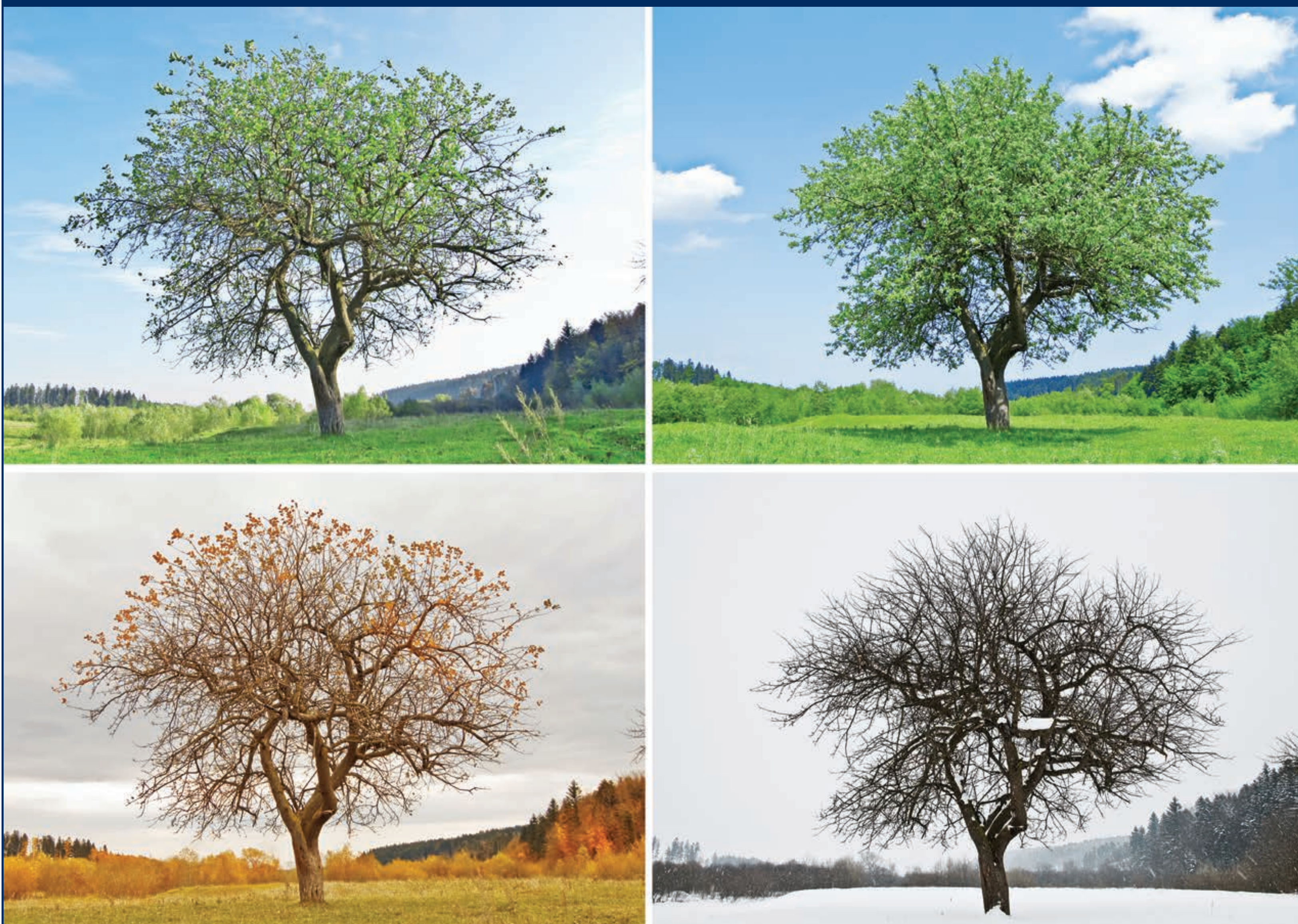
Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2016

Minnesota State Retirement System
Pension Trust Funds of the
State of Minnesota



Here today. Here tomorrow.

MSRS Minnesota State Retirement System
Your Foundation for Retirement

About the theme...

Here today. Here tomorrow.

MSRS is here for you at the beginning of your career, as you make plans for your future.

MSRS is here for you after retirement, when those plans are realized.

And, as change happens, we are here for all of the stages in between.

The photos throughout this Comprehensive Annual Financial Report represent various stages in our lives. From the early days, with seeds and budding trees, through the strong, steady days of our careers, to the fall colors and snows of retirement, MSRS is committed to fulfilling its mission to you.

Minnesota State Retirement System

Pension Trust Funds of the State of Minnesota

Erin Leonard
Executive Director

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2016

Prepared by MSRS Finance and Executive Division Staff

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

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INTRODUCTORY SECTION

MSRS 2016 Comprehensive Annual Financial Report

Providing Exemplary
Customer Service
and Support
From Day One

Achievement Awards

GFOA

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. MSRS received this award for our 2015 Comprehensive Annual Financial Report.

PPCC

The Public Pension Coordinating Council (PPCC) recently recognized MSRS for meeting its professional standards for the administration of public retirement systems.

Board Chairperson's Report

MSRS Minnesota State Retirement System
MNDCP Minnesota Deferred Compensation Plan
HCSP Health Care Savings Plan

December 22, 2016

Dear Members, Benefit Recipients, and Employers:

Fiscal year 2016 presented some unique challenges for the Minnesota State Retirement System (MSRS). Lower than expected investment returns and changes in various actuarial assumptions including expectations for member and retirees living longer had a significant effect on the retirement plans' funding status. As of July 1, 2016, MSRS' largest retirement plan, the General Employees Retirement Plan, was 81.56 percent funded (based on the actuarial value of assets). The plan's funding status decreased by 4.85 percent since July 1, 2015. The MSRS Board of Directors remains deeply committed to our fiduciary responsibility to ensure that our pension funds remain stable, sustainable and secure for all of our current and future benefit recipients.

MSRS' net assets as of June 30, 2016, totaling $20.06 billion, decreased approximately 1.99 percent from the prior year. Even though total assets of $22.06 billion grew 0.46 percent, total liabilities grew more substantially by $1.99 billion, or 34.14 percent, from June 30, 2015. The Board monitors MSRS' financial position on an ongoing basis. In a year where the MSRS net assets decrease, the Board must roll up it sleeves and continue to take proactive measures to ensure that MSRS provides financially secure retirement plans to pay promised retirement benefits now and in the future.

The Board regularly reviews the actuarial assumptions used to determine MSRS' funding status and to ensure that MSRS' defined benefit retirement plans are adequately funded. This review helps shape our funding policy. To implement funding policy, the Board recommended "shared sacrifice" legislation for the 2016 session aimed at increasing funding requirements to offset increasing pension liabilities and costs due to increases in member life expectancy and lower than expected investment returns. Proposed legislative initiatives for the General Plan included reducing future post-retirement benefit increases at a fixed rate, removing of current funding triggers in existing legislation and increasing employee and employer contribution rates. Unfortunately, the recommended legislation was not passed in the package as proposed in 2016, leading to additional pension liabilities increases to address in future years.

The MSRS Board of Directors continues to monitor funding status and contribution deficiency rates and will take appropriate action to ensure the financial security of the retirement funds. On October 13, 2016, the board proposed key legislative initiatives to proactively address the additional pension liabilities for the General Employees Retirement Fund, State Patrol Retirement Fund and the Correctional Employees Retirement Fund.

The Board remains committed to being a leader in public pension plan policy today, tomorrow, and into the future. We strive to fulfill our fiduciary duty to provide a secure retirement plan for you, and we truly appreciate your continued support.

Sincerely,

Mary Benner

Mary Benner, Chair
Board of Directors

Letter of Transmittal

MSRS Minnesota State Retirement System
MNDCP Minnesota Deferred Compensation Plan
HCSP Health Care Savings Plan

December 22, 2016

Board of Directors
Minnesota State Retirement System
60 Empire Drive, Suite 300
St. Paul, MN 55103-3000

Dear Directors:

We are pleased to present this Comprehensive Annual Financial Report (CAFR) for the Minnesota State Retirement System (MSRS) for the fiscal year ended June 30, 2016, our 87th year of operation. The theme of this year's report is *Here today. Here tomorrow.* Change is rapidly occurring in our state and in our organization. Demographic trends over the next decade will transform the landscape of Minnesota, including both our organization and the members MSRS serves. During the past year, you've dealt with a continued changing environment which included appointing a new Executive Director, Erin Leonard, to replace our respected and admired leader of 25 years, David Bergstrom. One thing has not changed; the board is leading our organization into the future with steadfast dedication to preserving our defined benefit retirement plans. We applaud your dedication for continuing to create a forward thinking funding policy and advancing legislative initiatives to administer financially secure retirement plans, a tax-free health care savings plan, and a low-cost deferred compensation plan. As change happens, MSRS is committed to provide exemplary services to our members today, tomorrow and into the future.

Report Contents and Structure

This CAFR is designed to meet the reporting requirements of *Minnesota Statutes 356.20*. The preparation of this report, including the financial statements contained within, is the result of a collaborative effort of the MSRS Executive Director and MSRS' Finance Division staff under the direction of its Chief Financial Officer.

Ultimate responsibility for the integrity of the data presented within this report and the fair presentation of the financial statements, in all material respects, lies with MSRS management. The MSRS Board of Directors provides an oversight role, and is assisted in this responsibility by its four-person Audit Committee. The Audit Committee has the responsibility to oversee the adequacy and effectiveness of MSRS' system of internal controls, including controls over financial reporting.

MSRS management is responsible for establishing and maintaining a system of internal controls over financial reporting. The objective of this internal control framework is to provide reasonable, not absolute, assurance that assets are safeguarded against loss or unauthorized disposition, financial records and reports are reliable, and MSRS has complied with all finance-related legal provisions. The concept of reasonable assurance recognizes the relationship between the cost of an internal control and the benefit likely to be derived, based on management's judgment. Management asserts, to the best of its knowledge and belief, that the internal controls over financial reporting are operating effectively as of June 30, 2016, to meet the purpose for which they were intended.

Inherent limitations exist in the effectiveness of any internal control system, including the possibility of human error, faulty decision making, fraud or management overriding the system. Accordingly, even a well-conceived and operating internal control system may not prevent or detect misstatements in the preparation of financial statements. Also, any projection of the evaluation of the effectiveness of internal controls to a future period is subject to risk that controls may become inadequate due to changing business conditions, or that the degree of MSRS compliance with established policies and procedures has deteriorated.

State law permits the Office of the Legislative Auditor (OLA), a professional, nonpartisan office in the legislative branch of Minnesota state government, to audit the financial statements and related note disclosures contained in this report. The OLA completed this audit in accordance with auditing standards generally accepted in the United States, and the standards applicable to financial audits contained in *Government Auditing Standards*. The OLA also reviewed the adequacy of our internal controls over financial reporting and compliance with certain legal provisions. The Legislative Auditor's opinion letters, the *Independent Auditor's Report*, are presented in the *Financial Section* of this CAFR. The auditors reported no material weaknesses in our internal controls.

The *Financial Section* of this report also contains *Management's Discussion and Analysis*. This narrative, found on pages 48-57, presents financial highlights and an overview of MSRS' financial statements for fiscal year 2016, along with an analysis of MSRS' defined benefit and defined contribution retirement funds. This letter of transmittal complements *Management's Discussion and Analysis* and these items should be read in conjunction.

MSRS' financial activities are also reflected in the pension trust fund financial statements included in the Fiduciary Funds section of the State of Minnesota's Comprehensive Annual Financial Report. This report is available online at http://www.mn.gov/mmb/accounting/reports.

About MSRS Funds

MSRS administers five defined benefit and four defined contribution funds, which are identified below. The fiduciary net position (total assets minus total liabilities to vendors, bondholders, and other parties) of these funds that is reserved for payments of pension benefits totaled more than $20 billion as of June 30, 2016.

Defined Benefit Funds

- State Employees Retirement Fund, which includes General Plan employees and three special groups: Minnesota Department of Transportation pilots, deputy state fire marshals, and Military Affairs personnel;
- State Patrol Retirement Fund;
- Correctional Employees Retirement Fund;
- Judges Retirement Fund; and
- Legislators Retirement Fund, which includes members of the Legislators and Elective State Officers Retirement Plans.

Defined Contribution Funds

- Minnesota Deferred Compensation Fund (MNDCP);
- Unclassified Employees Retirement Fund;
- Health Care Savings Fund; and
- Supplemental Retirement Fund for Hennepin County.

For the defined benefit funds, MSRS serves approximately 55,200 active employees from over 15 employer and component units, 42,640 benefit recipients, and 26,700 members who are no longer contributing, but are eligible for either future monthly benefits or a lump-sum distribution. The fiduciary net position for these funds is nearly $12.92 billion as of June 30, 2016.

Alternatively, for the defined contribution funds, member participation and financial position as of June 30, 2016, varied significantly among these funds. MSRS serves approximately 84,100 participants in the MNDCP with a fiduciary net position totaling $5.87 billion. Over 106,800 members participate in the Health Care Savings Fund with a fiduciary net position of nearly $827 million. Over 3,200 members participate in the Unclassified Employees Retirement Fund with a fiduciary net position of about $305 million. About 1,400 members participate in the Supplemental Retirement Fund for Hennepin County with a fiduciary net position of approximately $144 million.

Continued on next page

Letter of Transmittal

Major Initiatives

Fiscal year 2016 accomplishments included completion of some significant initiatives and as well as numerous other projects that contributed to MSRS being a more efficient and financially secure retirement system. The year also included MSRS embarking on other important projects, aimed at moving MSRS even closer to achieving its business process improvement goals. These major initiatives are highlighted in the bullets on the next few pages.

- **Succession planning.** The MSRS Board of Directors and senior management were effective in carrying out a succession plan to steer the organization into the future. The Board of Directors chose Erin Leonard as the next MSRS Executive Director. Erin succeeded Dave Bergstrom, who retired in December 2016. Dave was the MSRS Executive Director for 25 years. In addition, MSRS senior management welcomed Tim Rekow to the organization as the Chief Financial Officer. Tim succeeded Judy Hunt, who retired in July 2016. Judy was the MSRS Chief Financial Officer for 9 years.

- **Recordkeeper transition completed.** In February 2015, MSRS executed a contract with Great-West Life & Annuity Insurance Company for Empower Retirement, the retirement services arm of the company, to provide recordkeeping and custodial services. Effective July 1, 2015, Empower succeeded Voya Financial® as the as the recordkeeper for MSRS' four defined contribution retirement funds. MSRS staff worked diligently to ensure our members had a seamless transition between the two vendors. Although there were some bumps along the way, staff's willingness to go the extra mile to ensure this transition was successful was integral to our success this year.

- **Lower fee investment options made available to members.** MSRS worked diligently in fiscal year 2016 to make investment option changes to lower member fees in its Minnesota Deferred Compensation Plan. Effective September 15, 2016, the Vanguard Dividend Growth Fund replaced the Janus Twenty Fund. The Vanguard Dividend Growth Fund has significantly lower fees, 0.33 percent as of June 30, 2016, versus 0.82 percent for the Janus Twenty Fund. Also, effective November 11, 2016, the Fidelity Diversified International Fund became a lower-cost investment of the same fund. Instead of offering the Fidelity Diversified International Fund as a mutual fund, it is now offered as a Collective Investment Trust called the Fidelity Diversified International Commingled Pool. The change reduced fees for this fund from 1.00 percent to 0.58 percent as of November 11, 2016. Finally, the T. Rowe Price Small Cap Stock Fund is now offered as a lower-cost institutional share class fund. The change reduced fees for this fund from 0.90 percent to 0.67 percent as of November 11, 2016.

- **Microfiche records scanning completed.** Phase 1 of the "Evolution of Records" project has been completed. Approximately 1.5 to 2 million participant file documents that were previously stored on over 100,000 pieces of microfiche have been converted to digital media. This phase of the project started November 12, 2014, and took almost two years to complete. Phase 2 will include the manipulation of the digital images so they can be added to the individual participant files. When this phase is complete, staff will have easy access to higher-quality images of member documents.

- **Aurora hosting migration project underway.** The Hosting Migration Project is a major effort to move Aurora, the MSRS participant management system, and related applications from its current host, MN.IT, to IBM Cloud Managed Services by December 2016. Since early 2015, MSRS has been busy planning the migration steps, preparing our applications for their new home at IBM, configuring the new IBM systems to accept our applications, and creating suites of tests to be sure each part of our move is successful. Once the migration is complete, MSRS will experience significant cost savings as well as greater stability in Aurora and all its related applications and system redundancy to ensure continuity of operations.

- **Other notable MSRS accomplishments during fiscal year 2016 include:**
  - Implementation of enhanced information technology security including encryption and patch management.
  - Business continuity improvements including the completion of various business continuity plan documents, effective testing of our hot site, and execution of exercises to test the plan.
  - Improved MSRS defined benefit account online usability and security.
  - Completion of Strengths Based Leadership training with MSRS management.
  - Filing determination letter requests with the Internal Revenue Service (IRS) for MSRS' four largest defined benefit retirement plans and the Unclassified Employees Retirement Plan. These filings are necessary to obtain assurance that the retirement plans remain qualified and eligible for tax benefits.

The MSRS fiscal year 2017 goals focus in three primary areas: technology, staff development, and participant services.

Continued improvements will enable MSRS to enhance usability and security of technology for our staff and members during the coming year. This will include completing the Aurora hosting project, improving MSRS defined benefit online account usability and security, the continued release of enhancements to improve Aurora, and implementing two-factor authentication. SEMA4 Self Service Time Entry will be implemented, moving MSRS away from paper timesheets to an automated payroll system. MSRS recognizes that technology is changing at a rapid pace, so the hiring of a Chief Information Officer in fiscal year 2017 will further strengthen the leadership of MSRS.

Developing and formalizing a staff training curriculum is a goal for the upcoming fiscal year. This includes building upon Strengths Finder training with team engagement meetings and development of a customized performance management leadership program. Other staff development initiatives include ongoing business continuity plans, including "hot site" exercises to ensure employees have the tools they need to continue operations in the event of a business interruption.

In fiscal year 2017, MSRS will focus on the continued development of web-based tools to improve the participant service experience. This will include an account online tutorial, as well as implementation of the Gov Delivery tool for employer communication and participant engagement. MSRS continues to make improvements based on participant feedback, striving to make information readily available so participants can make informed decisions about their retirements.

Financial Information

Accounting System and Reports

MSRS prepares its financial statements in accordance with generally accepted accounting principles promulgated by GASB. Transactions are reported on the accrual basis of accounting. Contributions from employers and members are recognized as revenue when earned. Expenses are recorded when corresponding liabilities are incurred, regardless of when payment is made. Most financial transactions are processed through the Statewide Integrated Financial Tools (SWIFT) system under the oversight of the department of Minnesota Management and Budget.

Financial Summary

The schedule on the following page is a comparative summary of total additions and total deductions that determine the change in fiduciary net position for MSRS' defined benefit and defined contribution funds for the fiscal years ended June 30, 2016 and 2015. Total additions represent employee and employer contributions and net investment income. Total deductions include annuity payments, refunds, health care reimbursements, ongoing deferred compensation and other defined contribution plan withdrawals, and administrative expenses. With a 0.1 percent investment loss in

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fiscal year 2016, MSRS realized a decrease of over $407 million in the fiduciary net position for all MSRS pension trust funds for fiscal year 2016. This amount includes a decrease of over $471 million for MSRS' defined benefit funds and an increase of more than $64 million for its defined contribution funds.

Summary Statement of Changes in Fiduciary Net Position
All MSRS Pension Trust Funds
For the Fiscal Years Ended June 30, 2016 and 2015
(Dollars in thousands)

	Defined Benefit Funds		Defined Contribution Funds	
Source	**FY 2016**	**FY 2015**	**FY 2016**	**FY 2015**
Total Additions	$410,935	$993,844	$462,596	$679,021
Total Deductions	882,283	830,797	398,363	425,744
Net Increase (Decrease) in Net Position	$(471,348)	$163,047	$64,233	$253,277
Fiduciary Net Position - beginning of year	$13,389,861	$13,226,814	$7,079,900	$6,826,623
Fiduciary Net Position - end of year	**$12,918,513**	**$13,389,861**	**$7,144,133**	**$7,079,900**

Actuarial Valuations

MSRS contracted with Gabriel Roeder Smith & Company (GRS) of Minneapolis, Minnesota to perform two annual actuarial valuations for each MSRS defined benefit fund and to provide other actuarial consulting and advisory services during fiscal year 2016.

The first set of actuarial valuations is to determine actuarial valuation information necessary to prepare financial reports in compliance with GASB Statements No. 67 and Statement No. 68, including the computation of the net pension liability, pension income or expense, enhanced note disclosures, and expanded *Required Supplementary Information* (RSI). More detail regarding these financial reporting actuarial valuations may be found in the *Notes to the Financial Statements* in the *Financial Section* of this CAFR.

The second set of actuarial valuations are the traditional funding valuations. These valuations report funding progress, the required contribution rate, contribution sufficiency or deficiency levels, and other actuarial information necessary for monitoring each defined benefit retirement plan's funding status. The actuarial methods, assumptions, and funding status of MSRS' defined benefit retirement plans are detailed in the *Actuarial Section* of this report.

Retirement Plan Actuarial Position and Funding Status

The traditional funding actuarial valuations for each defined benefit fund measure current costs and contribution requirements to determine how much employers and members should contribute to maintain appropriate funding levels to pay future benefits. These traditional funding actuarial valuations also measure assets and actuarial accrued liabilities to determine the funding status for each defined benefit plan that MSRS administers. Improvement in the funding status leads to a larger ratio of assets to actuarial accrued liabilities, and a greater level of investment income potential. A high funded ratio gives members assurance that their pensions are financially secure, and that existing assets and projected investment earnings on those assets are sufficient to cover the liabilities for present and future annuities, survivor and disability benefits, refunds, and administrative expenses.

The schedule below highlights the actuarial value of assets, actuarial accrued liability, funded ratio and contribution deficiency (expressed as a percent of payroll except for Legislators Retirement Fund, which is expressed in dollars because it is a closed plan) for each defined benefit fund as of the latest actuarial valuation date, July 1, 2016.

Highlights of the 2016 Actuarial Valuations

(Dollars in thousands)

Defined Benefit Retirement Fund	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	Contribution Deficiency
State Employees	$11,676,370	$14,316,886	81.56%	3.49%
State Patrol	654,842	833,886	78.53	3.08
Correctional Employees	937,000	1,313,516	71.34	5.61
Judges	172,525	331,334	52.07	6.28
Legislators*	0	218,514	0.00	$22,998

** Unlike the other defined benefit retirement funds, the Legislators Retirement Fund is financed on a pay-as-you-go basis.*

For the State Employees Retirement Fund, the contribution deficiency, determined on an actuarial value of assets basis as of the July 1, 2016, valuation date, increased in comparison to the contribution deficiency as of July 1, 2015. This is due to the many changes in actuarial assumptions resulting from a recent experience study.

For the State Patrol Retirement and Judges Retirement Funds, the contribution deficiencies, determined on an actuarial value of assets basis as of the July 1, 2016, valuation date, decreased in comparison to the contribution deficiencies one year earlier. For the State Patrol Retirement Fund, the primary reasons for the decrease are additional member and employee contributions and the decrease in liability due to the delay in postretirement benefit increases implemented in fiscal year 2016. For the Judges Retirement Fund, the primary reason for the decrease was the new state contribution of $3 million in fiscal year 2017.

The Correctional Employees Retirement Fund contribution deficiency, determined on an actuarial value of assets basis as of the July 1, 2016, valuation date, increased only slightly. Plan changes affecting members first hired after June 30, 2010, are expected to ultimately reduce the cost of the plan, but changes to the current year valuation are minimal.

The Legislators Retirement Fund is a closed plan, with few active, contributing members. Remaining assets in the plan were depleted in the year ending June 30, 2016, and benefits are paid on a pay-as-you-go basis by annual appropriations from the state's General Fund.

The Minnesota Legislature, along with the MSRS Board of Directors, reviews annual valuation reports of the actuarial funding status of the retirement systems. Current law for the General State Employees, Correctional Employees, and State Patrol Retirement Funds allows the MSRS Board of Directors to change employee and employer contribution rates to eliminate contribution deficiencies over time, unless the Legislative Commission on Pensions and Retirement denies or modifies any rate changes.

The board recommended legislation for the 2016 session aimed at increasing funding requirements to offset increasing pension liabilities and costs due to increases in member life expectancy and lower than expected investment returns. Proposed legislative initiatives for the General Plan included reducing future post-retirement benefit increases at a

Continued on next page

Letter of Transmittal

fixed rate, removing of current funding triggers in existing legislation and increasing employee and employer contribution rates. The recommended legislation did not become law in 2016, leading to additional pension liability increases to address in future years. The board also recommended legislation to improve the funding of the Judges Retirement Fund in 2016. The Legislature passed a law that included a state contribution of $3 million to the Judges Retirement Fund in the fiscal year ending June 30, 2017, and an additional contribution of $6 million per year in subsequent fiscal years until the plan is fully funded.

The MSRS Board of Directors continues to monitor funding status and contribution deficiency rates and will take appropriate action, as necessary, to ensure the financial security of the retirement funds. Fiscal year 2017 will present additional challenges for the board to manage additional pension liabilities caused by negative investment returns and increases in member life expectancy. On October 13, 2016, the board proposed key legislative initiatives to proactively address the additional pension liabilities for the General Employees Retirement Fund, State Patrol Retirement Fund and the Correctional Employees Retirement Fund which are detailed in the *Board Chairperson's Report* in the *Introduction Section* of this CAFR.

Investment Results

In accordance with the Minnesota Constitution, the State Board of Investment (SBI) invests the assets of MSRS' funds. The Board includes Governor Mark Dayton, Attorney General Lori Swanson, Secretary of State Steve Simon, and State Auditor Rebecca Otto. For all investments under the SBI's management, the Board, the 17 member Investment Advisory Council (IAC) to the board (which includes the MSRS executive director), and the SBI staff are governed by the prudent person rule, and fiduciary standards detailed in Minnesota Statutes, Chapters 11A and 356A. The Board, in consultation with the IAC and the SBI staff, establishes asset allocation and other investment policies and guidelines, and conducts detailed investment analyses of the funds under its control.

MSRS does not own specific securities, but instead owns shares in various pools invested by the SBI. During fiscal year 2016, the domestic stock pool reported a 0.0 percent return (net of fees), performing worse than the Russell 3000 Index by 2.1 percentage points. The bond pool posted a 5.9 return (net of fees) for fiscal year 2016, 0.1 percentage points lower than the Barclays Aggregate Bond Index. The International Stock Pool reported a 9.7 percent loss (net of fees) for the 2016 fiscal year, performing worse than the Morgan Stanley Capital International All Country World Index excluding the United States (which represents the developed and emerging international markets outside the U.S.) for the fiscal year by 0.5 percentage points. Alternative investments returned a gain 0.2 percent in fiscal year 2016. Within this investment environment, the Combined Funds, which represent all defined benefit pension assets under the SBI's control, reported a 0.1 percent loss (net of fees) for the 2016 fiscal year. Annualized over the latest ten-year period, the Combined Funds generated a 6.5 percent return (net of fees), outperforming a composite market index (weighted in manner that reflects the long-term asset allocation of the Combined Funds over the latest ten-year period as indicated in the following table) by 0.2 percentage points.

Combined Funds Asset Mix and Market Indices

Investment Type	Market Indicator	Long-Term Policy Target
Domestic Equity	Russell 3000 Index	45.0%
International Equity	Morgan Stanley Capital International World All County World Index Ex-U.S.	15.0
Alternative Assets	Alternative investments are measured against themselves using actual portfolio returns	20.0
Bonds	Barclays Capital Aggregate Bond Index	18.0
Unallocated Cash	3-Month Treasury Bills	2.0
		100.0%

Please refer to the *Investment Section* for additional details on the investment results of MSRS' largest defined benefit retirement funds for fiscal year 2016.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Minnesota State Retirement System for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the seventh consecutive year that MSRS has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial 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.

We are also very pleased to report that MSRS received the Public Pension Coordinating Council's (PPCC) Public Pension Standards 2016 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. The PPCC has offered this award program to public retirement systems for the past twelve years. MSRS is proud to be a recipient of this award.

Membership Report

This report provides complete and reliable information on which management decisions may be based and through which compliance with statutory requirements may be assessed. It is reproduced, in its entirety, on MSRS' website at http://www.msrs.state.mn.us/financial-information. A summary of the CAFR will be published in the next issue of the *Messenger*, MSRS' newsletter.

Acknowledgements

As the MSRS Chief Financial Officer, I wish to express my sincere appreciation to the team who have partnered with me to produce this CAFR including: Financial Reporting and Risk Assessment Director Cheryl Jahnke, Finance Manager Joan Weber, Accounting officer Jason White, and the entire MSRS Finance Division. It was truly a great privilege to work with this team to complete our first MSRS CAFR together.

I join the entire CAFR team in expressing our thanks to Maureen McIlhargey, an outside consultant, for her talents in producing this CAFR, and for her remarkable creative efforts as demonstrated in the layout and design of the CAFR cover and section pages.

Finally, we would like to express our sincere gratitude and thanks to Dave Bergstrom for his public service to MSRS. Dave has been an exemplary leader and a pleasure to work with. Dave was Executive Director during some significant changes with MSRS plans. These changes included navigating the dot-com bubble that resulted in a recession in the early 2000s and more recently the "Great Recession." Dave was able to work successfully with the MSRS Board and the Legislature to adopt sound pension policies. During his tenure, the Minnesota Deferred Compensation Plan (MDNCP) adopted a new, lower cost administrative model which resulted in lower fees for plan participants. The MNDCP has grown to be the fifth largest plan of its kind in the United States with over $5.8 billion in assets. In 2001, a new plan was created to allow Minnesota Public employees to use a tax-preferred savings vehicle to offset healthcare expenses. This is now the MSRS Health Care Savings Plan (HCSP). To date, the HCSP has about 125,000 participant accounts and over $800 million in assets. These examples highlight Dave's commitment to execute the MSRS mission. Dave's leadership and personality will surely be missed at MSRS. As an organization, we look forward to providing services to support him in fulfilling his retirement goals.

Respectfully submitted,

Erin Leonard	Timothy Rekow, CPA
Executive Director	Chief Financial Officer

MSRS Board of Directors, Administrative Staff and Professional Consultants

As of June 30, 2016

Board of Directors

All board member positions are four-year terms, unless specified otherwise.

Mary Benner, Chair
Appointed by Governor
Term expires: January 7, 2019

Sally (R.W.) Olsen, Vice Chair
Appointed by Governor
Term expires: January 2, 2017

Tommy Bellfield
Appointed Representative for employees of Metropolitan Council's Transit Division
Term expires: at the discretion of the Executive Board for the Amalgamated Transit Union, Local 1005

Gabe Cornish
State Patrol Representative
Appointed by Board to complete an elected member's term
Term expires: May 7, 2018

Myron Frans, Commissioner
Minnesota Management and Budget
Appointed by Governor
Term expires: January 7, 2019

Chester Jorgenson
Elected by General and Unclassified Plans Membership
Term expires: May 7, 2018

Michael Schweyen
Elected by General and Unclassified Plans Membership
Term expires: May 4, 2020

Dave Senf
Elected by General Plan Membership
Term expires: May 7, 2018

Wes Skoglund
Elected Retiree Representative
Term expires: May 4, 2020

Joseph Strunk
Elected by Correctional Plan Membership
Appointed by Board to complete an elected member's term
Term expires: May 4, 2020

Joseph Sullivan
Elected by General and Unclassified Plans Membership
Appointed by Board to complete an elected member's term
Term expires: May 4, 2020

Key Administrative Staff

Executive Director:
David Bergstrom*

Chief Financial Officer:
Timothy M. Rekow

Assistant Executive Director - Retirement Services:
Erin M. Leonard*

Professional Consultants

Actuary:
Gabriel Roeder Smith & Company

Legal Counsel:
Assistant Attorney General Rory Foley
Assistant Attorney General Kevin Finnerty

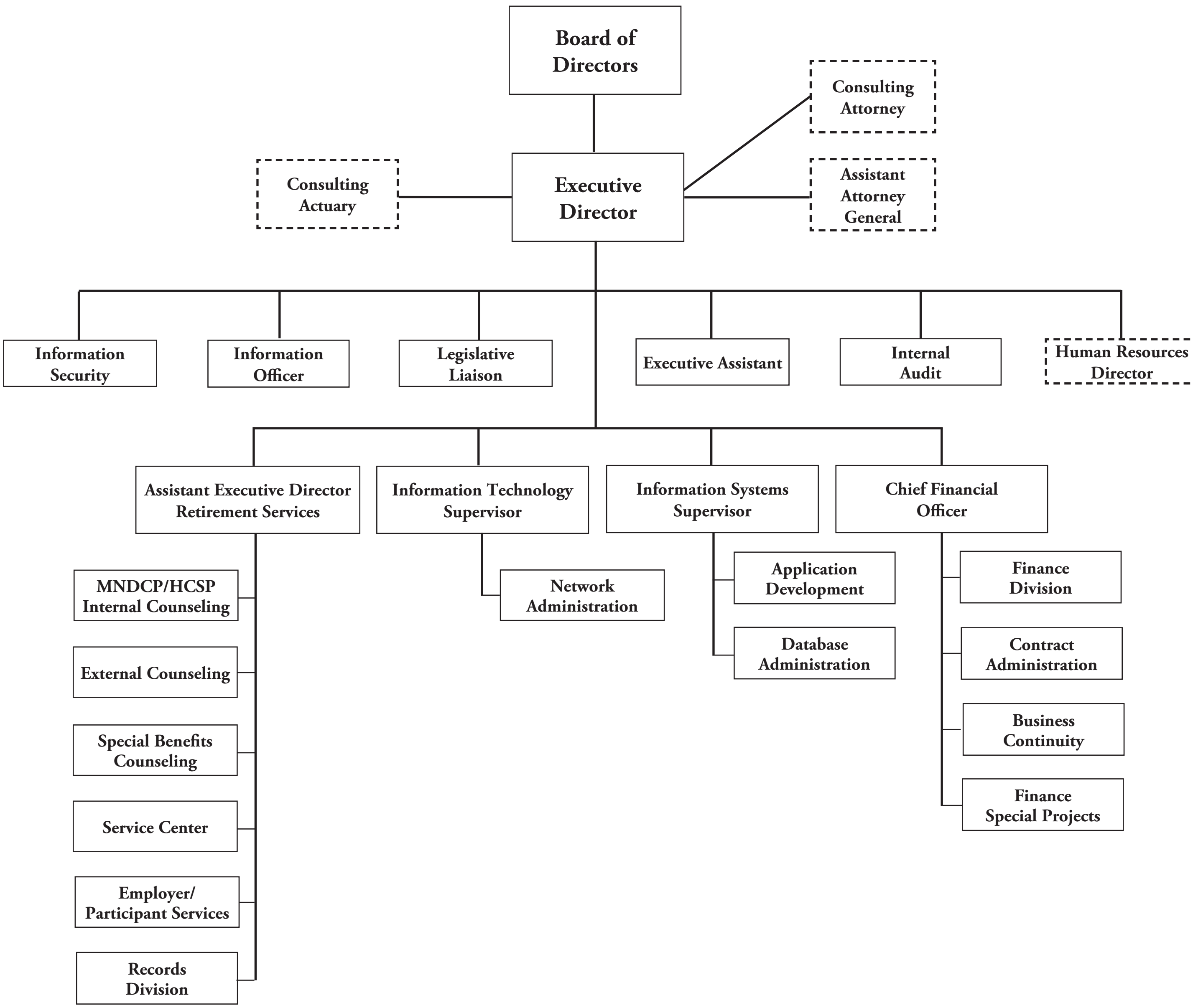
Medical Advisor:
MMRO - Managed Medical Review Organization

* Effective November 1, 2016, David Bergstrom retired from his position as Executive Director, and the MSRS Board of Directors hired Erin Leonard as the new Executive Director.

NOTE: MSRS 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 MSRS. A schedule of these advisors and MSRS' share of their fees is included on page 133 of the *Investment Section* of this CAFR.

Organization Chart

As of June 30, 2016



Mission Statement

To administer financially secure retirement plans, a tax-free health care savings plan, and a low-cost deferred compensation plan; ensure timely benefit payments; be proactive in public pension policies; and provide exemplary customer service, through a one-stop shopping source.

Summary of Plan Provisions
Defined Benefit Retirement Funds

The following is a summary of the major plan provisions for MSRS' defined benefit retirement plans. Within the General Employees Retirement Plan are three special groups: Military Affairs, Transportation Pilots, and Fire Marshals Retirement Plans. These special groups have the same plan provisions as the General Employees Retirement Plan, except as noted below.

Plan descriptions are not all inclusive. Descriptions provide general information only.

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
STATUTORY OR LEGAL REFERENCES:		
Minn. Stat. §352.01 - 352.76	Minn. Stat. §352.85 - 352.87	Minn. Stat. §352B
COVERAGE:		
• Most state employees, University of Minnesota non-instructional employees, and selected metropolitan agency employees	• **Military Affairs:** Minnesota Department of Military Affairs personnel on active duty • **Transportation Pilots:** pilots and chief pilots employed by the Minnesota Department of Transportation • **Fire Marshals:** employees of the Department of Public Safety, State Fire Marshal Division, who are employed as deputy state fire marshal, fire or arson investigator	• State troopers, conservation officers, and certain crime bureau and gambling enforcement agents

Effective July 1, 2013, the Elective State Officers Retirement Plan is a special group within the Legislators Retirement Fund. This special group has the same plan provisions as the Legislators Retirement Plan, except as noted below.

Plan provisions specific to MSRS' defined contribution plans follow this section.

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
STATUTORY OR LEGAL REFERENCES:			
Minn. Stat. §352.90 - 352.955	Minn. Stat. §490	Minn. Stat. §3A	Minn. Stat. §3A.17
COVERAGE:			
• Certain state employees who spend at least 75 percent working time in direct contact with inmates or patients at Minnesota Correctional Facilities, the state-operated forensic services program, or the Minnesota Sex Offender Program	• District, appellate and supreme court judges • Retirees include former municipal and county court judges • Members belong to either the Tier 1 or Tier 2 benefit program • Tier 1 includes judges first appointed or elected before July 1, 2013 • Tier 2 includes judges first appointed or elected after June 30, 2013 • A judge with less than five years of allowable service as of December 30, 2013, may make a one-time irrevocable election into the Tier 2 benefit program.	• Legislators first elected before July 1, 1997 • Effective July 1, 1997, newly-elected legislators are covered by the Unclassified Employees Retirement Plan.	• Constitutional Officers first elected prior to July 1, 1997, and who chose to retain coverage under this plan • Effective July 1, 1997, newly-elected constitutional officers are covered by the Unclassified Employees Retirement Plan. • All current constitutional officers were elected after July 1, 1997; therefore, this plan is closed.

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Summary of Plan Provisions
Defined Benefit Retirement Funds

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
CONTRIBUTION RATES:		
• **Employee:** 5.5 percent of salary • **Employer:** 5.5 percent of salary • Employee contributions are “picked up” according to the provisions of Internal Revenue Code 414(h)	**Military Affairs:** • **Employee:** 7.1 percent of salary • **Employer:** 7.1 percent of salary **Transportation Pilots:** • **Employee:** 7.1 percent of salary • **Employer:** 7.1 percent of salary **Deputy Fire Marshals:** • **Employee:** 8.28 percent of salary • **Employer:** 9.70 percent of salary	• **Employee:** 13.4 percent of salary • Increases to 14.4 percent July 1, 2016 • **Employer:** 20.1 percent of salary • Increases to 21.6 percent July 1, 2016 • A supplemental state aid of $1 million is paid annually to the fund until both the Public Employees Retirement Association (PERA) Police and Fire Retirement Fund and the MSRS State Patrol Retirement Fund become 90 percent funded on a market value of assets basis. • Employee contributions are “picked up” according to the provisions of Internal Revenue Code 414(h)
VESTING:		
Members hired before July 1, 2010: • Three years of allowable service **Members hired after June 30, 2010:** • Five years of allowable service	• Same as General Employees	**Members hired before July 1, 2013:** • Three years of allowable service **Members hired after June 30, 2013:** • Ten years of allowable service

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
CONTRIBUTION RATES:			
• **Employee:** 9.1 percent of salary • **Employer:** 12.85 percent of salary • Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h)	**Tier 1:** • **Employee:** 9.0 percent of salary • **Employer:** 22.5 percent of salary • Tier 1 employee contributions are redirected to the Unclassified Employees Retirement Plan after the member reaches the maximum retirement benefit limit. **Tier 2:** • **Employee:** 7.0 percent of salary • **Employer:** 22.5 percent of salary **Tier 1 and Tier 2:** • Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h) • A supplemental state aid of $3 million will be paid to the fund in fiscal year 2017. That aid will increase to $6 million annually beginning in fiscal year 2018 until fully funded.	• **Employee:** 9.0 percent of salary • **Employer:** funded by annual appropriation, as needed, from the State's General Fund • Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h)	• Plan is funded by annual appropriation from the State's General Fund
VESTING:			
Members hired before July 1, 2010: • 100 percent vested after three years of allowable service **Members hired after June 30, 2010:** • Graded vesting applies, ranging from 50 percent vested after five years of allowable service to 100 percent vested after ten years of allowable service	• Five years of allowable service	• Six years of allowable service	• Same as Legislators

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Summary of Plan Provisions
Defined Benefit Retirement Funds

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
RETIREMENT ELIGIBILITY:		
Vested employees hired before July 1, 1989: • Full retirement benefits at age 65 • Full retirement benefits if age plus years of service total 90 or more (Rule of 90) • Reduced benefits at age 55 • Reduced benefits at any age with 30 years of service **Vested employees hired after June 30, 1989:** • Full retirement benefits at the age eligible for full Social Security retirement benefits (but not later than age 66) • Reduced benefits at age 55	**For vested Military Affairs members:** • Full retirement benefits at age 60 **For vested Transportation Pilots:** • Full retirement benefits at age 62 **For vested Fire Marshals:** • Full retirement benefits at age 60	**For vested employees:** • Full retirement benefits at age 55 • Reduced retirement benefits at age 50
ANNUITY OPTIONS:		
Single-Life annuity: • Benefit for the life of the member only **50, 75, or 100 percent Joint-and-Survivor with a bounce-back feature:** • Monthly benefits for the life of the member, then benefits at the chosen percentage for the life of the survivor after the member death • Monthly benefits increase (bounce back) to the higher, single-life amount if the survivor dies before the member **15-Year Certain and Life Thereafter:** • Lifetime benefit for the member for a minimum of 15 years • If the member dies before he or she has received a benefit for 15 years, the named survivor receives a benefit for the balance of the 15 years.	• Same as General Employees	• Same as General Employees

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
RETIREMENT ELIGIBILITY:			
For vested employees: • Full retirement benefits at age 55 • Reduced retirement benefits at age 50	**For vested employees:** **Tier 1:** • Normal retirement age is 65; mandatory retirement is at age 70. **Tier 2:** • Normal retirement age is 66; mandatory retirement is at age 70. **Tier 1 and Tier 2:** • Reduced retirement benefits at age 60.	**For vested employees:** • Full retirement benefits at age 62 • Reduced retirement benefits at age 55	**For vested employees:** • Full retirement benefits at age 62 • Reduced retirement benefits at age 60
ANNUITY OPTIONS:			
• Same as General Employees	• Single-Life annuity • 50, 75, or 100 percent Joint-and-Survivor with the bounce-back feature • 50, 75, or 100 percent Joint-and-Survivor without the bounce-back feature - monthly benefits will remain the same if the survivor dies before the member (without the bounce-back feature) • 15-year Certain and Life Thereafter	• Single-Life annuity with automatic 50 percent survivor coverage • 100 percent Joint-and-Survivor with the bounce-back feature	• Single-Life annuity with automatic 50 percent survivor coverage

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Summary of Plan Provisions
Defined Benefit Retirement Funds

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
BENEFIT FORMULA:		
Employees hired before July 1, 1989: • The benefit formula is the greater of: (a) 1.2 percent of a high-five average salary for the first 10 years of allowable service, plus 1.7 percent of high-five average salary for each subsequent year. Benefit is reduced for each month the member is under age 65 at the time of retirement, or reduced for each month the member is under age 62 with 30 years of allowable service. <u>OR</u> (b) 1.7 percent of high-five average salary for each year of allowable service. Benefit is reduced for each month the member is under age 65. • There is no reduction if the member's age plus years of allowable service total 90 or more (Rule of 90). **Employees hired after June 30, 1989:** • 1.7 percent of high-five average salary for each year of allowable service. Benefit is reduced for each month the member is under the normal retirement age. **For all benefit calculations:** • Salary includes wages or other periodic compensation, but excludes lump sum payments at separation, employer contributions to deferred compensation and tax sheltered annuity plans, and benevolent vacation and sick leave donation programs. • The high-five average salary is the average salary from the sixty successive month period with the highest gross salary.	• Same as General Employees	• 3.0 percent of high-five average salary for each year of allowable service up to 33 years. Contributions above the service cap are refunded at retirement. • Members with at least 28 years of service as of July 1, 2013, are not subject to the allowable service limit.

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
BENEFIT FORMULA:			
Employees hired before July 1, 2010: • 2.4 percent of high-five average salary for each year of allowable service **Employees hired after June 30, 2010:** • 2.2 percent of high-five average salary for each year of allowable service **For all benefit calculations:** • Members have the option of choosing an accelerated annuity to age 62 or 65, with an actuarially-adjusted benefit thereafter. This will provide a higher benefit until the chosen age, then a lower, permanent amount to cover the remaining retirement years.	**Tier 1 Benefit Program:** • 2.7 percent of high-five average salary for each year of allowable service prior to July 1, 1980, plus 3.2 percent of high-five average salary for each year of allowable service after June 30, 1980 • The maximum benefit is capped at 76.8 percent of the high-five average salary. **Tier 2 Benefit Program: Judges elected before July 1, 2013:** • 3.2 percent of high-five average salary for each year of allowable service prior to January 1, 2014, plus 2.5 percent of high-five average salary for each year of allowable service after December 31, 2013 **Judges elected after June 30, 2013:** • 2.5 percent of high-five average salary for each year of allowable service • No maximum benefit limit applies to Tier 2 members. **Tier 1 and Tier 2 Benefit Programs:** • The high-five average salary is determined using only the final ten years of employment.	**Legislators elected prior to January 1, 1979:** • 5.0 percent of high-five average salary for the first eight years of allowable service prior to January 1, 1979, plus 2.5 percent for subsequent years **Legislators elected after December 31, 1978:** • 2.5 percent of high-five average salary	• 2.5 percent of high-five average salary

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Summary of Plan Provisions
Defined Benefit Retirement Funds

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
POST-RETIREMENT BENEFIT INCREASES:		
• Benefit recipients receive annual 2.0 percent benefit increases on January 1. • Annual benefit increases will revert to 2.5 percent when the Plan's funded ratio reaches 90 percent or higher determined on a market value of assets (instead of an actuarial value of assets) basis for two consecutive years. • After receiving a 2.5 percent post-retirement benefit increase, annual post-retirement benefit increases will be reduced to 2.0 percent if the Plan's funded ratio falls to 85 percent or less determined on a market value of assets basis for two consecutive years, or to 80 percent or less for the most recent actuarial valuation. • Retirees who have been receiving a benefit for at least 12 full months as of June 30 of the calendar year immediately before the post-retirement benefit increase adjustment will receive the full increase. Members receiving benefits for at least one month, but less than 12 full months, will receive a pro rata increase.	• Same as General Employees	• Benefit recipients receive annual 1.0 percent benefit increases on January 1. • Annual benefit increases will revert to 1.5 percent when the Plan's funded ratio reaches 85 percent or higher determined on a market value of assets basis for two consecutive years. • After receiving a 1.5 percent post-retirement benefit increase, annual post-retirement benefit increases will be reduced to 1.0 percent if the Plan's funded ratio falls to 80 percent or less determined on a market value of assets basis for two consecutive years, or to 75 percent or less for the most recent actuarial valuation. • Annual benefit increases will revert to 2.5 percent when the Plan's funded ratio reaches 90 percent or higher determined on a market value of assets basis for two consecutive years.

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
POST-RETIREMENT BENEFIT INCREASES:			
• Same as General Employees	• Benefit recipients receive annual 1.75 percent benefit increases on January 1. • Annual benefit increases will revert to 2.0 percent when the Plan's funded ratio reaches 70 percent determined on a market value of assets basis for two consecutive years. • Annual benefit increases will revert to 2.5 percent when the Plan's funded ratio reaches 90 percent determined on a market value of assets basis for two consecutive years.	• Benefit recipients receive annual 2.0 percent benefit increases on January 1. • Annual benefit increases will revert to 2.5 percent when the funded ratio of the State Employee Retirement Fund reaches 90 percent determined on a market value of assets basis for two consecutive years. • After receiving a 2.5 percent post-retirement benefit increase, annual post-retirement benefit increases will be reduced to 2.0 percent if the funded ratio of the State Employee Retirement Fund falls to 85 percent or less determined on a market value of assets basis for two consecutive years, or to 80 percent or less for the most recent actuarial valuation.	• Same as Legislators

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Summary of Plan Provisions
Defined Benefit Retirement Funds

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
SURVIVOR BENEFITS:		
• If a member dies while still an active employee, the spouse is eligible for a 100 percent survivor annuity or a refund if: (a) The member was hired prior to July 1, 2010, and had at least three years of service at death, <u>OR</u> (b) The member was hired after June 30, 2010, and had at least five years of service at death. • Dependent children are eligible for the monthly benefit until age 20 if there is no surviving spouse.	• Same as General Employees	• If a member dies while still an active employee, the spouse is eligible for 50 percent of the final average salary if: (a) The member was hired before July 1, 2013, had three or more years of allowable service, and died before attaining age 55, <u>OR</u> (b) The member was hired after June 30, 2013, and had at least five years of allowable service. • The spouse's benefit changes to a 100 percent Joint-and-Survivor annuity when the employee would have reached age 55. • A dependent child's benefit is 10 percent of the member's final average salary plus $20 per month prorated among all dependent children.
REFUNDS:		
• When a member ends employment with the state, member contributions can be refunded. Refund will include 6.0 percent interest compounded daily until June 30, 2011, and 4.0 percent thereafter.	• Same as General Employees	• Same as General Employees

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
SURVIVOR BENEFITS:			
• Generally, the spouse of a vested employee is eligible for a 100 percent survivor annuity.	• If a member dies while still an active employee, the spouse is eligible for the larger of: (a) 25 percent of average salary <u>OR</u> (b) 60 percent of the normal retirement benefit, had the member retired at the date of death. • If a vested judge is 60 or over, the surviving spouse may elect to receive a 100 percent Joint-and-Survivor benefit.	• The spouse is eligible for 50 percent of the benefit if, upon death, the legislator was serving as a member, or was a former member with six years of service. The survivor benefit is computed as though the member were age 62 on date of death and is based on the member's allowable service or eight years, whichever is greater. • First child's benefit is 25 percent of the retirement benefit (computed as for surviving spouse) with 12.5 percent of the retirement benefit for each additional child. • The maximum benefit payable to children and the spouse is 100 percent of the retirement benefit.	• Same as Legislators
REFUNDS:			
• Same as General Employees	• Same as General Employees	• Same as General Employees	• Same as General Employees

Continued on next page

Summary of Plan Provisions
Defined Benefit Retirement Funds

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
DISABILITY ELIGIBILITY AND BENEFIT CALCULATION		
Disability Eligibility: • (a) At least three years of allowable service and meeting the definition of disability OR (b) At least five years of service if hired on or after June 30, 2010, and meeting the definition of disability. • Totally and permanently disabled is defined as the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that has existed or is expected to continue for a period of at least one year. **Calculation:** • Disability benefits are calculated following the same formula as a regular retirement benefit.	**Disability Eligibility:** • At least three years of service and unable to perform duties **Calculation:** • **Military Affairs:** Benefit calculation follows the General Plan formula with no reduction • **Pilots:** 75 percent of salary for a maximum of five years • **Deputy Fire Marshals:** Minimum benefit is calculated as though the member had 20 years of service for a job-related disability, 15 years of service for a non job-related disability	**Disability Eligibility:** • **Job-related:** Unable to perform job duties as a direct result of a disability relating to an act of duty. There is no service time requirement. • **Regular (non job-related):** At least one year of service and unable to perform duties • **Both Regular and Job Related:** Member is reclassified from disabled to retired at age 55 (age 65 if disabled prior to July 1, 2015) **Calculation:** • **Job Related:** 60 percent of high-five average salary, plus 3 percent for each year beyond 20 years of allowable service • **Regular:** Normal State Patrol benefit based on salary and years of service. If disability occurs before 15 years of service, the benefit is calculated with a service credit of 15 years.

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS	ELECTIVE STATE OFFICERS
DISABILITY ELIGIBILITY AND BENEFIT CALCULATION			
Disability Eligibility: • **Job-related:** The disability must result from an incident while performing duties of the job which present inherent dangers to the employee. There is no service time requirement • **Regular (non job-related):** • For employees hired before July 1, 2009: one year of covered correctional service • For employees hired after June 30, 2009: employee must be vested • **Both Regular and Job Related:** Member is reclassified from disabled to retired at age 55 (age 65 if disabled prior to July 1, 2009) **Calculation:** • **Job Related:** 50 percent of the average of the high-five average salary plus 2.4 percent (2.2 percent if hired after June 30, 2010) for each year beyond 20 years and ten months of allowable service • **Regular:** Normal Correctional benefit based on salary and years of service. If hired before July 1, 2009, the benefit is calculated with a minimum of 15 years service. If hired after June 30, 2009, there is no minimum benefit.	**Disability Eligibility:** • Member is permanently unable to perform duties of a judge. **Calculation:** • Prior to commencement of disability benefits, the member will receive a continuation of full salary for one year, but not beyond age 70. • If disability continues after one year, disability benefits are equal to the normal retirement benefit or 25 percent of high-five average salary, whichever is larger. There is no early-retirement reduction applied.	• None	• None

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Summary of Plan Provisions
Defined Contribution Retirement Funds

The following is a summary of the major plan provisions for MSRS' defined contribution retirement plans.

Plan provisions specific to MSRS' defined benefit plans begin on page 24 of this section.
Plan descriptions are not all inclusive. Descriptions provide general information only.

UNCLASSIFIED EMPLOYEES	HEALTH CARE SAVINGS
STATUTORY OR LEGAL REFERENCES:	
Minn. Stat. §352D • Internal Revenue Code (IRC) Section 401(a) Plan • Internally administered by MSRS prior to July 1, 2009	Minn. Stat. §352.98 • Plan document is available online at www.msrs.state.mn.us/pdf/HCSP-Plan.pdf • Created in 2001 through state legislation • The trust is exempt from federal income tax through Private Letter Ruling. • Internally administered by MSRS prior to July 1, 2009
COVERAGE:	
• Specified employees in unclassified positions	• Available to all public employees in the state of Minnesota • Negotiated by bargaining unit or personnel department
CONTRIBUTION RATES:	
Employee: 5.5 percent of salary **Employer:** 6.0 percent of salary	• Employee or negotiated employer funding criteria is bargained per labor contract • May include severance pay
BENEFITS:	
• Account balance (contributions and investment gains or losses) or annuity benefit withdrawal based on age and 6.0 percent interest assumption	• Account balance which must be used for qualifying health-related expenses • The annual maximum Health Care Savings Plan reimbursement limit is $29,000 for fiscal year 2016 for non-insurance premium, qualified health care expenses.
REFUNDS:	
• Account value	• None • After participant's death, legal dependents, or if none exist, beneficiaries, may use the remaining account balance for eligible healthcare reimbursements, as designated in the Internal Revenue Code. • Non-dependent beneficiary reimbursements are taxable.

MN DEFERRED COMPENSATION	HENNEPIN COUNTY SUPPLEMENTAL
STATUTORY OR LEGAL REFERENCES:	
Minn. Stat. §352.965 - 352.97 • IRC Section 457(b) Plan • Plan document is available online at www.mndcplan.com/PlanDocument.htm	Minn. Stat. §383B.46 - 383B.52 • Non-qualified Plan • Internally administered by MSRS from December 1, 2005 through July 1, 2009
COVERAGE:	
• Optional for all state employees and political subdivision employees	• Optional for employees of Hennepin County, Minnesota, who began employment prior to April 14, 1982
CONTRIBUTION RATES:	
• Member selected tax-deferred amount, with a $10 per pay period minimum • After-tax Roth contribution option is available for eligible employees. • Subject to annual calendar year 2016 IRS contribution limit of $18,000 for members under 50 years old, $24,000 for members over 50	• **Employee:** 1.0 percent of salary • **Employer:** 1.0 percent of salary
BENEFITS:	
• Account balance	• Account balance
REFUNDS:	
• None; After a member is eligible to take a withdrawal, withdrawal of the full value of an account is reflected as a refund on the Statement of Changes in Fiduciary Net Position.	• None; After a member is eligible to take a withdrawal, withdrawal of the full value of an account is reflected as a refund on the Statement of Changes in Fiduciary Net Position.

Continued on next page

Summary of Plan Provisions
Defined Contribution Retirement Funds

UNCLASSIFIED EMPLOYEES	HEALTH CARE SAVINGS
INVESTMENT OPTIONS:	
Supplemental Investment Fund (SIF) Investment Options: • Money Market Fund • Stable Value Fund • Bond Fund • Balanced Fund • U.S. Stock Index Fund • U.S. Stock Actively Managed Fund • Broad International Stock Fund • Effective July 1, 2015, the SBI renamed investment options to more descriptive titles.	**Supplemental Investment Fund (SIF) Investment Options:** • Money Market Fund • Stable Value Fund • Bond Fund • Balanced Fund • U.S. Stock Index Fund • U.S. Stock Actively Managed Fund • Broad International Stock Fund • Effective July 1, 2015, the SBI renamed investment options to more descriptive titles.
ADMINISTRATIVE FEES:	
• $2 per month for an account balance $10,000 or less • $4 per month for an account balance that is $10,000.01 to $30,000 • $6 per month for an account balance that is $30,000.01 to $90,000 • $8 per month for an account balance exceeding $90,000 • Plan fees only apply to contributions made after July 1, 1992. Prior to July 1, 1992, participants were charged a front-end fee.	• 0.65 percent of each participant's account balance, prorated and deducted from participant accounts on a monthly basis • Maximum annual fee: $140
WHEN USED / WITHDRAWAL EVENTS:	
• Termination of employment (lump-sum distribution) • Age 55 retirement with any length of service (monthly benefits)	• Termination of employment • After retirement • Upon receiving a disability retirement • Certain situations in which employees are rehired in a position with their previous public employer
WITHDRAWAL OPTIONS:	
• Single-Life Annuity • 50, 75, or 100 percent Joint-and-Survivor with a bounce-back feature • 15-Year Certain and Life Thereafter	• Reimbursements for qualified health care expenses

MN DEFERRED COMPENSATION	HENNEPIN COUNTY SUPPLEMENTAL
INVESTMENT OPTIONS:	
• Various retail mutual funds contracted by the Minnesota State Board of Investment (SBI) • Self-directed brokerage account through TD Ameritrade • The SBI Supplemental Investment Fund Fixed Interest Stable Value Fund and Money Market Fund • Target Date Retirement Funds managed by State Street Global Advisors • Effective July 1, 2015, the SBI renamed investment options to more descriptive titles.	**Supplemental Investment Fund (SIF) Investment Options:** • Money Market Fund • Stable Value Fund • Bond Fund • Balanced Fund • U.S. Stock Index Fund • U.S. Stock Actively Managed Fund • Broad International Stock Fund • Effective July 1, 2015, the SBI renamed investment options to more descriptive titles.
ADMINISTRATIVE FEES:	
• 0.05 percent of participant's account balance, prorated and deducted from participant accounts on a monthly basis • Maximum annual fee: $50 on the first $100,000 in the participant's account • $30 annual fee for members opting to use the Self-directed brokerage account option through TD Ameritrade • Program fee charged on the managed account balance for participants who opt to use a professional account manager through the record keeper	• 0.06 percent of each participant's account balance, prorated and deducted from participant accounts on a monthly basis
WHEN USED / WITHDRAWAL EVENTS:	
• Termination of service or death • Unforeseeable emergency	• Termination of service or death • Retirement • Unforeseeable emergency
WITHDRAWAL OPTIONS:	
• Lump-sum or rollover to qualified financial institution • Ongoing withdrawals • Various annuities, including a fixed annuity provided through an insurance company • Combinations of the above options • Required minimum distributions begin in the year participant reaches age 70½.	• Lump-sum • Monthly withdrawals for five years • Annual withdrawals for five years

Continued on next page

Summary of Plan Provisions
Defined Contribution Retirement Funds

UNCLASSIFIED EMPLOYEES	HEALTH CARE SAVINGS
ANNUITY AND DISABILITY OPTIONS FOR EMPLOYEES ELECTING COVERAGE IN GENERAL EMPLOYEES RETIREMENT PLAN:	
• Employees appointed prior to July 1, 2010, may elect to transfer their Unclassified Plan service to the General Plan if they have ten or more years of service, or employees may select General Plan coverage in the first year of employment in the Unclassified Plan. • Employees appointed after June 30, 2010, may elect to be covered by the General Plan within seven years of their appointment.	• Not applicable

GENERAL INFORMATION FOR ALL DEFINED CONTRIBUTION PLANS:

- Effective July 1, 2015 Empower Retirement™ began providing recordkeeping services, and MSRS counsels plan participants and processes all distributions and other requests.

  Empower Retirement™ refers to services offered in the retirement markets by Great-West Life & Annuity Insurance Company.

MN DEFERRED COMPENSATION	HENNEPIN COUNTY SUPPLEMENTAL
ANNUITY AND DISABILITY OPTIONS FOR EMPLOYEES ELECTING COVERAGE IN GENERAL EMPLOYEES RETIREMENT PLAN:	
• Not applicable	• Not applicable

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FINANCIAL SECTION

MSRS 2016 Comprehensive Annual Financial Report

Fostering Sustainable Retirement, Health Care Savings, and Deferred Compensation Plans

Independent Auditor's Report

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

Independent Auditor's Report

Members of the Board of Directors
Minnesota State Retirement System

Ms. Erin Leonard, Executive Director
Minnesota State Retirement System

Report on the Financial Statements

We have audited the accompanying financial statements of the Minnesota State Retirement System (MSRS), which included the statement of fiduciary net position as of June 30, 2016, 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 MSRS's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the

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circumstances, but not for the purpose of expressing an opinion on the effectiveness of MSRS'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.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Minnesota State Retirement System as of June 30, 2016, and the changes in financial position for the period then ended in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter – GASB and Statutory Financial Requirements

Minnesota Statutes 2016, 356.20, require MSRS to include in its financial report information using funding-focused statutory assumptions and methodologies. For its fiscal year 2016 financial report, the funding-focused information differs from the GASB-based information primarily for the following reasons:

(1) The discount rates required by statute for funding purposes was significantly higher than the discount rates used for financial reporting purposes. The discount rate is the rate used to bring the projected benefit payments to the present value of those benefits (the pension liability). A higher discount rate results in a smaller pension liability.

(2) For funding purposes, statutes require investment gains and losses be recognized over a five-year period to "smooth" the volatility that can occur from year to year. For GASB financial reporting purposes, assets are valued at fair (market) value as of the end of the fiscal year.

Including funding-focused information was necessary for MSRS to comply with state law and had no effect on our audit opinion.

Members of the Board of Directors
Ms. Erin Leonard, Executive Director
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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, who 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 MSRS'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 Content, 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.

Members of the Board of Directors
Ms. Erin Leonard, Executive Director
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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 have issued our report, also dated December 21, 2016, on our consideration of the Minnesota State Retirement System's internal controls 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 of our testing of internal controls over financial reporting and compliance and the results of that testing and not to provide an opinion on the internal controls 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.

James R. Nobles
Legislative Auditor

Cecile M. Ferkul, CPA, CISA
Deputy Legislative Auditor

December 21, 2016
Saint Paul, Minnesota

Management's Discussion and Analysis

We, the management of the Minnesota State Retirement System (MSRS), present this discussion and analysis of MSRS' financial activities for the fiscal year ended June 30, 2016. We encourage you to read the information contained in this narrative in conjunction with the Letter of Transmittal that begins on page 12, the financial statements with explanatory notes, and required supplementary information contained in this section of the Comprehensive Annual Financial Report (CAFR).

Financial Highlights

• Overall, MSRS' financial condition declined during fiscal year 2016. MSRS' fiduciary net position for all pension trust funds decreased $407.12 million (1.99 percent), from almost $20.47 billion as of June 30, 2015, to over $20.06 billion as of June 30, 2016.

• Total additions to all MSRS pension trust funds decreased over $799.33 million (47.78 percent) during fiscal year 2016, from $1.67 billion for fiscal year 2015 to over $873.53 million for fiscal year 2016. This decrease is primarily the result of a slump in financial market performance in fiscal year 2016.

• For MSRS' defined benefit retirement funds, the investment rate of return (net of fees) for the state of Minnesota's Combined Funds, the investment pool of which MSRS owns a share, decreased substantially, from 4.4 percent for fiscal year 2015 to negative 0.1 percent for fiscal year 2016. The 2016 investment performance was the lowest since fiscal year 2009, when the Combined Funds had a loss of 18.8 percent. Additional information about all MSRS retirement fund investment activities can be found in the *Investment Section* of this report.

• For MSRS' defined contribution retirement funds, participants' fiscal year 2016 investment performance varied depending upon the types of assets held in their securities portfolio. The average fiscal year 2016 rates of return ranged from a low of a negative 10.0 percent for the Fidelity Diversified International Stock Fund to a high of 6.1 percent for the Vanguard Total Bond Market Index Fund.

• Total deductions from all MSRS pension trust funds increased almost $24.11 million (1.92 percent) from almost $1.26 billion for fiscal year 2015 to over $1.28 billion for fiscal year 2016. Much of this change was due to defined benefit annuity payments which increased $48.45 million (6.01 percent) due to annual post-retirement benefit increases of up to 2.00 percent and the growth in the number of retirees. Plan member refunds decreased $28.59 million (9.97 percent).

• Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 actuarial valuation results indicated that on June 30, 2016, MSRS' governmental employers participating in MSRS' largest cost-sharing defined benefit retirement plans that compose the State Employees Retirement Fund, incurred a Net Pension Liability of $12.40 billion. As of this measurement date, Fiduciary Net Position for this fund as a percentage of the Total Pension Liability was 47.51 percent, representing a decrease of 40.81 percent from a ratio of 88.32 percent as of the June 30, 2015, measurement date. The increase in Total Pension Liability is due to a number of factors, including a change in the long-term expected rate of return actuarial assumption from 7.9 percent to 7.5 percent.

• "Funding" actuarial valuation results revealed the funding progress for MSRS' four largest defined benefit retirement funds deteriorated during fiscal year 2016, primarily due to investment losses and changes in actuarial assumptions, including mortality rates. On an actuarial value of assets basis, MSRS' largest defined benefit retirement fund, the State Employees Retirement Fund, was 81.56 percent funded as of the July 1, 2016, actuarial valuation in comparison to 85.72 percent funded as of the July 1, 2015, actuarial valuation. On a market value of assets basis, this fund was 78.39 percent funded based on the 2016 actuarial valuation results; funding status declined in comparison to the 88.89 percent funded ratio reported as of the July 1, 2015, actuarial valuation. This decline was due primarily to lower investment gains for the 2016 fiscal year and an increase in pension liabilities resulting from retiree growth and changes in economic actuarial assumptions.

Overview of the Financial Statements

MSRS administers five defined benefit retirement funds and four defined contribution funds. The defined benefit funds include the State Employees, State Patrol, Correctional Employees, Judges, and Legislators Retirement Funds. The defined contribution funds include the Unclassified Employees Retirement, the Health Care Savings, the Minnesota Deferred Compensation, and the Hennepin County Supplemental Retirement Funds. All of these pension trust funds are fiduciary funds for governmental accounting and financial reporting purposes.

This CAFR includes two basic financial statements for MSRS' pension trust funds:

- The *Statement of Fiduciary Net Position*, found on pages 58-59, and
- The *Statement of Changes in Fiduciary Net Position*, found on pages 60-61.

Consistent with *Minnesota Statutes,* Chapter 356.20, the purpose of these financial statements, along with the accompanying *Notes to the Financial Statements* (found on pages 62-93) and *Required Supplementary Information* (found on pages 94-109), is to present the financial position and results of operations of MSRS' retirement funds to our membership, participating employers, and other financial statements users. This CAFR also provides readers with financial information in a format that is reasonably comparable to that of other public employee pension trust funds. These financial statements and explanatory notes are prepared in conformance with generally accepted governmental accounting principles. As indicated in the *Notes to the Financial Statements*, MSRS' financial statements are reported using the accrual basis of accounting.

The *Statement of Fiduciary Net Position* provides a snapshot of the financial resources and obligations for all of MSRS' pension trust funds on June 30, the last day of each fiscal year. The assets available and the liabilities owed are reported at fair value as of that date. The difference between the sum of total assets and deferred outflows of resources and the sum of total liabilities and deferred inflows of resources is net position restricted for pensions. This amount is available for payment of future pension benefits or other obligations. Comparisons of total assets and deferred outflows, total liabilities and deferred inflows, and net position restricted for pensions as of June 30, 2016 and 2015 are depicted in the table below.

Summary Statement of Fiduciary Net Position – All MSRS Pension Trust Funds
As of June 30, 2016 and 2015
(Dollars in thousands)

	FY 2016	FY 2015	Change	% Change
Total Assets and Deferred Outflows	$22,057,538	$21,956,922	$100,616	0.46%
Total Liabilities and Deferred Inflows	1,994,892	1,487,161	507,731	34.14
Net Position Restricted for Pensions	**$20,062,646**	**$20,469,761**	**$(407,115)**	**(1.99)%**

Total assets as of June 30, 2016, equal almost $22.06 billion, increased nearly $100.62 million (0.46 percent) from the prior year. This growth was primarily the result of a moderate investment return for the short-term investment securities for fiscal year 2016, as well as an increase in securities lending collateral.

Total liabilities of $1.99 billion as of June 30, 2016, increased $507.73 million (34.14 percent) from the prior year. This is due to increases in security lending collateral, which correspond to the securities lending collateral reflected in total assets.

This fiscal year, the decrease in the net position restricted for pensions was $407.12 million (1.99 percent). This decrease was due to lower investment income resulting from the negative 0.1 percent investment return for fiscal year 2016. The investment return declined significantly in comparison to the fiscal year 2015 return of 4.4 percent, and was far less than the expected rate of return of 8.0 percent. Plan member and employer contributions were not adequate to offset the investment losses and the payment of benefits in fiscal year 2016.

MSRS had no deferred outflows or inflows of resources as of June 30, 2016

The *Statement of Changes in Fiduciary Net Position* summarizes the financial transactions that occurred during the fiscal year. Additions include contributions, net investment income, and other revenue sources. Deductions include annuity benefit payments from our defined benefit retirement funds, ongoing withdrawals from our defined contribution retirement funds, refunds, and other administrative expenses.

Total additions by major source and total deductions by type for the fiscal years ended June 30, 2016 and 2015 are depicted on the following page.

Continued on next page

Management's Discussion and Analysis

Summary Statement of Changes in Fiduciary Net Position – All MSRS Pension Trust Funds
For the fiscal years ended June 30, 2016 and 2015
(Dollars in thousands)

	FY 2016	FY 2015	Change	% Change
Additions (by Major Source)				
Plan Member Contributions	$565,908	$566,625	$(717)	(0.13)%
Employer Contributions	212,441	205,839	6,602	3.21
Investment Income (Net)	58,774	856,069	(797,295)	(93.13)
Other (includes transfers from other plans)	36,408	44,332	(7,924)	(17.87)
Total Additions	**$873,531**	**$1,672,865**	**$(799,334)**	**(47.78)%**
Deductions (by Type)				
Benefits, Withdrawals and Reimbursements	$973,653	$913,552	$60,101	6.58%
Refunds	258,270	286,858	(28,588)	(9.97)
Recordkeeper and Custodian Expenses	4,163	2,956	1,207	40.83
Administrative Expenses	17,449	15,367	2,082	13.55
Other (includes transfers to other plans)	27,111	37,808	(10,697)	(28.29)
Total Deductions	**$1,280,646**	**$1,256,541**	**$24,105**	**1.92%**
Net Increase (Decrease) in Net Position Restricted for Pensions	**$(407,115)**	**$416,324**	**$(823,439)**	**(197.79)%**

Total additions decreased over $799.33 million (47.78 percent) to just under $874 million, primarily due to the decrease in net investment income during fiscal year 2016. The fiscal year 2016 rate of return on investments was negative 0.1 percent, a significant decline in comparison to the fiscal year 2015 return of 4.4 percent, and far less than the expected rate of return of 8.0 percent.

For MSRS' defined benefit retirement funds, the state of Minnesota's Combined Funds, the investment pool of which MSRS owns a share, reported a negative 0.1 percent investment rate of return (net of fees) for fiscal year 2016. The bond pool, real estate investments pool, and private equity pool all earned positive returns, at 5.9 percent, 8.4 percent, and 7.4 percent respectively. International equities, resource investments and yield orientated investments each garnered a negative return, with negative 9.7 percent, negative 24.2 percent, and negative 3.7 percent respectively. Domestic stocks had a 0.0 percent return.

For MSRS' defined contribution retirement funds, the average fiscal year 2016 rates of return for investment options ranged from a low of a negative 10.0 percent for the Fidelity Diversified International Stock Fund to a high of 6.1 percent for the Vanguard Total Bond Market Index Fund.

Total plan member and employer contributions increased by almost $5.89 million (0.76 percent) for fiscal year 2016. This increase is mostly due to increases in active members in the three largest defined benefit retirement funds during fiscal year 2016.

Total deductions increased $24.1 million (1.92 percent) from almost $1.26 billion for fiscal year 2015 to just over $1.28 billion for fiscal year 2016. This change was largely due to an increase in annuity benefits, deferred compensation withdrawals, and health care reimbursements to members. On January 1, 2016, retirees in the State

Employees, Correctional, and Legislators Retirement Plan received annual post-retirement benefit increases of 2.0 percent, eligible members in the State Patrol Retirement Fund received a 1.0 percent annual post-retirement benefit increase, and retirees in the Judges Retirement Plan received a 1.75 percent annual post-retirement benefit increase. Annuity benefits also increased due to growth in the number of benefit recipients, from about 41,000 as of June 30, 2015, to nearly 43,000 as of June 30, 2016. Health Care Savings Plan reimbursements rose primarily due to the increase in the number of member retirements and service terminations. Refunds decreased due to a decline of refunds processed in the Unclassified Employee and Minnesota Deferred Compensation plans.

The *Notes to the Financial Statements* are an integral part of the financial statements. They provide additional information relevant to obtain a full understanding of the financial statements. The notes are divided into five sections. Each section is described below

1. *Summary of Significant Accounting Policies* – This section provides a summary of significant accounting policies, including the basis of financial statement presentation and accounting method applied in recording financial transactions, investment policies, and policies MSRS abides by in the valuation of assets, liabilities, revenue and expenses reported on the financial statements, where generally accepted accounting principles permit more than one approach.

2. *Accounting Changes* – This section identifies and describes the new governmental accounting and financial reporting principles, promulgated by GASB, that MSRS implemented during fiscal year 2016.

3. *Description of System and Plans* – This section describes MSRS as an organization, and key membership, contribution, and benefit or distribution provisions for each of its retirement funds.

4. *Detailed Notes on All Activities and Funds* – This section elaborates on various investment-related risks, and provides computations for certain asset, liability, and transfer amounts reported on the financial statements.

5. *Required Supplementary Information (RSI)* –This section of the notes identifies required supplementary information that follows the basic financial statements and the notes to the financial statements.

Required Supplementary Information consists of three schedules, listed below, and related notes:

- *Schedule of Changes in the Employer Net Pension Liability and Related Ratios*
- *Schedule of Employer Contributions*
- *Schedule of Investment Returns*

These schedules are intended to show information for the most recent 10 years. However, for all but the *Schedule of Employer Contributions*, only the information for the past three years is presented. Additional yearly data will be displayed as it becomes available. The presentation of multi-year data is designed to provide some economic context regarding amounts reported in the financial statements, and to provide historical context for each pension plan's fiduciary net position related to the total pension liability. Significant assumptions used in the calculation of actuarially determined contributions and factors significantly affecting trends in the amounts reported are disclosed in the notes presented with each RSI schedule.

Supplementary schedules include the *Schedule of Administrative Expenses,* the *Summary Schedule of Commissions and Payments to Consultants*, and the *Schedule of Investment Expenses*. These schedules summarize the operating expenses MSRS incurred during fiscal year 2016 to administer its defined benefit and defined contribution retirement funds.

With the GASB Statements No. 67 and No. 68 implementation in fiscal year 2014, we added two new supplemental employer schedules to the *Financial Section* of this report: a *Schedule of Employer Allocations* for our cost-sharing pension plans (the State Employees and Correctional Employees Retirement Funds), and the *Schedule of Pension Amounts by Employer* for each defined benefit retirement fund. These schedules contain essential financial data, including net pension liability, deferred outflows and deferred inflows of resources, and pension income or pension expense for governmental employers participating in our defined benefit retirement plans to report in their own financial statements.

Continued on next page

Management's Discussion and Analysis

Financial Analysis of MSRS' Individual Funds

Each of MSRS' defined benefit and defined contribution retirement funds have some characteristics that are different from the others, such as membership served. The MSRS retirement funds also have some characteristics in common, such as the shared investment pools. The following paragraphs highlight events or conditions that had a significant effect on each fund's financial position or results of operations during fiscal year 2016.

Analysis of the Defined Benefit Funds

The following two tables compare various performance measures to the previous fiscal year for each of the following defined benefit funds: the State Employees Retirement Fund (SERF), the State Patrol Retirement Fund (SPRF), the Correctional Employees Retirement Fund (CORR) and the Judges Retirement Fund (JRF). The Legislators Retirement Fund is excluded from this analysis because the two plans that compose it, the Legislators and the Elective State Officers Retirement Plans, have been closed to new membership since July 1, 1997, and they are funded primarily by annual state of Minnesota General Fund appropriations.

Summary Statement of Fiduciary Net Position – MSRS Pension Trust Funds
Defined Benefit Plans
For the Fiscal Years Ended June 30, 2016 and 2015
(Dollars in thousands)

	SERF	SPRF	CORR	JRF
Total Assets, as of 06/30/2016	$12,820,470	$719,490	$1,028,049	$189,377
Total Assets, as of 06/30/2015	12,835,604	732,651	1,002,818	192,455
Change in Total Assets	$(15,134)	$(13,161)	$25,231	$(3,078)
Percentage Change	(0.12)%	(1.80)%	2.52%	(1.60)%
Total Liabilities, as of 06/30/2016	$1,597,405	$89,498	$128,457	$23,472
Total Liabilities, as of 06/30/2015	1,197,285	68,121	93,816	17,875
Change in Total Liabilities	$400,120	$21,377	$34,641	$5,597
Percentage Change	33.42%	31.38%	36.92%	31.31%
Total Net Position Restricted for Pensions, as of 06/30/2016	$11,223,065	$629,992	$899,592	$165,905
Total Net Position Restricted for Pensions, as of 06/30/2015	11,638,319	664,530	909,002	174,580
Change in Net Position Restricted for Pensions	$(415,254)	$(34,538)	$(9,410)	$(8,675)
Percentage Change	(3.57)%	(5.20)%	(1.04)%	(4.97)%

Summary Statement of Changes in Fiduciary Net Position – MSRS Pension Trust Funds
Defined Benefit Plans
For the Fiscal Years Ended June 30, 2016 and 2015
(Dollars in thousands)

	SERF	SPRF	CORR	JRF
Total Additions, year ended 06/30/2016	$316,140	$23,456	$52,436	$13,796
Total Additions, year ended 06/30/2015	827,212	52,840	89,165	20,977
Change in Total Additions	$(511,072)	$(29,384)	$(36,729)	$(7,181)
Percentage Change	(61.78)%	(55.61)%	(41.19)%	(34.23)%
Total Deductions, year ended 06/30/2016	$731,394	$57,994	$61,846	$22,471
Total Deductions, year ended 06/30/2015	687,497	55,650	57,219	21,953
Change in Total Deductions	$43,897	$2,344	$4,627	$518
Percentage Change	6.39%	4.21%	8.09%	2.36%
Net Increase (Decrease) for the Fiscal year ended 06/30/2016	$(415,254)	$(34,538)	$(9,410)	$(8,675)
Net Increase (Decrease) for the Fiscal year ended 06/30/2015	139,715	(2,810)	31,946	(976)
Change in Net Increase (Decrease) of Net Position Restricted for Pensions	$(554,969)	$(31,728)	$(41,356)	$(7,699)
Percentage Change	(397.22)%	1,129.11%	(129.46)%	788.83%

State Employees Retirement Fund

Fiduciary net position for the State Employees Retirement Fund, MSRS' largest defined benefit retirement fund, totaling $11.22 billion, decreased $415.25 million (3.57 percent), because of a disappointing investment performance during fiscal year 2016 in comparison to the previous two fiscal years. Member and employer contributions were inadequate to offset investment losses and the benefits paid to retirees, their survivors and disabled members.

Total additions decreased $511.07 million (61.78 percent) to $316.14 million. The decrease from the previous year correlates almost entirely to the substantial decline in investment income, from a return in fiscal year 2015 of 4.4 percent to a return in fiscal year 2016 of negative 0.1 percent.

Total plan member and employer contributions increased $9.40 million (3.18 percent) to $305.02 million due to payroll growth and an increase in active members.

Total deductions increased nearly $43.89 million (6.39 percent) to almost $731.39 million, largely due to increased annuity benefit distributions. Annuity benefits increased $41.54 million (6.24 percent) to $707.36 million due to growth in the number of retirees, survivors and disabled members (up 4.05 percent to 37,952 members) and payment of a 2.0 percent post-retirement benefit increase to retirees and other benefit recipients in January 2016. Refunds increased $1.32 million (10.97 percent) to $13.35 million during this fiscal year.

Continued on next page

Management's Discussion and Analysis

State Patrol Retirement Fund

The fiduciary net position for the State Patrol Retirement Fund decreased over $34.54 million (5.20 percent) to $629.99 million due to the lower than anticipated investment performance during fiscal year 2016.

Total additions decreased $29.38 million (55.61 percent) to $23.46 million. A drop in investment income of $29.68 million (102.68 percent) accounted for the entire decline in total additions. Total plan member and employer contributions increased slightly to $23.23 million (1.28 percent), due to payroll and active member growth. Other income includes $1 million of supplemental state aid that will continue to be received annually until the fund and the Public Employees Retirement Association's Police and Fire Fund both reach a 90 percent funded ratio, determined on a market value of assets basis.

Total deductions increased $2.34 million (4.21 percent) to $57.99 million. The increase is a result of annuity benefit distributions, which increased $2.23 million (4.02 percent) to $57.70 million due to growth in the number of retirees, survivors and disabled members (a 2.04 percent increase to 1,048 benefit recipients as of June 30, 2016) and payment of a 1.0 percent post-retirement benefit increase to retirees and other benefit recipients in January 2016. Refunds increased $64 thousand (426.67 percent) to $79 thousand during the fiscal year.

Correctional Employees Retirement Fund

The fiduciary net position for the Correctional Employees Retirement Fund decreased $9.41 million (1.04 percent) to just under $900 million. Like the State Employees Retirement Fund, member and employer contributions were inadequate to offset investment losses and the benefits paid to retirees, their survivors and disabled members.

Total additions decreased $36.73 million (41.19 percent) to $52.44 million. The decrease from the previous year reflects the substantial investment income decline of $38.82 million (100.5 percent). The loss was only slightly offset by an increase in total plan member and employer contributions, which increased $2.09 million (4.14 percent) to $52.63 million, due to payroll growth.

Total deductions increased $4.63 million (8.09 percent) to $61.85 million, largely due to annuity benefit distributions and refunds. Annuity benefits increased $4.14 million (7.53 percent) to $59.05 million due to growth in the number of benefit recipients and to the payment of a 2.0 percent post-retirement benefit increase to retirees and other benefit recipients in January 2016. Retiree, survivor and disabled member counts in fiscal year 2016 increased 5.38 percent to 2,918. Refunds increased $305 thousand (19.18 percent) to almost $1.90 million during the fiscal year.

Judges Retirement Fund

Fiduciary net position for the Judges Retirement Fund decreased $8.68 million (4.97 percent) to $165.91 million due to the unfavorable investment performance during fiscal year 2016.

Total additions decreased $7.18 million (34.23 percent) to $13.80 million. A net investment loss of $186 thousand was a fraction of the fiscal year 2015 investment activity, decreasing almost $7.76 million (102.46 percent) from a $7.57 million investment gain in fiscal year 2015. Contributions increased slightly by $577 thousand (4.30 percent) to $13.98 million for fiscal year 2016.

Total deductions increased $518 thousand (2.36 percent) to $22.47 million during fiscal year 2016 due to an increase in annuity benefits paid. Annuity benefits increased $485 thousand (2.22 percent) to $22.38 million for fiscal year 2016. The change results from growth in the number of retired judges, their survivors and disabled individuals (benefit recipient counts increased 1.16 percent from fiscal year 2015 to fiscal year 2016) and payment of a 1.75 percent post-retirement benefit increase to retirees and other benefit recipients in January 2016.

Legislators Retirement Fund

Fiduciary net position for the Legislators Retirement Fund Fund decreased $3.47 million (101.20 percent) to a negative $41 thousand as of June 30, 2016. The negative balance is a result of timing differences between the allocation of administrative expenses between the MSRS defined benefit plans, and the determination of the balances to be transferred to the Legislators Retirement Fund via General Fund appropriation. The remaining assets in the fund were depleted during fiscal year 2016, so future benefit payments and administrative expenses will be paid by contributions from the 23 remaining active members of the plan and by General Fund appropriation. The Legislators Fund consists of two retirement plans closed to new membership, so the depletion of assets was anticipated.

Total assets decreased $3.11 million (67.91 percent) to $1.47 million. These funds are due back to the State's General Fund.

Total additions of $5.11 million for fiscal year 2016 are up $1.46 million (39.92 percent) from fiscal year 2015. Total additions consist of a slight investment loss of $69 thousand, recognized prior to the depletion of assets, in addition to minimal plan member contributions of $89 thousand, and a General Fund appropriation of $5.09 million.

Total deductions increased $100 thousand (1.18 percent) to $8.58 million during fiscal year 2016. Annuity benefits increased $55 thousand (0.65 percent) due to payment of a 2.0 percent post-retirement benefit increase in January 2016. There was also a refund of $40 thousand in 2016. Fiscal year 2015 reported no refunds.

Analysis of the Defined Contribution Funds

MSRS administers four defined contribution retirement funds: the Unclassified Employees Retirement Fund, the Health Care Savings Fund, the Minnesota Deferred Compensation Fund, and the Supplemental Retirement Fund for Hennepin County. Each of these funds was affected by the same investment market conditions that impacted the MSRS defined benefit retirement funds. However, because individual members select their own investment options, comparisons of net participant's investment income between fiscal years 2016 and 2015 for each defined contribution fund are not meaningful.

For each of MSRS' defined contribution funds, the amount of securities lending collateral recognized as an asset and a liability on the *Statement of Fiduciary Net Position* as of June 30, 2016, increased significantly in comparison to the amounts reported on June 30, 2015. These increases are attributable to the growth in lendable assets during the fiscal year.

Certain non-investment related financial activities of MSRS' defined contribution funds merit mention.

Unclassified Employees Retirement Fund

The fiduciary net position for the Unclassified Employees Retirement Fund decreased $10.30 million (3.27 percent) to $304.77 million as of June 30, 2016. The decrease was due to refunds and transfers out of the plan to the State Employees Retirement Fund, which outpaced the moderate investment growth.

Total additions decreased $11.02 million (38.84 percent) as a result of the lower investment returns, from $28.37 million in additions for fiscal year 2015 to $17.35 million for fiscal year 2016. Contributions decreased (3.48 the result of a decrease in the number of active participants from 1,514 to 1,380 (8.85 percent). Some members chose to transfer into the Unclassified Employees Retirement Fund from the State Employees Retirement Fund, which is reflected in the $470 thousand in Transfers from Other Plans.

Total deductions decreased $11.39 million (29.17 percent) from $39.04 million for fiscal year 2015 to $27.65 million for fiscal year 2016. This is due to a decrease in refunds, as well as a decrease in Unclassified Employees Retirement Fund participants electing defined benefit retirement coverage under the State Employees Retirement Fund during the fiscal year. Transfers to other plans due to this election totaled $20.48 million for fiscal year 2016, down $9.74 million (32.23 percent) since fiscal year 2015.

Health Care Savings Fund

For MSRS' fastest-growing plan, the Health Care Savings Fund, membership grew significantly during fiscal year 2016. Total participant counts increased 6,995 (7.01 percent) to over 106,800 participants as of June 30, 2016.

Fiduciary net position for the fund increased $61.31 million (8.01 percent) during fiscal year 2016 to $826.99 million.

Member contributions decreased 878 thousand (0.67 percent). Investment earnings were down in fiscal year 2016, decreasing by $11.19 million (59.93 percent) to $7.49 million. Together, decreased contributions and investment earnings led to a $11.79 million (7.69 percent) decrease in total additions for the fiscal year.

Total deductions increased by $5.16 million (6.88 percent) to $80.15 million. Health care reimbursements increased $3.85 million (5.69 percent) in fiscal year 2016 in comparison to fiscal year 2015, due primarily to significant growth in the number of retirees who became eligible for such distributions upon termination of state employment, from 10,699 in 2015 to 15,552 in 2016, an increase of 45.36 percent. Recordkeeping and custodial expenses increased $872 thousand (59.69 percent), also due to membership and asset growth during fiscal year 2016. Other expenses increased $194 thousand (5.12 percent) to $3.98 million, and include $3.76 million for participant-paid administrative fees and nearly $225 thousand for a federal tax assessed annually through 2019 to finance operations of the Patient-Centered Outcomes Research Institute.

Continued on next page

Management's Discussion and Analysis

Minnesota Deferred Compensation Fund

Fiduciary net position for the Minnesota Deferred Compensation Fund increased almost $18.45 million (0.32 percent), from over $5.85 billion on June 30, 2015, to nearly $5.87 billion as of June 30, 2016.

Total additions decreased substantially to $301.01 million, a decrease of $188.40 million (38.50 percent), primarily due to a decrease in investment income of $183.36 million (76.87 percent), and a reduction in contributions of $5.03 million (2.04 percent). The contribution decrease directly correlates to a decrease in active membership of 2,824 members during the fiscal year.

Total deductions in 2016 decreased $20.96 million (6.91 percent), mostly due to the decrease in refunds of $29.87 million (11.36 percent) to $232.99 million.

Hennepin County Supplemental Retirement Fund

Fiduciary net position for the Hennepin County Supplemental Retirement Fund decreased $5.23 million (3.51 percent) in fiscal year 2016, from $149.07 million to $143.84 million. As with other plans, investment returns were not sufficient to cover refunds and benefit payments to retired members.

Total additions decreased $5.22 million (65.30 percent) to $2.78 million, again due to the substantial decrease in investment income during the 2016 fiscal year.

The number of actively contributing members declined by 63 participants (21.00 percent) during the fiscal year, which is reflected in total member and employer contributions decreasing $72 thousand (15.45 percent) to $394 thousand in fiscal year 2016.

Total deductions decreased $195 thousand (2.38 percent) to $8.01 million as a result of decreasing withdrawals. In total, ongoing withdrawals and refunds decreased $202 thousand (2.51 percent) as membership in this closed plan continues to decline.

Actuarial Valuation Results

Beginning in fiscal year 2015, MSRS' consulting actuaries conducted two actuarial valuations for each MSRS defined benefit retirement fund: one for traditional "funding" purposes, and the other for GASB-compliant "financial reporting" purposes. Each valuation type is performed using a different set of actuarial methods and assumptions. Results of each are highlighted in the following paragraphs.

GASB Statements No. 67 and No. 68 Actuarial Valuations

This is the third year since MSRS implemented new pension accounting and financial reporting standards authorized by the Governmental Accounting Standards Board (GASB). To comply with GASB Statement No. 67, *Financial Reporting for Pensions*, an amendment of GASB Statement No. 25, MSRS relied upon its consulting actuary to compute the total pension liability, net pension liability, pension income or expenses, and deferred outflows and deferred inflows of resources for each of its defined benefit retirement plans as of June 30, 2016. MSRS' participating governmental employers are required to report their respective shares of these amounts in their financial statements for fiscal years beginning after June 15, 2014, in compliance with GASB Statement No. 68, Accounting and *Financial Reporting for Pensions*, an amendment of GASB Statement No. 27.

For MSRS' largest cost sharing, multiple-employer defined benefit fund, the State Employees Retirement Fund, the June 30, 2016, GASB-compliant actuarial valuation report revealed a net pension liability of $12.4 billion, and a pension expense totaling $1.8 billion. This is a significant increase from the net pension liability of the previous year due to a number of factors, including changes in various actuarial assumptions such as mortality rate and the long-term expected rate of return. The long-term expected rate of return, a critical assumption in the valuation of net pension liability, was changed in fiscal year 2016 from 7.9 percent to 7.5 percent. The State of Minnesota and its component units will recognize over 99 percent of the net pension liability and pension income in their financial statements for fiscal year 2017. As a result of this June 30, 2016, actuarial valuation, plan fiduciary net position as a percentage of the total pension liability was 47.51 percent, decreasing 40.81 percent from the ratio of 88.32 percent reported as of June 30, 2015.

Additional information on the GASB-compliant actuarial valuation results for MSRS' defined benefit retirement funds, can be found in the *Actuarial Section* of this report, beginning on page 172.

Funding Actuarial Valuations

The July 1, 2016, actuarial valuation results indicate the State Employees Retirement Fund was 81.56 percent funded, the State Patrol Retirement Fund was 78.53 percent funded, the Correctional Employees Retirement Fund was 71.34 percent funded, and the Judges Retirement Fund was 52.07 percent funded. These funded ratios are calculated using the actuarial value of assets.

State Employees Retirement Fund

For the State Employees Retirement Fund, the contribution deficiency increased from 1.44 percent on June 30, 2015, to 3.49 percent on June 30, 2016. The increase is due to changes in actuarial assumptions based on the most recent experience study. Changes were numerous, and include members living longer and reduced rates of retirement. Funding ratios on both an actuarial and a market value of assets basis declined from the previous year, also due to changes in actuarial assumptions.

State Patrol Retirement Fund

For the State Patrol Retirement Fund, the contribution deficiency decreased from 7.98 percent on June 30, 2015, to 3.08 percent on June 30, 2016. The decrease is attributed to additional member and employer contributions and a decrease in liability due to an assumed delay in the 1.50 percent and 2.50 percent post-retirement benefit increases. The actuarial value of assets funding ratio increased from 76.81 percent on June 30, 2015, to 78.53 percent on June 30, 2016, for the same reasons. However, on a market value of assets basis, the funding ratio decreased from 79.77 percent on June 30, 2015, to 75.55 percent on June 30, 2016. This decrease was due to an investment return of negative 0.20 percent for the market value of assets calculation, versus an investment return of 7.80 percent for the actuarial value of assets funding ratio calculation.

Correctional Employees Retirement Fund

For the Correctional Employees Retirement Fund, the contribution deficiency increased slightly from 5.46 percent on June 30, 2015, to 5.61 percent on June 30, 2016. The actuarial value of assets funding ratio increased from 70.90 percent on June 30, 2015, to 71.34 percent on June 30, 2016, and the market value of assets funding ratio decreased from 73.35 percent on June 30, 2015, to 68.49 percent on June 30, 2016. This difference in funding ratio changes was due to an investment return of negative 0.10 percent for the market value of assets calculation, versus an investment return of 7.60 percent for the actuarial value of assets funding ratio calculation.

Judges Retirement Fund

For the Judges Retirement Fund, the contribution deficiency decreased from 11.89 percent on June 30, 2015, to 6.28 percent on June 30, 2016. The decrease is due to a new state contribution of $3 million in fiscal year 2016. The state contribution will increase to $6 million annually in future fiscal years. The actuarial value of assets funding ratio decreased from 53.30 percent on June 30, 2015, to 52.07 percent on June 30, 2016. Additionally, the market value of assets funding ratio decreased from 55.31 percent on June 30, 2015, to 50.07 percent on June 30, 2016. The decreases in both funding ratios is due to an assumed post-retirement benefit increase change from 1.75 percent for all years to 1.75 percent through 2034, 2.00 percent for 2035 through 2045, and 2.50 percent thereafter.

Legislators Retirement Fund

The Legislators Retirement Fund is a closed plan, with few active, contributing members. Remaining assets in the plan were depleted in the year ending June 30, 2016, and benefits are paid on a pay-as-you-go basis by annual appropriations from the state's General Fund.

An economic downturn and continued investment returns lower than the 8.0 percent investment return assumption will result in the deterioration of the funding status of the retirement funds, increasing contribution deficiencies and depleting assets. The MSRS Board of Directors continues to monitor funding status, contribution deficiency rates, economic conditions, and actuarial experience, and will take appropriate action, as necessary, to ensure the financial security of the retirement funds.

Additional information about the funding actuarial valuation results for each defined benefit fund can be found in the *Actuarial Section* of this report, beginning on page 137.

Request for Information

This financial report is intended to provide a general overview of MSRS' financial position as of June 30, 2016, and the results of financial activities for fiscal year 2016. If you have any questions or comments concerning the contents of this report, please contact Minnesota State Retirement System by mail at 60 Empire Drive, Suite 300, Saint Paul, MN 55103-3000, by telephone toll-free at 1-800-657-5757, or via e-mail at info@msrs.us.

Statement of Fiduciary Net Position

As of June 30, 2016
(Dollars in thousands)

	Defined Benefit Funds			
	State Employees	State Patrol	Correctional Employees	Judges
Assets				
Cash	$12,005	$1,075	$2,120	$640
Short-term investments	240,753	13,609	20,928	4,408
Total Cash & Short-term Investments	$252,758	$14,684	$23,048	$5,048
Receivables				
Accounts Receivable	$15,566	$1,101	$2,414	$168
Accrued Interest	0	0	0	0
Due from Other Plans	5,791	11	15	3
Due from the State's General Fund	0	0	0	0
Other Receivables	875	24	18	3
Total Receivables	$22,232	$1,136	$2,447	$174
Investments, at Fair Value				
Bond Fund	$2,760,132	$155,056	$220,910	$40,576
U.S. Stock Actively Managed	3,456,873	194,197	276,674	50,818
U.S. Stock Index Fund	1,726,894	97,012	138,214	25,386
Alternative Pool	1,431,127	80,397	114,542	21,039
Broad International Stock Fund	1,564,844	87,909	125,244	23,004
Supplemental Investment Fund	0	0	0	0
Mutual Funds	0	0	0	0
Total Investments	$10,939,870	$614,571	$875,584	$160,823
Securities Lending Collateral	$1,586,006	$89,099	$126,970	$23,332
Capital Assets, Net of Depreciation				
Land	$88	$0	$0	$0
Development in Progress	168	0	0	0
Building, Improvements, and Equipment	5,331	0	0	0
Equipment, Furniture, and Fixtures	110	0	0	0
Internally Generated	13,907	0	0	0
Total Capital Assets	$19,604	$0	$0	$0
Total Assets	**$12,820,470**	**$719,490**	**$1,028,049**	**$189,377**
Deferred Outflows of Resources				
Total Deferred Outflows of Resources	**$0**	**$0**	**$0**	**$0**
Liabilities				
Accounts Payable	$4,394	$186	$271	$50
Compensated Absences	983	0	0	0
Securities Lending Collateral	1,586,006	89,099	126,970	23,332
Due To Other Plans	31	213	896	90
Due to the State's General Fund	0	0	0	0
Accrued OPEB Liability	115	0	0	0
Bonds Payable	4,516	0	0	0
Other Payables	1,360	0	320	0
Total Liabilities	**$1,597,405**	**$89,498**	**$128,457**	**$23,472**
Deferred Inflows of Resources				
Total Deferred Inflows of Resources	**$0**	**$0**	**$0**	**$0**
Net Position Restricted for Pensions	**$11,223,065**	**$629,992**	**$899,592**	**$165,905**

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

Legislators	Unclassified Employees	Health Care Savings Plan	MN Deferred Compensation	Hennepin County Supplemental	Totals
	Defined Contribution Funds				
$1,465	$0	$0	$0	$0	$17,305
0	161	1,249	11,158	35	292,301
$1,465	$161	$1,249	$11,158	$35	$309,606
$0	$455	$7,658	$9,486	$14	$36,862
0	0	0	0	0	0
2	0	0	4	0	5,826
0	0	0	0	0	0
0	9	169	200	3	1,301
$2	$464	$7,827	$9,690	$17	$43,989
$0	$0	$0	$0	$0	$3,176,674
0	0	0	0	0	3,978,562
0	0	0	0	0	1,987,506
0	0	0	0	0	1,647,105
0	0	0	0	0	1,801,001
0	300,728	821,088	1,401,375	143,850	2,667,041
0	3,993	0	4,449,686	0	4,453,679
$0	$304,721	$821,088	$5,851,061	$143,850	$19,711,568
$0	$6,298	$16,988	$121,106	$2,972	$1,972,771
$0	$0	$0	$0	$0	$88
0	0	0	0	0	168
0	0	0	0	0	5,331
0	0	0	0	0	110
0	0	0	0	0	13,907
$0	$0	$0	$0	$0	$19,604
$1,467	**$311,644**	**$847,152**	**$5,993,015**	**$146,874**	**$22,057,538**
$0	**$0**	**$0**	**$0**	**$0**	**$0**
$3	$56	$772	$1,204	$43	$6,979
0	0	0	0	0	983
0	6,298	16,988	121,106	2,972	1,972,771
40	494	2,321	1,725	16	5,826
1,465	0	0	0	0	1,465
0	0	0	0	0	115
0	0	0	0	0	4,516
0	23	84	450	0	2,237
$1,508	**$6,871**	**$20,165**	**$124,485**	**$3,031**	**$1,994,892**
$0	**$0**	**$0**	**$0**	**$0**	**$0**
$(41)	**$304,773**	**$826,987**	**$5,868,530**	**$143,843**	**$20,062,646**

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2016
(Dollars in thousands)

	Defined Benefit Funds			
	State Employees	State Patrol	Correctional Employees	Judges
Additions				
Contributions				
Plan Member Contributions	$153,854	$9,292	$21,953	$3,763
Employer Contributions	151,168	13,938	30,678	10,219
General Fund Contributions	0	0	0	0
Total Contributions	$305,022	$23,230	$52,631	$13,982
Investment Income				
Investment Income	$(1,612)	$(318)	$435	$(66)
Less Investment Expenses	14,989	847	1,188	222
Net Investment Income	$(16,601)	$(1,165)	$(753)	$(288)
Income from Securities Lending Activities				
Securities Lending Income	$11,752	$660	$941	$173
Securities Lending Expenses				
Borrower Rebates	$2,349	$132	$188	$35
Management Fees	2,435	137	195	36
Total Securities Lending Expenses	$4,784	$269	$383	$71
Net Income From Securities Lending Activities	$6,968	$391	$558	$102
Total Net Investment Income	$(9,633)	$(774)	$(195)	$(186)
Other Additions				
Transfers From Other Plans	$20,483	$0	$0	$0
Other Income	268	1,000	0	0
Total Other Additions	$20,751	$1,000	$0	$0
Total Additions	**$316,140**	**$23,456**	**$52,436**	**$13,796**
Deductions				
Annuity Benefits	$707,361	$57,695	$59,045	$22,378
Ongoing Withdrawals	0	0	0	0
Health Care Reimbursements	0	0	0	0
Refunds	13,345	79	1,895	0
Transfers to Other Plans	470	0	0	0
Recordkeeper and Custodian Expenses	0	0	0	0
Administrative Expenses	10,196	220	906	93
Other Expenses	22	0	0	0
Total Deductions	**$731,394**	**$57,994**	**$61,846**	**$22,471**
Net Increase (Decrease) in Net Position	**$(415,254)**	**$(34,538)**	**$(9,410)**	**$(8,675)**
Net Position Restricted for Pensions				
Beginning of Year	**$11,638,319**	**$664,530**	**$909,002**	**$174,580**
End of Year	**$11,223,065**	**$629,992**	**$899,592**	**$165,905**

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

	Legislators	Unclassified Employees	Health Care Savings Plan	MN Deferred Compensation	Hennepin County Supplemental	Totals
		Defined Contribution Funds				
	$89	$5,810	$130,016	$240,934	$197	$565,908
	0	6,187	0	54	197	212,441
	5,087	0	0	0	0	5,087
	$5,176	$11,997	$130,016	$240,988	$394	$783,436
	$(69)	$4,845	$7,949	$58,477	$2,377	$72,018
	1	197	531	3,783	93	21,851
	$(70)	$4,648	$7,418	$54,694	$2,284	$50,167
	$1	$42	$114	$816	$20	$14,519
	$0	$9	$24	$170	$4	$2,911
	0	8	23	163	4	3,001
	$0	$17	$47	$333	$8	$5,912
	$1	$25	$67	$483	$12	$8,607
	$(69)	$4,673	$7,485	$55,177	$2,296	$58,774
	$0	$470	$0	$0	$0	$20,953
	0	212	3,959	4,843	86	10,368
	$0	$682	$3,959	$4,843	$86	$31,321
	$5,107	**$17,352**	**$141,460**	**$301,008**	**$2,776**	**$873,531**
	$8,496	$0	$0	$0	$0	$854,975
	0	0	0	42,472	4,665	47,137
	0	0	71,541	0	0	71,541
	40	6,751	0	232,986	3,174	258,270
	0	20,483	0	0	0	20,953
	0	55	2,333	1,744	31	4,163
	42	155	2,290	3,522	25	17,449
	0	205	3,983	1,838	110	6,158
	$8,578	**$27,649**	**$80,147**	**$282,562**	**$8,005**	**$1,280,646**
	$(3,471)	**$(10,297)**	**$61,313**	**$18,446**	**$(5,229)**	**$(407,115)**
	$3,430	**$315,070**	**$765,674**	**$5,850,084**	**$149,072**	**$20,469,761**
	$(41)	**$304,773**	**$826,987**	**$5,868,530**	**$143,843**	**$20,062,646**

Notes to the Financial Statements

These notes provide disclosures relevant to the basic financial statements on the preceding pages.

1. Summary of Significant Accounting Policies

A. Basis of Presentation and Basis of Accounting

Basis of Presentation

The accompanying financial statements were prepared in accordance with generally accepted accounting principles (GAAP). In doing so, the Minnesota State Retirement System (MSRS) adheres to accounting and financial reporting standards established by the Governmental Accounting Standards Board (GASB). GASB is the independent, not-for-profit, standards-setting organization and the official source of GAAP for state and local governmental entities in the United States of America.

MSRS' accounts are organized and presented on the basis of funds. All of the funds presented in the financial statements are fiduciary funds. These funds are classified as pension trust funds, and are maintained for the exclusive benefit of the members or their beneficiaries.

Basis of Accounting

The basis of accounting indicates the timing of transactions or events for recognition in the financial statements. MSRS' financial statements are reported using the accrual basis of accounting. Plan member contributions, employer contributions, and related receivables are recognized as revenues when due, pursuant to formal commitments and statutory requirements. Annuity benefits and refunds are recognized when due and payable in accordance with the terms of each plan. Administrative and other expenses, and the associated liabilities, are recognized when the liability is incurred.

B. Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources, and Net Position Restricted for Pensions

Cash and Cash Equivalents

For MSRS' defined benefit retirement funds, cash and cash equivalents include cash on deposit in the state's treasury, commingled with other state funds, and short-term investments. Cash on deposit consists of year-end receipts not yet processed as of the investment cutoff on June 30. Short-term investments, which the Minnesota State Board of Investment (SBI) staff manage, include U.S. Treasury issues, repurchase agreements, bankers' acceptances, commercial paper, and certificates of deposit. For each MSRS defined contribution fund, cash equivalents represent the money market funds associated with a Plan Sponsor Account, or plan expense account. This is the account the recordkeeper uses to deposit monthly participant administrative fees and to pay authorized, allowable plan operating expenses.

Accounts Receivable

Accounts receivable represents plan member and employer contributions, calculated as a percentage of each employee's salary as specified in *Minnesota Statutes*, which is received after fiscal year-end for services rendered during the fiscal year. The statutory employee and employer contribution rates in effect for fiscal year 2016 for MSRS' retirement funds are shown in **Exhibit 1** on the following page.

Exhibit 1: Fiscal Year 2016 Employee and Employer Statutory Contribution Rates for MSRS Retirement Funds, Where Applicable

Retirement Fund	Employee Contribution Rate	Employer Contribution Rate
State Employees (General Plan)	5.50%	5.50%
State Patrol *	13.40	20.10
Correctional Employees	9.10	12.85
Judges - Tier 1 Benefit Program**	9.00	22.50
Judges - Tier 2 Benefit Program**	7.00	22.50
Legislators	9.00	Funded by appropriation from the State's General Fund
Unclassified Employees	5.50	6.00
Hennepin County Supplemental	1.00	1.00

* Excludes $1 million supplemental state contribution, which will be received on an annual basis until the State Patrol Retirement Fund and the Public Employees Retirement Association Police and Fire Retirement Fund both reach a 90 percent funded level on a market value of assets basis.

** Excludes supplemental state contribution of $3 million in fiscal year 2017 and $6 million annually thereafter which will be received until the Judges Retirement Fund is fully funded.

For the defined contribution funds, accounts receivable also includes any plan administrative fees, determined as a percentage of each participant's account balance, that were earned during the fiscal year, but received after fiscal year-end. These fees are collected on the 15th day of every month (or the first business day following the 15th, if the 15th falls on a non-business day) based on each participant's account balance on that day. They are used to pay for record-keeping and custodial services, and to reimburse MSRS for expenses incurred to administer the plan. The fiscal year 2016 plan administrative fee rate structure for each defined contribution fund is shown in **Exhibit 2**

Exhibit 2: Fiscal Year 2016 Plan Administrative Fee Schedule For MSRS Defined Contribution Retirement Funds

Defined Contribution Retirement Fund	Administrative Fee Rate Schedule
Unclassified Employees	• $2 per month for an account balance up to $10,000 • $4 per month for an account balance that is between $10,000.01 and $30,000 • $6 per month for an account balance that is between $30,000.01 and $90,000 • $8 per month for an account balance over $90,000
Health Care Savings	0.65% or 65 basis points of a participant's account balance ($140 annual maximum fee)
Minnesota Deferred Compensation	0.05% or 5 basis points of the first $100,000 of a participant's account balance ($50 annual maximum fee)
Hennepin County Supplemental	0.06% or 6 basis points of a participant's account balance

Continued on next page

Notes to the Financial Statements

Interfund Receivables, Payables, and Transfers

The purpose of interfund receivables and payables is to accrue interfund obligations that are outstanding as of the fiscal year-end date, June 30. Most of these balances are the result of our reallocation of administrative expenses, which is done annually. The only balance that may not be completely liquidated during the ensuing fiscal year is the interfund payable from the Unclassified Employees Retirement Fund to the State Employees Retirement Fund.

Interfund transfers are primarily the result of elective membership eligibility changes that have occurred during the fiscal year.

Due From/To The State's General Fund

The Legislators Retirement Fund is primarily funded on a pay-as-you-go basis with annual appropriations from the State's General Fund. These appropriations, reported as General Fund Contributions on the *Statement of Changes in Fiduciary Net Position*, are used to finance annuity benefits paid to retirees or their survivors, member refunds, and each retirement fund's share of MSRS' administrative expenses. The amount due from the State's General Fund as of fiscal year-end represents funds receivable to cover each fund's share of administrative expenses for the fiscal year. The amount due to the State's General Fund as of fiscal year-end represents the unused portion of the full appropriation that MSRS is obligated to return to the state.

Investments

The Minnesota State Board of Investment (SBI) is established by Article XI of the Minnesota Constitution to invest all state funds. The membership is made up of Minnesota's Governor (who is designated as chair of the Board), State Auditor, Secretary of State, and Attorney General. The legislature has also established a 17-member Investment Advisory Council (IAC) to advise the SBI and its staff on investment related matters. MSRS' Executive Director is a permanent member of the IAC.

Investment Policy

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

Within the requirements defined by *Minnesota Statutes*, Section 11A.04, the SBI, with assistance of the SBI staff and the Investment Advisory Council, has the authority for establishing and amending investment policy decisions for all funds under its control. These investment policies specify investment objectives, risk tolerance, asset allocation, investment management structure, and specific performance standards. Studies that the SBI staff perform guide the on-going management of the funds and are updated periodically.

Description of Significant Investment Policy Changes During the Year

The SBI made no significant changes to their investment policies during fiscal year 2016.

Participation in the State's Combined Investment Funds

The state's public retirement fund assets are commingled in various pooled investment accounts, commonly referred to as the Combined Funds. *Minnesota Statutes* Section 11A.14 establishes the Combined Funds, which the SBI administers. Each participating retirement fund owns an undivided participation in all of the assets of the Combined Funds' pooled investment accounts.

As of June 30, 2016, MSRS Funds' share of the Combined Funds, at fair value, was approximately 22 percent ($12.6 billion for MSRS and $56.6 billion total, exclusive of short-term investments). **Exhibit 3** displays specific totals of MSRS' investment portfolio by category. *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. Various alternative investments, including international securities, are limited by statute to 35 percent of the fund pool.

Exhibit 3: MSRS Investment Portfolio – At Fair Value
(Dollars in thousands)

MSRS Fund Pooled Accounts	Amount As of June 30, 2016
Bond Fund	$3,176,674
U.S. Stock Actively Managed Fund	3,978,562
U.S. Stock Index Fund	1,987,506
Alternative Pool	1,647,105
Broad International Stock Fund	1,801,001
Subtotal – MSRS' share of the SBI's Combined Funds	$12,590,848
Supplemental Investment Fund	2,667,041
Mutual Funds	4,453,679
Total Investment Pools	$19,711,568
Short-term Investments	292,301
Total MSRS Investment Portfolio	**$20,003,869**

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Notes to the Financial Statements

Valuation of Investments

Investments in the pooled accounts, the Supplemental Investment Fund, and the Minnesota Deferred Compensation Plan (mutual funds) 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 fair value less accrued interest. Accrued interest is recognized as short-term income. The SBI values long-term fixed income securities by using the Financial Times Interactive Data Services valuation system. This service provides prices for both actively traded and privately placed bonds. For equity securities, the SBI uses a valuation service provided by Reuters and fair value is the last reported sales price for securities traded on national or international exchanges. If a security is not actively traded, then the fair value is based on the analysis of financial statements, analysis of future cash flows and independent appraisals.

Assumptions made in valuing securities are as follows:

- Values of actively traded securities determined by recognized exchanges are objectively negotiated purchase prices between willing buyers and sellers, and are not subject to either undue influence or market manipulation.

- Values of securities not actively traded are determined by objective appraisals by qualified professional analysts whose results would not vary materially from those of other similarly qualified professionals. The fair value of investments is based upon valuations provided by a recognized pricing service. Securities traded on a national or international exchange are valued using the last reported trade price. Short-term investments are reported at cost, which approximates fair value. The fair value of real estate investments is based on independent yearly appraisals. Investments that do not have an established market are reported at estimated fair value.

  The term "market value" is used when describing asset valuation methods for actuarial purposes, and is used consistently throughout the Actuarial Section and in other places in the CAFR when referring to funded status. "Market value" is equivalent to "fair value."

Investment Income

Investment income is recognized as it is 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.

Investment Expenses

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 comprehensive investment portfolio and investment management fees paid to the external money managers and the state's master custodian for pension fund assets. These expenses are allocated proportionately to the funds participating in the pooled investment accounts. MSRS' share of these expenses in fiscal year 2016 totaled \$21,849,534: \$14,988,322 for the State Employees Retirement Fund, \$847,467 for the State Patrol Retirement Fund, \$1,187,447 for the Correctional Employees Retirement Fund, \$222,057 for the Judges Retirement Fund, \$1,059 for the Legislators Retirement Fund, \$196,743 for the Unclassified Employees Retirement Fund, \$530,659 for the Health Care Savings Plan, \$3,782,930 for the Minnesota Deferred Compensation Plan, and \$92,850 for the Supplemental Retirement Plan for Hennepin County. Details of these expenses are presented in the *Schedule of Investment Manager Fees, Commissions and Other Investment Expenses* found within the unaudited *Investment Section* of this comprehensive annual financial report. A more detailed schedule of fees and commissions the SBI paid to brokerage firms, along with the number of shares traded, total commissions, commissions per share for the pooled investment accounts, and other investment information may be obtained from the Minnesota State Board of Investment at the Retirement Systems of Minnesota Building, 60 Empire Drive, Suite 355, Saint Paul, Minnesota 55103.

Investment expenses exclude the plan administrative fees, self-directed brokerage account fees, investment advisory service fees, and any fund redemption fees deducted from participants' defined contribution retirement plan account balances. These investment-related fees are reported as Other Expenses in the *Statement of Changes in Fiduciary Net Position*.

Information about the primary government's investments, including credit risk classification, is reflected in the State of Minnesota's Comprehensive Annual Financial Report. This report can be obtained from Minnesota Management and Budget, 400 Centennial Building, 658 Cedar Street, Saint Paul, Minnesota 55155.

Asset Allocation

To match the long-term nature of the pension obligations, the SBI maintains a strategic asset allocation for the Combined Funds that includes allocations to domestic equity, international equity, bonds, alternative assets, and cash. The long-term asset allocation is shown in **Exhibit 4**.

If a 20 percent allocation to Alternative Investments cannot be achieved, the uncommitted allocation in Alternatives is invested in Bonds. When the actual asset allocation deviates beyond specified ranges, assets are redistributed to achieve the long-term allocation targets.

The SBI's long-term expected rate of return was determined using a building-block method. Best estimates of 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 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.

Exhibit 4: SBI Target Asset Allocations and Long Term Expected Real Rate of Return

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return (Geometric Mean)
Domestic Equity	45%	5.50%
International Equity	15	6.00
Bonds	18	1.45
Alternative Assets	20	6.40
Cash	2	0.50
Total	**100%**	
Portfolio Real Rate of Return		5.36%
SBI Assumed Inflation Rate		3.00
SBI Nominal Rate of Return		8.36%

Annual Money-Weighted Rate of Return

The annual money-weighted rate of return is a method of calculating period-by-period returns on pension fund investments that adjusts for the changing amounts actually invested. The money-weighted rate of return is calculated as the internal rate of return on pension fund investments, net of pension fund investment expenses. Inputs to the internal rate of return calculation are determined by actual date. Because the pension funds each have different cash flows throughout the year, they have different money-weighted rates of return. The money-weighted rate of return for each MSRS retirement fund is presented in **Exhibit 5**. The Legislators Retirement Fund had no assets at June 30, 2016, and therefore no rate of return.

Exhibit 5: Money-Weighted Rate of Return
For the year ended June 30, 2016

Retirement Fund	Money-weighted rate of return
State Employees	(0.083)%
State Patrol	(0.119)
Correctional Employees	(0.019)
Judges	(0.108)
Legislators	NA

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Notes to the Financial Statements

Capital Assets

Capital assets consist of land, development in progress, building, building improvements, equipment, furniture, and fixtures, and internally developed software intended for MSRS use only. With the exception of internally developed or acquired computer software, capital assets are defined as assets with an initial, individual cost of more than $5,000 and an estimated minimum useful life of two years. The capitalization threshold for internally developed or acquired software is $30,000 per application. All assets were capitalized at historical cost at the date of acquisition, issuance, or completion. All assets, except land and development in progress, are depreciated or amortized when placed into operation using the straight-line method over the estimated useful lives shown in **Exhibit 6**.

Exhibit 6: Capital Assets Estimated Useful Lives

Capital Asset Types	Useful Life (In Years)
Land	N/A
Development in Progress	N/A
Building	30
Building Improvements and Building Equipment	10
Equipment, Furniture, and Fixtures	3-10
Internally Generated Software	4-10

Deferred Outflows/Inflows of Resources

In addition to assets, the *Statement of Fiduciary Net Position* reports a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expense) until then.

In addition to liabilities, the *Statement of Fiduciary Net Position* also reports a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to future periods and so will not be recognized as an inflow of resources (revenue) until that time.

Net Position Restricted for Pensions

Net position represents the sum of total assets and total deferred outflows of resources less the sum of total liabilities and total deferred inflows of resources. For each defined benefit and defined contribution retirement fund, the amount reported as net position is restricted for the future payment of benefits and refunds to members or their surviving spouses or beneficiaries, and administrative expenses.

Accrued Compensated Absences

In accordance with various collective bargaining unit agreements, MSRS employees earn vacation, sick, and compensatory leave benefits. Earned but unused benefits are eligible for payment upon separation from state government service. At fiscal year-end, MSRS recognizes an obligation for future payment to the extent that the right to receipt is vested or expected to become vested.

Other Income

Other income for MSRS' defined benefit retirement funds represents its proportionate ownership share (27.5 percent) of the Retirement Services Building office space lease income, room rental fees, and parking fee revenues. Other income for these funds also includes employer late fees submitted with payroll contributions and fees received for fulfilling data requests.

Other income for MSRS' defined contribution retirement funds represents participant plan administrative fee income earned during the fiscal year. For the Minnesota Deferred Compensation Fund, other income also includes administrative expense reimbursements from various mutual fund companies.

For all defined contribution funds, except the Supplemental Retirement Fund for Hennepin County, this revenue is primarily used to cover fees for recordkeeping and custodial services, and to reimburse MSRS for administrative costs incurred to counsel members, adjudicate health care reimbursement claims, and perform various business support services. For the Supplemental Retirement Fund for Hennepin County, the excess of participant plan administrative fee income over recordkeeping, custodial, and MSRS' administrative expenses is returned to the County.

Refunds

For defined benefit plans, refunds represent distributions to members, separated from service, of their retirement deductions with interest compounded daily at 6.0 percent through June 30, 2011, and at 4.0 percent thereafter It excludes employer contribution amounts. When a member takes a refund, the member forfeits the right to retirement, survivor, and disability benefits. Refunds also include rollovers to an individual retirement account or another qualified retirement plan.

For defined contribution funds, refunds represent distributions to plan participants equal to all or a portion of their account balances, which are composed of contributions plus any investment gains or losses. Refunds may be in the form of cash withdrawals or rollovers to other qualified plans.

Administrative Expenses

MSRS administrative expenses are disbursed from the State Employees Retirement Fund. While no designated revenue source is statutorily dedicated to the payment of administrative expenses, as a policy, they are paid from investment earnings. At fiscal year-end, these expenses are allocated pursuant to an approved cost reallocation plan to the various funds administered. Each fund then reimburses the State Employees Retirement Fund for their allocated portion of administrative expenses.

2. Accounting Changes

A. Changes in Accounting Principles

MSRS implemented GASB Statement No. 72, *Fair Value Measurement and Application*, during the fiscal year ended June 30, 2016. This statement establishes general principles for measuring fair value of investments, provides guidance for applying fair value to certain investments, and identifies required disclosures related to all fair value measurements.

MSRS also implemented GASB Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68 and No. 73*. This statement requires the presentation of covered payroll (payroll on which contributions to a pension plan are based) in Required Supplementary Information schedules.

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Notes to the Financial Statements

3. Description of System and Plans

A. Organization

The Minnesota State Retirement System (MSRS) is the administrator of a multiple-employer, cost-sharing public employee retirement system. It consists of five defined benefit funds and four defined contribution funds. The defined benefit funds are listed below with parenthetical disclosure of the Minnesota Statutes (MS) that set forth criteria for benefit computations, members' and participating employers' obligations to make contributions, and other plan provisions:

- **State Employees Retirement Fund**
  (MS Sections 352.01 - 352.87)
- **State Patrol Retirement Fund**
  (MS Chapter 352B)
- **Correctional Employees Retirement Fund**
  (MS Sections 352.90 - 352.955)
- **Judges Retirement Fund**
  (MS Chapter 490)
- **Legislators Retirement Fund**
  (MS Chapter 3A)

The defined contribution funds are listed below with parenthetical disclosure of the Minnesota Statutes pertinent to plan administration:

- **Unclassified Employees Retirement Fund**
  (MS Chapter 352D)
- **Health Care Savings Fund**
  (MS Chapter 352.98)
- **Minnesota Deferred Compensation Fund**
  (MS Sections 352.965 - 352.97)
- **Hennepin County Supplemental Retirement Fund**
  (MS Sections 383B.46 - 383B.52)

Minnesota Statutes Section 356.20 defines financial reporting requirements for all MSRS administered retirement funds.

Responsibility for the organization is vested in MSRS' Board of Directors, which consists of eleven members. Four members are elected by the membership at large of the State Employees Retirement Plan and the Unclassified Employees Retirement Plan. Three members are appointed by the Governor, one of which must be a constitutional officer or an appointed state official, and two of whom must be public members knowledgeable in pension matters. The remaining four members represent the State Patrol Retirement Plan, the Correctional Employees Plan, the Transit Division of the Metropolitan Council, and the retired and disabled members of all plans that MSRS administers. MSRS employees are ineligible for membership on the board of directors.

B. Participating Employers

MSRS members are employed by the State of Minnesota, the University of Minnesota (non-instructional), and approximately 76 counties, 280 cities and townships, 283 school districts and other educational entities, and 222 additional miscellaneous entities.

C. Reporting Entity

MSRS functions as a separate statutory entity. The system maintains rights to sue or be sued in its own name and to hold property in its own name. For financial reporting purposes, MSRS funds are considered pension trust funds of the State of Minnesota and are included in the State's *Comprehensive Annual Financial Report* with its fiduciary funds. MSRS does not have any component units and this report includes financial information for MSRS only.

D. Defined Benefit Retirement Funds – Membership Statistics, Contribution Information, and Plan Descriptions

Membership statistics as of June 30, 2016, for all MSRS defined benefit retirement funds are shown in **Exhibit 7** on the following page. Specific descriptions of each of these funds, including employee and employer contribution rate information, are contained on the pages that follow.

Exhibit 7: Membership Statistics – Defined Benefit Funds

As of June 30, 2016	State Employees	State Patrol	Correctional Employees	Judges	Legislators	Totals
Members Receiving Benefits						
Retirees	32,241	844	2,426	250	302	36,063
Disabilitants	1,843	53	284	20	N/A	2,200
Beneficiaries	3,868	151	208	80	70	4,377
Total Members Receiving Benefits	**37,952**	**1,048**	**2,918**	**350**	**372**	**42,640**
Deferred Members						
Vested, Not Receiving	17,019	55	1,316	17	52	18,459
Nonvested	7,571	20	661	0	0	8,252
Total Deferred Members	**24,590**	**75**	**1,977**	**17**	**52**	**26,711**
Active Members						
Vested	33,436	730	2,970	278	23	37,437
Nonvested	16,036	162	1,551	33	0	17,782
Total Active Members	**49,472**	**892**	**4,521**	**311**	**23**	**55,219**
Grand Total Members	**112,014**	**2,015**	**9,416**	**678**	**447**	**124,570**
Participating Employers	15	1	3	1	1	

Note: These retirement funds have no nonemployer contributing entities.

State Employees Retirement Fund

The State Employees Retirement Fund includes the General Employees Retirement Plan (General Plan), a multiple-employer, cost-sharing plan, and three single-employer plans: the Military Affairs Plan, the Transportation Pilots Plan, and the Fire Marshals Plan. Only certain employees of the Department of Military Affairs, Department of Transportation, and the State Fire Marshals Office are eligible to be members of those plans, but all state of Minnesota employees who are not members of another plan are covered by the General Plan. The Transportation Pilots Plan has been closed to new entrants since July 1, 2008. The General Plan provides retirement, disability, and death benefits to plan members and their beneficiaries.

Minnesota Statutes, Section 352.04 requires that eligible employees contribute 5.50 percent of their total compensation to the State Employees Retirement Fund. Participating employers also are required to contribute 5.50 percent to this fund.

All active and deferred members are fully vested to the extent of their contributions plus interest at a rate of 6.0 percent through June 30, 2011, and 4.0 percent thereafter. For monthly retirement benefits, members hired before July 1, 2010, are vested after three years of covered service; members hired after June 30, 2010, are vested after five years of covered service.

Retirement benefits can be computed using one of two methods: the Step formula and the Level formula. Members hired before July 1, 1989, may use the Step or Level formula, whichever is greater. Members hired on or after July 1, 1989, must use the Level formula. Each formula converts years and months of service to a certain percentage. Under the Step formula, members receive 1.2 percent of the high-five average salary for each of the first 10 years of covered service, plus 1.7 percent for each year thereafter. It also includes full benefits under the Rule of 90 (age plus years of allowable service equals 90). In contrast, the Level formula does not include the Rule of 90. Under the Level formula, members receive 1.7 percent of the high-five average salary for all years of covered service, and full benefits are available at normal retirement age.

Annuitants receive post-retirement increases of 2.0 percent each year. When the State Employees Retirement Fund reaches or exceeds a 90 percent funded ratio for two consecutive years (determined on a market value of assets basis), the post-retirement adjustment will increase to 2.5 percent each year. If, after reverting to a 2.5 percent increase, the funded ratio (determined on a market value of assets basis) declines to less than 80 percent for the most recent actuarial valuation year, or 85 percent for two consecutive years, the post-retirement benefit increase will return to 2.0 percent. The funding status of the State Employees Retirement Fund is actuarially calculated on an annual basis.

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Notes to the Financial Statements

As of June 30, 2016, all MSRS employees are members of the General Plan. MSRS employee and employer contributions, as reported in **Exhibit 8**, were funded at 100 percent of the required contributions set by statute.

Total covered payroll for MSRS employees was approximately $7.6 million for fiscal year 2016. This includes $68,048 that was capitalized in the development of internal software for MSRS.

Exhibit 8: MSRS Contributions to the State Employees Retirement Fund

For Fiscal Year Ended	Employee	Employer
June 30, 2013	$307,737	$307,737
June 30, 2014	340,776	340,776
June 30, 2015	400,445	400,445
June 30, 2016	438,791	438,791

State Patrol Retirement Fund

The State Patrol Retirement Fund includes only the State Patrol Retirement Plan, a single-employer plan. Membership is limited to State of Minnesota employees who are state troopers, conservation officers, and certain crime bureau and gambling enforcement agents. The State Patrol Retirement Plan provides retirement, disability, and death benefits to plan members and their beneficiaries.

Minnesota Statutes, Section 352B.02 requires that eligible employees contribute 13.40 percent of their total compensation, with the employer contributing 20.10 percent. Effective July 1, 2016, these rates will increase to 14.40 percent and 21.60 percent, respectively.

All active and deferred members are fully vested to the extent of their contributions plus interest at a rate of 6.0 percent through June 30, 2011, and 4.0 percent thereafter. For monthly retirement benefits, members hired before July 1, 2013, become vested after three years of allowable service; members hired after June 30, 2013, are vested after ten years of allowable service. Vesting for survivor purposes for members hired after June 30, 2013, is five years of allowable service.

Members become eligible for normal retirement benefits at age 55. The benefit formula is three percent of the high five-year average salary for each year of allowable service. Allowable service used to determine benefits is limited to 33 years, with a refund of employee contributions for excess years of service. Members with at least 28 years of service as of July 1, 2013, are not subject to this service limit.

Annuitants receive post-retirement benefit increases of 1.0 percent each year. When the State Patrol Retirement Fund reaches or exceeds an 85 percent funded ratio for two consecutive years (on a market value of assets basis), the post-retirement adjustment will increase to 1.5 percent each year. When the funded ratio (determined on a market value of assets basis) reaches or exceeds 90 percent for two consecutive years, the post-retirement adjustment will increase to 2.5 percent each year. If, after reverting to a 1.5 percent increase, the funded ratio of the State Patrol Retirement Fund (determined on a market value of assets basis) declines to 75 percent or less for one year, or 80 percent or less for two consecutive years, the benefit increase will return to 1.0 percent. The funding status of the State Patrol Retirement Fund is actuarially calculated on an annual basis.

A state contribution of $1 million will be made annually to the State Patrol Retirement Fund until the State Patrol Retirement Fund and the Public Employees Retirement Association Police and Fire Retirement Fund both reach a 90 percent funded ratio, determined on the market value of assets basis.

Correctional Employees Retirement Fund

The Correctional Employees Retirement Fund includes only the Correctional Plan, a multiple-employer, cost-sharing plan. Membership is limited to State of Minnesota employees with 75 percent working time spent in direct contact with inmates or patients in Minnesota correctional facilities, the state-operated forensic services program, or the Minnesota Sex Offenders Program. Additionally, employees on leave from eligible positions to work for a labor organization may also be covered. The Correctional Employees Retirement Plan provides retirement, disability, and death benefits to plan members and their beneficiaries.

Minnesota Statutes, Section 352.92 requires that eligible employees contribute 9.10 percent of their total compensation. The employer contributes 12.85 percent of salary.

All active and deferred members are fully vested to the extent of their contributions plus interest at a rate of 6.0 percent through June 30, 2011, and 4.0 percent thereafter. For monthly retirement benefits, members hired before July 1, 2010, become vested after three years of allowable service. New hires after June 30, 2010, must have a minimum of five years allowable service before a graded vesting schedule begins, which ranges from 50 percent vested after five years of allowable service to 100 percent vested after ten years of allowable service.

Vested members become eligible for normal retirement benefits at age 55. For employees hired before July 1, 2010, the benefit formula is 2.4 percent of the high-five average salary for each year of allowable service, pro-rated for completed months. For employees hired after June 30, 2010, the benefit formula is 2.2 percent of the high-five salary for each year of allowable service, prorated for completed months. The monthly benefit can be received either as level lifelong payments or accelerated payments until a reversion age of 62 or 65. Upon attaining the reversion age, the benefit is adjusted actuarially to a lower, permanent amount.

Annuitants receive post-retirement increases of 2.0 percent each year. When the Correctional Employees Retirement Fund reaches or exceeds a 90 percent funded ratio for two consecutive years (on a market value of assets basis), the post-retirement adjustment will increase to 2.5 percent each year. If, after reverting to a 2.5 percent increase, the funded ratio (determined on a market value of assets basis) declines to less than 80 percent for the most recent actuarial valuation year, or 85 percent for two consecutive years, the post-retirement benefit increase will return to 2.0 percent. The funding status of Correctional Employees Retirement Fund is actuarially calculated on an annual basis.

Judges Retirement Fund

The Judges Retirement Fund includes only the Judges Retirement Plan, a single employer plan. Membership is limited to Minnesota district, appellate and Supreme Court judges. Retirees also include former municipal and county court judges. The Judges Retirement Plan provides retirement, disability, and death benefits to plan members and their beneficiaries.

The Judges Retirement Plan provides a Tier 1 and a Tier 2 benefit program depending upon a judge's appointment or election date. Tier 1 program judges are those first appointed or elected before July 1, 2013, and Tier 2 program judges are those first appointed or elected after June 30, 2013. Judges with less than five years of service as of December 31, 2013, may make a one-time irrevocable election into the Tier 2 benefit program.

Minnesota Statutes, Section 490.123 requires that eligible judges in the Tier 1 program contribute 9.0 percent of their total compensation. A Tier 1 program judge's contributions are redirected to the Unclassified Employees Retirement Plan after the judge's maximum retirement benefit is reached. Tier 2 program judges are required to contribute 7.0 percent of their total compensation. The employer contributes 22.5 percent of salary for both tiers.

Tier 1 members become eligible for retirement benefits at age 65 with five years of allowable service. Tier 2 members become eligible for retirement benefits at age 66 with five years of allowable service. Reduced retirement benefits are available to all members at age 60 with five years of allowable service. Mandatory retirement age is age 70 for both tiers.

The retirement benefit for Tier 1 program judges is 2.7 percent of the high-five average salary for each year of allowable service prior to July 1, 1980, plus 3.2 percent for each year of allowable service after June 30, 1980. The retirement benefit for Tier 2 program judges is 2.5 percent of the high-five average salary for each year of allowable service. The maximum benefit a Tier 1 program member receives is 76.80 percent of high-five average salary. There is no maximum benefit for Tier 2 program members.

Annuitants receive post-retirement increases of 1.75 percent each year. When the Judges Retirement Fund reaches or exceeds a 70 percent funded ratio for two consecutive years (on a market value of assets basis), the post-retirement adjustment will increase to 2.0 percent each year. When the funding status reaches or exceeds 90 percent for two consecutive years, the post-retirement adjustment will increase to 2.5 percent each year. The funding status of the Judges Retirement Fund is actuarially calculated on an annual basis.

A state contribution of $3 million will be made to the Judges Retirement Fund in fiscal year 2017, and $6 million annually beginning in fiscal year 2018 until the plan is fully funded.

Legislators Fund

The Legislators Fund includes two state of Minnesota General Fund plans: the Legislators Retirement Plan and the Elective State Officers Retirement Plan. Each is a single employer plan that is closed to new entrants. Effective July 1, 2013, these plans were merged for administrative cost savings purposes. The General Fund plans provide retirement and death benefits to plan members and their beneficiaries.

The Legislators Retirement Plan includes members of the Minnesota State Legislature who were first elected to office before July 1, 1997, and who elected to retain coverage under this plan. Legislators elected after that date are participants in the Unclassified Employees Retirement Plan, a defined contribution plan. The Elective State Officers Retirement Plan includes constitutional officers (e.g., Governor, Lieutenant

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Governor, Secretary of State, Attorney General and State Auditor) who were first elected to office between July 1, 1967, and July 1, 1997, and chose to retain coverage under this plan.

Although the Legislators Retirement Plan is closed, a small number of members actively contribute to the plan. *Minnesota Statutes*, Section 3A.03 requires that these active members contribute 9.0 percent of their salary to the state's General Fund. There are no active contributing participants in the Elective State Officers Retirement Plan.

Legislators are eligible for full retirement benefits at age 62 with six years of allowable service. Reduced retirement benefits are available at age 55 with the same service requirement. For members first elected prior to January 1, 1979, the retirement benefit is computed at 5.0 percent of high-five average salary for the first eight years of service prior to January 1, 1979, and 2.5 percent for subsequent years. For members elected after December 31, 1978, the retirement benefit is computed at 2.5 percent of the high-five average salary for each year of allowable service.

Elective State Officers are eligible for full retirement benefits at age 62 with six years of allowable service. Reduced retirement benefits are available at age 60 with the same service requirement. The retirement benefit is computed at 2.5 percent of high-five average salary.

Benefits for both plans are financed on a pay-as-you-go basis, funded primarily by annual appropriations from the state's General Fund. Annual retirement benefits for Legislators who retired prior to July 1, 2003, were financed by the remaining assets of the Legislators Retirement Fund until fiscal year 2016, when the assets were fully depleted. All benefits are now funded on a pay-as-you-go basis with annual appropriations from the state's General Fund.

Annuitants receive post-retirement increases of 2.0 percent each year. When the State Employees Retirement Fund reaches or exceeds a 90 percent funded ratio for two consecutive years (determined on a market value of assets basis), the post-retirement adjustment will increase to 2.5 percent each year. If, after reverting to a 2.5 percent increase, the funded ratio of the State Employees Retirement Fund (determined on a market value of assets basis) declines to less than 80 percent for the most recent actuarial valuation year, or 85 percent for two consecutive years, the post-retirement benefit increase will return to 2.0 percent. The funding status of the State Employees Retirement Fund is actuarially calculated on an annual basis.

Optional Retirement Annuities

In the defined benefit funds, three joint-and-survivor annuity options are available: a 50 percent survivor benefit; a 75 percent survivor benefit; and a 100 percent survivor benefit to the beneficiary. Each option includes the right of reversion to the single-life amount if the beneficiary dies before the member. A 15-year period certain and life thereafter annuity is also available. By statute, the Legislators Retirement Fund automatically provides a 50 percent benefit continuance to a surviving spouse. Also, legislators can choose 100 percent survivor coverage with an actuarially reduced benefit.

E. Defined Contribution Retirement Funds Membership Statistics, Contribution Information, and Plan Descriptions

During fiscal year 2015 MSRS contracted with a third-party administrator, Voya Institutional Plan Services, LLC, to provide various recordkeeping services for administering its four defined contribution funds. Effective June 30, 2015, MSRS' contract with Voya expired. Under a new contractual arrangement, Empower Retirement™ (Great-West Life & Annuity Assurance Company) became the recordkeeper for MSRS' defined contribution retirement funds on July 1, 2015. Membership statistics are provided in **Exhibit 9**.

Exhibit 9: Membership Statistics – Defined Contribution Funds
(Dollars in thousands)

As of June 30, 2016	Unclassified Employees	Health Care Savings	MN Deferred Compensation	Hennepin County Supplemental
Active Members	1,380	57,721	46,601	237
Inactive Members	1,846	33,561	27,582	1,002
Withdrawing Members	0	15,552	9,870	174
Total Members	3,226	106,834	84,053	1,413
Annual Payroll	$105,640	N/A	N/A	$19,728
Participating Employers	10	544	688	2

Unclassified Employees Retirement Fund

The Unclassified Employees Retirement Fund is a tax-deferred, defined contribution fund entirely composed of a single, multiple-employer defined contribution plan, the Unclassified Employees Retirement Plan. Participation is limited to certain, specified employees of the State of Minnesota and various statutorily designated entities. *Minnesota Statutes*, Section 352D.01 authorized creation of this plan. No MSRS employees are active participants of the Unclassified Employees Retirement Plan.

It is considered a money purchase plan, with participants vesting only to the extent of the value of their accounts (employee contributions plus employer contributions plus/minus investment gains/losses, less administrative expenses), but functions as a hybrid of a defined contribution plan and a defined benefit plan.

Minnesota Statutes, Section 352D.04, subdivision 2, requires a contribution rate of 5.5 percent of salary from participating employees, which is equivalent to the employee contribution rate for members of the General Employees Retirement Plan. The employer contribution rate for the Unclassified Employees Retirement Plan is 6.0 percent of salary.

Unclassified Employees Retirement Plan participants are eligible to apply for the balance in their account after termination of public service. There is no minimum employment requirement to qualify for this lump-sum payment. Since contributions made to this plan are not taxed, participants pay taxes when funds are withdrawn and may be subject to a ten percent tax penalty if funds are withdrawn in a lump sum before the member reaches age 59 1/2. Monthly benefits are available to terminated participants at age 55 or later, regardless of the individual's length of service. Participants age 55 or older may also apply for a portion of their account balance as a lump-sum payment and the remainder in lifetime, monthly benefits.

Retirement and disability benefits are available to some participants through conversion, at the participant's option, to the General Plan provided the employee has at least 10 years of allowable service in the Unclassified and/or the General Plan if hired prior to July 1, 2010, or has no more than seven years of service if hired after June 30, 2010. This conversion option is not available to judges, legislators and elected state officers. It is a contingent liability of the State Employees Retirement Fund and actuarially valued as of June 30, 2016, in the amount of $13,423,000.

Health Care Savings Fund

The Health Care Savings Fund is a defined contribution fund entirely composed of the Health Care Savings Plan. It is an employer-sponsored program authorized by *Minnesota Statutes* Section 352.98. The Health Care Savings Plan allows employees to save tax-free contributions in an investment account to be used to reimburse the plan participants for future medical expenses and medical insurance premiums after they terminate employment. As a result of various Internal Revenue Service (IRS) rulings and regulations, benefit payments are tax exempt. Program participation is mandated by either collective bargaining agreement or personnel policy. Contribution rates are determined by collective bargaining agreements or employer personnel policies. They are highly variable, ranging from a percentage of weekly earnings to terminal, lump sum benefits such as severance pay.

Minnesota Deferred Compensation Fund

The Minnesota Deferred Compensation Fund is a defined contribution fund entirely composed of the Minnesota Deferred Compensation Plan. *Minnesota Statutes* Section 352.965 establishes this plan. It is a voluntary plan offered to all state employees and political subdivisions located in Minnesota. Authorized under Section 457(b) of the Internal Revenue Code, contributions and investment earnings are tax sheltered until the time of withdrawal. Employee contributions may be as little as $10 each paycheck. Some employer units or bargaining units may match a portion of an employee's contributions annually. All contributions are subject to annual maximum limits determined by the IRS. All assets and income are held in trust, custodial accounts, or annuity contracts for the sole benefit of plan participants and beneficiaries. Plan participants may only withdraw money from their account upon separation of service or retirement. Unlike many other supplemental retirement plans, Section 457(b) plan participants who take a distribution before reaching age 59 1/2 are not subject to the IRS ten percent early withdrawal penalty.

Hennepin County Supplemental Retirement Fund

MSRS is responsible for providing recordkeeping services for the Hennepin County Supplemental Retirement Fund, a defined contribution fund. Only employees of Hennepin County who began employment prior to April 14, 1982, are eligible to participate in this tax sheltered nonqualified plan. This plan was created in accordance with *Minnesota Statutes* Section 383B.46 and Section 6064(d)(2) and (3) of the *Technical and Miscellaneous Revenue Act of 1988*. Employee contributions of 1.0 percent of salary are matched by employer contributions of 1.0 percent of salary.

Continued on next page

4. Detailed Notes on All Activities and Funds

A. Assets

Cash Deposits with Financial Institutions

Custodial Credit Risk - Deposits

In the case of deposits, there is risk that in the event of a bank failure, the organization's deposits may not be returned to it. *Minnesota Statutes*, Section 9.031, requires that 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 fair value of the collateral. Throughout fiscal year 2016, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all MSRS deposits, eliminating exposure to custodial credit risk.

Investment Risks

The Minnesota State Board of Investment (SBI) is responsible for investing various MSRS funds under the authority of *Minnesota Statutes*, Section 11A.24. The following disclosures apply to those investments.

Credit Risk

Credit risk is the risk that an issuer or counterparty to an investment will be unable to fulfill its obligations. 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 that 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 five percent of the fund for which the SBI 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.

As of June 30, 2016, MSRS' proportionate share of the SBI's exposure to credit risk, based on the lower of Standard and Poor's or Moody's Quality Ratings for debt securities and short-term investments, is shown in **Exhibit 10.**

Exhibit 10: Credit Risk Exposure
(Dollars in thousands)

Quality Rating*	Fair Value As of June 30, 2016
AAA	$181,470
AA	84,732
A	200,668
BBB	637,028
BB	359,764
B	51,947
CCC	24,217
CC	9,812
C	562
D	4,702
Unrated	493,159
Agencies**	988,963
U.S. Government	888,020
Total	**$3,925,044**

*The exposure to credit risk is based on the lower of Standard and Poor's or Moody's Quality Ratings. For clarity of reporting, Moody's ratings are displayed in this exhibit using the comparable Standard and Poor's rating.

**Items listed as Agencies are not rated and include implicitly and explicitly guaranteed items of the federal government. The implicitly guaranteed items make up 88 percent of the value, and include investments in the Federal Home Loan Bank (FHL Banks), Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), Financing Corporation (FICO), Federal Farm Credit Banks (FCBanks), and Federal Agricultural Mortgage Corporation (Farmer Mac). The balance of the Agencies quality rating consists of federally guaranteed investments.

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 the concentration of credit risk based on security identification number. MSRS' defined benefit retirement funds do not have exposure to a single issuer that equals or exceeds 5 percent of any MSRS retirement fund's fiduciary net position. Therefore, there is no concentration of credit risk.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt instruments could adversely affect the fair value of an investment. The SBI controls interest rate risk through guidelines established for each portfolio. MSRS' share of debt securities are held in external investment pools and as of June 30, 2016, had the weighted-average maturities shown in **Exhibit 11**.

Exhibit 11: Interest Rate Risk
As of June 30, 2016
(Dollars in thousands)

	Defined Benefit Funds		Defined Contribution Funds	
Security Type	**Fair Value**	**Weighted Average Maturity in Years**	**Fair Value**	**Weighted Average Maturity in Years**
U.S. Agencies	$94,921	3.99	$4,034	5.09
Asset-Backed Securities	161,144	2.44	9,495	2.44
Short-Term Investment Securities	406,919	0.76	11,822	1.20
Commercial Mortgage-Backed Securities	1,403	5.08	83	5.08
Collateralized Mortgage Obligations	288,329	4.02	16,989	4.02
Corporate Debt	891,703	9.33	51,606	9.47
Foreign Country Bonds	12,919	20.61	761	20.61
Yankee Bonds	232,936	8.31	13,587	8.36
Mortgage-Backed Securities (non-commercial)	753,840	3.99	44,417	3.99
State and Local Government Bonds	36,254	15.80	2,051	16.34
Preferred Stock	1,864	0.00	110	0.00
U.S. Treasuries	838,844	9.79	49,013	9.86
Total Fair Value	**$3,721,076**		**$203,968**	
Portfolio Weighted Average Maturity		**6.60**		**7.06**

Note 4: Detailed Notes on All Activities and Funds

Continued on next page

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. To reduce foreign currency risk, the SBI implements several 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. Based on total investments, the SBI has less than a 15 percent exposure to currency risk. Various investments at June 30, 2016, were distributed among the following currencies shown in **Exhibit 12**.

Exhibit 12: Foreign Currency Risk
As of June 30, 2016
(Dollars in thousands)

Currency	Cash & Cash Equivalents	Equities	Fixed Income	Investment Totals
Australian Dollar	$197	$88,033	$0	$88,230
Brazilian Real	7	18,510	0	18,517
Canadian Dollar	885	114,275	118	115,278
Chilean Peso	3	2,163	0	2,166
Columbian Peso	0	1,648	0	1,648
Czech Koruna	0	1,779	0	1,779
Danish Krone(1)	(23)	34,499	0	34,476
Egyptian Pound	41	798	0	839
Euro Currency	783	522,800	1,674	525,257
Hong Kong Dollar	429	124,846	0	125,275
Indian Rupee	11	38,482	0	38,493
Indonesian Rupiah	78	12,397	0	12,475
Japanese Yen	3,600	328,031	3,689	335,320
Malaysian Ringgit	12	4,022	0	4,034
Mexican Peso	3	9,548	0	9,551
New Israeli Sheqel	23	4,046	0	4,069
New Taiwan Dollar	51	34,989	0	35,040
New Zealand Dollar	90	4,396	0	4,486
Norwegian Krone	39	9,802	0	9,841
Philippine Peso	3	8,625	0	8,628
Polish Zloty	0	4,855	0	4,855
Pound Sterling	1,890	260,893	3,544	266,327
Qatari Rial	1	527	0	528
Singapore Dollar	44	15,969	0	16,013
South African Rand	111	22,188	0	22,299
South Korean Won	0	36,465	0	36,465
Swedish Krona	80	35,595	0	35,675
Swiss Franc	22	119,757	0	119,779
Thailand Baht	29	6,450	0	6,479
Turkish Lira	2	5,663	0	5,665
UAE Dirham	0	1,114	0	1,114
Other(2)	5	175	0	180
Totals	**$8,416**	**$1,873,340**	**$9,025**	**$1,890,781**

(1) *Timing issues resulted in an overdrawn account and negative cash and cash equivalents in Danish Krone.*
(2) *Examples of other currency include Hungarian Forint and Moroccan Dirham.*

Derivative Financial Instruments

On behalf of MSRS, 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 (sell) and call (buy) options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. This 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's derivative activity is to equitize cash in the portfolio, to adjust the duration of the portfolio, or to offset current futures positions.

The fair value balances and notional (face value) amounts at June 30, 2016, classified by derivative instrument type, and the changes in fair value for fiscal year 2016 are shown in **Exhibit 13**.

Exhibit 13: Derivative Financial Instruments
As of June 30, 2016
(Dollars in thousands)

Derivative Investment Type	Changes in Fair Value During FY 2016	Fair Value at June 30, 2016	Notional Amount
Futures			
Equity Futures – Long	$192	$0	$378
Equity Futures – Short	315	0	(4)
Fixed Income Futures – Long	7,742	0	85,744
Fixed Income Futures - Short	(16,175)	0	(160,632)
Options			
Futures Options Bought (Puts)	$(849)	$0	$0
Futures Options Written (Calls)	600	(30)	(62)
Currency Forwards			
Foreign Exchange (FX) Forwards	$1,901	$900	$65,660
Stock Warrants and Rights			
Stock Rights	$(6)	$132	$483
Stock Warrants	(74)	157	63

Derivative Instrument Type Explanations

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 fair 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 five years or more before expiration. When exercised, the company issues new shares. 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.

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Notes to the Financial Statements

The SBI maintains a fully benefit-responsive synthetic guaranteed investment contract for the Supplemental Investment Fund - Stable Value Fund. The investment objective of the Stable Value Fund is to protect investors from loss of their original investment and to provide a competitive interest rate. On June 30, 2016, the SBI's portfolio of well-diversified, high quality, investment grade fixed income securities had a fair value of $1,418,559,475 that is $40,433,072 in excess of the value protected by the wrap contract. The Stable Value Fund also includes liquid investment pools with a combined fair value of $166,470,219.

Derivative Credit Risk

The SBI is exposed to credit risk through multiple counterparties in foreign currency forward contracts that are used to offset the currency risk of a security. MSRS' proportionate share of the maximum loss that the SBI would have recognized as of June 30, 2016, if all counterparties failed to perform as contracted is $1,533,365. These counterparties have Standard and Poor's ratings of BBB+ or better. There is no collateral held or any liabilities included in netting arrangements with those counterparties that would have reduced the SBI's exposure to credit risk.

Securities Lending Transactions

MSRS does not own specific securities, but instead owns shares in various pooled funds invested by the SBI. The amounts shown on the financial statements are MSRS' 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 **Exhibit 14.**

Exhibit 14: Securities Loaned
(Dollars in thousands)

Investment Type	Amount as of June 30, 2016
Domestic Equities	$2,188,143
U.S. Government Bonds	676,369
International Equities	313,987
Domestic Corporate Bonds	129,602
International Corporate Bonds	1,831
Total	$3,309,932

Minnesota Statutes, section 356A.06, subdivision 7, allows the SBI to participate in securities lending transactions. The SBI has, by way of 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.

During the fiscal year, State Street lent, on behalf 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 fair 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 the 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 right to terminate securities lending transactions upon notice. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. As of June 30, 2016, the investment pool had an average duration of 12.39 days and an average weighted final maturity of 88.83 days for U.S. dollars. 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, 2016, the SBI had no credit risk exposure to borrowers. MSRS' share of the collateral held and the fair value of securities on loan (in U.S. dollars) as of June 30, 2016, was $3,430,050,043 and $3,309,932,152, respectively. Cash collateral totaling $1,972,771,984 is reported on the *Statement of Fiduciary Net Position* as an asset and correspondingly on the statement as a liability.

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: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

Level 2: 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.

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

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 **Exhibit 15** on the following page, 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, 2016, values, adjusted for cash flows. The investments measured at NAV are typically not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which occur over the life of the investment. Cash and short term investments are not leveled under GASB Statement No. 72, and therefore are not included in the exhibit.

The SBI has 21 investments that are valued at NAV that are currently in the liquidation mode, totaling 1.5 percent of the NAV value. MSRS' proportionate share of the unfunded commitments to the investments valued at NAV totals $1,204,244,179. Unfunded commitments are funds that have been committed to an investment but not yet transferred to investors.

Explanations of investment types follow the exhibit.

Continued on next page

Notes to the Financial Statements

Exhibit 15: Fair Value of MSRS Investments
As of June 30, 2016
(Dollars in thousands)

Investments	Fair Value	Level 1	Level 2	Level 3
Equity				
Common Stock	$7,801,197	$7,794,379	$6,597	$221
Real Estate Investment Trust	297,709	297,699	0	0
Other Equity	136,160	118,826	17,318	16
Equity Total	**$8,235,066**	**$8,210,904**	**$23,915**	**$247**
Fixed Income				
Asset-Backed Securities	$477,781	$0	$476,803	$978
Mortgage-Backed Securities	1,550,630	0	1,543,414	7,216
Corporate Bonds	1,577,665	0	1,577,665	0
Government Issues	1,364,190	0	1,362,481	1,709
Other Debt Instruments	389,414	0	389,414	0
Fixed Income Total	**$5,359,680**	**$0**	**$5,349,777**	**$9,903**
Investment Derivatives - Options	**$(30)**	**$(30)**	**$0**	**$0**
Total Investments by Fair Value	**$13,594,716**	**$8,210,874**	**$5,373,692**	**$10,150**

Investments Measured at the Net Asset Value (NAV)

	NAV	Unfunded Commitments
Private Equity	$1,013,818	$715,898
Real Estate	134,821	101,069
Resource	254,313	219,649
Yield Oriented	202,242	167,628
NAV Total	**$1,605,194**	**$1,204,244**

Equity

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 dividends 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 Partnership Units, Common Stock Units, and Mutual Funds

Fixed Income

Asset-Backed Securities: Bonds or notes back 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 their principal when they mature. Maturities range from 1 to 30 years.

Government Issue: Securities or bonds issued by any of the fifty states, the territories and their subdivisions, 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 STIF (Short Term Investment Funds) 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.

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 112 Private Equity investments representing 63 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 15 Real Estate investments representing 8 percent of the NAV value.

Resource Funds: The strategy for resource investments is to establish and maintain a portfolio of resource investment vehicles that provide an inflation hedge and additional diversification. Resource investments include oil and gas investments and energy service industry investments that are diversified by geographic area as well as by type. The SBI has 25 Resource Funds investments representing 16 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 13 percent of the NAV value.

Continued on next page

Notes to the Financial Statements

Capital Assets

Capital asset activity for the year ended June 30, 2016, is reported in **Exhibit 16**.

Exhibit 16: Capital Assets
(Dollars in thousands)

Capital Asset Types	Balance July 1, 2015	Additions	Deductions	Balance June 30, 2016
Capital Assets, Not Depreciated:				
Land	$88	$0	$0	$88
Development in Progress	0	168	0	168
Total Capital Assets, Not Depreciated	**$88**	**$168**	**$0**	**$256**
Capital Assets, to be Depreciated or Amortized for:				
Building, Improvements, and Building Equipment	$8,026	$207	$0	$8,233
Equipment, Furniture, and Fixtures	1,462	36	0	1,498
Internally Generated Software	15,084	820	0	15,904
Total Capital Assets, to be Depreciated or Amortized	$24,572	$1,063	$0	$25,635
Total Capital Assets	**$24,660**	**$1,231**	**$0**	**$25,891**
Less Accumulated Depreciation or Amortization for:				
Building, Improvements and Building Equipment	$(2,679)	$(223)	$0	$(2,902)
Equipment, Furniture, and Fixtures	(1,308)	(80)	0	(1,388)
Internally Generated Software	(979)	(1,018)	0	(1,997)
Total Accumulated Depreciated or Amortization	**$(4,966)**	**$(1,321)**	**$0**	**$(6,287)**
Total Capital Assets, Net of Accumulated Depreciation or Amortization	**$19,694**	**$(90)**	**$0**	**$19,604**

B. Liabilities

Lease Obligations

MSRS' main office is in the Retirement Systems of Minnesota building located in St. Paul. MSRS, Public Employees Retirement Association (PERA), and Teachers Retirement Association (TRA), jointly own this building under the terms of a co-tenancy agreement. MSRS also leases space for branch offices in Mankato, Detroit Lakes, and Duluth, and has an interagency agreement with TRA to reimburse TRA for one-half of the lease costs for office space located in the St. Cloud, Minnesota branch office.

As of June 30, 2016, future obligations under the terms of those leases are scheduled in **Exhibit 17** on the next page.

Exhibit 17: Lease Obligations

Fiscal Year Ending June 30	Locations: Mankato	St. Cloud	Duluth	Detroit Lakes	Totals
2017	$75,609	$4,282	$25,613	$17,388	$122,892
2018	82,221	0	25,995	17,621	125,837
2019	83,542	0	15,294	17,931	116,767
2020	83,542	0	0	18,009	101,551
2021	83,542	0	0	4,502	88,044
2022-2023	97,467	0	0	0	97,467
Totals	**$505,923**	**$4,282**	**$66,902**	**$75,451**	**$652,558**

Long-term Debt

Legislation was passed in 1999 allowing MSRS, TRA and PERA 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 proportionate share of the building's usable space in square feet. On June 1, 2000, the state Department of Finance (currently known as Minnesota Management and Budget) issued $29,000,000 in 30-year revenue bonds to finance the building construction.

In the fall of 2012, the remaining bonds were refunded with the proceeds of a new, lower-interest rate bond issue. The bonds are secured by the value of the total assets of the retirement systems, excluding all amounts contributed to and deposited for the Elective State Officers Retirement Plan (MSRS), the Legislators Retirement Plan (MSRS), the Supplemental Investment Fund for participants in the Unclassified Employees Retirement Plan (MSRS), the Minnesota Deferred Compensation Plan (MSRS), the Hennepin County Supplemental Retirement account (MSRS), the Health Care Savings Plan (MSRS), the Public Employees Defined Contribution Plan (PERA), the Volunteer Firefighters Lump Sum Retirement Plan (PERA), and any fund related to or dedicated to defined contribution plans administered by the retirement systems. Through the issuance of the refunding bonds, which received an AAA rating in late July 2012, the bond term has been reduced by five years and the present value of the savings to the three systems is $9,582,538. The MSRS portion of the savings is $2,568,120.

Exhibit 18 on the following page shows the debt service amounts for which MSRS is directly responsible. Pursuant to the joint and several liability clause in the bond sale official statement, in the event of default, MSRS could be liable for the entire remaining outstanding principal and premium balances of the bonds, plus the interest accrued for the month of June, a total of $16,421,406. Bonds Payable on the *Statement of Fiduciary Net Position* is the MSRS share of the outstanding debt, calculated at MSRS' building ownership percentage on June 30, 2016, of 27.5 percent. Bonds Payable includes the principal balance as of June 30, 2016, the premium balance as of June 30, 2016, and interest accrued for the month of June.

Continued on next page

Notes to the Financial Statements

Exhibit 18: Debt Repayment Schedule by Fiscal Year

Fiscal Year	Principal	Interest	Premium	Total Principal, Interest & Premium
2017	$460,625	$70,218	$40,662	$571,505
2018	470,250	62,581	39,087	571,918
2019	484,000	54,784	37,479	576,263
2020	490,875	46,759	35,824	573,458
2021	504,625	38,620	34,145	577,390
2022	515,625	30,253	32,419	578,297
2023	526,625	21,704	30,656	578,985
2024	507,375	12,972	18,323	538,670
2025	275,000	4,559	6,440	285,999
Totals	**$4,235,000**	**$342,450**	**$275,035**	**$4,852,485**

Total Unpaid Principal, June 30, 2016	$4,235,000	
Total Unpaid Premium, June 30, 2016	275,035	
Accrued Interest for June 2016	5,852	
Bonds Payable per Statement of Fiduciary Net Position	**$4,515,887**	**$4,516 (in 000s)**

Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions

All MSRS employees are covered by the State Employees Group Insurance Plan (SEGIP), a multiple-employer cost-sharing defined benefit plan, administered by Minnesota Management and Budget (MMB). At present, this plan subsidizes the cost of retiree insurance by charging a single premium rate for active employees and retirees, regardless of underwriting experience. Based on the results of a July 1, 2014, actuarial valuation, the SEGIP had an actuarially determined unfunded net obligation for future benefits of $295,958,000 at June 30, 2016, to be funded on a pay-as-you-go basis. MSRS' allocated portion of this liability is $115,000. The MSRS share of the required contributions and the net Other Post Employment Benefit (OPEB) obligation is presented in **Exhibit 19** on the following page.

Exhibit 19: Required OPEB Contributions and Net OPEB Obligation

State Employee Group Insurance Plan OPEB Disclosures:

Fiscal Year Ended June 30	**Annual Required Contribution (a)**	**Employer Contribution (b)**	**Percent (b)/(a)**	**Net OPEB Obligation**
2012	$65,000	$78,000	120.00%	$67,000
2013	52,000	60,000	115.38	60,000
2014	53,000	43,000	81.13	70,000
2015	63,000	40,000	63.49	93,000
2016	66,000	45,000	68.18	115,000

C. Interfund Receivables and Payables

Interfund receivables and payables as of June 30, 2016, are detailed in **Exhibit 20**.

Exhibit 20: Due From/To Other Plans as of June 30, 2016
(Dollars in thousands)

	Due From Other Plans (Interfund Receivables)	**Due To Other Plans (Interfund Payables)**
Defined Benefit Retirement Funds		
State Employees	$5,791	$31
State Patrol	11	213
Correctional Employees	15	896
Judges	3	90
Legislators	2	40
Defined Contribution Retirement Funds		
Unclassified Employees	0	494
Health Care Savings	0	2,321
Minnesota Deferred Compensation	4	1,725
Hennepin County Supplemental	0	16
Totals	**$5,826**	**$5,826**

Continued on next page

D. Revenues and Expenses

Administrative Expenses

Administrative expenses by fund for the fiscal year ended June 30, 2016, are detailed in the *Schedule of Administrative Expenses* found on page 110.

Reemployed Retirees' Earnings Limitations

MSRS members whose age is under the Social Security full retirement age, and who return to work in an MSRS covered position after their retirement, are subject to an annual earnings limitation unless hired under a Post-Retirement Option (PRO) agreement. The maximum earnings limits for calendar years 2015 and 2016 for individuals under the full retirement age is $15,720 for each year. For individuals that reach full retirement age during 2015 or 2016, the maximum earnings limits is $41,880 during that year.

Benefit payments for members exceeding the earnings limit are stopped for the remainder of the calendar year and held in abeyance for later distribution to the retiree. Six percent interest, compounded annually, accrued on these funds through December 31, 2010.

Effective January 1, 2011, funds held in abeyance no longer accrue interest. Funds held in abeyance are included in Other Payables in the respective fund's *Statement of Fiduciary Net Position*. As of June 30, 2016, MSRS had 69 re-employed retirees with funds held in abeyance, which totaled $1,588,859 ($1,270,333 for the State Employees Retirement Fund and $318,526 for the Correctional Employees Retirement Fund).

Retirees must wait one year following termination of their post-retirement employment to be eligible to receive a distribution of these funds. At the time of distribution, the retiree may choose a lump-sum payment or a direct rollover to an eligible retirement plan as defined by section 402(c) of the Internal Revenue Code. MSRS processed 10 distributions of these funds, totaling $108,147, all for the State Employees Retirement Fund, during fiscal year 2016.

E. Interfund Transfers

Interfund transfers during the fiscal year ended June 30, 2016, are shown in **Exhibit 21.**

Exhibit 21: Fiscal Year 2016 Interfund Transfers
(Dollars in thousands)

	Transfers From Other Plans (Transfers In)	Transfers to Other Plans (Transfers Out)
Defined Benefit Retirement Funds		
State Employees	$20,483	$470
State Patrol	0	0
Correctional Employees	0	0
Judges	0	0
Legislators	0	0
Defined Contribution Funds		
Unclassified Employees	470	20,483
Health Care Savings	0	0
Minnesota Deferred Compensation	0	0
Hennepin County Supplemental	0	0
Totals	**$20,953**	**$20,953**

F. Net Pension Liability of Participating Employers

Beginning in 2014, two actuarial valuations for each MSRS defined benefit retirement fund are performed annually: a traditional funding actuarial valuation and a GASB-compliant actuarial valuation. The purpose of the traditional funding actuarial valuation is to measure funding progress, and to determine the required contribution rate, contribution sufficiency or deficiency, and other actuarial information necessary for monitoring funding position. The purpose of the GASB-compliant actuarial valuation is to determine actuarial information necessary to prepare financial reports in compliance with GASB Statements No. 67 and No. 68. This includes computation of the net pension liability. Net pension liability is computed as the total pension liability for each MSRS defined benefit retirement fund, determined in accordance with GASB Statement No. 67, less the fiduciary net position of the respective fund.

Exhibit 22 presents the components of the net pension liability of the participating employers for each MSRS defined benefit retirement fund as of June 30, 2016. This exhibit also depicts each retirement fund's net position as a percentage of the total pension liability.

Exhibit 22: Net Pension Liability of Participating Employers
As of June 30, 2016
(Dollars in thousands)

	Defined Benefit Retirement Fund				
Component of Net Pension Liability	**State Employees**	**State Patrol**	**Correctional Employees**	**Judges**	**Legislators**
Total Pension Liability	$23,621,950	$1,122,970	$2,232,382	$345,033	$154,701
Fiduciary Net Position	11,223,065	629,992	899,592	165,905	0
Employers' Net Pension Liability	$12,398,885	$492,978	$1,332,790	$179,128	$154,701
Fiduciary Net Position as a percentage of the Total Pension Liability	47.51%	56.10%	40.30%	48.08%	0.00%

Continued on next page

Actuarial Methods and Assumptions

The total pension liability for each MSRS defined benefit retirement fund was determined by an actuarial valuation as of June 30, 2016, using the key actuarial assumptions shown in **Exhibit 23**, applied to all prior periods included in the measurement.

Exhibit 23: Summary of Key Actuarial Methods and Assumptions

	Defined Benefit Retirement Fund				
	State Employees	State Patrol	Correctional Employees	Judges	Legislators
Actuarial Valuation Date	June 30, 2016 for all funds				
Actuarial Cost Method	Entry Age Normal for all funds				
Asset Valuation Method	Fair Value for all funds				
Long-Term Expected Rate of Return	7.50 percent for all funds				
Inflation	2.50 percent for all funds				
Salary Increases	Service related rates			2.50 percent	4.50 percent
Payroll Growth	3.25 percent			2.50 percent	Not applicable
Mortality Rates	**State Employees:** RP-2014 generational mortality tables projected with mortality improvement scale MP-2015 from a base year of 2014. **All Other Funds:** RP-2000 generational mortality tables projected with mortality improvement scale AA. All of the tables are set back or set forward to match fund experience				
Annual post-retirement benefit increases (e.g., cost of living adjustments)	2.0% indefinitely	1.0% indefinitely	2.0% indefinitely	1.75% through 2041; 2.0% from 2042 through 2054; 2.5% thereafter	2.0% indefinitely
Retirement	Age-related rates				
Withdrawal	Select and Ultimate rates based on actual experience			None	Ultimate rates based on actual experience
Disability	Age-based table of rates based on experience				None

Actuarial assumptions are based on experience studies, generally conducted every four years for the State Employees Retirement Fund, and every six to eight years for the smaller MSRS defined benefit funds. The most recent studies and the periods covered are presented in **Exhibit 24**. An experience study was completed for the State Patrol Retirement Fund, the Correctional Employees Retirement Fund, and the Judges Retirement Fund in June of 2016. Results of these studies are expected to affect actuarial assumptions for the valuations performed for fiscal year 2017.

Exhibit 24: Experience Study Dates

Retirement Fund	Fiscal Years Covered
State Employees	2008 – 2014
State Patrol	2011 – 2015
Correctional Employees	2011 – 2015
Judges	2011 – 2015

For additional actuarial assumptions used in determination of the June 30, 2016, valuation results, please refer to page 183 of the *Actuarial Section* of this comprehensive annual financial report.

In addition to the experience studies listed above, a study of economic assumptions took place in the fall of 2014. This study reviewed assumptions for inflation, salary increases, payroll growth, and the long-term expected rate of return, which are central to the calculations of the net pension liability for each fund.

Long-Term Expected Rate of Return on Investments

The long-term expected rate of return used in the determination of the net pension liability is 7.5 percent. This is a reduction from the assumed rate of 7.9 percent in fiscal year 2015. The earlier rate assumption was selected as the result of a 2014 actuarial review of economic assumptions. The review combined the SBI's asset class target allocations and long-term rate of return expectation with return expectations from eight other investment consultants. The review also factored in information from the Social Security Trustees Report, U.S. Department of the Treasury yield curve rates, and historical observations of inflation statistics and investment returns. All calculations in the review were made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

During fiscal year 2016, the SBI hired an outside consultant to perform a thorough asset and liability study. Based on the study, the SBI staff proposed an update to the asset allocation, which yields a lower nominal expected return. As a result of this study, and keeping in mind the national trends towards lower investment rate assumptions, the MSRS Board of Directors approved the use of a 7.5 percent long term expected rate of return assumption for the fiscal year 2016 actuarial valuations

Single Discount Rate

Projected benefit payments are discounted to their actuarial present values using a single discount rate. The single discount rate reflects (1) the long-term expected rate of return on pension plan investments for the period in which assets are projected to be available to pay benefits, and (2) a tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating for the remaining years.

As long as assets are projected to be on hand to pay future benefits, the long-term expected rate of return is used as the discount rate. In years where assets are not projected to be sufficient to meet benefit payments, the use of a "risk-free" municipal bond rate is required in the calculation of the single discount rate. The single discount rate is the equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods.

All MSRS defined benefit funds use a long-term expected rate of return assumption of 7.5 percent, and a municipal bond rate of 2.85 percent, as published by the Federal Reserve Board in June 2016.

The projection of cash flows used to determine the single discount rates assumes that plan member and employer contributions will be made at the current statutory contribution rates.

Based on the assumptions noted on page 183, the fiduciary net position for the Judges Retirement Fund was projected to be available to make all projected future benefit payments of current plan members. Therefore, the discount rate is the long-term expected rate of return on pension plan investments, which was applied to all periods of projected benefit payments to determine the total pension liability. The discount rate used to measure the total pension liability was 7.5 percent.

For the State Employees, State Patrol, Correctional Employees, and Legislators Retirement Funds, the fiduciary net position was projected to be insufficient to finance the projected future benefit payments of current plan members.

Continued on next page

Therefore, a single discount rate was applied, which blends the long-term expected rate of return on pension plan investments (7.5 percent) with the tax-exempt municipal bond rate, based on an index of 20-year general obligation bonds with an average AA credit rating (2.85 percent). This single discount rate was applied to all periods of projected benefit payments to determine the total pension liability.

For the State Employees Retirement Fund, the long-term expected rate of return was used to project benefit payments through fiscal year 2042 and the municipal bond rate was used in all of the following years, resulting in the single blended rate of 4.17 percent. This is a change from the previous fiscal year, when the single blended rate was 7.90 percent.

For the State Patrol Retirement Fund, the long-term expected rate of return was used to project benefit payments through fiscal year 2052 and the municipal bond rate was used in all of the following years, resulting in the single blended rate of 5.31 percent. This is a change from the previous fiscal year, when the single blended rate was 7.90 percent.

For the Correctional Employees Retirement Fund, the long-term expected rate of return was used to project benefit payments through fiscal year 2045 and the municipal bond rate was used in all of the following years, resulting in the single blended rate of 4.24 percent. This is a change from the previous fiscal year, when the single blended rate was 6.25 percent.

For the Legislators Retirement Fund, assets are not sufficient to pay benefits in any future year, so the municipal bond rate of 2.85 percent was used in all years. In the previous fiscal year, the municipal bond rate of 3.80 percent was used to calculate the total pension liability.

Further detail on the calculation of the single discount rates can be found in the unaudited Actuarial Section of this comprehensive annual financial report beginning on page 172.

Sensitivity Analysis

GASB Statement No. 67 requires the disclosure of the sensitivity of the net pension liability to changes in the discount rates. **Exhibit 25** presents the June 30, 2016, net pension liability for each of MSRS' defined benefit retirement funds calculated using the current single discount rates, as well as what each fund's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate.

Exhibit 25: Sensitivity of the FY 2016 Net Pension Liability to Changes in the Discount Rates
(Dollars in thousands)

	With 1% Decrease		Current Discount Rate		With 1% Increase	
Retirement Fund	**Rate**	**Net Pension Liability**	**Rate**	**Net Pension Liability**	**Rate**	**Net Pension Liability**
State Employees	3.17%	$16,347,293	4.17%	$12,398,885	5.17%	$9,224,441
State Patrol	4.31	648,622	5.31	492,978	6.31	365,920
Correctional Employees	3.24	1,742,178	4.24	1,332,790	5.24	1,009,206
Judges	6.50	213,206	7.50	179,128	8.50	149,781
Legislators	1.85	173,150	2.85	154,701	3.85	139,340

5. Required Supplementary Information

Required supplementary information for each defined benefit retirement fund, listed in the bullets below, is presented in the pages that follow these notes.

- *Schedule of Changes in the Employers' Net Pension Liability and Related Ratios*
- *Notes to Schedule of Changes in the Employers' Net Pension Liability and Related Ratios*
- *Schedules of Employer Contributions (and notes thereto)*
- *Schedule of Investment Returns*

Other supplementary information presented in the succeeding sections of this comprehensive annual financial report is for the benefit of financial statement users and is not a required part of the basic financial statements.

Required Supplementary Information
Schedule of Changes in the Employers' Net Pension Liability and Related Ratios

For the Three Years Ended June 30, 2016*
(Dollars in thousands)

State Employees Retirement Fund	2014	2015	2016
Total Pension Liability			
Service Cost	$256,155	$210,545	$211,491
Interest on the Total Pension Liability	922,181	1,018,035	1,020,925
Changes of Benefit Terms	0	0	0
Difference between Expected and Actual Experience in the Measurement of the Total Pension Liability	(44,023)	(493,197)	21,209
Changes of Assumptions	(1,477,308)	0	9,911,319
Benefit Payments, Including Refunds of Member Contributions	(635,928)	(677,847)	(720,706)
Net Change in Total Pension Liability	$(978,923)	$57,536	$10,444,238
Total Pension Liability - Beginning	$14,099,099	$13,120,176	$13,177,712
Total Pension Liability - Ending	**$13,120,176**	**$13,177,712**	**$23,621,950**
Plan Fiduciary Net Position			
Contributions - Employer	$128,037	$146,333	$151,168
Contributions - Plan Member	131,033	149,293	153,854
Net Investment Income	1,829,621	501,185	(9,633)
Benefit Payments, Including Refunds of Member Contributions	(635,928)	(677,847)	(720,706)
Administrative Expense	(8,125)	(8,719)	(10,196)
Other Changes	20,528	29,470	20,259
Net Change in Plan Fiduciary Net Position	**$1,465,166**	**$139,715**	**$(415,254)**
Plan Fiduciary Net Position - Beginning	$10,033,438	$11,498,604	$11,638,319
Plan Fiduciary Net Position - Ending	**$11,498,604**	**$11,638,319**	**$11,223,065**
Net Pension Liability - Ending	**$1,621,572**	**$1,539,393**	**$12,398,885**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	87.64%	88.32%	47.51%
Covered-Employee Payroll	$2,620,660	$2,714,418	$2,797,345
Net Pension Liability as a Percentage of Covered-Employee Payroll	61.88%	56.71%	443.24%

Notes to this schedule may be found on pages 99-100.

* *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

State Patrol Retirement Fund	2014	2015	2016
Total Pension Liability			
Service Cost	$14,514	$16,144	$16,555
Interest on the Total Pension Liability	60,183	63,753	64,592
Changes of Benefit Terms	0	0	0
Difference between Expected and Actual Experience in the Measurement of the Total Pension Liability	(5,771)	(12,855)	(22,222)
Changes of Assumptions	30,058	0	283,584
Benefit Payments, Including Refunds of Member Contributions	(53,722)	(55,480)	(57,774)
Net Change in Total Pension Liability	$45,262	$11,562	$284,735
Total Pension Liability - Beginning	$781,411	$826,673	$838,235
Total Pension Liability - Ending	**$826,673**	**$838,235**	**$1,122,970**
Plan Fiduciary Net Position			
Contributions - Employer**	$12,894	$14,763	$14,938
Contributions - Plan Member	7,930	9,174	9,292
Net Investment Income	107,187	28,903	(774)
Benefit Payments, Including Refunds of Member Contributions	(53,722)	(55,480)	(57,774)
Administrative Expense	(150)	(170)	(220)
Other Changes	0	0	0
Net Change in Plan Fiduciary Net Position	**$74,139**	**$(2,810)**	**$(34,538)**
Plan Fiduciary Net Position - Beginning	$593,201	$667,340	$664,530
Plan Fiduciary Net Position - Ending	**$667,340**	**$664,530**	**$629,992**
Net Pension Liability - Ending	**$159,333**	**$173,705**	**$492,978**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	80.73%	79.28%	56.10%
Covered-Employee Payroll	$63,952	$68,463	$69,343
Net Pension Liability as a Percentage of Covered-Employee Payroll	249.14%	253.72%	710.93%

Notes to this schedule may be found on pages 100-101.

* *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

** *Includes supplemental state aid of $1,000*

Required Supplementary Information

Schedule of Changes in the Employers' Net Pension Liability and Related Ratios

For the Three Years Ended June 30, 2016*
(Dollars in thousands)

Correctional Employees Retirement Fund	2014	2015	2016
Total Pension Liability			
Service Cost	$54,443	$48,805	$56,718
Interest on the Total Pension Liability	85,702	92,039	97,571
Changes of Benefit Terms	0	0	0
Difference between Expected and Actual Experience in the Measurement of the Total Pension Liability*	4,103	7,115	(764)
Changes of Assumptions	(147,067)	118,399	576,552
Benefit Payments, Including Refunds of Member Contributions	(52,289)	(56,499)	(60,940)
Net Change in Total Pension Liability	$(55,108)	$209,859	$669,137
Total Pension Liability - Beginning	$1,408,494	$1,353,386	$1,563,245
Total Pension Liability - Ending	**$1,353,386**	**$1,563,245**	**$2,232,382**
Plan Fiduciary Net Position			
Contributions - Employer	$26,468	$29,480	$30,678
Contributions - Plan Member	18,855	21,061	21,953
Net Investment Income	137,523	38,624	(195)
Benefit Payments, Including Refunds of Member Contributions	(52,289)	(56,499)	(60,940)
Administrative Expense	(657)	(720)	(906)
Other Changes	(1)	0	0
Net Change in Plan Fiduciary Net Position	**$129,899**	**$31,946**	**$(9,410)**
Plan Fiduciary Net Position - Beginning	$747,157	$877,056	$909,002
Plan Fiduciary Net Position - Ending	**$877,056**	**$909,002**	**$899,592**
Net Pension Liability - Ending	**$476,330**	**$654,243**	**$1,332,790**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	64.80%	58.15%	40.30%
Covered-Employee Payroll	$219,244	$231,440	$241,242
Net Pension Liability as a Percentage of Covered-Employee Payroll	217.26%	282.68%	552.47%

Notes to this schedule may be found on pages 101-102.

* *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Judges Retirement Fund

	2014	2015	2016
Total Pension Liability			
Service Cost	$12,075	$12,251	$13,711
Interest on the Total Pension Liability	20,535	21,773	21,349
Changes of Benefit Terms	0	0	0
Difference between Expected and Actual Experience in the Measurement of the Total Pension Liability	5,080	(4,366)	7,135
Changes of Assumptions	(8,416)	21,696	(85,756)
Benefit Payments, Including Refunds of Member Contributions	(20,802)	(21,893)	(22,378)
Net Change in Total Pension Liability	$8,472	$29,461	$(65,939)
Total Pension Liability - Beginning	$373,039	$381,511	$410,972
Total Pension Liability - Ending	**$381,511**	**$410,972**	**$345,033**
Plan Fiduciary Net Position			
Contributions - Employer	$9,426	$9,776	$10,219
Contributions - Plan Member	3,578	3,629	3,763
Net Investment Income	28,011	7,572	(186)
Benefit Payments, Including Refunds of Member Contributions	(20,802)	(21,893)	(22,378)
Administrative Expense	(55)	(60)	(93)
Other Changes	0	0	0
Net Change in Plan Fiduciary Net Position	**$20,158**	**$(976)**	**$(8,675)**
Plan Fiduciary Net Position - Beginning	$155,398	$175,556	$174,580
Plan Fiduciary Net Position - Ending	**$175,556**	**$174,580**	**$165,905**
Net Pension Liability - Ending	**$205,955**	**$236,392**	**$179,128**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	46.02%	42.48%	48.08%
Covered-Employee Payroll	$41,893	$43,449	$45,418
Net Pension Liability as a Percentage of Covered-Employee Payroll	491.62%	544.07%	394.40%

Notes to this schedule may be found on pages 102-103.

* *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Required Supplementary Information
Schedule of Changes in the Employers' Net Pension Liability and Related Ratios

For the Three Years Ended June 30, 2016*
(Dollars in thousands)

Legislators Retirement Fund	2014	2015	2016
Total Pension Liability			
Service Cost	$398	$428	$495
Interest on the Total Pension Liability	6,177	6,113	5,333
Changes of Benefit Terms	0	0	0
Difference between Expected and Actual Experience in the Measurement of the Total Pension Liability	(237)	(7,303)	(1,597)
Changes of Assumptions	11,201	7,057	14,653
Benefit Payments, Including Refunds of Member Contributions	(8,486)	(8,441)	(8,536)
Net Change in Total Pension Liability	$9,053	$(2,146)	$10,348
Total Pension Liability - Beginning	$137,446	$146,499	$144,353
Total Pension Liability - Ending	**$146,499**	**$144,353**	**$154,701**
Plan Fiduciary Net Position			
Contributions - Employer	$0	$0	$0
Contributions - Plan Member	101	153	89
Contributions - State General Fund Appropriations	3,436	3,216	5,087
Net Investment Income	1,750	281	(69)
Benefit Payments, Including Refunds of Member Contributions	(8,486)	(8,441)	(8,536)
Administrative Expense	(36)	(37)	(42)
Other Changes	0	0	41
Net Change in Plan Fiduciary Net Position	**$(3,235)**	**$(4,828)**	**$(3,430)**
Plan Fiduciary Net Position - Beginning	$11,493	$8,258	$3,430
Plan Fiduciary Net Position - Ending	**$8,258**	**$3,430**	**–**
Net Pension Liability - Ending	**$138,241**	**$140,923**	**$154,701**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	5.64%	2.38%	0.00%
Covered-Employee Payroll	$1,122	$1,700	$989
Net Pension Liability as a Percentage of Covered-Employee Payroll	12,320.94%	8,289.59%	15,642.16%

Notes to this schedule may be found on page 103.

* *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Required Supplementary Information
Notes to Schedules of Changes in the Employers' Net Pension Liability and Related Ratios

State Employees Retirement Fund

Fiscal Year 2016 Changes Since the Fiscal Year 2015 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- Assumed salary increase rates were changed to rates that average 0.2 percent greater than the previous rates.
- Assumed rates of retirement were changed, resulting in fewer unreduced retirements and fewer Rule of 90 retirements. Distinct rates for reduced (Early) retirements were adopted for members hired prior to July 1, 1989, and members hired after June 30, 1989.
- Assumed rates of termination were changed, with new rates generally greater than the previous rates for years 3 through 9 and less than the previous rates after 15 years.
- Assumed rates of disability for females were reduced to 75 percent of previous rates. Rates for male members were lowered by utilizing the same disability rates as for females.
- The base mortality table for healthy annuitants and employees was changed from the RP-2000 fully generational table to the RP-2014 fully generational table (with a base year of 2014), white collar adjustments, with age adjustments. The mortality improvement scale was changed from Scale AA to Scale MP-2015. The base mortality table for disabled annuitants was changed from the RP-2000 disabled mortality table (no projection for future mortality improvement) to the RP-2014 disabled annuitant mortality table (with future mortality improvement according to Scale MP-2015), with age adjustments.
- The percent married assumption was changed from 85 percent of active male members and 70 percent of female members to 80 percent of active male members and 65 percent of active female members.
- The assumed number of married male new retirees electing the 75 percent Joint & Survivor option changed from 10 percent to 15 percent. The assumed number of married female new retirees electing the 75 percent and 100 percent Joint & Survivor options changed from 0 percent to 10 percent and from 25 percent to 30 percent, respectively. The corresponding number of married new retirees electing the Life annuity option was adjusted accordingly.
- The assumed post-retirement benefit increase rate was changed from 2.0 percent per year through 2043 and 2.5 percent per year thereafter, to 2.0 percent per year for all future years.
- The long-term expected rate of return on pension plan investments was changed from 7.9 percent to 7.5 percent.
- The single discount rate changed from 7.9 percent to 4.17 percent.
- The inflation assumption was changed from 2.75 percent to 2.50 percent.
- The payroll growth assumption was changed from 3.50 percent to 3.25 percent.

Fiscal Year 2015 Changes Since the Fiscal Year 2014 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The assumed post-retirement benefit increase rate was changed from 2.0 percent per year through 2015 and 2.5 percent per year thereafter, to 2.0 percent per year through 2043 and 2.5 percent per year thereafter.

The following changes were made to plan provisions:

- The Contribution Stabilizer statutes were revised to make changes to contribution rates less prescriptive and more flexible.

Continued on next page

Required Supplementary Information
Notes to Schedules of Changes in the Employers' Net Pension Liability and Related Ratios

State Employees Retirement Fund *(continued)*

- Effective July 1, 2015, if the 2.5 percent post-retirement benefit increase is triggered and the funding ratio subsequently drops below 80 percent for the most recent valuation year or 85 percent for two consecutive years, the post-retirement benefit increase will change to 2.0 percent until the plan again reaches a 90 percent funding ratio for two consecutive years.

Fiscal Year 2014 Changes Since the Fiscal Year 2013 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The assumed post-retirement benefit increase rate was changed from 2.0 percent per year indefinitely, to 2.0 percent per year through 2015 and 2.5 percent per year thereafter.
- The long-term expected rate of return on pension plan investments changed from 6.63 percent to 7.90 percent.

The following changes were made to plan provisions:

- The member and employer contribution rates increased from 5.0 percent to 5.5 percent of pay.
- The funding ratio threshold that must be attained to pay a 2.5 percent post-retirement benefit increase to benefit recipients was changed from 90 percent for one year to 90 percent for two consecutive years.

State Patrol Retirement Fund

Fiscal Year 2016 Changes Since the Fiscal Year 2015 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0 percent per year through 2031, 1.5 percent per year from 2032 to 2052, and 2.5 percent per year thereafter, to 1.0 percent per year indefinitely.
- The long-term expected rate of return on investments was changed from 7.9 percent to 7.5 percent.
- The assumed future salary increases, payroll growth, and inflation rates were decreased by 0.25 percent.
- The single discount rate changed from 7.9 percent to 5.31 percent.

Fiscal Year 2015 Changes Since the Fiscal Year 2014 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0 percent per year through 2018, 1.5 percent per year from 2019 to 2045, and 2.5 percent per year thereafter, to 1.0 percent per year through 2031, 1.5 percent per year from 2032 to 2052, and 2.5 percent thereafter.

The following changes were made to plan provisions:

- The Contribution Stabilizer statutes were revised to make changes to contribution rates less prescriptive and more flexible.

- Effective July 1, 2015, if the 1.5 percent post-retirement benefit increase is triggered and the funding ratio subsequently drops below 75 percent for one year or 80 percent for two consecutive years, the post-retirement benefit increase will change to 1.5 percent until the plan again reaches an 85 percent funding ratio for two consecutive years.
- The age that disabilitants change from disabled status to retired status changed from age 65 to age 55 for disabilities after June 30, 2015.

Fiscal Year 2014 Changes Since the Fiscal Year 2013 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.0 percent per year indefinitely, to 1 percent per year through 2018, 1.5 percent per year from 2019 through 2045, and 2.5 percent per year thereafter.

The following changes were made to plan provisions:

- The funding ratio threshold that must be attained to pay a 1.5 percent post-retirement benefit increase to benefit recipients was changed from 85 percent for one year to 85 percent for two consecutive years. The funding ratio threshold that must be attained to pay a 2.5 percent post-retirement benefit increase to benefit recipients was changed from 90 percent for one year to 90 percent for two consecutive years.
- The interest assumption used to determine optional form conversion factors was changed from an actuarial equivalent rate consistent with the post-retirement discount rate to a fixed rate of 6.5 percent.

Correctional Employees Retirement Fund

Fiscal Year 2016 Changes Since the Fiscal Year 2015 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The single discount rate changed from 6.25 percent to 4.24 percent.
- The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent.
- The assumed future salary increases, payroll growth, and inflation rates were decreased by 0.25 percent.

Fiscal Year 2015 Changes Since the Fiscal Year 2014 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The single discount rate changed from 6.82 percent to 6.25 percent.
- The assumed post-retirement benefit increase rate was changed from 2.0 percent through 2065 and 2.5 percent thereafter, to 2.0 percent indefinitely.

The following changes were made to plan provisions:

- The Contribution Stabilizer statutes were revised to make changes to contribution rates less prescriptive and more flexible.

Continued on next page

Required Supplementary Information
Notes to Schedules of Changes in the Employers' Net Pension Liability and Related Ratios

Correctional Employees Retirement Fund *(continued)*

- Effective July 1, 2015, if the 2.5 percent post-retirement benefit increase is triggered and the funding ratio subsequently drops below 80 percent for one year or 85 percent for two consecutive years, the post-retirement benefit increase will change to 2.0 percent until the plan again reaches a 90 percent funding ratio for two consecutive years.

Fiscal Year 2014 Changes Since the Fiscal Year 2013 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The single discount rate changed from 6.08 percent to 6.82 percent.
- The assumed post-retirement benefit increase rate was changed from 2.0 percent indefinitely, to 2.0 percent per year through 2065, and 2.5 percent per year thereafter.

The following changes were made to plan provisions:

- Member contribution rates increased from 8.6 percent to 9.1 percent of pay
- Employer contribution rates increased from 12.1 percent to 12.85 percent of pay.
- The funding ratio threshold that must be attained to pay a 2.5 percent post-retirement benefit increase to benefit recipients was changed from 90 percent for one year to 90 percent for two consecutive years.

Judges Retirement Fund

Fiscal Year 2016 Changes Since the Fiscal Year 2015 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The assumed post-retirement benefit increase rate was changed from 1.75 percent for all years, to 1.75 percent per year through 2041, 2.0 percent per year from 2042 through 2054, and 2.5 percent per year thereafter.
- The long-term expected rate of return on investments was changed from 7.9 percent to 7.5 percent.
- The assumed future salary increases, payroll growth, and inflation rates were decreased by 0.25 percent.
- The single discount rate was changed from 5.25 percent to 7.50 percent.

The following changes were made to plan provisions:

- Legislation provides state contributions equal to $3,000,000 for the fiscal year ending June 30, 2017, and $6,000,000 per year thereafter until the plan is fully funded.

Fiscal Year 2015 Changes Since the Fiscal Year 2014 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The single discount rate was changed from 5.78 percent to 5.25 percent.

Fiscal Year 2014 Changes Since the Fiscal Year 2013 Actuarial Valuation
The following changes were made to the actuarial assumptions:

- The single discount rate was changed from 5.57 percent to 5.78 percent.

The following changes were made to plan provisions:

- Effective July 1, 2014, the funding ratio threshold that must be attained to pay a 2.0 percent post-retirement benefit increase to benefit recipients was changed from 70 percent for one year to 70 percent for two consecutive years. The funding ratio threshold that must be attained to pay a 2.5 percent post-retirement benefit increase to benefit recipients was changed from 90 percent for one year to 90 percent for two consecutive years.
- The 10-year certain and life thereafter optional form of payment is no longer available.

Legislators Fund

Fiscal Year 2016 Changes Since the Fiscal Year 2015 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The single discount rate changed from 3.80 percent to 2.85 percent.
- The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent.
- The assumed salary increases and inflation rates were decreased by 0.25 percent.
- The assumed post-retirement benefit increase rate was changed from 2.0 percent per year through 2043 and 2.5 percent thereafter, to 2.0 percent for all years.

Fiscal Year 2015 Changes Since the Fiscal Year 2014 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The single discount rate changed from 4.29 percent to 3.80 percent.
- The assumed post-retirement benefit increase rate was changed from 2.0 percent per year through 2015 and 2.5 percent thereafter, to 2.0 percent per year through 2043 and 2.5 percent thereafter.

The following changes were made to plan provisions:

- Effective July 1, 2015, if the 2.5 percent post-retirement benefit increase is triggered and the State Employees Retirement Fund funding ratio declines to less than 80 percent for the most recent year or 85 percent for two consecutive years, the benefit increase will decrease to 2.0 percent until the plan reaches a 90 percent funding ratio for two consecutive years.

Fiscal Year 2014 Changes Since the Fiscal Year 2013 Actuarial Valuation

The following changes were made to the actuarial assumptions:

- The single discount rate changed from 4.63 percent to 4.29 percent.
- The assumed post-retirement benefit increase rate was changed from 2.0 percent per year indefinitely, to 2.0 percent per year through 2015, and 2.5 percent per year thereafter.

The following changes were made to plan provisions:

- The funding ratio threshold that must be attained in the State Employees Retirement Fund to pay a 2.5 percent post-retirement benefit increase to benefit recipients in the Legislators Retirement Fund was changed from 90 percent for one year to 90 percent for two consecutive years.

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

State Employees Retirement Fund

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) a	Contributions Recognized by Plan in Relation to the Actuarially Determined Contribution b	Contribution Deficiency (Sufficiency) c=a-b	Covered-Employee Payroll d	Contributions as a Percentage of Covered-Employee Payroll e=b/d
2007	$122,389	$86,492	$35,897	$2,095,310	4.13%
2008	166,088	96,746	69,342	2,256,528	4.29
2009	179,759	107,211	72,548	2,329,499	4.60
2010	230,439	113,716	116,723	2,327,398	4.89
2011	146,191	118,563	27,628	2,440,580	4.86
2012	142,740	115,159	27,581	2,367,160 (2)	4.86
2013	181,756	121,673	60,083	2,483,000 (2)	4.90
2014	195,239	128,037	67,202	2,620,660 (2)	4.89
2015	198,695	146,333	52,362	2,714,418 (2)	5.39
2016	194,136	151,168	42,968	2,797,345 (2)	5.40

Notes to Schedule

(1) The Actuarially Determined Contribution is calculated as of June 30 each year using the actuarial methods and assumptions listed below. For additional actuarial assumptions, please refer to pages 142-155 of the *Actuarial Section* of this report.

Valuation Date:	June 30, 2016
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	26 years
Asset Valuation Method:	Market value smoothed over 5 years
Investment Rate of Return:	8.00%
Projected Salary Increases:	Service-related rates ranging from 14.00% (one year of service) to 3.50% (25 or more years of service), including inflation
Inflation Rate:	2.75%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Healthy Post-Retirement Mortality:	RP-2014 annuitant generational mortality tables, projected with mortality improvement MP-2015 from a base year of 2014 with a white collar adjustment, set forward 2 years for males and no age adjustment for females
Post-Retirement Benefit Increases:	2.0% per year

(2) Assume equal to actual member contributions divided by employee contribution rate

State Patrol Retirement Fund

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) a	Contributions Recognized by Plan in Relation to the Actuarially Determined Contribution b	Contribution Deficiency (Sufficiency) c=a-b	Covered-Employee Payroll d	Contributions as a Percentage of Covered-Employee Payroll e=b/d
2007	$11,427	$7,461	$3,966	$61,498	12.13%
2008	12,355	8,279	4,076	60,029	13.79
2009	14,999	9,178	5,821	61,511	14.92
2010	17,410	10,104	7,306	63,250	15.97
2011	14,826	9,873	4,953	63,250	15.61
2012	14,912	11,620	3,292	62,524 (2)	18.58
2013	18,711	11,482	7,229	62,121 (2)	18.48
2014	18,444	12,894 (3)	5,550	63,952 (2)	20.16
2015	20,648	14,763 (3)	5,885	68,463 (2)	21.56
2016	20,463	14,938 (3)	5,525	69,343 (2)	21.54

Notes to Schedule

(1) The Actuarially Determined Contribution is calculated as of June 30 each year using the actuarial methods and assumptions listed below. For additional actuarial assumptions, please refer to pages 142-155 of the *Actuarial Section* of this report.

Valuation Date:	June 30, 2016
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	22 years
Asset Valuation Method:	Market value smoothed over 5 years
Investment Rate of Return:	8.00%
Projected Salary Increases:	Service-related rates ranging from 7.75% (one year of service) to 3.75% (21 or more years of service), including inflation
Inflation Rate:	2.75%
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.
Healthy Post-Retirement Mortality:	RP-2000 annuitant generational mortality tables, projected with mortality improvement scale AA with a white collar adjustment, set back 2 years for males and set forward 1 year for females
Post-Retirement Benefit Increases:	1.0% per year

(2) Assume equal to actual member contributions divided by employee contribution rate

(3) Includes supplemental state aid of $1,000

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

Correctional Employees Retirement Fund

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) a	Contributions Recognized by Plan in Relation to the Actuarially Determined Contribution b	Contribution Deficiency (Sufficiency) c=a-b	Covered-Employee Payroll d	Contributions as a Percentage of Covered-Employee Payroll e=b/d
2007	$29,115	$13,927	$15,188	$167,727	8.30%
2008	34,734	18,623	16,111	194,391	9.58
2009	31,738	20,126	11,612	193,445	10.40
2010	32,557	21,988	10,569	192,450	11.43
2011	33,274	23,892	9,382	197,702	12.08
2012	34,806	24,188	10,618	200,035 (2)	12.09
2013	34,060	24,632	9,428	204,198 (2)	12.06
2014	38,390	26,468	11,922	219,244 (2)	12.07
2015	40,109	29,480	10,629	231,440 (2)	12.74
2016	44,171	30,678	13,493	241,242 (2)	12.72

Notes to Schedule

(1) The Actuarially Determined Contribution is calculated as of June 30 each year using the actuarial methods and assumptions listed below. For additional actuarial assumptions, please refer to pages 142-155 of the *Actuarial Section* of this report.

Valuation Date:	June 30, 2016
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	22 years
Asset Valuation Method:	Market value smoothed over 5 years
Investment Rate of Return:	8.00%
Projected Salary Increases:	Service-related rates ranging from 5.75% (one year of service) to 3.50% (19 or more years of service), including inflation
Inflation Rate:	2.75%
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.
Healthy Post-Retirement Mortality:	RP-2000 annuitant generational mortality tables, projected with mortality improvement scale AA with a white collar adjustment set forward 1 year for males and set back 1 year for females
Post-Retirement Benefit Increases:	2.0% per year

(2) Assume equal to actual member contributions divided by employee contribution rate

Judges Retirement Fund

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) a	Contributions Recognized by Plan in Relation to the Actuarially Determined Contribution b	Contribution Deficiency (Sufficiency) c=a-b	Covered-Employee Payroll d	Contributions as a Percentage of Covered-Employee Payroll e=b/d
2007	$8,331	$7,572	$759	$36,195	20.92%
2008	10,045	7,936	2,109	38,296	20.72
2009	8,985	8,219	766	39,444	20.84
2010	9,400	8,283	1,117	39,291	21.08
2011	9,804	8,297	1,507	40,473	20.50
2012	9,879	7,922	1,957	38,644 (2)	20.50
2013	13,524	8,177	5,347	39,888 (2)	20.50
2014	14,193	9,426	4,767	41,893 (2)	22.50
2015	14,298	9,776	4,522	43,449 (2)	22.50
2016	15,644	10,219	5,425	45,418 (2)	22.50

Notes to Schedule

(1) The Actuarially Determined Contribution is calculated as of June 30 each year using the actuarial methods and assumptions listed below. For additional actuarial assumptions, please refer to pages 142-155 of the *Actuarial Section* of this report.

Valuation Date:	June 30, 2016
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	23 years
Asset Valuation Method:	Market value smoothed over 5 years
Investment Rate of Return:	8.00%
Projected Salary Increases:	2.75%
Inflation Rate:	2.75%
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 2007-2011.
Healthy Post-Retirement Mortality:	RP-2000 annuitant generational mortality tables, projected with mortality improvement scale AA with a white collar adjustment, set back 1 year for males and set back 2 years for females
Post-Retirement Benefit Increases:	1.75% per year through 2034, 2% per year from 2035 through 2045, and 2.5% per year thereafter

(2) Assume equal to actual employer contributions divided by employer contribution rate

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

Legislators Retirement Fund*

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) a	Contributions Recognized by Plan in Relation to the Actuarially Determined Contribution (2) b	Contribution Deficiency (Sufficiency) c=a-b	Covered-Employee Payroll d	Contributions as a Percentage of Covered-Employee Payroll e=b/d
2007	$2,408	$1,772	$636	$2,380	74.45%
2008	3,230	2,217	1,013	1,993	111.24
2009	4,526	1,269	3,257	1,963	64.65
2010	7,582	1,975	5,607	1,877	105.22
2011	7,520	2,805	4,715	1,774	158.12
2012	18,079	3,935	14,144	1,378 (3)	285.56
2013	16,411	3,399	13,012	1,233 (3)	275.67
2014	22,157	3,436	18,721	1,122 (3)	306.24
2015	38,736	3,216	35,520	1,700 (3)	189.18
2016	21,711	5,087	16,624	989 (3)	514.36

Notes to Schedule

(1) The Actuarially Determined Contribution is calculated as of June 30 each year using the actuarial methods and assumptions listed below. For additional actuarial assumptions, please refer to pages 142-155 of the *Actuarial Section* of this report.

Valuation Date:	June 30, 2016
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level dollar, closed period
Remaining Amortization Period:	10 years
Asset Valuation Method:	Market value of assets
Investment Rate of Return:	0.0%
Projected Salary Increases:	5.0% including inflation
Inflation Rate:	2.75%
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.
Mortality Rates:	RP-2000 annuitant generational mortality tables, projected with mortality improvement scale AA with a white collar adjustment
Benefit Increases Post Retirement:	2.0% per year

(2) Contributions to the Legislators Retirement Fund include appropriations from the State's General Fund. The State of Minnesota is the employer for this Retirement Fund.

(3) Assume equal to actual member contributions divided by employee contribution rate

** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for cost-savings purposes. The 2014-2016 figures in the schedule above represent the combined totals for both funds.*

Elective State Officers Retirement Fund*

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) a	Contributions Recognized by Plan in Relation to the Actuarially Determined Contribution b	Contribution Deficiency (Sufficiency) c=a-b	Covered-Employee Payroll d	Contributions as a Percentage of Covered-Employee Payroll e=b/d
2007	$477	$427	$50	$0	N/A
2008	506	435	71	0	N/A
2009	558	442	116	0	N/A
2010	601	453	148	0	N/A
2011	644	460	184	0	N/A
2012	1,269	466	803	0	N/A
2013	991	470	521	0	N/A

Notes to Schedule

(1) The Actuarially Determined Contribution is calculated as of June 30 each year using the actuarial methods and assumptions in effect as of the valuation date.

** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*

Required Supplementary Information
Schedule of Investment Returns

For the Year Ended June 30, 2016**

Annual Money-Weighted Rate of Return (Net of Investment Expense)

Fiscal Year	State Employees	State Patrol	Correctional Employees	Judges	Legislators
2014	18.674%	18.688%	18.623%	18.658%	19.302%
2015	4.451	4.457	4.440	4.451	5.002
2016	(0.083)	(0.119)	(0.019)	(0.108)	N/A

*** Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Schedule of Administrative Expenses

Supplementary Information

For the Fiscal Year Ended June 30, 2016

(Dollars in thousands)

Personnel Services	
Staff Salaries	$7,644
Health Insurance	1,491
Social Security and Medicare	557
Retirement	439
Other Personnel Services	(34)
Total	**$10,097**
Communication-Related Expenses	
Printing	$406
Postage	274
Telephone	180
Subscriptions and Memberships	20
Total	**$880**
Office Building and Maintenance Expenses	
Building Services	$413
Building and Building Improvements Depreciation	224
Office Space Rentals	77
Bond Interest and Issuance	77
Other Building and Maintenance	8
Total	**$799**
Professional Services	
Data Processing	$1,889
Actuarial	487
Application Hosting	246
Disability Examinations	221
Board of Directors Elections	114
Leadership Training	73
Project Management	60
Legal Counsel	52
Network Penetration Testing	27
Annual Financial Report Desktop Publishing Support	23
Other Professional Services	128
Total	**$3,320**

Miscellaneous	
Equipment Depreciation and Software Amortization	$1,099
Computer Components and Supplies	612
Statewide Indirect Costs	200
Travel	161
Training and Licenses	99
State and Local Sales Taxes	76
Office Supplies	52
Equipment Repairs and Maintenance Expenses	30
Other Rentals	5
Department Head and Board Member Expenses	5
Other Expenses	14
Total	**$2,353**
Total Administrative Expenses	**$17,449**

Allocation of Administrative Expenses by Retirement Fund

State Employees	$10,196
State Patrol	220
Correctional Employees	906
Judges	93
Legislators	42
Unclassified Employees	155
Health Care Savings	2,290
Minnesota Deferred Compensation	3,522
Hennepin County Supplemental	25
Total Administrative Expenses	**$17,449**

Summary Schedule of Commissions and Payments to Consultants

Supplementary Information
For the Fiscal Year Ended June 30, 2016
(Dollars in thousands)

Individual or Firm Name	Services Received	Fees Paid
CSC Consulting	Application Development Support	$877
Gabriel Roeder Smith & Company	Actuarial Services	479
IBM Corporation	System Migration Project	237
Managed Medical Review Organization (MMRO)	Medical and Disability Evaluations	221
RSM US LLP	Application Development Support	84
Aeritae Consulting Group	Technical Assistance - System Migration Project	60
Securance LLC	Network Penetration Testing	27
Momentum Design	Annual Financial Report Desktop Publishing Support	23
Duan Corporation	Remodeling Services	13
State of Minnesota		
Office of Legislative Auditor	Financial Audit	145
MINNCOR Industries	Graphic Design Services	78
Aeritae	StrengthsFinders® Training	73
Office of Minnesota Attorney General	Legal Advice	43

Fees paid may differ from expenses reported on the *Schedule of Administrative Expenses* due to retainage.

Schedule of Investment Expenses

Supplementary Information

For the Fiscal Year Ended June 30, 2016

(Dollars in thousands)

	State Employees	State Patrol	Correctional Employees	Judges	Legislators	Defined Contribution Funds	Totals
External Managers							
Domestic Equity - Active	$5,020	$284	$397	$75	$0	$224	$6,000
International Equity	4,390	248	349	65	0	178	5,230
Domestic Equity - Semi-Passive	1,856	105	147	27	1	82	2,218
Domestic Equity - Passive	166	9	13	3	0	35	226
Fixed Income	0	0	0	0	0	3,715	3,715
Domestic Bond	2,528	143	200	37	0	165	3,073
Other Investment Expenses							
MN State Board of Investment	874	50	69	13	0	205	1,211
Pension Consulting Alliance	61	3	5	1	0	0	70
Callan Investment	7	0	1	0	0	0	8
QED Financial Systems	87	5	7	1	0	0	100
Total Investment Expenses	**$14,989**	**$847**	**$1,188**	**$222**	**$1**	**$4,604**	**$21,851**

MSRS does not directly pay any investment fees or commissions. All investment expenses are paid by the Minnesota State Board of Investment. These are the prorata portions of the expenses charged to the investment pools in which MSRS participates.

GASB Statement No. 68
Supplemental Employer Schedules

The schedules that follow on pages 119-123 are provided for financial reporting purposes for the employer units of the defined benefit plans of MSRS.

Independent Auditor's Report

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

Independent Auditor's Report

Members of the Board of Directors
Minnesota State Retirement System

Ms. Erin Leonard, Executive Director
Minnesota State Retirement System

Report on the Schedules

We have audited the accompanying Schedule of Employer Allocations of the Minnesota State Retirement System (MSRS) as of and for the fiscal year ended June 30, 2016. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) included in the accompanying Schedule of Pension Amounts by Employer of MSRS as of and for the year ended June 30, 2016.

Management's Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of these schedules 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 the schedules that are free from material misstatement, due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on the Schedule of Employer Allocations and the specified column totals included in the Schedule of Pension Amounts by Employer 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Schedule of Employer Allocations and specified column totals included in the Schedule of Pension Amounts by Employer are free from material misstatement.

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

Independent Auditor's Report

Members of the Board of Directors
Ms. Erin Leonard, Executive Director
Page 2

An audit involves performing procedures to obtain audit evidence about the amounts in the Schedule of Employer Allocations and specified column totals included in the Schedule of Pension Amounts by Employer. The procedures selected depend on the auditor's judgment, including the assessment of risks of material misstatement within the schedules, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the entity's preparation and fair presentation of the schedules 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 the entity'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 Schedule of Employer Allocations and specified column totals included in the Schedule of Pension Amounts by Employer. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for MSRS as of and for the year ended June 30, 2016, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of MSRS as of and for the year ended June 30, 2016, and our report thereon, dated December 21, 2016, expressed an unmodified opinion on those financial statements.

Emphasis of Matter – Assumptions Used

For the correctional, judges, and state patrol retirement funds, MSRS did not implement changes recommended by its actuary to the actuarial assumptions used to estimate the June 30, 2016, pension liability. The actuary based these recommended changes on experience studies for the four-year period ending June 30, 2015. Instead, MSRS continued to use actuarial assumptions based on experience studies of the five-year period ending June 30, 2011.

Members of the Board of Directors
Ms. Erin Leonard, Executive Director
Page 3

(An experience study compared the actual experience of plan participants to assumptions used to estimate the cost of future benefit payments.) If MSRS had implemented the recommended changes to the actuarial assumptions, the pension liability for the correctional, judges, and state patrol retirement funds would be higher than reported. MSRS plans to implement the recommended changes for its fiscal year 2017 estimate of pension liability.

The actuarial valuation process, while very sophisticated in its calculation methodology, is an estimate based on assumptions about events, which occur many years into the future. A range of assumptions may be reasonable. No one set of assumptions is uniquely correct.

MSRS's actuary concluded that the assumptions used to determine the 2016 pension liability for the correctional, judges, and state patrol retirement funds were reasonable and conformed to actuarial standards of practice issued by the Actuarial Standards Board, as required by the Governmental Accounting Standards Board. MSRS's decision to delay the implementation of recommended changes to its actuarial assumptions study had no effect on our audit opinion. See Note 4.F. in MSRS's 2016 *Comprehensive Annual Financial Report, Notes to the Financial Statements*, for further information about MSRS's net pension liability.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 21, 2016, on our consideration of MSRS's internal controls over the preparation of these schedules and on our tests of compliance with certain provisions of laws, regulations, and other matters. The purpose of that report is to describe the scope of our testing of internal controls and compliance and not to provide an opinion on internal controls over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards*.

Independent Auditor's Report

Members of the Board of Directors
Ms. Erin Leonard, Executive Director
Page 4

Restrictions on Use

Our report is intended solely for the information and use of MSRS's Board of Directors and its management to support the financial reporting needs of employers participating in MSRS's plans and their auditors for the year ended June 30, 2016. It is not suitable for any other purpose.

James R. Nobles
Legislative Auditor

Cecile M. Ferkul, CPA, CISA
Deputy Legislative Auditor

December 21, 2016
Saint Paul, Minnesota

Schedule of Employer Allocations

As of the Measurement Date of June 30, 2016

State Employees Retirement Fund

Employer	2016 Employer Contributions	Employer Allocation Percentage
State of Minnesota and Select Component Units*	$112,784,131	74.618%
Other State of Minnesota Component Units*:		
University of Minnesota	22,974,910	15.200
Metropolitan Council	14,198,830	9.394
Minnesota Sports Facilities Authority	30,943	0.021
Total State of Minnesota and its Component Units	**$149,988,814**	**99.233%**
Minnesota Historical Society	307,941	0.204
Minnesota State Fair	314,000	0.208
Gillette Children's Hospital	165,531	0.110
Minnesota Association of Professional Employees (MAPE)	96,685	0.064
Minnesota Safety Council	71,445	0.047
Veolia Environment North America	50,330	0.033
Minnesota Crop Improvement Association	38,480	0.025
Amalgamated Transit Union	26,037	0.017
American Federation of State, County and Municipal Employees (AFSCME)	35,954	0.024
Middle Management Association (MMA)	18,619	0.012
Minnesota State Horticultural Society	16,527	0.011
Kandiyohi County	5,197	0.003
Minnesota Government Engineers Council (MGEC)	6,193	0.004
Enterprise Minnesota	7,502	0.005
Total	**$151,149,255**	**100.000%**

Employers listed above are defined in Minnesota Statutes as employers participating in the State Employees Retirement Fund.

* *State of Minnesota component units include the Housing Finance Agency, Metropolitan Council, University of Minnesota, Minnesota Sports Facilities Authority, Agricultural and Economic Development Board, National Sports Center Foundation, Office of Higher Education, Public Facilities Authority, Rural Finance Authority, and the Workers' Compensation Assigned Risk Plan. Component units that submit contributions to MSRS separately from the state payroll are displayed individually in this schedule. The remaining component units are included in the line specified for the State of Minnesota.*

Correctional Employees Retirement Fund

Employer	2016 Employer Contributions	Employer Allocation Percentage
State of Minnesota	$30,645,643	99.908%
AFSCME	27,760	0.091
MAPE	340	.001
Total	**$30,673,743**	**100.000%**

Additional information regarding the GASB Statement No. 68 standards may be found in the *Notes to the Financial Statements.*

Schedule of Pension Amounts by Employer

As of and For the Year Ended June 30, 2016

State Employees Retirement Fund

Employer	Net Pension Liability	Deferred Outflows of Resources*: Differences Between Expected and Actual Experience in the Measurement of the Total Pension Liability	Changes of Assumptions	Net Differences Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
State of Minnesota and Select Component Units**	$9,251,799,462	$12,660,437	$5,916,502,261	$409,484,182	$31,124,301	$6,369,771,181
Other State of Minnesota Component Units**:						
University of Minnesota	1,884,630,408	2,578,984	1,205,216,360	79,969,990	(563,302)	1,287,202,032
Metropolitan Council	1,164,751,185	1,593,879	744,855,426	52,168,958	16,257,316	814,875,579
Minnesota Sports Facilities Authority	2,603,765	3,564	1,665,100	16,709	18,611	1,703,984
Total State of Minnesota and its Component Units	**$12,303,784,820**	**$16,836,864**	**$7,868,239,147**	**$541,639,839**	**$46,836,926**	**$8,473,552,776**
Minnesota Historical Society	25,293,728	34,614	16,175,274	1,101,182	16,494	17,327,564
Minnesota State Fair	25,789,678	35,290	16,492,434	1,132,055	123,826	17,783,605
Gillette Children's Hospital	13,638,770	18,663	8,721,959	421,591	(42,750)	9,119,463
MAPE	7,935,285	10,859	5,074,595	370,236	969,236	6,424,926
Minnesota Safety Council	5,827,476	7,975	3,726,656	252,244	447	3,987,322
Veolia Environment North America	4,091,633	5,600	2,616,588	147,436	689,974	3,459,598
Minnesota Crop Improvement Association	3,099,718	4,240	1,982,264	140,614	35,141	2,162,259
Amalgamated Transit Union	2,107,810	2,884	1,347,940	93,267	17,612	1,461,703
AFSCME	2,975,731	4,072	1,902,972	157,333	368,421	2,432,798
MMA	1,487,868	2,036	951,488	67,325	44,758	1,065,607
Minnesota State Horticultural Society	1,363,877	1,867	872,196	60,020	1	934,084
Kandiyohi County	371,966	508	237,872	12,672	(4,307)	246,745
MGEC	495,957	680	317,163	21,824	325	339,992
Enterprise Minnesota	619,945	848	396,452	26,774	59,761	483,835
Agricultural Utilization Research Institute***	0	0	0	(8,412)	1,276	(7,136)
Foster Wheeler Twin Cities***	0	0	0	0	22,264	22,264
Total	**$12,398,884,262**	**$16,967,000**	**$7,929,055,000**	**$545,636,000**	**$49,139,405**	**$8,540,797,405**

* *Deferred Outflows of Resources figures and Deferred Inflows of Resources figures represent balances at June 30, 2016, not the activity during fiscal year 2016.*

** *Refer to the note on page 119 for details regarding State of Minnesota component units.*

*** *These employers were not allocated a percentage of Net Pension Liability because they were not active at fiscal year end.*

Deferred Inflows of Resources*					Pension Expense (Income)		
Differences Between Expected and Actual Experience in the Measure-ment of the Total Pension Liability	Changes of Assumptions	Net Differences Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
$233,913,756	$437,713,652	$0	$13,653,439	$685,280,847	$1,345,634,525	$5,550,866	$1,351,185,391
48,465,284	94,730,708	0	25,624,098	168,820,090	269,220,261	(8,920,098)	260,300,163
28,573,626	53,318,894	0	6,640,236	88,532,756	171,019,650	3,411,764	174,431,414
106,635	301,368	0	293,624	701,627	221,149	2,914	224,063
$311,059,301	**$586,064,622**	**$0**	**$46,211,397**	**$943,335,320**	**$1,786,095,585**	**$45,446**	**$1,786,141,031**
673,731	1,258,664	0	474,620	2,407,015	3,622,694	(206,559)	3,416,135
643,082	1,223,208	0	41,839	1,908,129	3,748,941	43,317	3,792,258
404,340	957,292	0	865,944	2,227,576	1,708,601	(200,973)	1,507,628
199,777	348,644	0	123,785	672,206	1,177,479	394,010	1,571,489
147,533	283,643	0	42,536	473,712	840,673	(15,339)	825,334
117,063	254,097	0	116,798	487,958	541,616	333,178	874,794
78,206	141,821	0	24,958	244,985	455,047	(811)	454,236
59,394	106,364	0	64,475	230,233	300,387	(23,099)	277,288
37,448	65,002	0	211,127	313,577	501,203	36,045	537,248
34,487	65,002	0	15,506	114,995	221,299	11,423	232,722
34,487	65,002	0	271	99,760	197,957	(88)	197,869
15,676	29,546	0	19,757	64,979	43,296	(5,983)	37,313
12,542	23,636	0	127	36,305	71,985	91	72,076
9,581	23,639	0	28,513	61,733	95,528	15,184	110,712
352	11,818	0	19,568	31,738	(10,291)	2,118	(8,173)
0	0	0	878,184	878,184	0	(427,960)	(427,960)
$313,527,000	**$590,922,000**	**0**	**$49,139,405**	**$953,588,405**	**$1,799,612,000**	**$0**	**$1,799,612,000**

Refer to pages 99-103 for details of actuarial assumption changes.

Schedule of Pension Amounts by Employer

As of and For the Year Ended June 30, 2016

Employer	Net Pension Liability	Deferred Outflows of Resources*: Differences Between Expected and Actual Experience in the Measurement of the Total Pension Liability	Changes of Assumptions	Net Differences Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
State Patrol Retirement Fund						
State of Minnesota**	**$492,978,164**	**$0**	**$251,348,000**	**$30,436,000**	**$0**	**$281,784,000**
Correctional Employees Retirement Fund						
State of Minnesota	$1,331,563,128	$6,783,487	$539,643,309	$44,019,871	$629,797	$591,076,464
AFSCME	1,212,532	10,061	527,079	21,491	(45,861)	512,770
MAPE	13,391	452	4,612	(6,362)	74,504	73,206
Total	**$1,332,789,051**	**$6,794,000**	**$540,175,000**	**$44,035,000**	**$658,440**	**$591,662,440**
Judges Retirement Fund						
State of Minnesota	**$179,128,506**	**$7,740,000**	**$13,018,000**	**$8,070,000**	**$0**	**$28,828,000**
Legislators Retirement Fund						
State of Minnesota	**$154,700,359**	**$0**	**$0**	**$0**	**$0**	**$0**

* *Deferred Outflows of Resources figures and Deferred Inflows of Resources figures represent balances at June 30, 2016, not the activity during fiscal year 2016.*

** *No component units of the State of Minnesota participate in the plans listed on this page.*

Refer to pages 99-103 for details of actuarial assumption changes.

Deferred Inflows of Resources*					Pension Expense (Income)		
Differences Between Expected and Actual Experience in the Measurement of the Total Pension Liability	Changes of Assumptions	Net Differences Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
$29,972,000	**$0**	**$0**	**$0**	**$29,972,000**	**$68,951,000**	**$0**	**$68,951,000**
$610,437	$73,388,403	$0	$277,613	$74,276,453	$178,557,928	$63,101	$178,621,029
555	129,421	0	313,537	443,513	140,802	(77,430)	63,372
8	16,176	0	67,290	83,474	(6,730)	14,329	7,599
$611,000	**$73,534,000**	**$0**	**$658,440**	**$74,803,440**	**$178,692,000**	**$0**	**$178,692,000**
$2,620,000	**$71,972,000**	**$0**	**$0**	**$74,592,000**	**$5,720,000**	**$0**	**$5,720,000**
$0	**$0**	**$147,000**	**$0**	**$147,000**	**$18,525,000**	**$0**	**$18,525,000**

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INVESTMENT SECTION

MSRS 2016 Comprehensive Annual Financial Report

Investing in the Security and Growth of Defined Benefit Plans

MINNESOTA STATE BOARD OF INVESTMENT

60 Empire Drive
Suite 355
St. Paul, MN 55103
(651) 296-3328
FAX (651) 296-9572
E-mail:
minn.sbi@state.mn.us
www.sbi.state.mn.us

INVESTMENT AUTHORITY

The assets of the Minnesota State Retirement System (MSRS) are invested along with the assets of the Public Employees Retirement Association and the Teachers Retirement Association 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. MSRS'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

MSRS'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 MSRS, the Minnesota Teachers Retirement Association, and the Public Employees Retirement Association. MSRS 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 2015 legislature reduced the interest rate actuarial assumption for MSRS to a single rate of 8%.

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 asset allocation for the Combined Funds as follows:

• Domestic Equity	45%
• International Equity	15%
• Alternatives	20%
• Fixed Income	18%
• Cash	2%

Based on values on June 30, 2016, the Combined Funds returned 5.3 percentage points above the CPI over the last 20 years and returned 0.2 percentage point above the composite index over the past 10 years. Investment returns ranked in the 28th percentile over the past five years and in the 22nd percentile over the past 10 years, compared to similar funds 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.

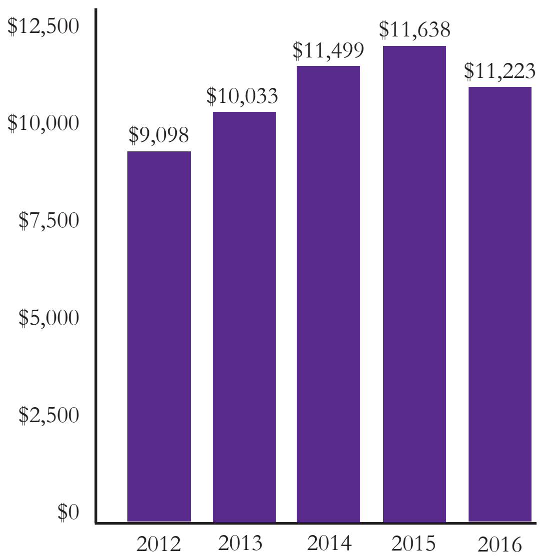
Respectfully submitted,

Mansco Perry III
Executive Director
Minnesota State Board of Investment

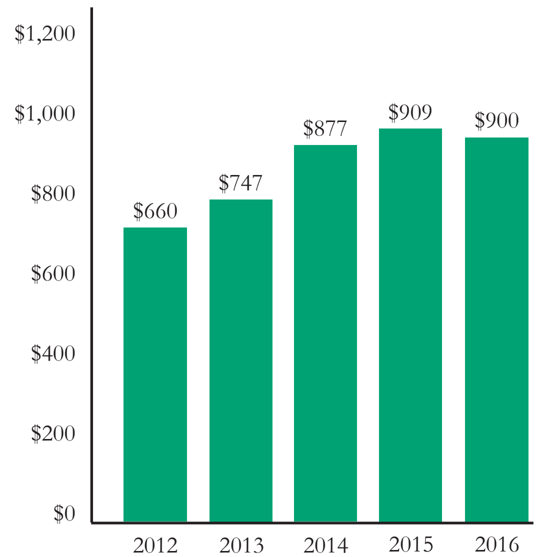
Fair Value of Net Assets

Four Largest MSRS Defined Benefit Retirement Funds
As of June 30, 2016
(Dollars in millions)

State Employees Retirement Fund

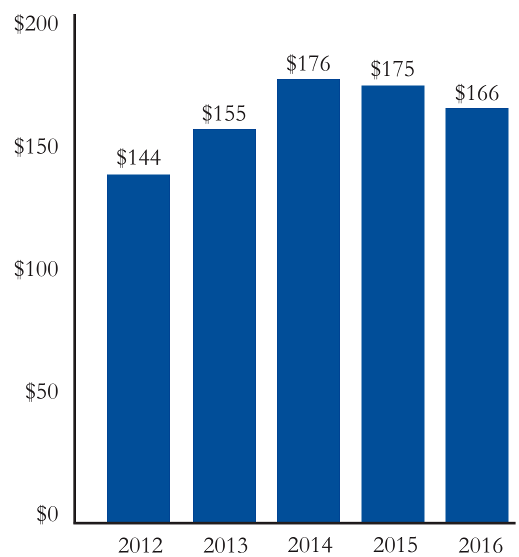


Correctional Employees Retirement Fund



State Patrol Retirement Fund

Judges Retirement Fund



Investment Returns by Sector

Investment Performance Compared to Target Indices (Net of Fees)

Funds	Rates of Return (Annualized) FY 2016	Three-Year	Five-Year	Ten-Year
Domestic Stock Pool	0.0%	10.7%	11.2%	7.2%
Russell 3000 Index	2.1	11.1	11.6	7.4
Bond Pool	5.9%	4.3%	4.3%	5.4%
Barclays Aggregate Bond Index	6.0	4.1	3.8	5.1
International Stock Pool	(9.7)%	1.8%	0.9%	2.4%
MSCI ACWI Free ex U.S. (Net)	(10.2)	1.2	0.1	1.9
Alternative Investments	0.2%	8.6%	9.4%	9.6%
Inflation	1.0	1.1	1.3	1.7
(Note: This is the target rate of return; there is no comparable index available.)				
Real Estate Investments Pool (Equity emphasis)	8.4%	15.2%	12.7%	6.2%
Inflation +5%	6.0	6.1	6.3	6.7
(Note: This is the target rate of return over the life of the investment; there is no comparable index available.)				
Private Equity Investments Pool (Equity emphasis)	7.4%	13.1%	12.0%	11.5%
Inflation +10%	11.0	11.1	11.3	11.7
(Note: This is the target rate of return over the life of the investment; there is no comparable index available.)				
Resource Investments Pool (Equity emphasis)	(24.2)%	(7.9)%	(1.0)%	7.8%
Inflation +5%	6.0	6.1	6.3	6.7
(Note: This is the target rate of return over the life of the investment; there is no comparable index available.)				
Yield Oriented Investments Pool (Debt emphasis)	(3.7)%	6.5%	9.4%	10.4%
Inflation +5.5%	6.5	6.6	6.8	7.2
(Note: This is the target rate of return over the life of the investment; there is no comparable index available.)				

Investment return percentages are the time-weighted rate of return, net of all management fees.

Asset Allocation

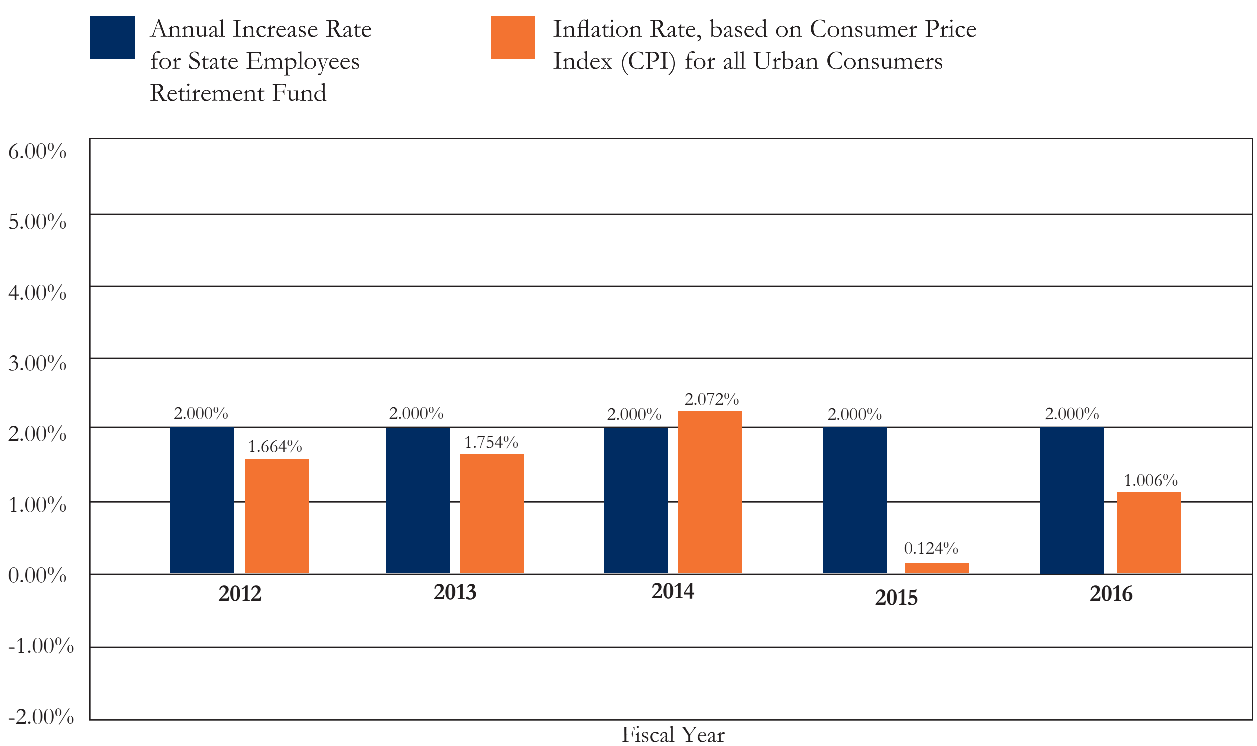
Asset allocation can have a significant effect on investment returns. To achieve the best results, investment allocations are periodically reviewed and adjusted to reflect changing market conditions and revised investment objectives.

	Combined Funds	
Investment Type	**Actual Asset Mix 06/30/2016**	**Long-Term Policy Target**
Domestic Stocks	46.4%	45.0%
International Stocks	14.0	15.0
Bonds	24.7	18.0
Alternative Investments*	12.8	20.0
Cash	2.1	2.0
Totals	100.0%	100.0%

*Alternative investments are real estate, venture capital and resource funds. Uninvested allocations are held in bonds.

Investment Results
Benefit Increases vs. Inflation (Last Five Years)

Annual post-retirement benefit increases awarded to MSRS retirees have been greater than inflation during four of the past five years: 2012, 2013, 2015 and 2016. Benefit increases and inflation are measured as of June 30. Benefit increases are effective January 1 of the following year.



As a sustainability measure, post-retirement benefit increases are set at 2% for all defined benefit plans, except State Patrol Retirement Fund, which is set at 1%, and Judges Retirement Fund, which is set at 1.75%. These limits will remain in effect until designated funding thresholds are achieved.

Investment Results by Investment Pool

Investment Performance

Funds	Rates of Return (Annualized) FY2016	Three-Year	Five-Year	Ten-Year
Combined Funds	(0.1)%	7.3%	7.7%	6.5%
Combined Composite Market Index	1.1	7.4	7.6	6.3

Notes:
1. Investment return percentages are the time-weighted rate of return, net of all management fees.
2. The composite index is composed of the market indicators listed below, weighted according to asset allocation.

Investment Type	Market Indicator
Domestic Stocks	Russell 3000
International Stocks	Morgan Stanley Capital International All Country World Index ex-U.S.
Domestic Bonds	Barclays Aggregate Bond Index
Alternative Investments	Alternative investments are measured against themselves using actual portfolio returns
Unallocated cash	3-Month Treasury Bills

List of Largest Assets Held at Fair Value

As of June 30, 2016
(Dollars in thousands)

Composite of Top Ten Equity Holdings

Company	Fair Value	Percent of Portfolio
Apple, Inc.	$130,452	0.84%
Microsoft Corporation	101,061	0.65
Johnson & Johnson	90,344	0.58
Exxon Mobil Corporation	89,177	0.57
Amazon.com Inc	83,185	0.53
Facebook, Inc.	83,167	0.53
JP Morgan Chase & Co.	70,274	0.45
Pfizer, Inc.	67,492	0.43
Wells Fargo & Company	65,660	0.42
General Electric Company	63,379	0.41

Composite of Top Ten Bond Holdings

Security	Coupon Rate	Maturity Date	Fair Value	Percent of Portfolio
FNMA TBA 30 Yr	3.500%	08/16/2046	$32,951	0.21%
FNMA TBA 30 Yr	4.000	07/14/2046	32,864	0.21
U.S. Treasury Note/Bond	1.375	09/30/2020	30,142	0.19
U.S. Treasury Note/Bond	2.500	02/15/2046	29,150	0.19
U.S. Treasury Note/Bond	0.875	05/31/2018	27,761	0.18
U.S. Treasury Note/Bond	0.625	06/30/2018	26,626	0.17
U.S. Treasury Note/Bond	1.375	01/31/2021	25,563	0.16
U.S. Treasury Note/Bond	1.500	02/28/2023	24,337	0.16
U.S. Treasury Note/Bond	1.375	04/30/2021	23,702	0.15
FNMA TBA 30 Yr	3.000	08/16/2046	22,038	0.14

Legend: FNMA = Federal National Mortgage Association TBA = To be Announced

MSRS assets are commingled in various pooled investment accounts administered by the Minnesota State Board of Investment (SBI). MSRS does not own specific values of the underlying assets. The percentages and fair value shown are those attributable to the MSRS funds based on MSRS's participation in the pools. Information on the SBI investment activity and a listing of specific investments held by the various investment pools is available from the SBI.

Investment Results by Defined Contribution Investment Options

	Rates of Return (Annualized)		
	FY 2016	Three-Year	Five-Year
Supplemental Investment Fund Accounts*			
Balanced Fund	3.4%	8.3%	8.7%
U.S. Stock Actively Managed Fund	(1.1)	10.4	11.0
U.S. Stock Index Fund	2.2	11.1	11.6
Broad International Stock Fund	(9.7)	1.8	0.9
Bond Fund	5.9	4.3	4.3
Money Market Fund	0.4	0.2	0.2
Stable Value Fund	2.0	1.9	2.3
Deferred Compensation Plan Accounts			
Large Cap Equity			
Vanguard Institutional Index Plus (passive)	4.0%	11.7%	12.1%
Janus Twenty (active)	0.7	11.1	10.4
Mid Cap Equity			
Vanguard Mid Cap Index (passive)	(0.9)%	10.8%	10.6%
Small Cap Equity			
T. Rowe Price Small Cap (active)	(2.3)%	8.6%	10.0%
International Equity			
Fidelity Diversified International (active)	(10.0)%	4.2%	3.4%
Vanguard Total International Stock Index (passive)	(9.1)	2.1	0.6
Balanced			
Vanguard Balanced Index (passive)	4.0%	8.4%	8.6%
Fixed Income			
Dodge & Cox Income Fund (active)	4.4%	4.0%	4.0%
Vanguard Total Bond Market Index (passive)	6.1	4.0	3.7
Money Market Account	0.4	0.2	0.2
Fixed Interest Account	2.0%	1.9%	2.3%
MN Target Retirement Accounts			
Income Fund	1.9%	3.8%	4.3%
2020 Fund	1.7	5.1	6.4
2025 Fund	1.3	6.0	7.2
2030 Fund	0.9	6.6	7.6
2035 Fund	0.4	6.9	7.8
2040 Fund	(0.2)	7.0	7.6
2045 Fund	(0.8)	7.1	7.6
2050 Fund	(1.1)	7.0	7.5
2055 Fund	(1.1)	7.0	7.5
2060 Fund	(1.1)	7.0	7.5

* *Effective July 1, 2015, investment options were renamed to more descriptive titles.*

Schedule of Investment Manager Fees, Commissions and Other Investment Expenses

For the Fiscal Year Ended June 30, 2016
(Dollars in thousands)

SBI and Consultants

MN State Board of Investment	$1,211
Pension Consulting Alliance	70
Callan Investment	8
QED Financial Systems Fees	100
Total	**$1,389**

Outside Money Managers

Domestic Equity - Active Managers

Barrow, Hanley, Mewhinney & Strauss, Inc.	$344
Earnest Partners, LLC	225
INTECH Investment Management, LLC	410
Goldman Sachs Asset Management	436
Hotchkis & Wiley Capital Management	432
Jacobs Levy Equity Management, Inc.	446
LSV Asset Management	554
Martingale Asset Management	351
McKinley Capital Management	483
Next Century Growth Investors, LCC	452
Peregrine Capital Management	479
Sands Capital Management, Inc.	406
Systematic Financial Management, L.P.	318
Winslow Capital Management, Inc.	223
Zevenbergen Capital, Inc.	441
Total	**$6,000**

Domestic Equity - Semi Passive Managers

BlackRock Institutional Trust Co., N.A.	$537
Mellon Capital Management	539
J.P. Morgan Investment Management	645
INTECH Investment Management, LLC	497
Total	**$2,218**

Fixed Income Manager

Galliard Capital Management, Inc.	**$3,715**

Domestic Equity - Passive Managers

BlackRock Institutional Trust Co., N.A.	**$226**

International Equity Managers

Acadian Asset Management LLC	$336
State Street Emerging Markets	60
Columbia Management Investment Advisors, LLC	251
AQR Capital Management, LLC	346
Capital International, Inc.	999
Pyramis Global Advisors Trust Company - Select	333
Pyramis Global Advisors Trust Company - Growth	214
J.P. Morgan Investment Management Inc.	242
Marathon Asset Management	537
McKinley Capital Management, Inc.	274
Morgan Stanley Investment Management	1,245
State Street Global Advisors ALPHA	266
State Street Global Advisors Passive	127
Total	**$5,230**

Domestic Bond Managers

Aberdeen Asset Management	$421
Columbia Management Investment Advisors, LLC	273
BlackRock, Inc.	254
Dodge & Cox Investment Management Managers	382
Goldman Sachs Asset Management	424
Neuberger Investment Management	182
Western Asset Management	355
Pacific Investment Management Co. LLC (PIMCO)	782
Total	**$3,073**

Total Investment Expenses **$21,851**

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

Investment Summary at Fair Value

As of June 30, 2015 and 2016
(Dollars in thousands)

Description	Fair Value June 30, 2015	Fair Value June 30, 2016	Percent of Portfolio
State Employees Retirement Fund			
Growth Share Pool	$3,688,408	$3,456,873	31%
Common Stock Index Pool	1,807,316	1,726,894	15
International Equity Pool	1,731,549	1,564,844	15
Fixed Income Pool	2,736,251	2,760,132	24
Alternative Investment Pool	1,434,881	1,431,127	15
Totals	**$11,398,405**	**$10,939,870**	**100%**
State Patrol Retirement Fund			
Growth Share Pool	$210,773	$194,197	31%
Common Stock Index Pool	103,278	97,012	15
International Equity Pool	98,949	87,909	15
Fixed Income Pool	156,362	155,056	24
Alternative Investment Pool	81,996	80,397	15
Totals	**$651,358**	**$614,571**	**100%**
Correctional Employees Retirement Fund			
Growth Share Pool	$287,844	$276,674	31%
Common Stock Index Pool	141,043	138,214	15
International Equity Pool	135,130	125,244	15
Fixed Income Pool	213,537	220,910	24
Alternative Investment Pool	111,978	114,542	15
Totals	**$889,532**	**$875,584**	**100%**
Judges Retirement Fund			
Growth Share Pool	$55,222	$50,818	31%
Common Stock Index Pool	27,059	25,386	15
International Equity Pool	25,924	23,004	15
Fixed Income Pool	40,967	40,576	24
Alternative Investment Pool	21,483	21,039	15
Totals	**$170,655**	**$160,823**	**100%**
Legislators Retirement Fund			
Growth Share Pool	$1,101	$0	31%
Common Stock Index Pool	540	0	15
International Equity Pool	517	0	15
Fixed Income Pool	817	0	24
Alternative Investment Pool	428	0	15
Totals	**$3,403**	**$0**	**100%**

ACTUARIAL SECTION

MSRS 2016 Comprehensive Annual Financial Report

Monitoring the Progress of Funds Well Into the Golden Years

Actuarial Section

The following section is divided into two parts:

Actuarial Valuation information for funding purposes.

Typically, these valuations include the calculations for funded ratio and annual required contribution, which are necessary for developing and monitoring funding policy. The Executive Director, staff and advisors develop funding policy recommendations for review and approval by the MSRS Board of Directors. The Board of Directors is responsible for establishing and maintaining funding policy for all MSRS defined benefit retirement plans.

The valuation results can be found on pages 138-171.

Actuarial Valuation information for GASB-compliant accounting and financial reporting purposes.

These valuations provide information necessary for the MSRS governmental employers to record pension related transactions in their accounting system and financial statements, including year-end actuarially determined pension amounts and related note disclosures.

The valuation results can be found on pages 173-183.

Funding
Actuarial Valuation
Results

Actuary's Certification Letter

GRS Gabriel Roeder Smith & Company
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December 20, 2016

Board of Directors
Minnesota State Retirement System
60 Empire Drive, Suite 300
St. Paul, MN 55103-3000

Re: 2016 Comprehensive Annual Financial Report (CAFR)

Dear Members of the Board:

We have previously prepared and presented to you our annual actuarial valuation of the State Employees Retirement Fund (SERF), the State Patrol Retirement Fund (SPRF), the Correctional Employees Retirement Fund (CERF), the Judges Retirement Fund (JRF) and the Legislators Retirement Fund (LRF) as of July 1, 2016.

In this Comprehensive Annual Financial Report (CAFR), MSRS prepared all supporting schedules in the Actuarial Section based on the information included in the annual actuarial valuation prepared by Gabriel, Roeder, Smith & Company (GRS). Reading the CAFR is not a substitute for reading the actuarial reports. In order to gain a full understanding of the actuarial condition of the system, it is important to read and understand the full actuarial reports and potentially other relevant information in addition to this CAFR for each of the aforementioned funds. Annual actuarial valuation reports for funding purposes as well as for accounting and financial reporting purposes are available on the MSRS website, along with online copies of this and previous CAFRs.

Valuation Results
The results of the valuations are summarized in the following table. For all plans, except LRF, because the asset returns are smoothed over five years in the valuation, the actuarial value of assets is greater than the market value of assets. The funded ratios on that basis are higher and the deficiencies are lower than the market value results. The LRF valuation is based on the market value of assets, consistent with valuations since July 1, 2000.

	Accrued Liability Funded Ratio		Contribution Deficiency/ (Sufficiency) (% of Pay)			Projected Full Funding Date	
Plan	Actuarial Value of Assets	Market Value of Assets	Actuarial Value of Assets	Market Value of Assets	Statutory Amortization Date	Actuarial Value of Assets	Market Value of Assets
SERF	81.56%	78.39%	3.49%	4.51%	2042	never	never
SPRF	78.53%	75.55%	3.08%	5.51%	2038	2050	2064
CERF	71.34%	68.49%	5.61%	6.68%	2038	never	never
JRF	52.07%	50.07%	6.28%	7.30%	2039	2048	2055
LRF*	0.00%	0.00%	$22,998,000*	$22,998,000*	2026	N/A	N/A

* *This fund is closed to new hires and currently funded on a pay-as-you-go basis by annual appropriations from the State's General Fund. Tthe deficiency is expressed as an annual dollar amount rather than a percent of payroll.*

Members of the Board
December 20, 2016
Page 2

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.

A contribution deficiency means that over the long run, without further changes or favorable actuarial experience, the contributions scheduled to be made to the fund will not meet the goal of full funding by the statutory amortization date. All of the plans currently have contribution deficiencies on an actuarial value of assets basis and a market value of assets basis. JRF will have a lower contribution deficiency when the $3 million state contribution increases to $6 million after July 1, 2017. For the CERF and JRF, plan changes affecting members hired after June 30, 2010 and June 30, 2013, respectively, are also expected to ultimately reduce the cost of the plan.

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 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 actuarial assumption, method and plan changes were recognized this year in the valuations for funding purposes:

- For SERF:
  - Assumed increases in member salaries were changed.
  - Assumed rates of retirement were reduced. In addition, distinct rates for reduced (Early) retirements were adopted for members hired prior to July 1, 1989, and members hired after June 30, 1989.
  - Assumed rates of termination were changed, generally resulting in greater rates for three to nine years of service, and lower for 15 or more years of service.
  - Assumed rates of disability were reduced.
  - The base mortality table for annuitants and employees was changed from RP-2000 to RP-2014, fully generational, white collar adjustments with age adjustments. The mortality improvement scale was changed from Scale AA to Scale MP-2015.

Gabriel Roeder Smith & Company

Actuary's Certification Letter

Members of the Board
December 20, 2016
Page 3

- The percent married assumption was changed from 85% to 80% of active male members and from 70% to 65% of active female members.
- Form of payment assumptions were modified.
- As a result of the additional liability resulting from the changes described above, the amortization date was changed from June 30, 2041 to June 30, 2042 per Minnesota Statute 356.215, Subd. 11(c).

- For JRF, 2016 legislation provides state contributions equal to $3,000,000 for the fiscal year ending June 30, 2017, and $6,000,000 per year thereafter until the plan is fully funded.
- The assumed post-retirement benefit increase rate was changed as follows:
  - For the SERF and LRF, from 2.0% per year through 2035 and 2.5% thereafter to 2.0% per year for all years
  - For the SPRF, from 1.0% per year through 2029, 1.5% from 2030 through 2048 and 2.5% thereafter to 1.0% through 2044, 1.5% from 2045 through 2061 and 2.5% thereafter
  - For the JRF, from 1.75% per year for all years to 1.75% through 2034, 2.00% for 2035 through 2045, and 2.50% thereafter

GRS conducted an examination of the basic financial and membership data provided to us as of June 30, 2016 by MSRS, and determined that the data appears reasonable in comparison to last year, and we have relied upon the data as submitted in performing the actuarial valuation and in 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 adopted by the MSRS Board, and approved by the Legislative Commission on Pensions and Retirement (LCPR). The assumptions and methods used meet the parameters set by Actuarial Standards of Practice.

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.

To the best of our knowledge and belief, the valuations were performed in accordance with generally accepted actuarial principles and procedures, 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.

Gabriel Roeder Smith & Company

Members of the Board
December 20, 2016
Page 4

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, MAAA

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, MAAA
BBM/BJW:ah

Gabriel Roeder Smith & Company

Summary of Actuarial Methods and Assumptions

The actuarial methods and assumptions that follow are prescribed by *Minnesota Statutes*, the Legislative Commission on Pensions and Retirement (LCPR), and the MSRS Board of Directors. MSRS uses these methods and assumptions to monitor funding progress and the sufficiency of plan member and employer contribution rates. These assumptions are also used in the computation of Actuarially Determined Contributions found in *Required Supplementary Information* on pages 104-109. Methods and assumptions used for financial reporting purposes, if they differ, are found in the *Actuarial Section*, beginning on page 182. Additional actuarial methods and assumptions used in the July 1, 2016, funding actuarial valuations can be found online at www.msrs.state.mn.us/actuarial-reports.

State Employees Retirement Fund

Actuarial Methods

1. **Actuarial Cost Method:** Entry age normal, with the unfunded actuarial accrued liability amortized over the statutory period using a level percent of payroll assuming payroll increases
2. **Asset Valuation Method:** Market value smoothed over five years
3. **Funding Objective:** Establish contribution rates which, when expressed as a percentage of active member payroll, will remain approximately level from generation to generation and meet the required deadline for full funding
4. **Change in Methods since the 7/1/2015 Valuation:** None.

Actuarial Assumptions*

1. **Investment Return:** 8.00% per year (2015)
2. **Benefit Increases After Retirement:** 2% per year (2016)
3. **Salary Increases:** Service-related rates as shown in the table on page 149 of this section (2016)
4. **Inflation:** 2.75% per year (2015)
5. **Payroll Growth:** 3.50% per year (2015)
6. **Mortality Rates:**
   a. Healthy Pre-retirement: RP-2014 employee generational mortality table projected with mortality improvement scale MP-2015 from a base year of 2014; white collar adjustment; males-set forward one year; females-no adjustment (2016)
   b. Healthy Post-retirement: RP-2014 annuitant generational mortality table projected with mortality improvement scale MP-2015 from a base year of 2014; white collar adjustment; males-set forward two years; females-no adjustment (2016)
   c. Disabled: RP-2014 disabled mortality table projected with mortality improvement scale MP-2015 from a base year of 2014; males-set forward two years; females-set forward four years (2016)
7. **Retirement:** Age-based rates as shown in the table on page 153 of this section (2016)
8. **Withdrawal:** Service-related rates based on experiences as shown in the table on page 155 of this section (2016)
9. **Disability:** Age-related rates based on actual experience as shown in the table on page 154 of this section (2016)
10. **Allowance for Combined Service Annuity:** Liabilities for active members are increased by 1.2% and liabilities for former members are increased by 40% to account for the effect of some participants having eligibility for a Combined Service Annuity
11. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)
12. **Refund of Contributions:** Employees who withdraw are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit (1978)

** Year in parentheses is the date of adoption.*

State Patrol Retirement Fund

Actuarial Methods

1. **Actuarial Cost Method:** Entry age normal, with the unfunded actuarial accrued liability amortized over the statutory period using a level percent of payroll assuming payroll increases
2. **Asset Valuation Method:** Market value smoothed over five years
3. **Funding Objective:** Establish contribution rates which, when expressed as a percentage of active member payroll, will remain approximately level from generation to generation and meet the required deadline for full funding
4. **Change in Methods since the 7/1/2015 Valuation:** None.

Actuarial Assumptions*

1. **Investment Return:** 8.00% per year (2015)
2. **Benefit Increases After Retirement:**
   1.0% per year through 2044, then 1.5% per year from 2045 to 2061, and 2.5% per year thereafter (2016)
3. **Salary Increases:** Service-related rates as shown in the table on page 149 of this section (2015)
4. **Inflation:** 2.75% per year (2015)
5. **Payroll Growth:** 3.50% per year (2015)
6. **Mortality Rates:**
   a. Healthy Pre-retirement: RP-2000 employee generational mortality table projected with mortality improvement scale AA; white collar adjustment (2012)
   b. Healthy Post-retirement: RP-2000 annuitant generational mortality table projected with mortality improvement scale AA; white collar adjustment; males-set back two years; females-set forward one year (2012)
   c. Disabled: RP-2000 annuitant generational mortality table projected with mortality improvement scale AA; white collar adjustment; males-set back 2 years; females-set forward 1 year (2012)
7. **Retirement:** Age-based rates as shown in the table on page 153 of this section (2012)
8. **Withdrawal:** Select and Ultimate rates based on actual experience; 5% in year 1, 2% in year 2, and 2% in year 3; Rates after the third year are shown on page 155 of this section (2012)
9. **Disability:** Age-related rates based on experience as shown in the table on page 154 of this section. All incidences are assumed to be duty-related (2012)
10. **Allowance for Combined Service Annuity:** Liabilities for former members are increased by 30% to account for the effect of some participants having eligibility for a Combined Service Annuity
11. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)
12. **Refund of Contributions:** Employees who withdraw are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit (1978)

** Year in parentheses is the date of adoption.*

Continued on next page

Summary of Actuarial Methods and Assumptions

Correctional Employees Retirement Fund

Actuarial Methods

1. **Actuarial Cost Method:** Entry age normal, with the unfunded actuarial accrued liability amortized over the statutory period using a level percent of payroll assuming payroll increases
2. **Asset Valuation Method:** Market value smoothed over five years
3. **Funding Objective:** Establish contribution rates which, when expressed as a percentage of active member payroll, will remain approximately level from generation to generation and meet the required deadline for full funding
4. **Change in Methods since the 7/1/2015 Valuation:** None.

Actuarial Assumptions*

1. **Investment Return:** 8.00% per year (2015)
2. **Benefit Increases After Retirement:** 2% per year (2015)
3. **Salary Increases:** Service-related rates as shown in the table on page 149 of this section (2015)
4. **Inflation:** 2.75% per year (2015)
5. **Payroll Growth:** 3.50% per year (2015)
6. **Mortality Rates**
   a. Healthy Pre-retirement: RP-2000 employee generational mortality table projected with mortality improvement scale AA; white collar adjustment (2012)
   b. Healthy Post-retirement: RP-2000 annuitant generational mortality table projected with mortality improvement scale AA; white collar adjustment; males-set forward one year; females-set back one year (2012)
   c. Disabled: RP-2000 disabled mortality table (2012)
7. **Retirement:** Age-based rates as shown in the table on page 153 of this section (2012)
8. **Withdrawal:** Select and Ultimate rates based on actual experience; 20% in year 1, 15% in year 2, and 8% in year 3; Rates after the third year are shown on page 155 of this section (2012)
9. **Disability:** Age-related rates based on experience as shown in the table on page 154 of this section. All incidences are assumed to be duty-related (2012)
10. **Allowance for Combined Service Annuity:** Liabilities for former members are increased by 30% to account for the effect of some participants having eligibility for a Combined Service Annuity
11. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)
12. **Refund of Contributions:** Employees who withdraw are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit (1978)

** Year in parentheses is the date of adoption.*

Judges Retirement Fund

Actuarial Methods

1. **Actuarial Cost Method:** Entry age normal, with the unfunded actuarial accrued liability amortized over the statutory period using a level percent of payroll assuming payroll increases
2. **Asset Valuation Method:** Market value smoothed over five years
3. **Funding Objective:** Establish contribution rates which, when expressed as a percentage of active member payroll, will remain approximately level from generation to generation and meet the required deadline for full funding
4. **Change in Methods since the 7/1/2015 Valuation:** None.

Actuarial Assumptions*

1. **Investment Return:** 8.00% per year (2015)
2. **Benefit Increases After Retirement:** 1.75% per year through 2034, then 2.0% per year from 2035 to 2045, and 2.5% per year thereafter (2016)
3. **Salary Increases:** 2.75% per year (2015)
4. **Inflation:** 2.75% per year (2015)
5. **Payroll Growth:** 2.75% per year (2015)
6. **Mortality Rates:**
   a. Healthy Pre-retirement: RP-2000 employee generational mortality table projected with mortality improvement scale AA; white collar adjustment (2012)
   b. Healthy Post-retirement: RP-2000 annuitant generational mortality table projected with mortality improvement scale AA; white collar adjustment; males-set back one year; females-set back two years (2012)
   c. Disabled: RP-2000 annuitant generational mortality table projected with mortality improvement scale AA; white collar adjustment; males-set back one year; females-set back two years (2012)
7. **Retirement:** Age-based rates as shown in the table on page 153 of this section (2012)
8. **Withdrawal:** None
9. **Disability:** Age-related rates are based on actual experience as shown in the table on page 154 of this section (2012)
10. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll
11. **Refund of Contributions:** Account balances for deferred members accumulate interest until normal retirement date and are discounted back to the valuation date

** Year in parentheses is the date of adoption.*

Continued on next page

Summary of Actuarial Methods and Assumptions

Legislators Retirement Fund

Actuarial Methods

1. **Actuarial Cost Method:** Entry age normal, with the unfunded actuarial accrued liability amortized over 30 years as a level percent of payroll
2. **Asset Valuation Method:** Market value
3. **Funding Objective:** Pay-as-you-go, with annual benefit payments and administrative expenses financed primarily by State of Minnesota General Fund appropriations
4. **Change in Methods since the 7/1/2015 Valuation:** None.

Actuarial Assumptions*

1. **Investment Return:** 0% per year (2011)
2. **Benefit Increases After Retirement:** 2% per year (2016)
3. **Salary Increases:** 5% annually (1994)
4. **Inflation:** 2.75% per year (2015)
5. **Payroll Growth:** Not applicable; closed plan with decreasing payroll
6. **Mortality Rates:**
   a. Healthy Pre-retirement: RP-2000 employee generational mortality table projected with mortality improvement scale AA; white collar adjustment; males-set forward three years; females-set back one year (2012)
   b. Healthy Post-retirement: RP-2000 annuitant generational mortality table projected with mortality improvement scale AA; white collar adjustment (2012)
   c. Disabled: Not applicable
7. **Retirement:** Age-based rates as shown in the table on page 153 of this section (2012)
8. **Withdrawal:** Ultimate rates based on actual experience as shown on page 155 of this section
9. **Disability:** No disability benefits
10. **Allowance for Combined Service Annuity:** Liabilities for former members are increased by 30% to account for the effect of some participants having eligibility for a Combined Service Annuity
11. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)
12. **Refund of Contributions:** Employees who withdraw are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit (1978)

** Year in parentheses is the date of adoption.*

Changes in Actuarial Assumptions

The changes in funding actuarial assumptions listed below have occurred since the July 1, 2015, actuarial valuations. Assumption changes in the State Employee Retirement Fund are the result of an experience study dated June 30, 2015.

State Employees Retirement Fund

- Assumed salary increase rates are, on average, 0.2% greater than previous rates.
- Changes in assumed rates of retirement result in fewer unreduced retirements and fewer Rule of 90 retirements.
- Distinct rates of retirement were adopted for members hired prior to July 1, 1989, and members hired after June 30, 1989.
- Assumed rates of termination are based on service and are generally greater than previous rates for years 3 - 9 and less than the previous rates after 15 years.
- Assumed rates of disability are 75% of previous rates for females. Rates for male members were lowered to the same disability rate as for females..
- The base mortality table for healthy annuitants and employees was changed from the RP-2000 fully generational table to the RP-2014 fully generational table (with a base year of 2014), while collar adjustments, with age adjustments. The mortality improvement scale was changed from Scale AA to Scale MP-2015.
- The base mortality table for disabled annuitants was changed from the RP-2000 disabled mortality table (no projection for future mortality improvement) to the RP-2014 disabled annuitant mortality table (with future mortality improvement according to scale MP-2015), with age adjustments.
- The percent married assumption was changed from 85% of active male members and 70% of female members to 80% of active members and 65% of active female members.
- The assumed number of married male new retirees electing the 75% Joint and Survivor option changed from 10% to 15%. The assumed number of married female new retirees electing the 75% and 100% Joint and Survivor option changed from 0% to 10% and from 25% to 30%, respectively. The corresponding number of married new retirees electing the Life annuity option was adjusted accordingly.
- The assumed post-retirement benefit increase rate was changed from 2.0% per year through 2035 and 2.5% per year thereafter, to 2.0% per year indefinitely.

State Patrol Retirement Fund

- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2029, 1.5% per year from 2030 to 2048, and 2.5% per year thereafter, to 1.0% per year through 2044, 1.5% per year from 2045 to 2061, and 2.5% per year thereafter.

Correctional Employees Retirement Fund

- There have been no changes to actuarial assumptions since the prior valuation.

Judges Retirement Fund

- The assumed post-retirement benefit increase rate was changed from 1.75% per year for all years, to 1.75% per year through 2034, 2.0% per year from 2035 to 2045, and 2.5% per year thereafter.

Legislators Retirement Fund

- The assumed post-retirement benefit increase rate was changed from 2.0% per year through 2035 and 2.5% per year thereafter, to 2.0% per year indefinitely.

Other Assumptions

June 30, 2016

Form of Payment

Annuity Option Selected

Retirement Fund	Benefit Option: 50% Joint and Survivor	75% Joint and Survivor	100% Joint and Survivor	Straight Life
State Employees				
Male-Married	15%	15%	50%	20%
Female-Married	15	10	30	45
All Unmarried	0	0	0	100
All Deferred	0	0	0	100
State Patrol				
Male-Married	15%	25%	35%	25%
Female-Married	25	30	5	40
All Unmarried	0	0	0	100
Correctional Employees				
Male-Married	10%	10%	40%	40%
Female-Married	10	10	30	50
All Unmarried	0	0	0	100
All Deferred*	0	0	0	100
Judges				
All	0%	0%	0%	100%
Legislators				
Active Married	100%	0%	0%	0%
Active Single	0	0	0	100
All Deferred	0	0	0	100

** Current deferred members who terminated prior to July 1, 1997, are assumed to receive the Level Social Security option to age 62.*

Member Information

Active Member Percentage Married and Beneficiary Age

Retirement Fund	Percent Married: Males	Percent Married: Females	Age of Beneficiaries for: Males	Age of Beneficiaries for: Females
State Employees	80%	65%	3 years younger	2 years older
State Patrol	85	85	2 years younger	2 years older
Correctional Employees	85	85	3 years younger	3 years older
Judges	Marital status as indicated in member data file		3 years younger	3 years older
Legislators	85	85	3 years younger	3 years older

Actual marital status is used for members in payment status in the four largest plans. Legislators in payment status are assumed to be 100% married for purposes of a death benefit, except if reported with a joint and survivor benefit. 100% of Elective State Officers members are assumed to be eligible for the automatic survivor benefit.

Actuarial Tables

June 30, 2016

Salary Increase Rates

State Employees Retirement Fund

Salary Scale	
Service Years	Increase
1	14.00%
2	11.50
3	6.25
4	5.50
5	5.25
6	5.15
7	5.00
8	4.75
9	4.50
10	4.25
11	4.20
12	4.15
13	4.10
14	4.05
15	4.00
16	3.95
17	3.90
18	3.85
19	3.80
20	3.75
21	3.70
22	3.65
23	3.60
24	3.55
25+	3.50

State Patrol Retirement Fund

Salary Scale	
Service Years	Increase
1	7.75%
2	7.25
3	6.75
4	6.50
5	6.25
6	6.00
7	5.75
8	5.60
9	5.45
10	5.30
11	5.15
12	5.00
13	4.85
14	4.70
15	4.55
16	4.40
17	4.25
18	4.10
19	3.95
20	3.80
21+	3.75

Correctional Employees Retirement Fund

Salary Scale	
Service Years	Increase
1	5.75%
2	5.60
3	5.45
4	5.30
5	5.15
6	5.00
7	4.85
8	4.70
9	4.55
10	4.40
11	4.30
12	4.20
13	4.10
14	4.00
15	3.90
16	3.80
17	3.70
18	3.60
19+	3.50

Judges Retirement Fund

2.75% per year

Legislators Retirement Fund

5.00% per year

Continued on next page

Actuarial Tables

June 30, 2016

Mortality Rates

State Employees Retirement Fund

	Rates*					
	Healthy Pre-Retirement Mortality**		Healthy Post-Retirement Mortality**		Disability Mortality	
Age	Male	Female	Male	Female	Male	Female
20	0.03%	0.01%	0.03%	0.01%	0.09%	0.07%
25	0.03	0.01	0.05	0.03	0.30	0.20
30	0.03	0.02	0.07	0.05	0.63	0.38
35	0.04	0.02	0.10	0.08	1.02	0.61
40	0.05	0.03	0.15	0.11	1.44	0.87
45	0.08	0.06	0.22	0.16	1.83	1.14
50	0.13	0.09	0.32	0.21	2.16	1.40
55	0.22	0.14	0.44	0.27	2.46	1.64
60	0.37	0.21	0.60	0.39	2.83	1.99
65	0.65	0.31	0.91	0.65	3.46	2.63
70	1.15	0.54	1.54	1.06	4.52	3.80

State Patrol Retirement Fund

	Rates*					
	Healthy Pre-Retirement Mortality***		Healthy Post-Retirement Mortality***		Disability Mortality***	
Age	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	0.03%	0.02%
25	0.04	0.02	0.04	0.02	0.04	0.02
30	0.04	0.03	0.04	0.03	0.04	0.03
35	0.06	0.05	0.05	0.05	0.05	0.05
40	0.09	0.06	0.08	0.07	0.08	0.07
45	0.13	0.10	0.11	0.11	0.11	0.11
50	0.20	0.16	0.17	0.25	0.17	0.25
55	0.27	0.24	0.57	0.39	0.57	0.39
60	0.43	0.38	0.57	0.61	0.57	0.61
65	0.67	0.59	0.92	1.01	0.92	1.01
70	0.98	0.88	1.58	1.69	1.58	1.69

* *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, the actuaries would not expect the valuation results to be materially different.*

** *These rates were adjusted for mortality improvements using Projection Scale MP-2015 from a base year of 2014.*

*** *These rates were adjusted for mortality improvements using Projection Scale AA.*

Correctional Employees Retirement Fund

	Rates*					
	Healthy Pre-Retirement Mortality***		Healthy Post-Retirement Mortality***		Disability Mortality	
Age	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.04%	0.02%	2.26%	0.75%
25	0.04	0.02	0.04	0.02	2.26	0.75
30	0.04	0.03	0.04	0.02	2.26	0.75
35	0.06	0.05	0.06	0.04	2.26	0.75
40	0.09	0.06	0.10	0.06	2.26	0.75
45	0.13	0.10	0.15	0.09	2.26	0.75
50	0.20	0.16	0.60	0.15	2.90	1.15
55	0.27	0.24	0.54	0.32	3.54	1.65
60	0.43	0.38	0.73	0.51	4.20	2.18
65	0.67	0.59	1.30	0.82	5.02	2.80
70	0.98	0.88	2.14	1.37	6.26	3.76

Judges Retirement Fund

	Rates*					
	Healthy Pre-Retirement Mortality***		Healthy Post-Retirement Mortality***		Disability Mortality***	
Age	Male	Female	Male	Female	Male	Female
20	0.03%	0.02%	0.03%	0.02%	0.03%	0.02%
25	0.04	0.02	0.04	0.02	0.04	0.02
30	0.04	0.03	0.04	0.02	0.04	0.02
35	0.06	0.05	0.05	0.04	0.05	0.04
40	0.09	0.06	0.08	0.06	0.08	0.06
45	0.13	0.10	0.12	0.08	0.12	0.08
50	0.20	0.16	0.18	0.13	0.18	0.13
55	0.27	0.24	0.56	0.29	0.56	0.29
60	0.43	0.38	0.61	0.47	0.61	0.47
65	0.67	0.59	1.04	0.74	1.04	0.74
70	0.98	0.88	1.74	1.24	1.74	1.24

Continued on next page

Actuarial Tables

June 30, 2016

Mortality Rates

Legislators Retirement Fund

	Rates*			
	Healthy Pre-Retirement Mortality**		Healthy Post-Retirement Mortality**	
Age	**Male**	**Female**	**Male**	**Female**
20	0.04%	0.02%	0.03%	0.02%
25	0.04	0.02	0.04	0.02
30	0.05	0.02	0.04	0.03
35	0.08	0.04	0.06	0.05
40	0.11	0.06	0.09	0.06
45	0.17	0.09	0.13	0.10
50	0.24	0.15	0.60	0.24
55	0.35	0.22	0.54	0.35
60	0.56	0.34	0.66	0.56
65	0.85	0.54	1.16	0.91
70	2.67	0.82	1.93	1.52

* *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, the actuaries would not expect the valuation results to be materially different.*

** *These rates were adjusted for mortality improvements using Projection Scale AA.*

Retirement Rates

State Employees Retirement Fund

Age	Percent Retiring: Rule of 90 Eligible	Hired Prior to 7/1/1989	Hired After 6/30/1989
55	15%	4%	4%
56	15	4	4
57	12.5	4	4
58	12.5	4	4
59	15	6	5
60	15	8	5
61	20	10	10
62	30	20	15
63	25	18	15
64	25	18	15
65	35	35	20
66	30	30	30
67	25	25	25
68	25	25	25
69	22	22	22
70	30	30	30
71+	100	100	100

State Patrol Retirement Fund

Age	Percent Retiring
50	7%
51	6
52	6
53	6
54	3
55	65
56	50
57	30
58	20
59	20
60+	100

Correctional Employees Retirement Fund

Age	Percent Retiring
50	5%
51	3
52	3
53	3
54	5
55	55
56	12
57	12
58	10
59	10
60	10
61	10
62	30
63	30
64	30
65	50
66	50
67	50
68	50
69	50
70+	100

Judges Retirement Fund

Age	Percent Retiring
60	0%
61	0
62	8
63	5
64	8
65	25
66	20
67	10
68	30
69	10
70	100

Legislators Retirement Fund

Age	Percent Retiring
60	0%
61	0
62	40
63	30
64	30
65	40
66	30
67	25
68	25
69	25
70	30
71+	100

Continued on next page

Actuarial Tables

June 30, 2016

Disability Retirement Rates

State Employees Retirement Fund

	Disability Retirement Rates	
Age	Male	Female
20	0.00%	0.00%
25	0.01	0.01
30	0.01	0.01
35	0.02	0.02
40	0.06	0.06
45	0.11	0.11
50	0.22	0.22
55	0.32	0.32
60	0.47	0.47
65	0.00	0.00

State Patrol Retirement Fund

	Disability Retirement Rates	
Age	Male	Female
20	0.03%	0.03%
25	0.05	0.05
30	0.06	0.06
35	0.09	0.09
40	0.14	0.14
45	0.23	0.23
50	0.40	0.40
55	0.70	0.70
60	1.13	1.13
65	0.00	0.00

Correctional Employees Retirement Fund

	Disability Retirement Rates	
Age	Male	Female
20	0.05%	0.05%
25	0.08	0.08
30	0.11	0.11
35	0.15	0.15
40	0.24	0.24
45	0.39	0.39
50	0.67	0.67
55	1.17	1.17
60	1.88	1.88
65	0.00	0.00

Judges Retirement Fund

	Disability Retirement Rates	
Age	Male	Female
20	0.00%	0.00%
25	0.00	0.00
30	0.00	0.00
35	0.01	0.00
40	0.01	0.01
45	0.02	0.03
50	0.07	0.05
55	0.17	0.12
60	0.38	0.31
65	0.00	0.00

Legislators Retirement Fund

No disability benefits are available with this plan.

Withdrawal Rates*

State Employees Retirement Fund

Years of Service	Withdrawal Rates After Third Year	
	Male	Female
1	20.00%	24.00%
2	15.00	18.00
3	11.00	13.00
4	8.50	11.00
5	7.75	9.00
6	6.50	8.50
7	5.75	7.50
8	5.00	5.75
9	4.00	5.00
10	3.25	4.50
11	3.00	4.00
12	2.75	4.00
13	2.50	3.00
14	2.50	2.75
15	2.50	2.50
16	2.00	2.25
17	2.00	2.25
18	2.00	2.25
19	2.00	2.25
20	1.50	2.25
21	1.50	2.00
22	1.50	2.00
23	1.00	1.50
24	1.00	1.50
25	1.00	1.50
26	1.00	1.50
27	1.00	1.25
28	1.00	1.25
29	1.00	1.25
30+	1.00	1.00

Legislators Retirement Fund

Years of Service	Withdrawal Rates After Third Year	
	Male	Female
1	0.00%	0.00%
2	30.00	0.00
3	0.00	0.00
4	20.00	25.00
5	0.00	0.00
6	10.00	0.00
7	0.00	0.00
8	5.00	10.00
9+	0.00	0.00

State Patrol Retirement Fund

Age	Withdrawal Rates After Third Year	
	Male	Female
20	1.47%	1.47%
25	1.13	1.13
30	0.80	0.80
35	0.47	0.47
40	0.40	0.40
45	0.40	0.40
50	0.00	0.00
55	0.00	0.00
60	0.00	0.00
65	0.00	0.00

Correctional Employees Retirement Fund

Age	Withdrawal Rates After Third Year	
	Male	Female
20	13.20%	8.80%
25	8.10	7.80
30	5.00	7.45
35	3.45	7.10
40	2.55	5.70
45	1.95	3.50
50	0.00	0.00
55	0.00	0.00
60	0.00	0.00
65	0.00	0.00

Judges Retirement Fund

Members in the Judges Plan are assumed not to withdraw.

* *Withdrawal rates for the first three years of employment in the State Patrol and Correctional Employees Retirement Funds are found in the* Summary of Actuarial Methods and Assumptions *on pages 143-144.*

Changes in Plan Provisions

The following changes in plan provisions have occurred since the July 1, 2015, actuarial valuations:

State Employees, State Patrol, Correctional Employees, and Legislators Retirement Funds

- There were no changes in plan provisions during fiscal year 2016.

Judges Retirement Fund

- A state contribution of $3 million will be made to the plan in the fiscal year ending June 30, 2017. A state contribution of $6 million per year will be made in subsequent fiscal years until the plan is fully funded.

A description of the system and plans may be found in the *Notes to the Financial Statements* beginning on page 71. Additional plan provisions are summarized in the *Introductory Section* beginning on page 22.

Actuarial Accrued Liability (AAL)

As of June 30, 2016
(Dollars in thousands)

	Defined Benefit Retirement Funds				
	State Employees	**State Patrol**	**Correctional Employees**	**Judges**	**Legislators**
Active Members					
Retirement Annuities	$5,009,945	$232,719	$473,926	$111,708	$15,490
Disability Benefits	132,924	8,408	26,870	1,523	0
Survivor Benefits	65,549	1,396	5,690	1,764	339
Deferred Retirements	(14,345)	708	15,332	0	(88)
Refunds	(45,078)	(217)	(5,935)	136	(12)
Total Active Members	$5,148,995	$243,014	$515,883	$115,131	$15,729
Deferred Retirements	1,398,187	9,501	122,302	4,609	51,492
Former Members Not Vested	9,770	28	2,202	0	0
Benefit Recipients	7,746,511	581,343	673,129	211,594	151,293
Unclassified Employees					
Retirement Fund					
Contingent Liability	13,423	0	0	0	0
Total AAL	**$14,316,886**	**$833,886**	**$1,313,516**	**$331,334**	**$218,514**

Actual Contribution Rates as Compared to Actuarially Recommended Rates

As of June 30, 2016

Retirement Fund	Actuarial Valuation Date	Actual Contribution Rates Employee	Employer	State	Total	Recommended Rate	Sufficiency/ (Deficiency)
State Employees	July 1, 2016	5.50%	5.50%	N/A	11.00%	14.49%	(3.49)%
State Patrol*	July 1, 2016	14.40	21.10	1.37%	37.37	40.45	(3.08)
Correctional Employees	July 1, 2016	9.10	12.85	N/A	21.95	27.56	(5.61)
Judges**	July 1, 2016	14.56	22.50	N/A	37.06	43.34	(6.28)
Legislators	July 1, 2016	9.00	0.00	N/A	9.00	$23,079,000	$(22,998,000)

* *State contribution is statutorily required only until the Public Employee Retirement Association Police and Fire Retirement Fund and the MSRS State Patrol Retirement Fund both reach a 90% funded ratio on a market value of assets basis.*

** *The statutory contribution rate for Judges in the Tier 1 benefit program is 9 percent of salary. The statutory contribution rate for Judges in the Tier 2 benefit program is 7 percent of salary. The employee and total rates on the schedule reflect the fact that member contributions for Tier 1 Judges at the maximum benefit are directed to the Unclassified Employees Retirement Fund. If these contributions were not directed to the Unclassified Employees Retirement Fund, the employee and total rates would be 14.88 percent and 37.38 percent, respectively, instead of 14.56 and 37.06 percent as shown above. The distinction between the Tier 1 and Tier 2 benefit programs is explained on page 73 of the* Financial Section.

Schedule of Changes in Unfunded Actuarial Accrued Liabilities (UAAL)

For the Fiscal Year Ended June 30, 2016
(Dollars in thousands)

	Defined Benefit Retirement Funds				
	State Employees	**State Patrol**	**Correctional Employees**	**Judges**	**Legislators**
A. UAAL at the Beginning of the Year	$1,869,417	$193,170	$360,634	$147,398	$226,789
B. Change Due to Interest Requirements and Current Rate of Funding					
1. Normal Cost and Expenses	$219,127	$16,573	$39,588	$8,367	$1,384
2. Contributions	(305,022)	(24,230)	(52,631)	(13,982)	(5,176)
3. Interest on A, B1, and B2	146,118	15,148	28,329	11,567	0
4. Totals (B1+B2+B3)	$60,223	$7,491	$15,286	$5,952	$(3,792)
C. Expected UAAL at End of the Year (A+B4)	$1,929,640	$200,661	$375,920	$153,350	$222,997
D. Increase (Decrease) Due to Actuarial Losses (Gains) Because of Experience Deviations from the Expected					
1. Age and Service Requirements	$(8,212)	$714	$199	$430	$(80)
2. Disability Requirements	627	(653)	(2,051)	(140)	0
3. Death-in-Service Benefits	210	(180)	9	(105)	36
4. Withdrawals	(3,243)	(223)	(1,701)	(967)	0
5. Salary Increases	50,945	(6,388)	1,747	4,455	(1,595)
6. Investment Return	12,464	1,324	3,273	437	70
7. Mortality of Annuitants	10,751	(3,027)	(699)	(253)	170
8. Other items	3,693	1,311	(181)	430	(601)
9. Totals	$67,235	$(7,122)	$596	$4,287	$(2,000)
E. UAAL at End of Year Before Plan Amendments and Changes in Actuarial Assumptions (C + D9)	$1,996,875	$193,539	$376,516	$157,637	$220,997
F. Change in UAAL Due to Changes in Plan Provisions	0	0	0	0	0
G. Change in UAAL Due to Changes in Actuarial Assumptions	643,641	(14,495)	0	1,172	(2,483)
H. Change in UAAL Due to Changes in Decrement Timing and Miscellaneous Methodology	0	0	0	0	0
I. UAAL at the End of the Year	**$2,640,516**	**$179,044**	**$376,516**	**$158,809**	**$218,514**

Schedule of Actuarial and Market Value Funding Progress

Four Largest MSRS Defined Benefit Retirement Funds
Last Ten Fiscal Years

Actuarial Valuation Date	Actuarial Basis Assets	Actuarial Basis Funded Ratio	Actuarial Basis Contribution Sufficiency/ (Deficiency)	Market Value Basis Assets	Market Value Basis Funded Ratio	Market Value Basis Contribution Sufficiency/ (Deficiency)*
State Employees Retirement Fund						
07/01/07	$8,904,517	92.49%	(3.26)%	$9,507,005	98.75%	N/A
07/01/08	9,013,456	90.18	(3.39)	8,803,140	88.08	N/A
07/01/09	9,030,401	85.90	(5.35)	6,897,118	65.61	(15.08)%
07/01/10	8,960,391	87.30	(0.99)	7,692,531	74.95	(3.90)
07/01/11	9,130,011	86.32	(1.03)	9,197,664	86.96	(0.86)
07/01/12	9,162,301	82.67	(2.32)	9,098,097	82.09	(2.48)
07/01/13	9,375,780	82.04	(2.45)	10,033,499	87.79	(0.80)
07/01/14	10,326,272	82.97	(1.82)	11,498,604	92.39	1.02
07/01/15	11,223,285	85.72	(1.44)	11,638,319	88.89	(0.45)
07/01/16	11,676,370	81.56	(3.49)	11,223,065	78.39	(4.51)
State Patrol Retirement Fund						
07/01/07	$617,901	91.75%	(7.20)%	$649,181	96.40%	N/A
07/01/08	595,082	85.79	(10.09)	589,379	84.96	N/A
07/01/09	584,501	80.58	(12.16)	450,060	62.05	(24.21)%
07/01/10	567,211	83.00	(7.84)	488,870	71.54	(15.05)
07/01/11	563,046	80.33	(5.25)	568,279	81.08	(4.75)
07/01/12	554,244	72.84	(11.52)	549,956	72.27	(11.95)
07/01/13	552,319	74.45	(8.68)	593,201	79.96	(4.33)
07/01/14	597,870	74.69	(8.58)	667,340	83.37	(1.52)
07/01/15	639,863	76.81	(7.98)	664,530	79.77	(5.52)
07/01/16	654,842	78.53	(3.08)	629,992	75.55	(5.51)

** Data not available for fiscal years 2007-2008.*

Actuarial Valuation Date	Actuarial Basis Assets	Actuarial Basis Funded Ratio	Actuarial Basis Contribution Sufficiency/ (Deficiency)	Market Value Basis Assets	Market Value Basis Funded Ratio	Market Value Basis Contribution Sufficiency/ (Deficiency)*

Correctional Employees Retirement Fund

Actuarial Valuation Date	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)*
07/01/07	$559,852	79.04%	(8.94)%	$595,057	84.01%	N/A
07/01/08	572,719	75.32	(6.56)	565,180	74.33	N/A
07/01/09	590,339	71.88	(6.05)	456,783	55.62	(9.77)%
07/01/10	603,863	70.95	(4.73)	525,245	61.71	(6.99)
07/01/11	637,027	70.23	(5.30)	646,582	71.29	(5.02)
07/01/12	663,713	68.55	(4.58)	659,523	68.12	(4.71)
07/01/13	701,091	68.33	(5.41)	747,157	72.82	(3.97)
07/01/14	790,304	70.41	(4.48)	877,056	78.14	(1.86)
07/01/15	878,624	70.90	(5.46)	909,002	73.35	(4.56)
07/01/16	937,000	71.34	(5.61)	899,592	68.49	(6.68)

Judges Retirement Fund

Actuarial Valuation Date	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)*
07/01/07	$153,562	71.66%	(5.63)%	$159,363	74.37%	N/A
07/01/08	147,542	63.70	(2.45)	146,088	63.07	N/A
07/01/09	147,120	60.84	(3.73)	114,690	47.43	(8.50)%
07/01/10	144,728	60.16	(3.62)	126,201	52.46	(6.41)
07/01/11	145,996	58.72	(5.17)	148,504	59.73	(4.78)
07/01/12	144,898	51.46	(13.50)	144,086	51.17	(13.68)
07/01/13	144,918	50.94	(11.46)	155,398	54.62	(9.64)
07/01/14	157,528	52.82	(10.24)	175,556	58.87	(7.27)
07/01/15	168,235	53.30	(11.89)	174,580	55.31	(10.85)
07/01/16	172,525	52.07	(6.28)	165,905	50.07	(7.30)

The Legislators Retirement Fund is financed primarily on a pay-as-you-go basis, so it is not presented here.

Schedule of Contributions from the Employer(s) and Other Contributing Entities

Last Ten Years
(Dollars in thousands)

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)x(B)]-(C)]	Actual Employer Contributions	Percent Contributed
State Employees Retirement Fund						
2007	10.11%	$2,095,310	$89,447	$122,389	$86,492	70.67%
2008	11.76	2,256,528	99,280	166,088	96,746	58.25
2009	12.39	2,329,499	108,866	179,759	107,211	59.64
2010	14.85	2,327,398	115,180	230,439	113,716	49.35
2011	10.99	2,440,580	122,029	146,191	118,563	81.10
2012	11.03	2,367,160	118,358	142,740	115,159	80.68
2013	12.32	2,483,000	124,150	181,756	121,673	66.94
2014	12.45	2,620,660	131,033	195,239	128,037	65.58
2015	12.82	2,714,418	149,293	198,695	146,333	73.65
2016	12.44	2,797,345	153,854	194,136	151,168	77.87
State Patrol Retirement Fund						
2007	26.69%	$61,498	$4,987	$11,427	$7,461	65.30%
2008	29.90	60,029	5,594	12,355	8,279	67.01
2009	34.49	61,511	6,216	14,999	9,178	61.19
2010	38.16	63,250	6,726	17,410	10,104	58.04
2011	33.84	63,250	6,578	14,826	9,873	66.59
2012	36.25	62,524	7,753	14,912	11,620	77.92
2013	42.52	62,121	7,703	18,711	11,482	61.37
2014	41.24	63,952	7,930	18,444	12,894*	69.91
2015	43.56	68,463	9,174	20,648	14,763*	71.50
2016	42.91	69,343	9,292	20,463	14,938*	73.00
Correctional Employees Retirement Fund						
2007	23.34%	$167,727	$10,032	$29,115	$13,927	47.83%
2008	24.44	194,391	12,775	34,734	18,623	53.62
2009	23.66	193,445	14,031	31,738	20,126	63.41
2010	24.85	192,450	15,267	32,557	21,988	67.54
2011	25.43	197,702	17,002	33,274	23,892	71.80
2012	26.00	200,035	17,203	34,806	24,188	69.49
2013	25.28	204,198	17,561	34,060	24,632	72.32
2014	26.11	219,244	18,855	38,390	26,468	68.95
2015	26.43	231,440	21,061	40,109	29,480	73.50
2016	27.41	241,242	21,953	44,171	30,678	69.45

** Includes supplemental state aid of $1 million*

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)x(B)]-(C)]	Actual Employer Contributions**	Percent Contributed
Judges Retirement Fund						
2007	30.73%	$36,195	$2,792	$8,331	$7,572	90.88%
2008	33.70	38,296	2,861	10,045	7,936	79.00
2009	30.33	39,444	2,978	8,985	8,219	91.47
2010	31.53	39,291	2,988	9,400	8,283	88.11
2011	31.66	40,473	3,010	9,804	8,297	84.63
2012	33.15	38,644	2,931	9,879	7,922	80.19
2013	41.52	39,888	3,037	13,524	8,177	60.46
2014	42.42	41,893	3,578	14,193	9,426	66.41
2015	41.26	43,449	3,629	14,298	9,776	68.37
2016	42.73	45.418	3,763	15,644	10,219	65.32
Legislators Retirement Fund* **						
2007	111.24%	$2,380	$239	$2,408	$1,772	73.59%
2008	171.10	1,993	180	3,230	2,217	68.64
2009	243.21	1,963	248	4,526	1,269	28.04
2010	413.00	1,877	171	7,582	1,975	26.05
2011	432.92	1,774	160	7,520	2,805	37.30
2012	1,320.95	1,378	124	18,079	3,935	21.77
2013	1,340.00	1,233	111	16,411	3,399	20.71
2014	1,887.98	1,122	101	21,082	3,436	16.30
2015****	2,287.58	1,700	153	38,736	3,216	8.30
2016	2,204.22	989	89	21,711	5,087	23.43
Elective State Officers Retirement Fund* **						
2007	$477	$0	$0	$477	$427	89.57%
2008	506	0	0	506	435	85.92
2009	558	0	0	558	442	79.28
2010	601	0	0	601	453	75.37
2011	644	0	0	644	460	71.54
2012	1,269	0	0	1,269	466	36.73
2013	991	0	0	991	470	47.43

*** For the Legislators and Elective State Officers Retirement Funds, actual employer contributions include contributions from the state's General Fund.*

**** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*

***** Actual member contributions include a member repayment of a prior year employee contribution refund. Actual covered payroll is calculated based on member contributions.*

Schedule of Active Member Valuation Data

Last Ten Fiscal Years

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percent Increase In Average Pay
State Employees Retirement Fund				
07/01/07	48,379	$2,095,310,000	$43,310	3.09%
07/01/08	48,823	2,256,528,000	46,219	6.71
07/01/09	48,989	2,329,499,000	47,551	2.88
07/01/10	48,494	2,327,398,000	47,994	0.93
07/01/11	47,955	2,440,580,000	48,191	0.41
07/01/12	48,207	2,367,160,000	48,815	1.29
07/01/13	49,121	2,483,000,000	49,601	1.61
07/01/14	49,663	2,620,660,000	50,952	2.72
07/01/15	49,037	2,714,418,000	53,149	4.31
07/01/16	49,472	2,797,345,000	55,463	4.35
State Patrol Retirement Fund				
07/01/07	844	$61,498,000	$72,865	7.35%
07/01/08	840	60,029,000	71,463	(1.92)
07/01/09	876	61,511,000	70,218	(1.74)
07/01/10	848	63,250,000	74,587	6.22
07/01/11	862	63,250,000	71,369	(4.31)
07/01/12	823	62,524,000	76,883	7.73
07/01/13	845	62,121,000	72,171	(6.13)
07/01/14	858	63,952,000	74,727	3.54
07/01/15	843	68,463,000	78,927	5.62
07/01/16	892	69,343,000	78,097	(1.05)
Correctional Employees Retirement Fund				
07/01/07	4,332	$167,727,000	$38,718	3.78%
07/01/08	4,520	194,391,000	43,007	11.08
07/01/09	4,403	193,445,000	43,935	2.16
07/01/10	4,268	192,450,000	45,091	2.63
07/01/11	4,332	197,702,000	44,200	(1.97)
07/01/12	4,276	200,035,000	47,358	7.14
07/01/13	4,384	204,198,000	46,411	(2.00)
07/01/14	4,504	219,244,000	48,153	3.75
07/01/15	4,449	231,440,000	50,671	5.23
07/01/16	4,521	241,242,000	52,524	3.66

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percent Increase In Average Pay

Judges Retirement Fund

07/01/07	308	$36,195,000	$117,516	(2.52)%
07/01/08	308	38,296,000	124,338	5.80
07/01/09	312	39,444,000	126,423	1.68
07/01/10	312	39,291,000	125,933	(0.39)
07/01/11	308	40,473,000	127,032	0.87
07/01/12	308	38,644,000	127,844	0.64
07/01/13	309	39,888,000	127,391	(0.35)
07/01/14	316	41,893,000	133,732	4.98
07/01/15	312	43,449,000	139,052	3.98
07/01/16	311	45,418,000	150,726	8.40

Legislators Retirement Fund*

07/01/07	54	$2,380,000	$44,074	15.74%
07/01/08	52	1,993,000	38,327	(13.04)
07/01/09	48	1,963,000	40,900	6.71
07/01/10	47	1,877,000	39,936	(2.35)
07/01/11	38	1,774,000	41,241	3.27
07/01/12	34	1,378,000	38,328	(7.06)
07/01/13	24	1,233,000	39,033	1.84
07/01/14	24	1,122,000	37,384	(4.22)
07/01/15	23	1,700,000**	41,313	10.51
07/01/16	23	989,000	37,047	(10.33)

* *Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes. There have been no active members in the Elective State Officers Retirement Fund between fiscal year 2006 and the merger.*

** *Actual member contributions include a member repayment of a prior year employee contribution refund. Actual payroll on this schedule is calculated based on member contributions.*

Schedule of Retirees and Beneficiaries

Last Ten Fiscal Years

Valuation Year Ended	Added to Rolls		Removed from Rolls		Rolls at Fiscal Year End		% Change in Annual Allowances	Average Annual Allowance
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		

State Employees Retirement Fund

Valuation Year Ended	Added Number	Added Annual Allowances	Removed Number	Removed Annual Allowances	Rolls Number	Rolls Annual Allowances	% Change in Annual Allowances	Average Annual Allowance
06/30/07	2,090	$20,344,000	948	$6,223,000	25,346	$392,058,000	6.89%	$15,468
06/30/08	2,107	21,456,000	1,007	7,102,000	26,446	418,757,000	6.81	15,834
06/30/09	1,873	18,931,000	976	7,210,000	27,343	445,792,000	6.46	16,304
06/30/10	2,071	23,023,000	979	8,116,000	28,435	473,447,000	6.20	16,650
06/30/11	2,699	27,821,000	970	9,607,000	30,164	505,573,000	6.79	16,761
06/30/12	2,971	32,057,768	1,160	11,467,895	31,975	552,088,000	9.20	17,266
06/30/13	2,291	24,459,318	980	9,758,992	33,286	586,256,000	6.19	17,613
06/30/14	2,611	19,878,596	1,168	9,734,906	34,729	623,942,000	6.43	17,966
06/30/15	2,860	35,485,229	1,113	11,270,174	36,476	665,821,000	6.71	18,254
06/30/16	2,548	22,010,668	1,072	10,993,119	37,952	707,361,000	6.24	18,638

State Patrol Retirement Fund

Valuation Year Ended	Added Number	Added Annual Allowances	Removed Number	Removed Annual Allowances	Rolls Number	Rolls Annual Allowances	% Change in Annual Allowances	Average Annual Allowance
06/30/07	69	$1,506,000	39	$326,000	876	$40,581,000	4.68%	$46,325
06/30/08	49	1,503,000	29	414,000	896	42,804,000	5.48	47,772
06/30/09	33	1,080,000	21	434,000	908	44,480,000	3.92	48,987
06/30/10	37	1,041,000	21	413,000	924	46,119,000	3.68	49,912
06/30/11	36	1,064,000	28	723,000	932	47,844,000	3.74	51,335
06/30/12	51	1,704,000	20	541,200	963	50,007,000	4.52	51,928
06/30/13	45	1,321,942	25	524,505	983	52,057,000	4.10	52,957
06/30/14	64	1,270,181	62	900,675	985	53,697,000	3.15	54,515
06/30/15	68	2,295,671	26	729,264	1,027	55,465,000	3.29	54,007
06/30/16	51	1,282,399	30	1,020,976	1,048	57,695,000	4.02	55,052

Correctional Employees Retirement Fund

Valuation Year Ended	Added Number	Added Annual Allowances	Removed Number	Removed Annual Allowances	Rolls Number	Rolls Annual Allowances	% Change in Annual Allowances	Average Annual Allowance
06/30/07	174	$2,061,000	47	$317,000	1,502	$28,565,000	9.19%	$19,018
06/30/08	135	1,580,000	37	284,000	1,600	30,932,000	8.29	19,332
06/30/09	139	1,871,000	30	190,000	1,709	33,239,000	7.46	19,449
06/30/10	173	2,116,000	23	175,000	1,859	36,078,000	8.54	19,407
06/30/11	195	2,103,000	38	330,000	2,016	39,116,000	8.42	19,403
06/30/12	222	1,804,146	41	395,124	2,197	42,571,000	8.83	19,377
06/30/13	214	2,524,880	37	327,671	2,374	46,226,000	8.59	19,472
06/30/14	208	2,072,392	65	489,187	2,517	50,842,000	9.99	20,199
06/30/15	295	4,209,512	43	494,457	2,769	54,909,000	8.00	19,830
06/30/16	193	1,741,689	44	488,337	2,918	59,045,000	7.53	20,235

Valuation Year Ended	Added to Rolls Number	Added to Rolls Annual Allowances	Removed from Rolls Number	Removed from Rolls Annual Allowances	Rolls at Fiscal Year End Number	Rolls at Fiscal Year End Annual Allowances	% Change in Annual Allowances	Average Annual Allowance

Judges Retirement Fund

Valuation Year Ended	Added Number	Added Annual Allowances	Removed Number	Removed Annual Allowances	Rolls Number	Rolls Annual Allowances	% Change in Annual Allowances	Average Annual Allowance
06/30/07	22	$542,000	20	$427,000	263	$14,516,000	1.80%	$55,194
06/30/08	25	833,000	9	272,000	279	15,116,000	4.13	54,179
06/30/09	17	580,000	11	187,000	285	16,261,000	7.57	57,056
06/30/10	20	933,000	14	223,000	291	17,058,000	4.90	58,619
06/30/11	25	780,000	19	831,000	297	17,585,000	3.09	59,209
06/30/12	24	784,130	7	367,857	314	18,539,000	5.43	59,041
06/30/13	32	1,088,182	14	437,495	332	19,772,000	6.65	59,554
06/30/14	28	764,654	25	328,523	335	20,802,000	5.21	62,096
06/30/15	23	1,058,885	12	487,967	346	21,893,000	5.24	63,275
06/30/16	20	532,785	16	673,338	350	22,378,000	2.22	63,937

Legislators Retirement Fund*

Valuation Year Ended	Added Number	Added Annual Allowances	Removed Number	Removed Annual Allowances	Rolls Number	Rolls Annual Allowances	% Change in Annual Allowances	Average Annual Allowance
06/30/07	34	$341,000	13	$46,000	340	$6,390,000	4.86%	$18,794
06/30/08	17	177,000	11	85,000	346	6,786,000	6.20	19,613
06/30/09	22	289,000	10	159,000	358	7,016,000	3.39	19,598
06/30/10	19	164,000	18	224,000	359	7,159,000	2.00	19,942
06/30/11	23	340,000	14	144,000	368	7,464,000	4.26	20,283
06/30/12	15	173,314	16	157,452	367	7,721,000	3.44	21,038
06/30/13	18	315,685	23	218,497	362	7,826,000	1.36	21,619
06/30/14	32	653,406	19	180,791	375	8,407,000	1.35	22,419
06/30/15	16	141,320	14	108,325	377	8,441,000	0.40	22,390
06/30/16	7	52,356	12	107,867	372	8,496,000	2.01	22,839

Elective State Officers Retirement Fund*

Valuation Year Ended	Added Number	Added Annual Allowances	Removed Number	Removed Annual Allowances	Rolls Number	Rolls Annual Allowances	% Change in Annual Allowances	Average Annual Allowance
06/30/07	0	$0	0	$0	15	$419,000	2.44%	$27,933
06/30/08	0	0	0	0	15	430,000	2.63	28,667
06/30/09	0	0	0	0	15	440,000	2.33	29,333
06/30/10	0	0	0	0	15	451,000	2.50	30,067
06/30/11	1	12	2	32,164	14	460,000	2.00	32,857
06/30/12	0	0	0	0	14	458,000	(0.43)	32,714
06/30/13	0	0	0	0	14	469,000	2.40	33,500

* *Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*

Solvency Test

Last Ten Fiscal Years
(Dollars in thousands)

Actuarial Valuation Date	Aggregate Accrued Liabilities: (1) Active Member Contributions	(2) Retired and Beneficiaries	(3) Active Member (Employer Financed)	Total Actuarial Accrued Liabilities	Reported Assets	Portion Covered by Reported Assets: (1)	(2)	(3)	Funded Ratio
State Employees Retirement Fund									
07/01/07	$1,001,316	$3,963,536	$4,662,453	$9,627,305	$8,904,517	100.0%	100.0%	84.5%	92.5%
07/01/08	1,041,731	4,251,341	4,701,530	9,994,602	9,013,456	100.0	100.0	79.1	90.2
07/01/09	1,102,082	4,496,247	4,914,431	10,512,760	9,030,401	100.0	100.0	69.8	85.9
07/01/10	1,155,473	4,535,401	4,573,197	10,264,071	8,960,391	100.0	100.0	71.5	87.3
07/01/11	982,365	4,982,212	4,611,904	10,576,481	9,130,011	100.0	100.0	68.6	86.3
07/01/12	1,044,810	5,489,756	4,548,661	11,083,227	9,162,301	100.0	100.0	57.8	82.7
07/01/13	1,090,373	5,807,381	4,530,887	11,428,641	9,375,780	100.0	100.0	54.7	82.0
07/01/14	1,128,164	6,471,998	4,844,964	12,445,126	10,326,272	100.0	100.0	56.3	83.0
07/01/15	1,161,369	6,949,000	4,982,333	13,092,702	11,223,285	100.0	100.0	62.5	85.7
07/01/16	1,206,968	7,746,511	5,363,407	14,316,886	11,676,370	100.0	100.0	50.8	81.6
State Patrol Retirement Fund									
07/01/07	$47,365	$431,969	$194,110	$673,444	$617,901	100.0%	100.0%	71.4%	91.8%
07/01/08	49,380	445,217	199,089	693,686	595,082	100.0	100.0	50.5	85.8
07/01/09	52,557	466,817	205,960	725,334	584,501	100.0	100.0	31.6	80.6
07/01/10	56,699	441,901	184,760	683,360	567,211	100.0	100.0	37.1	83.0
07/01/11	55,513	454,811	190,574	700,898	563,046	100.0	100.0	27.7	80.3
07/01/12	59,777	513,106	188,072	760,955	554,244	100.0	96.4	0.0	72.8
07/01/13	63,504	507,005	171,341	741,850	552,319	100.0	96.4	0.0	74.5
07/01/14	67,030	537,866	195,525	800,421	597,870	100.0	98.7	0.0	74.7
07/01/15	67,543	570,541	194,949	833,033	639,863	100.0	100.0	0.9	76.8
07/01/16	70,738	581,343	181,805	833,886	654,842	100.0	100.0	1.5	78.5
Correctional Employees Retirement Fund									
07/01/07	$72,259	$319,813	$316,220	$708,292	$559,852	100.0%	100.0%	53.1%	79.0%
07/01/08	81,233	338,511	340,619	760,363	572,719	100.0	100.0	44.9	75.3
07/01/09	90,572	368,390	362,288	821,250	590,339	100.0	100.0	36.3	71.9
07/01/10	100,323	383,387	367,376	851,086	603,863	100.0	100.0	32.7	71.0
07/01/11	93,251	417,110	396,651	907,012	637,027	100.0	100.0	31.9	70.2
07/01/12	105,973	456,495	405,698	968,166	663,713	100.0	100.0	25.0	68.6
07/01/13	113,276	498,718	414,104	1,026,098	701,091	100.0	100.0	21.5	68.3
07/01/14	122,102	543,049	457,323	1,122,474	790,304	100.0	100.0	27.4	70.4
07/01/15	126,918	634,592	477,748	1,239,258	878,624	100.0	100.0	24.5	70.9
07/01/16	136,511	673,129	503,876	1,313,516	937,000	100.0	100.0	25.3	71.3

Actuarial Valuation Date	Aggregate Accrued Liabilities: (1) Active Member Contributions	(2) Retired and Beneficiaries	(3) Active Member (Employer Financed)	Total Actuarial Accrued Liabilities	Reported Assets	Portion Covered by Reported Assets: (1)	(2)	(3)	Funded Ratio
Judges Retirement Fund									
07/01/07	$24,562	$114,005	$75,730	$214,297	$153,562	100.0%	100.0%	9.8%	71.7%
07/01/08	25,450	124,780	81,393	231,623	147,542	100.0	98.6	0.0	63.7
07/01/09	27,419	133,356	81,040	241,815	147,120	100.0	89.8	0.0	60.8
07/01/10	28,685	135,184	76,710	240,579	144,728	100.0	85.8	0.0	60.2
07/01/11	25,328	141,762	81,540	248,630	145,996	100.0	85.1	0.0	58.7
07/01/12	26,703	169,262	85,611	281,576	144,898	100.0	69.8	0.0	51.5
07/01/13	26,359	180,641	77,513	284,513	144,918	100.0	65.6	0.0	50.9
07/01/14	28,112	190,570	79,551	298,233	157,528	100.0	67.9	0.0	52.8
07/01/15	29,164	205,115	81,354	315,633	168,235	100.0	67.8	0.0	53.3
07/01/16	30,486	211,594	89,254	331,334	172,525	100.0	67.1	0.0	52.1
Legislators Retirement Fund*									
07/01/07	$6,542	$53,180	$26,727	$86,449	$44,869	100.0%	72.1%	0.0%	51.9%
07/01/08	6,266	54,926	24,939	86,131	39,209	100.0	60.0	0.0	45.5
07/01/09	6,059	61,327	23,045	90,431	28,663	100.0	36.9	0.0	31.7
07/01/10	5,993	59,229	21,014	86,236	26,821	100.0	35.2	0.0	31.1
07/01/11**	2,622	62,967	19,445	85,034	19,140	100.0	26.2	0.0	22.5
07/01/12**	2,498	146,582	98,577	247,657	15,523	100.0	8.9	0.0	6.3
07/01/13	1,930	149,331	84,616	235,877	11,493	100.0	6.4	0.0	4.9
07/01/14	2,011	162,938	85,911	250,860	8,258	100.0	3.8	0.0	3.3
07/01/15	2,024	154,999	73,196	230,219	3,430	100.0	0.9	0.0	1.5
07/01/16	2,103	151,293	65,118	218,514	0	0.0	0.0	0.0	0.0
Elective State Officers Retirement Fund*									
07/01/07	$36	$3,691	$242	$3,969	$212	100.0%	4.8%	0.0%	5.3%
07/01/08	36	3,605	267	3,908	212	100.0	4.9	0.0	5.4
07/01/09	36	3,570	280	3,886	213	100.0	5.0	0.0	5.5
07/01/10	36	3,476	270	3,782	214	100.0	5.1	0.0	5.7
07/01/11**	0	3,381	312	3,693	0	0.0	0.0	0.0	0.0
07/01/12**	0	8,036	871	8,907	0	0.0	0.0	0.0	0.0
07/01/13	0	7,751	844	8,595	0	0.0	0.0	0.0	0.0

** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*
*** Amounts reported are based on actuarial valuation results using GASB-compliant (as of the valuation date) alternative assumptions.*

Summary of Unfunded Actuarial Accrued Liabilities (UAAL)

Last Ten Fiscal Years
(Dollars in thousands)

Actuarial Valuation Date	Actuarial Accrued Liabilities	Actuarial Value of Assets	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
State Employees Retirement Fund					
07/01/07	$9,627,305	$8,904,517	$722,788	$2,095,310	34.50%
07/01/08	9,994,602	9,013,456	981,146	2,256,528	43.48
07/01/09	10,512,760	9,030,401	1,482,359	2,329,499	63.63
07/01/10	10,264,071	8,960,391	1,303,680	2,327,398	56.01
07/01/11	10,576,481	9,130,011	1,446,470	2,440,580	59.27
07/01/12	11,083,227	9,162,301	1,920,926	2,367,160	81.15
07/01/13	11,428,641	9,375,780	2,052,861	2,483,000	82.68
07/01/14	12,445,126	10,326,272	2,118,854	2,620,660	80.85
07/01/15	13,092,702	11,223,285	1,869,417	2,714,418	68.87
07/01/16	14,316,886	11,676,370	2,640,516	2,797,345	94.39
State Patrol Retirement Fund					
07/01/07	$673,444	$617,901	$55,543	$61,498	90.32%
07/01/08	693,686	595,082	98,604	60,029	164.26
07/01/09	725,334	584,501	140,833	61,511	228.96
07/01/10	683,360	567,211	116,149	63,250	183.63
07/01/11	700,898	563,046	137,852	63,250	217.95
07/01/12	760,955	554,244	206,711	62,524	330.61
07/01/13	741,850	552,319	189,531	62,121	305.10
07/01/14	800,421	597,870	202,551	63,952	316.72
07/01/15	833,033	639,863	193,170	68,463	282.15
07/01/16	833,886	654,842	179,044	69,343	258.20
Correctional Employees Retirement Fund					
07/01/07	$708,292	$559,852	$148,440	$167,727	88.50%
07/01/08	760,363	572,719	187,644	194,391	96.53
07/01/09	821,250	590,399	230,851	193,445	119.34
07/01/10	851,086	603,863	247,223	192,450	128.46
07/01/11	907,012	637,027	269,985	197,702	136.56
07/01/12	968,166	663,713	304,453	200,035	152.20
07/01/13	1,026,098	701,091	325,007	204,198	159.16
07/01/14	1,122,474	790,304	332,170	219,244	151.51
07/01/15	1,239,258	878,624	360,634	231,440	155.82
07/01/16	1,313,516	937,000	376,516	241,242	156.07

Actuarial Valuation Date	Actuarial Accrued Liabilities	Actuarial Value of Assets	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll

Judges Retirement Fund

07/01/07	$214,297	$153,562	$60,735	$36,195	167.80%
07/01/08	231,623	147,542	84,081	38,296	219.56
07/01/09	241,815	147,120	94,695	39,444	240.07
07/01/10	240,579	144,728	95,851	39,291	243.95
07/01/11	248,630	145,996	102,634	40,473	253.59
07/01/12	281,576	144,898	136,678	38,644	353.69
07/01/13	284,513	144,918	139,595	39,888	349.97
07/01/14	298,233	157,528	140,705	41,893	335.86
07/01/15	315,633	168,235	147,398	43,449	339.24
07/01/16	331,334	172,525	158,809	45,418	349.66

Legislators Retirement Fund*

07/01/07	$86,449	$44,869	$41,580	$2,380	1,747.06%
07/01/08	86,131	39,209	46,922	1,993	2,354.34
07/01/09	90,431	28,663	61,768	1,963	3,146.61
07/01/10	86,236	26,821	59,415	1,877	3,165.42
07/01/11**	216,559	19,140	197,419	1,774	11,128.47
07/01/12**	247,657	15,523	232,134	1,378	16,845.72
07/01/13	235,877	11,493	224,384	1,233	18,198.22
07/01/14	250,860	8,258	242,602	1,122	21,622.28
07/01/15***	230,219	3,430	226,789	1,700	13,340.53
07/01/16	218,514	0	218,514	989	22,094.44

Elective State Officers Retirement Fund*

07/01/07	$3,969	$212	$3,757	$0	N/A
07/01/08	3,908	212	3,696	0	N/A
07/01/09	3,886	213	3,673	0	N/A
07/01/10	3,782	214	3,568	0	N/A
07/01/11**	7,610	0	7,610	0	N/A
07/01/12**	8,907	0	8,907	0	N/A
07/01/13	8,595	0	8,595	0	N/A

* *Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes. The Elective State Officers Retirement Fund has no active contributing members.*

** *Amounts reported are based on actuarial valuation results using GASB-compliant (as of the valuation date) alternative assumptions.*

*** *Actual member contributions include a member repayment of a prior year employee contribution refund. Member payroll on this schedule is calculated based on member contributions.*

GASB Statements No. 67 and No. 68 Actuarial Valuation Results

The following pages contain information specific to the actuarial valuations performed to determine the pension liability and pension expense reported in the *Notes to the Financial Statements* in this CAFR. In addition, each employer participating in one of the MSRS defined benefit retirement plans will be allocated their proportionate share of these liability and expense amounts. State and local government employers will be required to recognize their share of the pension expense and pension liability in their financial statements.

These valuations have no bearing on measurement of pension plan funding status, or in decisions regarding contribution requirements for any plan.

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December 20, 2016

Board of Directors
Minnesota State Retirement System
60 Empire Drive, Suite 300
St. Paul, MN 55103-3000

Re: 2016 Comprehensive Annual Financial Report (CAFR)

Dear Members of the Board:

We have previously prepared and presented to you our actuarial valuations for accounting and financial reporting purposes for the State Employees Retirement Fund (SERF), the State Patrol Retirement Fund (SPRF), the Correctional Employees Retirement Fund (CERF), the Judges Retirement Fund (JRF) and the Legislators Retirement Fund (LRF) as of June 30, 2016. These annual reports provide information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These calculations have been made on a basis that is consistent with our understanding of these accounting standards.

GASB Statement No. 67 is the accounting standard that applies to the financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting requirements for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

In this Comprehensive Annual Financial Report (CAFR), MSRS prepared the Schedule of Changes in Net Pension Liabilities and Related Ratios and the Schedule of Contributions from Employers and Nonemployers in the Financial Section based on information included in the annual actuarial valuation prepared by Gabriel Roeder Smith & Company (GRS). MSRS was responsible for preparing the Schedule of Employer Allocations and the Schedule of Pension Amounts by Employer. Reading the CAFR is not a substitute for reading the actuarial reports. In order to gain a full understanding of the actuarial condition of the System, it is important to read and understand the full actuarial reports for each of the aforementioned funds. Annual actuarial valuation reports for funding purposes, as well as for accounting and financial reporting purposes, are available on the MSRS website.

Valuation Results

The results of the June 30, 2016 GASB Statements No. 67 and No. 68 valuations are summarized in the following table (Dollars in Thousands).

Plan	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Ratio[1]	Pension Expense/ (Income)	Single Discount Rate
	(a)	(b)	(a) – (b)	(b) / (a)		
SERF	$ 23,621,950	$ 11,223,065	$ 12,398,885	47.51%	$ 1,799,612	4.17%
SPRF	1,122.970	629,992	492,978	56.10	68,951	5.31
CERF	2,232,382	899,592	1,332,790	40.30	178,692	4.24
JRF	345,033	165,905	179,128	48.08	5,720	7.50
LRF[2]	154,701	0	154,701	0.00	18,525	2.85

[1]Plan Fiduciary Net Position as a Percentage of Total Pension Liability
[2]The Legislators Retirement Fund is currently funded on a pay-as-you-go basis

Members of the Board
December 20, 2016
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The following actuarial assumption and plan changes were recognized this year in the valuations for GASB Statements No. 67 and No. 68 purposes:

For all Funds:

- The long-term assumed investment return changed from 7.90% on July 1, 2015 to 7.50%. MSRS selected this assumption (as well as the inflation, payroll, and salary scale assumptions), based on a review of inflation and investment return assumptions dated September 11, 2014, and a recent asset liability study obtained by the State Board of Investment. The long-term assumed investment return rate differs from the statutory funding assumption of 8.00%. Both assumptions are within GRS' reasonable range for the valuations as of July 1, 2016.
- The inflation assumption was changed from 2.75% on July 1, 2015 to 2.50%.
- The payroll growth and salary scale assumptions were reduced by 0.25%.

The following additional changes were recognized for the SERF:

- The single discount rate was changed from 7.90% on July 1, 2015 to 4.17%. The primary reasons for this change are the demographic assumption changes and lower expected future investment returns (7.50% instead of 7.90%).
- The assumed post-retirement benefit increase rate was changed from 2.0% per year through 2043 and 2.5% thereafter to 2.0% for all years.
- Assumed increases in member salaries were changed. These rates were further decreased by 0.25% at all years as noted above.
- Assumed rates of retirement were reduced. In addition, distinct rates for reduced (Early) retirements were adopted for members hired prior to July 1, 1989, and members hired after June 30, 1989.
- Assumed rates of termination were changed, generally resulting in greater rates for three to nine years of service, and lower for 15 or more years of service.
- Assumed rates of disability were reduced.
- The base mortality table for annuitants and employees was changed from RP-2000 to RP-2014, fully generational, white collar adjustments with age adjustments. The mortality improvement scale was changed from Scale AA to Scale MP-2015.
- The percent married assumption was changed from 85% to 80% of active male members and from 70% to 65% of active female members.
- Form of payment assumptions were modified.

The following additional changes were recognized for the SPRF:

- The single discount rate was changed from 7.90% on July 1, 2015 to 5.31%. The primary reason for this change is the lower expected future investment returns (7.50% instead of 7.90%).
- The assumed post-retirement benefit increase rate was changed from 1.0% per year through 2031, 1.5% from 2032 through 2052 and 2.5% thereafter to 1.0% for all years.

Gabriel Roeder Smith & Company

Members of the Board
December 20, 2016
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The following additional changes were recognized for the CERF:

- The single discount rate was changed from 6.25% on July 1, 2015 to 4.24%. The primary reason for this change is the lower expected future investment returns (7.50% instead of 7.90%).

The following additional changes were recognized for the JRF:

- The single discount rate was changed from 5.25% on July 1, 2015 to 7.50%.
- The assumed post-retirement benefit increase rate was changed from 1.75% for all years to 1.75% per year through 2041, 2.00% per year from 2042 through 2054, and 2.50% per year thereafter.
- 2016 legislation provides state contributions equal to $3,000,000 for the fiscal year ending June 30, 2017, and $6,000,000 per year thereafter until the plan is fully funded.

The following additional changes were recognized for the LRF:

- The single discount rate was changed from 3.80% on July 1, 2015 to 2.85%.
- The assumed post-retirement benefit increase rate was changed from 2.0% per year through 2043 and 2.5% thereafter to 2.0% for all years.

GRS conducted an examination of the basic financial and membership data provided to us as of June 30, 2016 by MSRS, and determined that the data appears reasonable in comparison to last year, and we have relied upon the data as submitted in performing the actuarial valuation and in preparing trend data schedules. The demographic actuarial assumptions are based on actual experience, with changes adopted by the MSRS' Board and approved by the Legislative Commission on Pensions and Retirement (LCPR). The economic assumptions are based on a review of inflation and investment return assumptions dated September 11, 2014 and a recent asset liability study obtained by the Minnesota State Board of Investment.

To the best of our knowledge and belief, the methods and assumptions used in the actuarial valuations meet the parameters set by generally accepted actuarial principles and procedures (ASOPs), generally accepted accounting principles (GAAP) applicable in the United States, 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 reports 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 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, MAAA

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, MAAA
BBM/BJW:bd

Gabriel Roeder Smith & Company

Summary of GASB Statements No. 67 and No. 68 Actuarial Valuation Results

As of and For the Year Ended June 30, 2016
(Dollars in thousands)

	State Employees Retirement Fund	State Patrol Retirement Fund
Actuarial Valuation Date	June 30, 2016	June 30, 2016
Measurement Date of the Net Pension Liability	June 30, 2016	June 30, 2016
Net Pension Liability		
Total Pension Liability	$23,621,950	$1,122,970
Fiduciary Net Position	11,223,065	629,992
Net Pension Liability	**$12,398,885**	**$492,978**
Deferred Outflows (Inflows) of Resources		
Deferred Outflows (Inflows) of Resources Arising from the Current Reporting Period due to:		
Differences Between Expected and Actual Experience	$21,209	$(22,222)
Assumption Changes	9,911,319	283,584
Differences Between Expected and Actual Earnings on Investments	913,038	51,938
Total Pension Expense (Income)	**$1,799,612**	**$68,951**
Single Discount Rate		
Long-Term Expected Rate of Investment Return	7.50%	7.50%
Long-Term Municipal Bond Rate	2.85	2.85
Single Discount Rate	4.17	5.31
Last fiscal year for which projected benefits are fully funded (using a 100-year projection)	2042	2052

Other Information

- Details regarding the Net Pension Liability may be found in *Required Supplementary Information* on pages 94-103 of the *Financial Section* of this report.
- Details regarding the Single Discount Rate may be found in the *Notes to the Financial Statements* beginning on page 91.
- Details for all other information in this schedule are on the pages that follow.

Correctional Employees Retirement Fund	Judges Retirement Fund	Legislators Retirement Fund
June 30, 2016	June 30, 2016	June 30, 2016
June 30, 2016	June 30, 2016	June 30, 2016
$2,232,382	$345,033	$154,701
899,592	165,905	0
$1,332,790	**$179,128**	**$154,701**
$(764)	$7,135	$(1,597)
576,552	(85,756)	14,653
71,642	13,642	207
$178,692	**$5,720**	**$18,525**
7.50%	7.50%	7.50%
2.85	2.85	2.85
4.24	7.50	2.85
2045	2116	2017

Summary of Deferred Outflows (Inflows) of Resources Arising from Current Reporting Period

For the Fiscal Year Ended June 30, 2016

(Dollars in thousands)

Changes in the net pension liability from one fiscal year to the next are recognized as a pension expense, except in specific situations as outlined in GASB Statement No. 68, and presented in this schedule. In the situations noted in the schedule below, the change in net liability is considered a deferred outflow of resources or a deferred inflow of resources. The deferred outflows and inflows of resources are amortized on a straight-line basis over a specified period of time, and recognized as an expense (or income) partially in the current period and partially in future periods.

	State Employees Retirement Fund
Deferred Outflows (Inflows) of Resources Due to Differences Between Expected and Actual Experience	
Total Difference between Expected and Actual Experience in the measurement of the Total Pension Liability	**$21,209**
Recognition Period: Average of the expected remaining service lives of all employees (in years)	5
Deferred Outflows (Inflows) of Resources to be recognized in the *current* pension expense for the difference between expected and actual experience in the measurement of the Total Pension Liability	$4,242
Deferred Outflows (Inflows) of Resources to be recognized in *future* pension expenses for the difference between expected and actual experience in the measurement of the Total Pension Liability	$16,967
Deferred Outflows (Inflows) of Resources Due to Changes in Actuarial Assumptions	
Total Assumption Change (Gains) or Losses	**$9,911,319**
Recognition Period: Average of the expected remaining service lives of all employees (in years)	5
Deferred Outflows (Inflows) of Resources to be recognized in the *current* pension expense due to assumption changes	$1,982,264
Deferred Outflows (Inflows) of Resources to be recognized in *future* pension expenses due to assumption changes	$7,929,055
Deferred Outflows (Inflows) of Resources Due to the Difference Between Expected and Actual Earnings on Pension Plan Investments	
Total Difference between projected and actual earnings on pension plan investments	**$913,038**
Recognition Period (in years)	5
Deferred Outflows (Inflows) of Resources to be recognized in the *current* pension expense due to the difference between projected and actual investment (gains) or losses	$182,608
Deferred Outflows (Inflows) of Resources to be recognized in *future* pension expenses due to the difference between projected and actual investment (gains) or losses	$730,430

	State Patrol Retirement Fund	Correctional Employees Retirement Fund	Judges Retirement Fund	Legislators Retirement Fund
	$(22,222)	**$(764)**	**$7,135**	**$(1,597)**
	6	5	5	1
	$(3,704)	$(153)	$1,427	$(1,597)
	$(18,518)	$(611)	$5,708	$0
	$283,584	**$576,552**	**$(85,756)**	**$14,653**
	6	5	5	1
	$47,264	$115,310	$(17,151)	$14,653
	$236,320	$461,242	$(68,605)	$0
	$51,938	**$71,642**	**$13,642**	**$207**
	5	5	5	5
	$10,388	$14,328	$2,728	$41
	$41,550	$57,314	$10,914	$166

Summary of Pension Expense (Income)

For the Year Ended June 30, 2016
(Dollars in thousands)

	State Employees Retirement Fund	State Patrol Retirement Fund
Service Cost	$211,491	$16,555
Interest on the Total Pension Liability	1,020,925	64,592
Current-Period Benefit Changes	0	0
Employee Contributions	(153,854)	(9,292)
Projected Earnings on Plan Investments	(903,405)	(51,164)
Pension Plan Administrative Expenses	10,196	220
Other Changes in Fiduciary Net Position	(20,259)	0
Recognition of Outflow (Inflow) of Resources Arising from the Current Reporting Period due to:		
Difference between expected and actual experience in the measurement of the Total Pension Liability	4,242	(3,704)
Assumption Changes	1,982,264	47,264
Difference between projected and actual earnings on pension plan investments	182,608	10,388
Recognition of Outflow (Inflow) of Resources Arising from Prior Reporting Periods due to:		
Difference between expected and actual experience in the measurement of the Total Pension Liability	(107,444)	(3,105)
Assumption Changes	(295,462)	5,010
Difference between projected and actual earnings on pension plan investments	(131,690)	(7,813)
Total Pension Expense (Income)	**$1,799,612**	**$68,951**

Correctional Employees Retirement Fund	Judges Retirement Fund	Legislators Retirement Fund
$56,718	$13,711	$495
97,571	21,349	5,333
0	0	0
(21,953)	(3,763)	(89)
(71,447)	(13,456)	(138)
906	93	42
0	0	(41)
(153)	1,427	(1,597)
115,310	(17,151)	14,653
14,328	2,728	41
1,870	143	0
(4,778)	2,656	0
(9,680)	(2,017)	(174)
$178,692	**$5,720**	**$18,525**

Summary of Actuarial Methods and Assumptions

For the Year Ended June 30, 2016

Actuarial Methods

1. **Actuarial Cost Method:** Entry age normal
2. **Asset Valuation Method:** Fair value of assets
3. **Valuation of Future Post-Retirement Benefit Increases:**

State Employees

Benefit recipients receive a future annual 2.0% post-retirement benefit increase. If the funded ratio (determined on a market value of assets basis) reaches 90% (based on a 2.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase will revert to 2.5%. If, after reverting to a 2.5% benefit increase, the funded ratio declines to less than 80% for one year or less than 85% for two consecutive years, the benefit increase will be reduced to 2.0%.

Projections* indicate that this plan is expected to pay 2.0% post-retirement benefit increases indefinitely.

State Patrol

Benefit recipients receive a future annual 1.0% post-retirement benefit increase. If the funded ratio (determined on a market value of assets basis) reaches 85% (based on a 1.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase will change to 1.5%; if the funded ratio reaches 90% (based on a 2.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase will revert to 2.5%. If, after reverting to a 1.5% benefit increase, the funded ratio declines to less than 75% for one year or less than 80% for two consecutive years, the benefit increase will be reduced to 1.0%.

Projections* indicate that this plan is expected to pay 1.0% post-retirement benefit increases indefinitely.

Correctional Employees

Benefit recipients receive a future annual 2.0% post-retirement benefit increase. If the funded ratio (determined on a market value of assets basis) reaches 90% (based on a 2.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase will revert to 2.5%. If, after reverting to a 2.5% benefit increase, the funded ratio declines to less than 80% for one year or less than 85% for two consecutive years, the benefit increase will be reduced to 2.0%.

Projections* indicate that this plan is expected to attain the funding ratio threshold required to pay a 2% post-retiremnt benefit increase in the year 2041 (beginning payment in January 2042, and a 2.5% increase in 2054 (beginning payment in 2055).

Judges

Benefit recipients receive a future annual 1.75% post-retirement benefit increase. If the funded ratio (determined on a market value of assets basis) reaches 70% (based on a 2.0% post-retirement benefit increase assumption) for two consecutive years, the benefit increase will increase to 2.0%; if the funded ratio reaches 90% (based on a 2.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase will revert to 2.5%.

Projections* indicate that this plan is expected to attain the funded ratio threshold required to pay a 2% post-retirement benefit increase in the year 2041 (beginning payment in January 2042), and a 2.5% increase in 2054 (beginning payment in 2055).

* To determine assumptions regarding a future change in the post-retirement benefit increase, liabilities and assets were projected based on the following methods and assumptions:
  - Future investment returns of 7.5%
  - Liabilities and normal cost based on statutory funding assumptions (discount rate and salary increases) as reflected on pages 142-155.
  - Open group, stable active population (new members, if applicable, based on average new members hired in recent years)
  - Post-retirement benefit increases are assumed at the current rate until each successive funded ratio threshold required for a change is reached.
  - Contributions are at the current statutory rate, so do not include potential contribution increases under the contribution stabilizer statute.

Legislators

Benefit recipients receive a future annual 2.0% post-retirement benefit increase. If the funded ratio (determined on a market value of assets basis) of the State Employees Retirement Fund reaches 90% (based on a 2.5% post-retirement benefit increase assumption) for two consecutive years, the benefit increase for the Legislators Fund will revert to 2.5%. If, after reverting to a 2.5% benefit increase, the funded ratio of the State Employee Retirement Fund declines to less than 80% for one year or less than 85% for two consecutive years, the benefit increase will be reduced to 2.0%.

Projections* for the State Employees Retirement Fund indicate that the Legislators Fund is expected to pay a 2.0% post-retirement benefit indefinitely. (See calculation assumptions on previous page.)

Actuarial Assumptions

Most assumptions used for GASB-compliant financial reporting purposes are the same as those used for the purposes of measuring funding progress and determining the required contribution rate, as noted on pages 142-155 of this section. Only the assumptions that differ are listed below, and the funds to which they pertain are noted parenthetically.

1. Investment Return:	7.50%
2. Single Discount Rate as of the June 30, 2016 Measurement Date:	4.17% (State Employees) 5.31% (State Patrol) 4.24% (Correctional Employees) 7.50% (Judges) 2.85% (Legislators)
3. Inflation:	2.50%
4. Payroll Growth:	3.25% (State Employees, State Patrol, Correctional Employees) 2.50% (Judges) 4.50% (Legislators)
5. Administrative expenses:	Prior year administrative expenses expressed as a percentage of prior year projected payroll are assumed to increase 3.25% per year and are allocated to the closed group based on the ratio of closed group payroll to total payroll. (State Employees, State Patrol, Correctional Employees) Same as above, 2.75% (Judges)
6. Unclassified Plan Reversion:	Liabilities for active members increased by 0.21% to account for the effect of Unclassified Retirement Fund members who elect coverage under the State Employees Retirement Fund. (State Employees)
7. Benefit Increases After Retirement:	2.0% per year (State Employees, Correctional Employees, Legislators) 1% per year (State Patrol) 1.75% per year through 2041, 2% per year from 2042 to 2054, and 2.5% per year thereafter (Judges)

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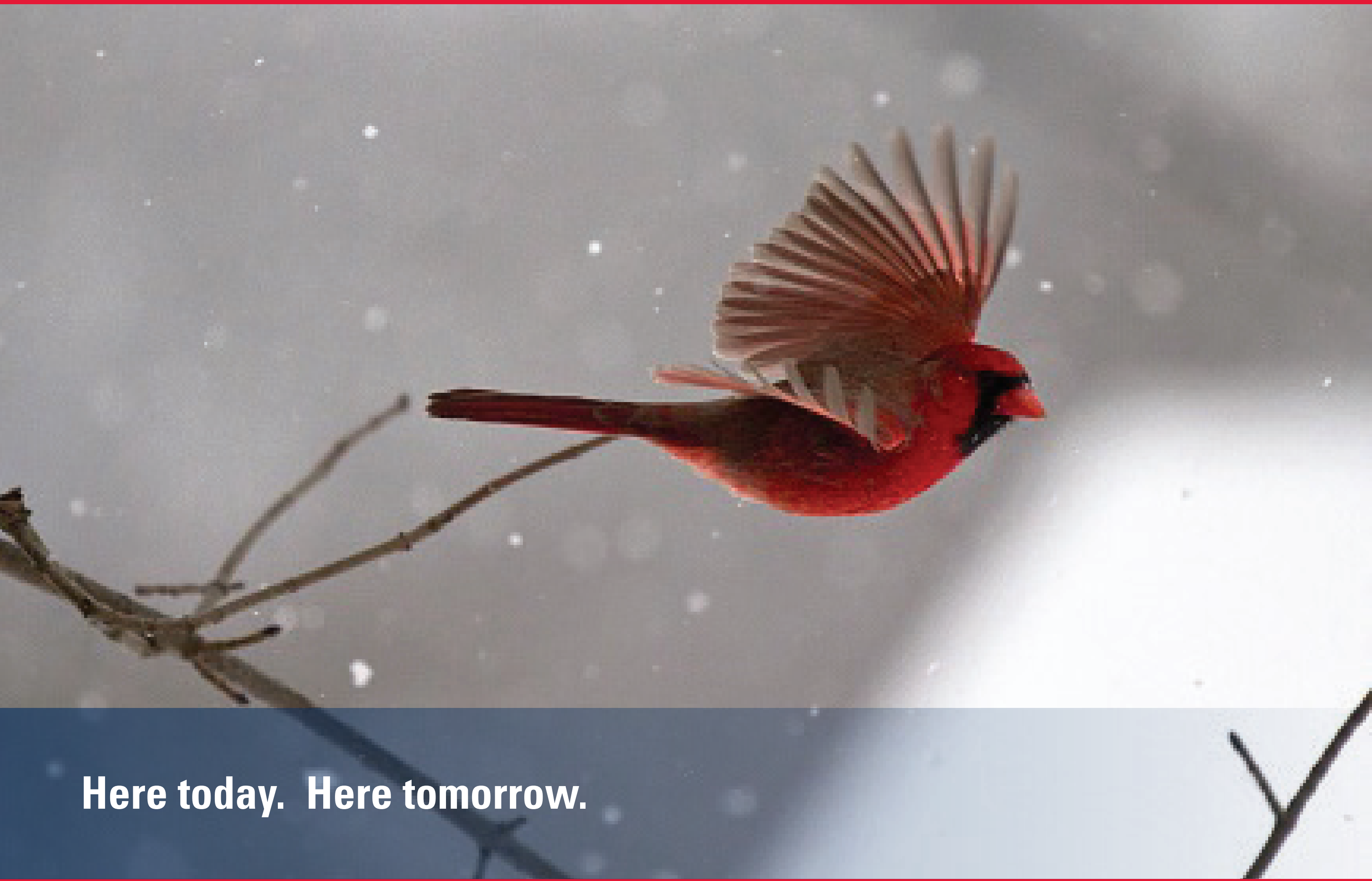
STATISTICAL SECTION

MSRS 2016 Comprehensive Annual Financial Report



Assisting Our Employees and Retirees Through Every Season of Life

Introduction

GASB *Statement No. 44, Economic Condition Reporting: The Statistical Section*, issued in May 2004, established the requirements for the information presented in this section of the comprehensive annual financial report. The information that follows is intended to provide financial statement users with additional historical perspectives, context and details. The information contained in this section supplements the financial information provided in the preceding sections and displays trends where they exist, to help readers gain a better understanding of MSRS' overall financial condition.

The *Schedule of Changes in Fiduciary Net Position* shows a 10-year history of the asset growth of the various funds. This data allows readers of the report to review trends in revenue sources and expense categories for all MSRS defined benefit and defined contribution funds.

The *Schedule of Benefits and Refunds by Type* displays in detail the growth of benefits disbursed, whereas the *Schedule of Revenues by Source* provides a 10-year history of the resources received along with the corresponding member payroll contributions and rate information. The *Schedule of Expenses by Type* summarizes the application of those resources over the past ten years.

The remaining schedules provide demographic information about the memberships and information about the employers that participate in the funds. The *Active Members Average Age Tables* report member entry age and attained age, as

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

State Employees Retirement Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$89,447	$99,280	$108,866	$115,181
Employer Contributions	86,492	96,746	107,211	113,716
Investment Income (Net of Expenses)	1,503,390	(474,845)	(1,674,387)	1,040,873
Other Additions	17,609	13,532	15,246	14,939
Total Additions	$1,696,938	$(265,287)	$(1,443,064)	$1,284,709
Deductions				
Annuity Benefits	$392,058	$418,757	$445,792	$473,447
Refunds	11,102	11,676	10,907	9,733
Administrative Expenses	4,916	5,152	5,320	5,771
Other Expenses	2,898	2,993	939	345
Total Deductions	$410,974	$438,578	$462,958	$489,296
Change in Net Position	**$1,285,964**	**$(703,865)**	**$(1,906,022)**	**$795,413**

well as service credit over a 10-year period. The *Schedule of New Retirees and Average Benefit Payments* reflects the number of new retirees and their average monthly benefits, also over a 10-year period. The *Schedule of Retired Members by Type of Benefit* reports the June 30, 2016, retirees, monthly benefit amount, and various benefit options selected.

The schedules in this section can be used together to gain a broader historical picture of the activities at MSRS. For instance, when service credit increases on the *Active Members Average Age Tables,* the average benefit shown on the *Schedule of New Retirees and Average Benefit Payments* will similarly increase for members with comparable years of service. Consequently, higher average benefits will be reflected in larger annuity benefit payment amounts reported in the *Schedule of Changes in Fiduciary Net Position* and *Schedule of Expenses by Type* found in this *Statistical Section.*

All the information contained in the schedules of this section was extracted from the database records of MSRS and summarized in the formats shown. There were no estimates or assumptions used in compiling this data.

2011	2012	2013	2014	2015	2016
$122,029	$118,358	$124,150	$131,033	$149,293	$153,854
118,563	115,159	121,673	128,037	146,333	151,168
1,764,307	213,887	1,275,308	1,829,621	501,185	(9,633)
24,975	24,677	21,565	21,014	30,401	20,751
$2,029,874	$472,081	$1,542,696	$2,109,705	$827,212	$316,140
$505,573	$552,088	$586,256	$623,942	$665,821	$707,361
14,206	11,573	12,222	11,986	12,026	13,345
6,064	6,341	8,589	8,125	8,719	10,196
325	219	227	486	931	492
$526,168	$570,221	$607,294	$644,539	$687,497	$731,394
$1,503,706	**$(98,140)**	**$935,402**	**$1,465,166**	**$139,715**	**$(415,254)**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

State Patrol Retirement Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$4,987	$5,595	$6,216	$6,726
Employer Contributions	7,461	8,279	9,178	10,104
Investment Income (Net of Expenses)	100,147	(30,579)	(110,073)	68,184
Other Additions	3	0	13	41
Total Additions	$112,598	$(16,705)	$(94,666)	$85,055
Deductions				
Annuity Benefits	$40,581	$42,804	$44,480	$46,119
Refunds	133	6	0	3
Administrative Expenses	112	109	104	123
Other Expenses	98	178	69	0
Total Deductions	$40,924	$43,097	$44,653	$46,245
Change in Net Position	**$71,674**	**$(59,802)**	**$(139,319)**	**$38,810**

Correctional Employees Retirement Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$10,032	$12,775	$14,031	$15,267
Employer Contributions	13,927	18,623	20,126	21,988
Investment Income (Net of Expenses)	84,830	(30,673)	(107,787)	68,880
Other Additions	131	1,845	40	30
Total Additions	$108,920	$2,570	$(73,590)	$106,165
Deductions				
Annuity Benefits	$28,565	$30,932	$33,239	$36,078
Refunds	752	795	1,016	1,170
Administrative Expenses	405	410	402	455
Other Expenses	358	310	150	0
Total Deductions	$30,080	$32,447	$34,807	$37,703
Change in Net Position	**$78,840**	**$(29,877)**	**$(108,397)**	**$68,462**

2011	2012	2013	2014	2015	2016
$6,578	$7,753	$7,703	$7,930	$9,174	$9,292
9,873	11,620	11,482	11,894	13,763	13,938
110,908	12,744	76,315	107,187	28,903	(774)
0	0	0	1,000	1,000	1,000
$127,359	$32,117	$95,500	$128,011	$52,840	$23,456
$47,844	$50,007	$52,057	$53,697	$55,465	$57,695
0	275	7	25	15	79
92	158	190	150	170	220
14	0	1	0	0	0
$47,950	$50,440	$52,255	$53,872	$55,650	$57,994
$79,409	**$(18,323)**	**$43,245**	**$74,139**	**$(2,810)**	**$(34,538)**

2011	2012	2013	2014	2015	2016
$17,002	$17,203	$17,561	$18,855	$21,061	$21,953
23,892	24,188	24,632	26,468	29,480	30,678
121,413	15,926	93,392	137,523	38,624	(195)
19	0	0	0	0	0
$162,326	$57,317	$135,585	$182,846	$89,165	$52,436
$39,116	$42,571	$46,226	$50,842	$54,909	$59,045
1,509	1,257	1,032	1,447	1,590	1,895
356	548	692	657	720	906
8	0	1	1	0	0
$40,989	$44,376	$47,951	$52,947	$57,219	$61,846
$121,337	**$12,941**	**$87,634**	**$129,899**	**$31,946**	**$(9,410)**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

Judges Retirement Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$2,792	$2,859	$2,978	$2,988
Employer Contributions	7,571	7,935	8,219	8,283
Investment Income (Net of Expenses)	25,523	(8,874)	(26,283)	17,339
Other Additions	0	0	0	1
Total Additions	$35,886	$1,920	$(15,086)	$28,611
Deductions				
Annuity Benefits	$14,516	$15,116	$16,261	$17,058
Refunds	0	45	0	0
Administrative Expenses	49	54	36	42
Other Expenses	63	24	16	0
Total Deductions	$14,673	$15,194	$16,313	$17,100
Change in Net Position	**$21,213**	**$(13,274)**	**$(31,399)**	**$11,511**

Legislators Retirement Fund*

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$239	$180	$248	$171
Employer Contributions	0	0	0	0
Investment Income (Net of Expenses)	6,808	(1,233)	(5,021)	3,199
Other Additions	1,783	2,217	1,269	1,975
Total Additions	$8,830	$1,164	$(3,504)	$5,345
Deductions				
Annuity Benefits	$6,390	$6,786	$7,016	$7,159
Refunds	35	1	0	0
Administrative Expenses	29	34	26	28
Other Expenses	26	3	0	0
Total Deductions	$6,480	$6,824	$7,042	$7,187
Change in Net Position	**$2,350**	**$(5,660)**	**$(10,546)**	**$(1,842)**

** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes. The Elective State Officers Retirement Fund schedule through fiscal year 2013 is on page 192.*

2011	2012	2013	2014	2015	2016
$3,010	$2,931	$3,037	$3,578	$3,629	$3,763
8,297	7,922	8,177	9,426	9,776	10,219
28,644	3,341	19,943	28,011	7,572	(186)
0	0	0	0	0	0
$39,951	$14,194	$31,157	$41,015	$20,977	$13,796
$17,585	$18,539	$19,772	$20,802	$21,893	$22,378
0	30	0	0	0	0
32	72	72	55	60	93
1	1	1	0	0	0
$17,648	$18,612	$19,845	$20,857	$21,953	$22,471
$22,303	**$(4,418)**	**$11,312**	**$20,158**	**$(976)**	**$(8,675)**

2011	2012	2013	2014	2015	2016
$160	$124	$111	$101	$153	$89
0	0	0	0	0	0
4,142	253	1,763	1,750	281	(69)
2,807	3,935	3,399	3,436	3,216	5,087
$7,109	$4,312	$5,273	$5,287	$3,650	$5,107
$7,464	$7,721	$7,826	$8,407	$8,441	$8,496
11	172	101	79	0	40
22	36	38	36	37	42
0	0	1,338	0	0	0
$7,497	$7,929	$9,303	$8,522	$8,478	$8,578
$(388)	**$(3,617)**	**$(4,030)**	**$(3,235)**	**$(4,828)**	**$(3,471)**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

Elective State Officers Retirement Fund*

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$0	$0	$0	$0
Employer Contributions	0	0	0	0
Investment Income (Net of Expenses)	0	0	0	0
Other Additions	428	434	442	453
Total Additions	$428	$434	$442	$453
Deductions				
Annuity Benefits	$419	$430	$440	$451
Refunds	0	0	0	0
Administrative Expenses	4	4	1	1
Other Expenses	0	0	0	0
Total Deductions	$423	$434	$441	$452
Change in Net Position	**$5**	**$0**	**$1**	**$1**

Unclassified Employees Retirement Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$5,476	$5,209	$4,660	$4,472
Employer Contributions	6,258	6,362	6,514	6,333
Investment Income (Net of Expenses)	68,142	(3,949)	(46,746)	28,860
Other Additions	2,028	878	426	259
Total Additions	$81,904	$8,500	$(35,146)	$39,924
Deductions				
Refunds	$29,994	$23,256	$5,009	$5,691
Administrative Expenses	166	157	229	164
Other Expenses	17,255	13,282	14,850	14,652
Total Deductions	$47,415	$36,695	$20,088	$20,507
Change in Net Position	**$34,489**	**$(28,195)**	**$(55,234)**	**$19,417**

** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes. The Legislators Retirement Fund schedule is on page 190.*

	2011	2012	2013
	$0	$0	$0
	0	0	0
	0	0	0
	460	465	470
	$460	$465	$470
	$459	$458	$469
	0	0	0
	1	7	1
	0	0	0
	$460	$465	$470
	$0	**$0**	**$0**

	2011	2012	2013	2014	2015	2016
	$5,417	$5,586	$5,096	$5,430	$6,173	$5,810
	6,360	5,918	5,867	6,099	6,256	6,187
	51,977	6,622	36,246	49,457	14,839	4,673
	311	293	139	147	1,102	682
	$64,065	$18,419	$47,348	$61,133	$28,370	$17,352
	$7,799	$5,250	$6,197	$7,496	$8,461	$6,751
	174	144	144	140	125	155
	24,777	24,339	21,155	21,001	30,451	20,743
	$32,750	$29,733	$27,496	$28,637	$39,037	$27,649
	$31,315	**$(11,314)**	**$19,852**	**$32,496**	**$(10,667)**	**$(10,297)**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

Health Care Savings Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$59,515	$73,082	$82,920	$90,445
Investment Income (Net of Expenses)	12,698	(2,336)	(13,942)	13,032
Other Additions	1,031	1,318	1,438	63
Total Additions	$73,244	$72,064	$70,416	$103,540
Deductions				
Health Care Reimbursements	$23,470	$27,548	$31,088	$35,613
Administrative Expenses	844	1,090	1,523	1,388
Other Expenses	0	0	0	743
Total Deductions	$24,314	$28,638	$32,611	$37,744
Change in Net Position	**$48,930**	**$43,426**	**$37,805**	**$65,796**

Minnesota Deferred Compensation Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$217,446	$231,671	$217,415	$228,190
Investment Income (Net of Expenses)	456,868	(93,065)	(547,303)	308,697
Other Income	6,036	4,608	3,788	2,305
Total Additions	$680,350	$143,214	$(326,100)	$539,192
Deductions				
Ongoing Withdrawals	$35,285	$37,039	$35,222	$30,353
Refunds	135,419	144,837	106,009	114,889
Administrative Expenses	2,514	2,728	3,004	2,726
Other Expenses	6,726	4,577	3,409	1,715
Total Deductions	$179,944	$189,181	$147,644	$149,683
Change in Net Position	**$500,406**	**$(45,967)**	**$(473,744)**	**$389,509**

2011	2012	2013	2014	2015	2016
$132,526	$128,375	$112,359	$116,971	$130,894	$130,016
26,499	4,445	28,116	50,333	18,678	7,485
1,989	2,422	2,789	3,610	3,673	3,959
$161,014	$135,242	$143,264	$170,914	$153,245	$141,460
$44,740	$58,987	$62,482	$64,762	$67,688	$71,541
794	1,296	1,506	1,838	2,048	2,290
1,396	855	941	4,600	5,250	6,316
$46,930	$61,138	$64,929	$71,200	$74,986	$80,147
$114,084	**$74,104**	**$78,335**	**$99,714**	**$78,259**	**$61,313**

2011	2012	2013	2014	2015	2016
$222,031	$216,010	$229,187	$234,805	$246,013	$240,934
652,762	85,400	642,247	748,675	238,537	55,177
5,819	4,480	4,237	5,320	4,857	4,843
$880,612	$305,890	$875,671	$988,800	$489,407	$301,008
$28,549	$29,615	$28,961	$29,754	$33,205	$42,472
162,756	170,442	192,774	218,492	262,855	232,986
3,370	2,762	2,959	3,372	3,463	3,522
1,630	1,745	1,721	3,851	3,998	3,582
$196,305	$204,564	$226,415	$255,469	$303,521	$282,562
$684,307	**$101,326**	**$649,256**	**$733,331**	**$185,886**	**$18,446**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

Hennepin County Supplemental Retirement Fund

	2007	2008	2009	2010
Additions				
Plan Member Contributions	$639	$601	$570	$514
Employer Contributions	640	601	570	515
Investment Income (Net of Expenses)	20,688	(9,625)	(20,951)	12,288
Other Income	53	50	34	48
Total Additions	$22,020	$(8,373)	$(19,777)	$13,365
Deductions				
Ongoing Withdrawals	$5,830	$5,885	$4,260	$3,514
Refunds	1,677	227	322	2,244
Administrative Expenses	5	6	5	17
Other Expenses	59	41	32	35
Total Deductions	$7,571	$6,159	$4,619	$5,810
Change in Net Position	**$14,449**	**$(14,532)**	**$(24,396)**	**$7,555**

2011	2012	2013	2014	2015	2016
$467	$458	$227	$270	$235	$197
466	459	228	270	231	197
21,710	3,919	15,968	22,473	7,450	2,296
49	49	52	57	83	86
$22,692	$4,885	$16,475	$23,070	$7,999	$2,776
$4,069	$2,807	$4,225	$5,182	$6,130	$4,665
2,490	3,933	2,491	1,933	1,911	3,174
11	17	16	27	25	25
39	33	37	87	134	141
$6,609	$6,790	$6,769	$7,229	$8,200	$8,005
$16,083	**$(1,905)**	**$9,706**	**$15,841**	**$(201)**	**$(5,229)**

Schedule of Revenues by Source

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total	Actual Covered Payroll	Percentage Employer Contributions*
State Employees Retirement Fund							
2007	$89,447	$86,492	$1,503,390	$17,609	$1,696,938	$2,095,310	4.00%
2008	99,280	96,746	(474,845)	13,532	(265,287)	2,256,528	4.25
2009	108,866	107,211	(1,674,387)	15,246	(1,443,064)	2,329,499	4.50
2010	115,181	113,716	1,040,873	14,939	1,284,709	2,327,398	4.75
2011	122,029	118,563	1,764,307	24,975	2,029,874	2,440,580	5.00
2012	118,358	115,159	213,887	24,677	472,081	2,367,160	5.00
2013	124,150	121,673	1,275,308	21,565	1,542,696	2,483,000	5.00
2014	131,033	128,037	1,829,621	21,014	2,109,705	2,620,660	5.00
2015	149,293	146,333	501,185	30,401	827,212	2,714,418	5.50
2016	153,854	151,168	(9,633)	20,751	316,140	2,797,345	5.50
State Patrol Retirement Fund							
2007	$4,987	$7,461	$100,147	$3	$112,598	$61,498	12.60%
2008	5,595	8,279	(30,579)	0	(16,705)	60,029	13.60
2009	6,216	9,178	(110,073)	13	(94,666)	61,511	14.60
2010	6,726	10,104	68,184	41	85,055	63,250	14.60
2011	6,578	9,873	110,908	0	127,359	63,250	18.60
2012	7,753	11,620	12,744	0	32,117	62,524	18.60
2013	7,703	11,482	76,315	0	95,500	62,121	18.60**
2014	7,930	11,894	107,187	1,000	128,011	63,952	18.60**
2015	9,174	13,763	28,903	1,000	52,840	68,463	20.10**
2016	9,292	13,938	(774)	1,000	23,456	69,343	20.10**
Correctional Employees Retirement Fund							
2007	$10,032	$13,927	$84,830	$131	$108,920	$167,727	7.98%
2008	12,775	18,623	(30,673)	1,845	2,570	194,391	9.10
2009	14,031	20,126	(107,787)	40	(73,590)	193,445	10.10
2010	15,267	21,988	68,880	30	106,165	192,450	11.10
2011	17,002	23,892	121,413	19	162,326	197,702	12.10
2012	17,203	24,188	15,926	0	57,317	200,035	12.10
2013	17,561	24,632	93,392	0	135,585	204,198	12.10
2014	18,855	26,468	137,523	0	182,846	219,244	12.10
2015	21,061	29,480	38,624	0	89,165	231,440	12.85
2016	21,953	30,678	(195)	0	52,436	241,242	12.85

** Because of employer-paid interest, penalties and leaves of absence, actual employer contributions may exceed the statutorily required percentage.*
*** Percentage excludes statutorily required annual supplemental state contribution of $1 million.*

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total	Actual Covered Payroll	Percentage Employer Contributions*

Judges Retirement Fund

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total	Actual Covered Payroll	Percentage Employer Contributions*
2007	$2,792	$7,571	$25,523	$0	$35,886	$36,195	20.50%
2008	2,859	7,935	(8,874)	0	1,920	38,296	20.50
2009	2,978	8,219	(26,283)	0	(15,086)	39,444	20.50
2010	2,988	8,283	17,339	1	28,611	36,723	20.50
2011	3,010	8,297	28,644	0	39,951	40,473	20.50
2012	2,931	7,922	3,341	0	14,194	38,644	20.50
2013	3,037	8,177	19,943	0	31,157	39,888	20.50
2014	3,578	9,426	28,011	0	41,015	41,893	22.50
2015	3,629	9,776	7,572	0	20,977	43,449	22.50
2016	3,763	10,219	(186)	0	13,796	45,418	22.50

Legislators Retirement Fund**

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total	Actual Covered Payroll	Percentage Employer Contributions*
2007	$239	N/A	$6,808	$1,783	$8,830	$2,380	N/A
2008	180	N/A	(1,233)	2,217	1,164	1,993	N/A
2009	248	N/A	(5,021)	1,269	(3,504)	1,963	N/A
2010	171	N/A	3,199	1,975	5,345	1,877	N/A
2011	160	N/A	4,142	2,807	7,109	1,774	N/A
2012	124	N/A	253	3,935	4,312	1,378	N/A
2013	111	N/A	1,763	3,399	5,273	1,233	N/A
2014	101	N/A	1,750	3,436	5,287	1,122	N/A
2015***	153	N/A	281	3,216	3,650	1,700	N/A
2016	89	N/A	(69)	5,087	5,107	989	N/A

Elective State Officers Retirement Fund**

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total	Actual Covered Payroll	Percentage Employer Contributions*
2007	$0	$0	$0	$428	$428	N/A	N/A
2008	0	0	0	434	434	N/A	N/A
2009	0	0	0	442	442	N/A	N/A
2010	0	0	0	453	453	N/A	N/A
2011	0	0	0	460	460	N/A	N/A
2012	0	0	0	465	465	N/A	N/A
2013	0	0	0	470	470	N/A	N/A

* *Because of employer-paid interest, penalties and leaves of absence, actual employer contributions may exceed the statutorily required percentage.*

** *Other income for the Legislators Retirement Fund and the Elective State Officers Retirement Fund include appropriations from the State's General Fund. Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*

*** *Employee contributions included a member repayment of a prior year employee contribution refund. Actual covered payroll is calculated based on employee contributions.*

Schedule of Expenses by Type

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

State Employees Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
2007	$392,058	$4,916	$11,102	$2,898	$410,974
2008	418,757	5,152	11,676	2,993	438,578
2009	445,792	5,320	10,907	939	462,958
2010	473,447	5,771	9,733	345	489,296
2011	505,573	6,064	14,206	325	526,168
2012	552,088	6,341	11,573	219	570,221
2013	586,256	8,589	12,222	227	607,294
2014	623,942	8,125	11,986	486	644,539
2015	665,821	8,719	12,026	931	687,497
2016	707,361	10,196	13,345	492	731,394

State Patrol Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
2007	$40,581	$112	$133	$98	$40,924
2008	42,804	109	6	178	43,097
2009	44,480	104	0	69	44,653
2010	46,119	123	3	0	46,245
2011	47,844	92	0	14	47,950
2012	50,007	158	275	0	50,440
2013	52,057	190	7	1	52,255
2014	53,697	150	25	0	53,872
2015	55,465	170	15	0	55,650
2016	57,695	220	79	0	57,994

Correctional Employees Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
2007	$28,565	$405	$752	$358	$30,080
2008	30,932	410	795	310	32,447
2009	33,239	402	1,016	150	34,807
2010	36,078	455	1,170	0	37,703
2011	39,116	356	1,509	8	40,989
2012	42,571	548	1,257	0	44,376
2013	46,226	692	1,032	1	47,951
2014	50,842	657	1,447	1	52,947
2015	54,909	720	1,590	0	57,219
2016	59,045	906	1,895	0	61,846

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total

Judges Retirement Fund

2007	$14,516	$49	$45	$63	$14,673
2008	15,116	54	0	24	15,194
2009	16,261	36	0	16	16,313
2010	17,058	42	0	0	17,100
2011	17,585	32	30	1	17,648
2012	18,539	72	0	1	18,612
2013	19,772	72	0	1	19,845
2014	20,802	55	0	0	20,857
2015	21,893	60	0	0	21,953
2016	22,378	93	0	0	22,471

Legislators Retirement Fund*

2007	$6,390	$29	$35	$26	$6,480
2008	6,786	34	1	3	6,824
2009	7,016	26	0	0	7,042
2010	7,159	28	0	0	7,187
2011	7,464	22	11	0	7,497
2012	7,721	36	172	0	7,929
2013	7,826	38	101	1,338	9,303
2014	8,407	36	79	0	8,522
2015	8,441	37	0	0	8,478
2016	8,496	42	40	0	8,578

Elective State Officers Retirement Fund*

2007	$419	$4	$0	$0	$423
2008	430	4	0	0	434
2009	440	1	0	0	441
2010	451	1	0	0	452
2011	459	1	0	0	460
2012	458	7	0	0	465
2013	469	1	0	0	470

** Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*

Comparable benefits are not provided by the defined contribution funds and therefore are not presented here.

Schedule of Benefits and Refunds by Type

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

State Employees Retirement Fund

	2007	2008	2009	2010
Benefits by Type				
Retirement	$331,464	$354,317	$377,343	$400,703
Survivor	41,816	44,403	47,345	50,822
Disability	18,778	20,037	21,104	21,922
Total	**$392,058**	**$418,757**	**$445,792**	**$473,447**
Refunds by Type				
Separation	$6,462	$6,657	$5,484	$5,556
Death	937	1,162	1,478	756
Interest	3,703	3,857	3,945	3,421
Total	**$11,102**	**$11,676**	**$10,907**	**$9,733**

State Patrol Retirement Fund

	2007	2008	2009	2010
Benefits by Type				
Retirement	$33,911	$35,561	$37,167	$38,560
Survivor	5,079	5,510	5,560	5,600
Disability	1,591	1,733	1,753	1,959
Total	**$40,581**	**$42,804**	**$44,480**	**$46,119**
Refunds by Type				
Separation	$77	$6	$0	$3
Death	0	0	0	0
Interest	56	0	0	0
Total	**$133**	**$6**	**$0**	**$3**

Correctional Employees Retirement Fund

	2007	2008	2009	2010
Benefits by Type				
Retirement	$24,069	$26,133	$28,167	$30,637
Survivor	1,307	1,404	1,515	1,618
Disability	3,189	3,395	3,557	3,823
Total	**$28,565**	**$30,932**	**$33,239**	**$36,078**
Refunds by Type				
Separation	$568	$631	$724	$758
Death	36	13	64	62
Interest	148	151	228	350
Total	**$752**	**$795**	**$1,016**	**$1,170**

	2011	2012	2013	2014	2015	2016
	$428,731	$471,881	$502,520	$536,403	$574,893	$613,101
	54,029	56,585	59,150	62,122	65,000	67,674
	22,813	23,622	24,586	25,417	25,928	25,586
	$505,573	**$552,088**	**$586,256**	**$623,942**	**$665,821**	**$707,361**
	$7,329	$6,683	$7,309	$7,227	$7,207	$7,390
	948	781	618	829	1,653	2,037
	5,929	4,109	4,295	3,930	3,166	3,918
	$14,206	**$11,573**	**$12,222**	**$11,986**	**$12,026**	**$13,345**

	2011	2012	2013	2014	2015	2016
	$40,246	$42,435	$44,296	$45,737	$47,363	$49,727
	5,562	5,528	5,598	5,612	5,590	5,453
	2,036	2,044	2,163	2,348	2,512	2,515
	$47,844	**$50,007**	**$52,057**	**$53,697**	**$55,465**	**$57,695**
	$0	$1	$5	$24	$14	$73
	0	138	0	0	0	0
	0	136	2	1	1	6
	$0	**$275**	**$7**	**$25**	**$15**	**$79**

	2011	2012	2013	2014	2015	2016
	$33,062	$35,906	$39,120	$43,087	$46,700	$50,313
	1,793	2,037	2,197	2,519	2,806	3,106
	4,261	4,628	4,909	5,236	5,403	5,626
	$39,116	**$42,571**	**$46,226**	**$50,842**	**$54,909**	**$59,045**
	$1,100	$1,007	$818	$1,058	$1,311	$1,516
	19	24	27	107	21	73
	390	226	187	282	258	306
	$1,509	**$1,257**	**$1,032**	**$1,447**	**$1,590**	**$1,895**

Schedule of Benefits and Refunds by Type

For the Ten Fiscal Years Ended June 30, 2016
(Dollars in thousands)

Judges Retirement Fund

	2007	2008	2009	2010
Benefits by Type				
Retirement	$10,467	$10,959	$10,528	$10,996
Survivor	3,427	3,520	3,906	4,202
Disability	622	637	1,827	1,860
Total	**$14,516**	**$15,116**	**$16,261**	**$17,058**
Refunds by Type				
Separation	$38	$0	$0	$0
Death	0	0	0	0
Interest	7	0	0	0
Total	**$45**	**$0**	**$0**	**$0**

Legislators Retirement Fund*

	2007	2008	2009	2010
Benefits by Type**				
Retirement	$5,496	$5,837	$5,983	$6,007
Survivor	894	949	1,033	1,152
Total	**$6,390**	**$6,786**	**$7,016**	**$7,159**
Refunds by Type				
Separation	$19	$1	$0	$0
Death	0	0	0	0
Interest	16	0	0	0
Total	**$35**	**$1**	**$0**	**$0**

Elective State Officers Retirement Fund*

	2007	2008	2009	2010
Benefits by Type**				
Retirement	$332	$340	$348	$347
Survivor	87	90	92	94
Total	**$419**	**$430**	**$440**	**$451**

Refunds by Type

There were no refunds for the past ten years.

* *Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost-savings purposes.*

** *The Legislators and Elective State Officers Retirement Funds do not provide disability benefits.*

Comparable benefits are not provided by the defined contribution retirement funds and therefore, are not presented here.

2011	2012	2013	2014	2015	2016
$11,525	$12,279	$13,415	$14,700	$15,874	$16,650
4,195	4,521	4,624	4,363	4,307	4,113
1,865	1,739	1,733	1,739	1,712	1,615
$17,585	**$18,539**	**$19,772**	**$20,802**	**$21,893**	**$22,378**

$27	$0	$0	$0	$0	$0
0	0	0	0	0	0
3	0	0	0	0	0
$30	**$0**	**$0**	**$0**	**$0**	**$0**

2011	2012	2013	2014	2015	2016
$6,231	$6,420	$6,565	$7,032	$6,987	$7,114
1,233	1,301	1,261	1,375	1,454	1,382
$7,464	**$7,721**	**$7,826**	**$8,407**	**$8,441**	**$8,496**

$5	$73	$34	$0	$0	$0
0	0	0	58	0	16
6	99	67	21	0	24
$11	**$172**	**$101**	**$79**	**$0**	**$40**

2011	2012	2013
$353	$337	$345
106	121	124
$459	**$458**	**$469**

Active Members Average Age Tables

For the Ten Fiscal Years Ended June 30, 2016
(In Years)

Fiscal Year Ended	Averages for New Members: Entry Age Male	Female	Total	Averages for All Members: Entry Age Male	Female	Total	Attained Age Male	Female	Total	Service Credit Male	Female	Total
State Employees Retirement Fund												
06/30/07	36.4	34.9	35.5	32.9	32.4	32.6	47.2	45.4	46.2	13.4	11.6	12.4
06/30/08	36.6	35.5	35.9	33.2	32.6	32.9	47.3	45.5	46.3	13.2	11.5	12.3
06/30/09	36.8	35.8	36.3	33.5	32.8	33.1	47.5	46.0	46.7	13.2	11.8	12.5
06/30/10	37.1	35.9	36.4	33.6	32.7	33.1	47.7	46.3	47.0	13.3	12.1	12.7
06/30/11	36.4	36.9	36.7	33.8	32.9	33.3	47.7	46.6	47.1	13.1	12.2	12.6
06/30/12	36.6	34.7	35.5	34.0	33.2	33.6	47.6	46.6	47.1	12.8	12.0	12.4
06/30/13	37.1	36.5	36.8	34.3	33.4	33.8	47.6	46.6	47.0	12.5	11.9	12.2
06/30/14	36.2	35.8	35.9	34.5	33.7	34.1	47.6	46.6	47.0	12.3	11.7	12.0
06/30/15	36.3	34.9	35.5	34.7	33.8	34.2	47.6	46.6	47.0	12.2	11.7	11.9
06/30/16	36.5	35.2	35.7	34.9	33.9	34.3	47.5	46.5	46.9	12.0	11.5	11.6
State Patrol Retirement Fund												
06/30/07	36.2	36.8	36.3	28.8	29.0	28.8	41.5	39.9	41.3	12.6	10.8	12.4
06/30/08	32.8	29.5	32.3	29.0	28.9	29.0	41.6	40.3	41.5	12.5	11.2	12.4
06/30/09	29.9	29.8	29.9	29.0	29.1	29.0	41.2	40.1	41.1	12.1	10.9	11.9
06/30/10	39.4	N/A	39.4	29.0	28.7	29.0	41.9	40.9	41.8	12.8	12.0	12.7
06/30/11	29.6	33.4	30.0	29.1	29.0	29.1	41.8	41.0	41.7	12.6	11.8	12.6
06/30/12	36.5	27.9	33.4	29.2	28.8	29.2	42.1	41.3	42.0	12.8	12.2	12.7
06/30/13	30.7	31.7	30.7	29.3	28.9	29.3	41.9	41.8	41.8	12.5	12.7	12.5
06/30/14	32.8	28.4	32.4	29.4	29.0	29.4	41.8	41.6	41.8	12.4	12.7	12.4
06/30/15	29.7	33.6	29.9	29.4	29.1	29.4	41.2	41.5	41.3	11.9	12.4	11.9
06/30/16	30.3	32.5	30.5	29.5	29.5	29.5	40.6	41.0	40.6	11.1	11.5	11.1

Fiscal Year Ended	Averages for New Members: Entry Age Male	Female	Total	Averages for All Members: Entry Age Male	Female	Total	Attained Age Male	Female	Total	Service Credit Male	Female	Total

Correctional Employees Retirement Fund

Fiscal Year Ended	New Entry Age Male	Female	Total	All Entry Age Male	Female	Total	Attained Age Male	Female	Total	Service Credit Male	Female	Total
06/30/07	34.2	35.4	34.8	32.0	34.2	32.8	40.3	39.7	40.1	7.9	5.2	6.9
06/30/08	33.5	34.7	34.1	32.0	34.3	32.9	40.5	40.0	40.3	8.2	5.5	7.1
06/30/09	33.3	35.2	34.2	32.1	34.6	33.0	41.0	40.9	40.9	8.7	6.1	7.7
06/30/10	36.1	38.0	37.1	32.0	34.5	32.9	41.6	41.6	41.6	9.3	6.7	8.4
06/30/11	32.1	33.3	32.7	31.9	34.0	32.7	41.6	41.3	41.5	9.4	7.0	8.5
06/30/12	32.3	33.6	32.8	31.8	33.8	32.6	41.5	41.2	41.4	9.4	7.1	8.6
06/30/13	32.0	34.0	32.9	31.8	33.7	32.4	41.6	41.2	41.5	9.5	7.2	8.7
06/30/14	33.7	33.6	33.7	31.9	33.4	32.5	41.8	40.8	41.4	9.7	7.1	8.7
06/30/15	33.0	35.4	34.1	31.9	33.6	32.5	41.7	41.0	41.4	9.6	7.1	8.7
06/30/16	33.1	34.1	33.6	31.9	33.4	32.5	41.7	40.9	41.4	9.6	7.2	8.7

Judges Retirement Fund

Fiscal Year Ended	New Entry Age Male	Female	Total	All Entry Age Male	Female	Total	Attained Age Male	Female	Total	Service Credit Male	Female	Total
06/30/07	50.2	46.1	49.3	46.1	43.3	45.3	57.0	52.8	55.8	10.6	9.5	10.3
06/30/08	53.2	46.5	50.7	46.6	44.1	45.9	57.1	52.9	55.9	10.4	8.7	9.9
06/30/09	52.0	47.7	49.8	46.9	44.4	46.1	57.6	53.2	56.2	10.5	8.7	10.0
06/30/10	49.4	43.8	47.1	47.0	44.5	46.2	58.6	53.4	56.5	10.8	8.8	10.1
06/30/11	49.8	45.3	48.3	47.3	44.7	46.4	58.2	53.8	56.7	10.8	9.0	10.2
06/30/12	52.1	49.4	51.0	47.7	45.0	46.7	58.3	54.4	56.9	10.6	9.2	10.1
06/30/13	51.6	46.6	48.7	48.1	45.1	47.0	58.3	54.2	56.7	10.1	8.7	9.6
06/30/14	48.7	45.9	47.5	48.0	45.1	46.9	58.3	54.0	56.7	10.2	8.6	9.6
06/30/15	51.6	48.1	49.6	48.2	45.0	46.9	58.6	53.9	56.8	10.3	8.5	9.6
06/30/16	47.0	46.9	47.0	48.0	45.1	46.8	58.8	54.1	56.8	10.5	8.6	9.7

These statistics are not available for the Legislators Retirement Fund.

Schedule of Retired Members by Type of Benefit

As of June 30, 2016

State Employees Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type 1	Retirement Type 2	Retirement Type 3	Option Selected Life	Option Selected I	Option Selected II	Option Selected III
$0-$499	8,309	7,171	369	769	4,853	2,976	267	213
$500-$999	6,730	5,399	487	844	3,465	2,895	242	128
$1,000-$1,499	5,877	4,714	420	743	2,946	2,708	144	79
$1,500-$1,999	4,912	4,097	308	507	2,204	2,559	91	58
$2,000-$2,499	4,085	3,582	150	353	1,700	2,292	57	36
$2,500-$2,999	2,988	2,656	70	262	1,236	1,691	40	21
$3,000-$3,499	1,992	1,815	26	151	784	1,177	18	13
$3,500-$3,999	1,259	1,172	3	84	465	777	8	9
$4,000-$4,499	769	695	6	68	269	492	2	6
$4,500-$4,999	450	409	2	39	164	275	6	5
$5,000+	587	531	2	54	224	350	5	8
Totals	**37,958**	**32,241**	**1,843**	**3,874**	**18,310**	**18,192**	**880**	**576**

Type:
1 Retired members
2 Disabilitants
3 Survivors

Option:
Life Single life annuity
I Joint and Survivor annuity
II Death while eligible
III Period certain

State Patrol Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type 1	Retirement Type 2	Retirement Type 3	Option Selected Life	Option Selected I	Option Selected II	Option Selected III
$0-$499	21	16	0	5	11	7	3	0
$500-$999	27	14	2	11	6	13	8	0
$1,000-$1,499	33	19	0	14	12	16	5	0
$1,500-$1,999	25	13	3	9	9	16	0	0
$2,000-$2,499	53	23	2	28	9	38	6	0
$2,500-$2,999	62	27	5	30	21	36	5	0
$3,000-$3,499	71	50	7	14	20	48	3	0
$3,500-$3,999	85	63	13	9	31	54	0	0
$4,000-$4,499	80	64	9	7	27	52	1	0
$4,500-$4,999	121	108	4	9	36	83	2	0
$5,000+	470	447	8	15	183	283	4	0
Totals	**1,048**	**844**	**53**	**151**	**365**	**646**	**37**	**0**

Type:
1 Retired members
2 Disabilitants
3 Survivors

Option:
Life Single life annuity
I Joint and Survivor annuity
II Death while eligible
III Period certain

Correctional Employees Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type			Option Selected			
		1	2	3	Life	I	II	III
$0-$499	440	380	13	47	234	173	26	7
$500-$999	502	440	15	47	253	230	16	3
$1,000-$1,499	479	333	104	42	232	230	12	5
$1,500-$1,999	454	341	78	35	207	236	7	4
$2,000-$2,499	361	296	49	16	154	198	6	3
$2,500-$2,999	259	238	12	9	108	148	2	1
$3,000-$3,499	162	147	10	5	60	101	1	0
$3,500-$3,999	129	124	2	3	52	77	0	0
$4,000-$4,499	58	55	1	2	19	39	0	0
$4,500-$4,999	42	40	0	2	11	30	0	1
$5,000+	32	32	0	0	11	21	0	0
Totals	2,918	2,426	284	208	1,341	1,483	70	24

Type:
1 Retired members
2 Disabilitants
3 Survivors

Option:
Life Single life annuity
I Joint and Survivor annuity
II Death while eligible
III Period certain

Judges Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type			Option Selected			
		1	2	3	Life	I	II	III
$0-$499	0	0	0	0	0	0	0	0
$500-$999	4	2	0	2	0	3	1	0
$1,000-$1,499	2	2	0	0	1	1	0	0
$1,500-$1,999	13	11	0	2	4	5	2	2
$2,000-$2,499	16	8	1	7	7	8	1	0
$2,500-$2,999	20	12	0	8	3	15	2	0
$3,000-$3,499	22	10	0	12	3	16	3	0
$3,500-$3,999	18	9	1	8	4	12	2	0
$4,000-$4,499	25	11	2	12	4	17	4	0
$4,500-$4,999	31	21	2	8	6	23	2	0
$5,000+	199	164	14	21	54	133	7	5
Totals	350	250	20	80	86	233	24	7

Type:
1 Retired members
2 Disabilitants
3 Survivors

Option:
Life Single life annuity
I Joint and Survivor annuity
II Death while eligible
III Period certain

Schedule of Retired Members by Type of Benefit

As of June 30, 2016

Legislators Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type		Option Selected		
		Member	Survivor	Life	I	II
$0-$499	20	15	5	12	4	4
$500-$999	82	56	26	34	26	22
$1,000-$1,499	80	66	14	45	27	8
$1,500-$1,999	59	49	10	26	27	6
$2,000-$2,499	40	37	3	22	15	3
$2,500-$2,999	23	22	1	14	8	1
$3,000-$3,499	20	16	4	9	9	2
$3,500-$3,999	16	14	2	12	4	0
$4,000-$4,499	8	8	0	5	3	0
$4,500-$4,999	10	7	3	5	4	1
$5,000+	14	12	2	6	7	1
Totals	**372**	**302**	**70**	**190**	**134**	**48**

Option:

Life	Single life annuity
I	Joint and Survivor annuity
II	Life plus 50 percent survivors

Schedule of New Retirees and Average Benefit Payments

Last Ten Years

State Employees Retirement Fund

	Years Credited Service							
Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Period 7/1/06 to 6/30/07:								
Average Monthly Benefit	$136	$371	$634	$983	$1,235	$1,629	$2,288	$1,291
Number of New Retirees	231	174	188	203	218	203	526	1,743
Average Final Average Salary	$4,317	$3,267	$3,266	$3,686	$3,782	$4,075	$4,525	$4,004
Period 7/1/07 to 6/30/08:								
Average Monthly Benefit	$147	$428	$740	$1,026	$1,395	$1,691	$2,335	$1,338
Number of New Retirees	224	184	163	209	198	208	541	1,727
Average Final Average Salary	$4,435	$3,737	$3,728	$3,928	$4,089	$4,227	$4,568	$4,203
Period 7/1/08 to 6/30/09:								
Average Monthly Benefit	$150	$421	$712	$1,068	$1,362	$1,744	$2,399	$1,367
Number of New Retirees	201	183	173	168	176	197	447	1,545
Average Final Average Salary	$4,278	$3,718	$3,767	$3,957	$3,853	$4,267	$4,816	$4,225
Period 7/1/09 to 6/30/10:								
Average Monthly Benefit	$151	$433	$683	$1,022	$1,414	$1,712	$2,416	$1,389
Number of New Retirees	252	204	178	166	241	199	606	1,846
Average Final Average Salary	$4,548	$3,849	$3,607	$3,992	$4,111	$4,237	$4,778	$4,315
Period 7/1/10 to 6/30/11:								
Average Monthly Benefit	$169	$452	$752	$1,159	$1,498	$1,772	$2,534	$1,527
Number of New Retirees	219	246	240	258	294	260	782	2,299
Average Final Average Salary	$4,164	$3,550	$3,899	$4,113	$4,214	$4,259	$4,734	$4,276
Period 7/1/11 to 6/30/12:								
Average Monthly Benefit	$179	$482	$813	$1,169	$1,551	$1,947	$2,673	$1,512
Number of New Retirees	285	291	299	236	289	235	738	2,373
Average Final Average Salary	$4,089	$3,512	$3,969	$3,966	$4,434	$4,627	$5,008	$4,372
Period 7/1/12 to 6/30/13:								
Average Monthly Benefit	$200	$520	$847	$1,201	$1,619	$2,024	$3,136	$1,595
Number of New Retirees	241	254	250	216	213	237	503	1,914
Average Final Average Salary	$4,310	$3,831	$3,868	$4,072	$4,549	$4,743	$5,247	$4,488
Period 7/1/13 to 6/30/14:								
Average Monthly Benefit	$158	$462	$850	$1,209	$1,757	$2,079	$2,724	$1,517
Number of New Retirees	241	253	269	245	200	235	554	1,997
Average Final Average Salary	$4,680	$3,809	$4,226	$4,363	$5,005	$5,041	$5,224	$4,695
Period 7/1/14 to 6/30/15:								
Average Monthly Benefit	$186	$509	$930	$1,245	$1,723	$2,111	$2,850	$1,650
Number of New Retirees	277	267	284	294	240	287	737	2,386
Average Final Average Salary	$4,886	$4,106	$4,363	$4,314	$4,868	$5,032	$5,413	$4,844
Period 7/1/15 to 6/30/16:								
Average Monthly Benefit	$195	$536	$950	$1,289	$1,742	$2,073	$2,797	$1,620
Number of New Retirees	221	280	268	290	202	260	639	2,160
Average Final Average Salary	$4,757	$4,066	$4,420	$4,642	$4,682	$5,199	$5,233	$4,797
Period 7/1/06 to 6/30/16:								
Average Monthly Benefit	$168	$469	$808	$1,153	$1,531	$1,895	$2,623	$1,494
Number of New Retirees	2,392	2,336	2,312	2,285	2,271	2,321	6,073	19,990
Average Final Average Salary	$4,450	$3,762	$3,964	$4,139	$4,363	$4,606	$4,967	$4,443

Notes:

The number of new retirees added in the Schedule of Retirees and Beneficiaries *is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations orders starts.*

The Average Final Average Salary is equivalent to the average of the five highest consecutive years of salary, based on service during which member contributions were made.

Schedule of New Retirees and Average Benefit Payments

Last Ten Years

State Patrol Retirement Fund

	Years Credited Service							
Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Period 7/1/06 to 6/30/07:								
Average Monthly Benefit	$0	$1,829	$1,633	$3,158	$3,403	$4,634	$3,887	$3,534
Number of New Retirees	0	2	1	10	8	6	10	37
Average Final Average Salary	$0	$5,694	$4,463	$6,379	$5,701	$6,406	$4,496	$5,639
Period 7/1/07 to 6/30/08:								
Average Monthly Benefit	$185	$774	$1,986	$2,788	$3,151	$4,469	$4,256	$3,541
Number of New Retirees	1	2	3	6	6	12	13	43
Average Final Average Salary	$4,992	$5,020	$6,769	$5,475	$5,304	$6,093	$5,918	$5,815
Period 7/1/08 to 6/30/09:								
Average Monthly Benefit	$0	$788	$2,053	$3,471	$4,204	$4,435	$3,842	$3,793
Number of New Retirees	0	2	3	2	3	14	11	35
Average Final Average Salary	$0	$6,121	$5,846	$5,642	$6,274	$6,098	$6,467	$6,183
Period 7/1/09 to 6/30/10:								
Average Monthly Benefit	$444	$827	$1,889	$0	$3,652	$4,840	$4,343	$3,441
Number of New Retirees	4	3	3	0	7	10	10	37
Average Final Average Salary	$5,677	$3,993	$5,557	$0	$6,061	$6,858	$7,092	$6,305
Period 7/1/10 to 6/30/11:								
Average Monthly Benefit	$0	$0	$2,406	$0	$3,484	$5,083	$4,670	$4,422
Number of New Retirees	0	0	2	0	6	12	7	27
Average Final Average Salary	$0	$0	$6,275	$0	$6,037	$6,452	$3,609	$5,610
Period 7/1/11 to 6/30/12:								
Average Monthly Benefit	$517	$847	$2,476	$2,383	$4,187	$5,391	$6,158	$4,875
Number of New Retirees	2	1	3	1	7	13	16	43
Average Final Average Salary	$7,934	$5,957	$6,634	$4,165	$6,785	$7,278	$7,361	$7,111
Period 7/1/12 to 6/30/13:								
Average Monthly Benefit	$395	$0	$2,323	$3,202	$4,297	$4,756	$6,296	$4,596
Number of New Retirees	2	0	3	1	5	7	10	28
Average Final Average Salary	$5,841	$0	$6,252	$5,908	$7,001	$7,187	$7,362	$6,974
Period 7/1/13 to 6/30/14:								
Average Monthly Benefit	$323	$1,086	$2,448	$2,685	$4,672	$5,218	$5,700	$4,035
Number of New Retirees	1	4	4	3	6	6	9	33
Average Final Average Salary	$7,171	$5,687	$6,535	$5,968	$6,923	$7,017	$7,317	$6,771
Period 7/1/14 to 6/30/15:								
Average Monthly Benefit	$85	$2,226	$2,704	$3,122	$4,426	$5,841	$6,234	$4,850
Number of New Retirees	2	1	2	9	10	17	14	55
Average Final Average Salary	$2,652	$8,607	$5,958	$6,731	$6,966	$7,602	$7,246	$7,032
Period 7/1/15 to 6/30/16:								
Average Monthly Benefit	$1,145	$0	$3,599	$3,062	$3,687	$5,551	$5,135	$4,612
Number of New Retirees	1	0	1	5	8	12	16	43
Average Final Average Salary	$9,737	$0	$8,638	$6,470	$6,676	$7,179	$6,524	$6,853
Period 7/1/06 to 6/30/16:								
Average Monthly Benefit	$417	$1,112	$2,297	$3,035	$3,906	$5,078	$5,128	$4,197
Number of New Retirees	13	15	25	37	66	109	116	381
Average Final Average Salary	$5,958	$5,531	$6,275	$6,185	$6,394	$6,838	$6,485	$6,472

Notes:

The number of new retirees added in the Schedule of Retirees and Beneficiaries *is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations orders starts.*

The Average Final Average Salary is equivalent to the average of the five highest consecutive years of salary, based on service during which member contributions were made.

Correctional Employees Retirement Fund

	Years Credited Service							
	0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Retirement Effective Dates								
Period 7/1/06 to 6/30/07:								
Average Monthly Benefit	$339	$751	$1,365	$1,474	$2,266	$2,674	$3,690	$1,580
Number of New Retirees	18	33	28	23	18	11	16	147
Average Final Average Salary	$4,556	$3,866	$4,157	$3,773	$4,136	$4,036	$4,903	$4,150
Period 7/1/07 to 6/30/08:								
Average Monthly Benefit	$407	$774	$1,265	$1,501	$2,044	$2,841	$3,171	$1,504
Number of New Retirees	17	32	18	22	13	17	10	129
Average Final Average Salary	$5,018	$4,059	$3,815	$3,592	$3,967	$4,367	$4,667	$4,150
Period 7/1/08 to 6/30/09:								
Average Monthly Benefit	$343	$822	$1,318	$1,567	$2,315	$3,003	$3,458	$1,671
Number of New Retirees	19	22	23	23	16	17	12	132
Average Final Average Salary	$4,308	$4,444	$4,014	$3,801	$4,738	$4,603	$5,099	$4,353
Period 7/1/09 to 6/30/10:								
Average Monthly Benefit	$440	$812	$1,386	$1,583	$2,416	$2,611	$3,101	$1,494
Number of New Retirees	35	28	23	36	21	12	14	169
Average Final Average Salary	$4,217	$4,315	$4,452	$3,999	$4,479	$4,680	$4,356	$4,296
Period 7/1/10 to 6/30/11:								
Average Monthly Benefit	$282	$745	$1,329	$1,601	$2,505	$3,157	$4,264	$1,623
Number of New Retirees	33	19	20	51	13	23	8	167
Average Final Average Salary	$4,421	$4,081	$4,161	$4,011	$4,594	$4,294	$5,408	$4,269
Period 7/1/11 to 6/30/12:								
Average Monthly Benefit	$296	$645	$1,050	$1,575	$1,884	$2,571	$3,248	$1,289
Number of New Retirees	34	40	23	1	22	14	13	177
Average Final Average Salary	$4,694	$4,228	$4,332	$4,165	$4,687	$5,067	$4,761	$4,548
Period 7/1/12 to 6/30/13:								
Average Monthly Benefit	$267	$630	$1,178	$1,769	$2,031	$2,679	$3,136	$1,386
Number of New Retirees	36	35	25	30	29	16	12	183
Average Final Average Salary	$4,961	$4,565	$4,515	$4,938	$4,658	$5,188	$5,231	$4,810
Period 7/1/13 to 6/30/14:								
Average Monthly Benefit	$272	$700	$1,266	$1,558	$1,957	$2,454	$3,099	$1,441
Number of New Retirees	18	34	23	25	20	7	18	145
Average Final Average Salary	$5,160	$4,402	$4,654	$4,394	$4,756	$5,346	$5,368	$4,749
Period 7/1/14 to 6/30/15:								
Average Monthly Benefit	$233	$790	$1,243	$1,669	$2,026	$2,715	$2,966	$1,648
Number of New Retirees	24	43	37	35	49	29	27	244
Average Final Average Salary	$4,971	$4,863	$4,486	$4,877	$4,644	$5,466	$5,237	$4,887
Period 7/1/15 to 6/30/16:								
Average Monthly Benefit	$275	$761	$1,164	$1,536	$2,034	$2,518	$3,352	$1,438
Number of New Retirees	22	39	31	24	26	13	15	170
Average Final Average Salary	$4,415	$4,382	$4,311	$4,685	$4,805	$5,017	$6,006	$4,673
Period 7/1/06 to 6/30/16:								
Average Monthly Benefit	$314	$738	$1,253	$1,592	$2,112	$2,769	$3,281	$1,508
Number of New Retirees	256	325	251	300	227	159	145	1,663
Average Final Average Salary	$4,649	$4,345	$4,312	$4,279	$4,587	$4,823	$5,127	$4,522

Notes:

The number of new retirees added in the Schedule of Retirees and Beneficiaries *greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations orders starts.*

The Average Final Average Salary is equivalent to the average of the five highest consecutive years of salary, based on service during which member contributions were made.

Schedule of New Retirees and Average Benefit Payments

Last Ten Years

Judges Retirement Fund

	Years Credited Service							
Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Period 7/1/06 to 6/30/07:								
Average Monthly Benefit	$0	$2,064	$2,624	$3,823	$5,993	$0	$0	$4,281
Number of New Retirees	0	1	3	3	5	0	0	12
Average Final Average Salary	$0	$8,821	$9,725	$9,730	$9,696	$0	$0	$9,639
Period 7/1/07 to 6/30/08:								
Average Monthly Benefit	$0	$2,606	$3,038	$4,243	$5,252	$5,588	$0	$4,675
Number of New Retirees	0	1	3	2	12	1	0	19
Average Final Average Salary	$0	$11,235	$9,934	$9,991	$8,516	$9,868	$0	$9,109
Period 7/1/08 to 6/30/09:								
Average Monthly Benefit	$0	$0	$4,538	$4,698	$4,539	$0	$0	$4,594
Number of New Retirees	0	0	1	2	3	0	0	6
Average Final Average Salary	$0	$0	$10,727	$10,119	$10,048	$0	$0	$10,185
Period 7/1/09 to 6/30/10:								
Average Monthly Benefit	$0	$1,347	$3,383	$4,880	$5,975	$0	$0	$5,387
Number of New Retirees	0	1	1	2	12	0	0	16
Average Final Average Salary	$0	$7,079	$10,299	$10,084	$10,348	$0	$0	$10,108
Period 7/1/10 to 6/30/11:								
Average Monthly Benefit	$0	$2,005	$2,369	$4,743	$5,416	$0	$0	$4,626
Number of New Retirees	0	1	3	6	11	0	0	21
Average Final Average Salary	$0	$8,020	$8,092	$9,163	$9,014	$0	$0	$8,878
Period 7/1/11 to 6/30/12:								
Average Monthly Benefit	$0	$1,673	$3,451	$5,443	$6,324	$0	$0	$4,898
Number of New Retirees	0	1	8	1	10	0	0	20
Average Final Average Salary	$0	$10,045	$10,175	$11,833	$10,734	$0	$0	$10,531
Period 7/1/12 to 6/30/13:								
Average Monthly Benefit	$807	$0	$3,087	$4,980	$6,216	$0	$0	$5,354
Number of New Retirees	1	0	2	8	14	0	0	25
Average Final Average Salary	$10,472	$0	$11,037	$11,833	$10,734	$0	$0	$11,099
Period 7/1/13 to 6/30/14:								
Average Monthly Benefit	$0	$1,104	$3,423	$5,464	$6,914	$0	$0	$5,568
Number of New Retirees	0	1	4	4	10	0	0	19
Average Final Average Salary	$0	$5,507	$10,067	$10,796	$10,700	$0	$0	$10,313
Period 7/1/14 to 6/30/15:								
Average Monthly Benefit	$0	$2,176	$3,904	$4,999	$6,870	$0	$0	$5,495
Number of New Retirees	0	3	2	4	11	0	0	20
Average Final Average Salary	$0	$10,887	$10,854	$10,925	$10,934	$0	$0	$10,917
Period 7/1/15 to 6/30/16:								
Average Monthly Benefit	$0	$2,479	$3,834	$5,135	$7,648	$0	$0	$5,740
Number of New Retirees	0	2	2	5	7	0	0	16
Average Final Average Salary	$0	$11,108	$9,511	$11,034	$11,383	$0	$0	$11,006
Period 7/1/06 to 6/30/16:								
Average Monthly Benefit	$807	$2,026	$3,275	$4,875	$6,173	$5,588	$0	$5,117
Number of New Retirees	1	11	29	37	95	1	0	174
Average Final Average Salary	$10,472	$9,599	$9,957	$10,625	$10,197	$9,868	$0	$10,210

Notes:

The number of new retirees added in the Schedule of Retirees and Beneficiaries *is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations orders starts.*

The Average Final Average Salary is equivalent to the average of the five highest consecutive years of salary, based on service during which member contributions were made.

Legislators Retirement Fund

	Years Credited Service							
	0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Retirement Effective Dates								
Period 7/1/06 to 6/30/07:								
Average Monthly Benefit	$0	$1,225	$1,340	$1,707	$2,057	$2,567	$3,038	$1,661
Number of New Retirees	0	7	6	2	2	3	1	21
Average Final Average Salary	$0	$4,552	$3,749	$3,923	$5,465	$3,452	$3,257	$4,131
Period 7/1/07 to 6/30/08:								
Average Monthly Benefit	$0	$1,372	$1,233	$1,289	$2,935	$2,318	$0	$1,505
Number of New Retirees	0	5	5	1	1	1	0	13
Average Final Average Salary	$0	$4,573	$3,334	$3,351	$2,705	$3,331	$0	$3,763
Period 7/1/08 to 6/30/09:								
Average Monthly Benefit	$739	$1,209	$1,240	$1,546	$2,200	$3,373	$0	$1,531
Number of New Retirees	1	5	5	1	3	1	0	16
Average Final Average Salary	$6,741	$4,410	$3,433	$3,275	$4,378	$3,284	$0	$4,103
Period 7/1/09 to 6/30/10:								
Average Monthly Benefit	$396	$2,187	$1,001	$1,471	$5,026	$3,373	$0	$1,670
Number of New Retirees	2	2	5	1	1	1	0	12
Average Final Average Salary	$6,741	$4,410	$3,433	$3,275	$4,378	$3,284	$0	$4,200
Period 7/1/10 to 6/30/11:								
Average Monthly Benefit	$0	$1,700	$1,552	$1,837	$1,999	$2,226	$2,451	$1,765
Number of New Retirees	0	7	9	1	3	2	1	23
Average Final Average Salary	$0	$7,785	$3,255	$3,345	$3,436	$3,338	$3,468	$4,678
Period 7/1/11 to 6/30/12:								
Average Monthly Benefit	$0	$1,235	$1,444	$2,481	$0	$0	$0	$1,621
Number of New Retirees	0	4	1	2	0	0	0	7
Average Final Average Salary	$0	$4,271	$2,691	$5,279	$0	$0	$0	$4,333
Period 7/1/12 to 6/30/13:								
Average Monthly Benefit	$664	$0	$2,518	$2,439	$1,851	$3,232	$3,290	$2,347
Number of New Retirees	2	0	3	2	2	2	2	13
Average Final Average Salary	$6,118	$0	$5,098	$4,682	$3,381	$7,461	$3,549	$5,052
Period 7/1/13 to 6/30/14:								
Average Monthly Benefit	$0	$1,008	$1,490	$0	$0	$6,118	$0	$1,888
Number of New Retirees	0	3	4	0	0	1	0	8
Average Final Average Salary	$0	$2,718	$3,391	$0	$0	$8,411	$0	$3,766
Period 7/1/14 to 6/30/15:								
Average Monthly Benefit	$831	$0	$1,681	$2,220	$1,979	$0	$0	$1,679
Number of New Retirees	1	0	6	1	1	0	0	9
Average Final Average Salary	$4,845	$0	$4,301	$3,136	$3,384	$0	$0	$4,130
Period 7/1/15 to 6/30/16:								
Average Monthly Benefit	$0	$2,335	$3,084	$2,406	$0	$0	$0	$2,727
Number of New Retirees	0	1	2	1	0	0	0	4
Average Final Average Salary	$0	$4,361	$9,563	$3,016	$0	$0	$0	$6,625
Period 7/1/06 to 6/30/16:								
Average Monthly Benefit	$615	$1,413	$1,535	$2,002	$2,335	$3,073	$3,017	$1,766
Number of New Retirees	6	34	46	12	13	11	4	126
Average Final Average Salary	$6,217	$4,991	$3,897	$3,931	$3,969	$4,569	$3,456	$4,358

Notes:

The number of new retirees added in the Schedule of Retirees and Beneficiaries *is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations orders starts.*

The Average Final Average Salary is equivalent to the average of the five highest consecutive years of salary, based on service during which member contributions were made.

Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for administrative cost savings purposes. There have been no new retirees in the Elective State Officers Retirement Fund between fiscal year 2006 and the merger.

Schedule of Principal Participating Employers

Current Year and Nine Years Ago

Participating Employer	Fiscal Year 2016 Active Employees	Fiscal Year 2016 Rank	Fiscal Year 2016 % of Total Active Members	Fiscal Year 2007 Active Employees	Fiscal Year 2007 Rank	Fiscal Year 2007 % of Total Active Members
State Employees Retirement Fund						
State of Minnesota and its component units*	49,011	1	99.07%	47,969	1	99.15%
All Others	461		0.93	410		0.85
Totals	49,472		100.00%	48,379		100.00%
State Patrol Retirement Fund						
State of Minnesota	892	1	100.00%	844	1	100.00%
Correctional Employees Retirement Fund						
State of Minnesota and its component units*	4,507	1	99.70%	4,323	1	99.79%
All Others	14		0.30	9		0.21
Totals	4,521		100.00%	4,332		100.00%
Judges Retirement Fund						
State of Minnesota	311	1	100.00%	308	1	100.00%
Legislators Retirement Fund						
State of Minnesota	23	1	100.00%	54	1	100.00%

Participating Employer	Fiscal Year 2016 Covered Employees	Fiscal Year 2016 Rank	Fiscal Year 2016 % of Total Fund	Fiscal Year 2007 Covered Employees	Fiscal Year 2007 Rank	Fiscal Year 2007 % of Total Fund
Unclassified Employees Retirement Fund**						
State of Minnesota and its component units*	3,087	1	95.69%	3,208	1	96.28%
All Others	139		4.31	124		3.72
Totals	3,226		100.00%	3,332		100.00%
Health Care Savings Plan**						
State of Minnesota and its component units*	50,165	1	46.96%	10,229	1	26.36%
Hennepin County	5,416	2	5.07			
Ramsey County	3,636	3	3.40	2,749	2	7.09
Dakota County	2,441	4	2.29	2,347	3	6.05
City of Minneapolis	2,049	5	1.92	1,897	4	4.89
Independent School District (ISD) 623 Roseville	1,804	6	1.69	961	7	2.48
Special School District 1 (SSD) Minneapolis	1,657	7	1.55	1,611	5	4.14
ISD 728 Elk River	1,382	8	1.29	866	8	2.23
City of Duluth	1,271	9	1.19			
Scott County	1,180	10	1.10	1,044	6	2.69
Metropolitan Airports Commission				827	9	2.13
City of Richfield				582	10	1.50
All Others	35,833		33.54	15,687		40.43
Totals	106,834		100.00%	38,800		100.00%

* *Component units of the State of Minnesota include the Housing Finance Agency, Metropolitan Council, University of Minnesota, Agricultural and Economic Development Board, National Sports Center Foundation, Office of Higher Education, Public Facilities Authority, Rural Finance Authority, Workers' Compensation Assigned Risk Plan, and the Minnesota Sports Facilities Authority.*

** *Includes all members with account balances.*

Participating Employer	Fiscal Year 2016 Covered Employees	Fiscal Year 2016 Rank	Fiscal Year 2016 % of Total Fund	Fiscal Year 2009*** Covered Employees	Fiscal Year 2009*** Rank	Fiscal Year 2009*** % of Total Fund
Minnesota Deferred Compensation Fund (MNDCP) **						
State of Minnesota and its component units*	46,655	1	55.51%	47,058	1	54.09%
SSD 1 Minneapolis	4,538	2	5.40	5,951	2	6.84
Ramsey County	3,460	3	4.12	3,414	3	3.93
City of Minneapolis	3,180	4	3.78	1,230	9	1.42
Hennepin County	2,099	5	2.50	2,446	4	2.81
ISD 625 St. Paul	1,708	6	2.03	2,239	6	2.57
City of St. Paul	1,618	7	1.93	2,246	5	2.58
Anoka County	1,540	8	1.83	1,204	10	1.38
ISD 279 Osseo	1,145	9	1.36	1,401	7	1.61
St. Louis County	1,045	10	1.24			
Dakota County				1,254	8	1.44
All Others	17,065		20.30	18,560		21.33
Totals	84,053		100.00%	87,003		100.00%

	Fiscal Year 2016 Covered Employees	Fiscal Year 2016 Rank	Fiscal Year 2016 % of Total Fund	Fiscal Year 2009*** Covered Employees	Fiscal Year 2009*** Rank	Fiscal Year 2009*** % of Total Fund
Hennepin County Supplemental Retirement Fund **						
Hennepin County	1,089	1	77.07%	1,596	1	78.01%
Hennepin County Medical Center	324	2	22.93	458	2	21.99
Totals	1,413		100.00%	2,054		100.00%

* *Component units of the State of Minnesota include the Housing Finance Agency, Metropolitan Council, University of Minnesota, Agricultural and Economic Development Board, National Sports Center Foundation, Office of Higher Education, Public Facilities Authority, Rural Finance Authority, Workers' Compensation Assigned Risk Plan, and the Minnesota Sports Facilities Authority.*

** *Includes all members with account balances.*

*** *Complete data is unavailable from previous recordkeeper.*

Schedule of Participating Employers

As of June 30, 2016

State and Component Units

State of Minnesota

Minnesota House of Representatives - Employees
Minnesota House of Representatives - Members
Minnesota State Senate - Employees
Minnesota State Senate - Members

Metropolitan Council
Minnesota Sports Facilities Authority
University of Minnesota

Cities

Aitkin
Akeley
Albert Lea
Albertville
Alexandria
Andover
Anoka
Apple Valley
Arden Hills
Aurora
Austin
Babbitt
Backus
Bagley
Balaton
Battle Lake
Baudette
Baxter
Beaver Bay
Bemidji
Bertha
Biwabik
Blaine
Blooming Prairie
Bloomington
Blue Earth
Bovey
Brainerd
Breckenridge
Breezy Point
Brooklyn Center
Brooklyn Park
Browerville
Browns Valley
Buffalo
Buhl
Burnsville
Caledonia
Calumet
Cambridge
Cannon Falls
Carlton
Centerville
Champlin
Chanhassen
Chatfield
Chisago
Chisholm
Circle Pines
Clarissa
Cleveland
Cloquet
Cohasset
Cold Spring
Coleraine
Cologne
Columbia Heights
Columbus
Cook
Coon Rapids
Corcoran
Cottage Grove
Cottonwood
Crookston
Crosby
Crosslake
Crystal
Dassel
Dawson
Dayton
Deephaven
Deer River
Deerwood
Detroit Lakes
Dilworth
Dodge Center
Duluth
Dundas
Eagan
East Bethel
East Grand Forks
East Gull Lake
Eden Prairie
Eden Valley
Edina
Elk River
Ely
Eveleth
Fairfax
Falcon Heights
Faribault
Farmington
Fergus Falls
Floodwood
Foley
Forest Lake
Freeport
Gaylord
Gilbert
Glencoe
Golden Valley
Goodhue
Goodview
Grand Marais
Grand Rapids
Ham Lake
Hanover
Hastings
Hector
Henning
Hermantown
Hibbing
Hinckley
Holdingford
Hopkins
Howard Lake
Hoyt Lakes
Hutchinson
International Falls
Inver Grove Heights
Isanti
Jackson
Janesville
Jordan
Kasson
Keewatin
La Crescent
La Prairie
Lake City
Lake Shore
Lakeville
Le Center
Le Sueur
Lester Prairie
Lino Lakes
Litchfield
Little Falls
Littlefork
Long Lake
Long Prairie
Luverne
Madelia
Mahnomen
Mahtomedi
Mankato
Maple Grove
Maple Lake
Maplewood
Marble
Marietta
Marshall
McGregor
Medford
Medina
Melrose
Menahga
Mendota Heights
Milaca
Minneapolis
Minnetonka
Montevideo
Montgomery
Monticello
Moorhead
Moose Lake
Mora
Morris
Mound
Mounds View
Mountain Iron
Nashwauk
Nevis
New Brighton
New Hope
New Prague
New Ulm
New York Mills

Newport
Nisswa
North Branch
North St. Paul
Northfield
Oak Grove
Oak Park Heights
Oakdale
Olivia
Orono
Osakis
Osseo
Owatonna
Park Rapids
Paynesville
Pelican Rapids
Perham
Pierz
Pine City
Plainview
Plummer
Preston
Prior Lake
Proctor
Ramsey
Red Lake Falls
Redwood Falls
Richfield
Robbinsdale
Rochester
Rockford
Rogers
Rosemount
Roseville
Rush City
Rushford
Sandstone
Sartell
Sauk Centre
Sauk Rapids
Savage
Scandia
Shakopee
Silver Bay
Slayton
Sleepy Eye
South St. Paul
Spring Lake Park
Spring Valley
Springfield
St. Anthony
St. Charles
St. Cloud
St. Francis
St. James
St. Louis Park
St. Michael
St. Paul
St. Paul Park
St. Peter
Staples
Stephen
Stewartville
Stillwater
Thief River Falls
Tonka Bay
Tower
Tracy
Truman
Two Harbors
Vadnais Heights
Vernon Center
Victoria
Village of Minnetonka Beach
Virginia
Wabasha
Wadena
Waite Park
Warren
Warroad
Waseca
Waterville
Wayzata
Wells
West St. Paul
White Bear Lake
Willmar
Windom
Winnebago
Winona
Winthrop
Woodbury
Worthington
Wyoming
Zumbrota

Townships

Balkan
Breitung
Fayal
Franconia
New Independence
Oronoco
White Bear
White

Counties

Aitkin
Anoka
Becker - Multi County
Beltrami
Benton
Blue Earth
Brown
Carlton
Carver
Cass
Chisago
Clay
Clearwater
Cook
Crow Wing
Dakota
Douglas
Faribault
Fillmore
Goodhue
Grant
Hennepin
Houston
Hubbard
Isanti
Itasca
Kanabec
Kandiyohi
Koochiching
Lake
Lake of the Woods
Le Sueur
Lincoln
Lyon
Marshall
McLeod
Mille Lacs
Morrison
Mower
Murray
Nicollet
Nobles
Norman
Olmsted
Ottertail
Pennington
Pine
Pipestone
Polk
Pope
Ramsey
Red Lake
Redwood
Renville
Rice
Rock
Scott
Sherburne
Sibley
St. Louis
Stearns
Steele
Stevens
Swift
Todd
Traverse
Wabasha
Wadena
Waseca
Washington
Watonwan
Wilkin
Winona
Wright
Yellow Medicine

Independent School Districts (ISD)

ISD 1 Aitkin
ISD 2 Hill City
ISD 4 McGregor
ISD 11 Anoka - Hennepin
ISD 12 Centennial
ISD 13 Columbia Heights
ISD 14 Fridley
ISD 15 St. Francis
ISD 16 Spring Lake Park
ISD 22 Detroit Lakes
ISD 23 Frazee - Vergas
ISD 31 Bemidji
ISD 47 Sauk Rapids - Rice

Continued on next page

Schedule of Participating Employers

As of June 30, 2016

ISD 51 Foley
ISD 75 St. Clair
ISD 77 Mankato
ISD 81 Comfrey
ISD 84 Sleepy Eye Schools
ISD 88 New Ulm
ISD 91 Barnum
ISD 93 Carlton
ISD 94 Cloquet
ISD 95 Cromwell - Wright
ISD 97 Moose Lake
ISD 99 Esko
ISD 100 Wrenshall
ISD 108 Central
ISD 111 Watertown - Mayer
ISD 112 Eastern Carver County
ISD 113 Walker - Hackensack - Akeley
ISD 115 Cass Lake - Bena
ISD 116 Pillager
ISD 118 Northland Community
ISD 138 North Branch
ISD 139 Rush City
ISD 150 Hawley
ISD 152 Moorhead
ISD 162 Bagley
ISD 166 Cook County
ISD 173 Mountain Lake
ISD 177 Windom
ISD 181 Brainerd
ISD 182 Crosby - Ironton
ISD 186 Pequot Lakes
ISD 191 Burnsville - Eagan - Savage
ISD 192 Farmington
ISD 194 Lakeville
ISD 195 Randolph
ISD 196 Rosemount - Apple Valley - Eagan
ISD 197 West St. Paul - Mendota Heights - Eagan
ISD 199 Inver Grove Heights
ISD 200 Hastings
ISD 203 Hayfield
ISD 204 Kasson - Mantorville
ISD 206 Alexandria
ISD 213 Osakis
ISD 227 Chatfield
ISD 239 Rushford - Peterson
ISD 241 Albert Lea
ISD 242 Alden - Conger
ISD 252 Cannon Falls
ISD 253 Goodhue
ISD 255 Pine Island
ISD 256 Red Wing
ISD 270 Hopkins
ISD 271 Bloomington
ISD 272 Eden Prairie
ISD 273 Edina
ISD 276 Minnetonka
ISD 277 Westonka
ISD 278 Orono
ISD 279 Osseo
ISD 280 Richfield
ISD 281 Robbinsdale
ISD 282 St. Anthony - New Brighton
ISD 283 St. Louis Park
ISD 284 Wayzata
ISD 286 Brooklyn Center
ISD 294 Houston
ISD 297 Spring Grove
ISD 299 Caledonia
ISD 300 La Crescent - Hokah
ISD 306 Laporte
ISD 308 Nevis
ISD 309 Park Rapids
ISD 314 Braham
ISD 316 Greenway
ISD 317 Deer River
ISD 318 Grand Rapids
ISD 319 Nashwauk - Keewatin
ISD 330 Heron Lake - Okabena
ISD 332 Mora
ISD 333 Ogilvie
ISD 347 Willmar
ISD 361 International Falls
ISD 362 Littlefork - Big Falls
ISD 363 South Koochiching
ISD 381 Lake Superior
ISD 390 Lake of the Woods
ISD 391 Cleveland
ISD 402 Hendricks
ISD 403 Ivanhoe
ISD 404 Lake Benton
ISD 423 Hutchinson
ISD 424 Lester Prairie
ISD 458 Truman
ISD 463 Eden Valley - Watkins
ISD 465 Litchfield
ISD 466 Dassel - Cokato
ISD 477 Princeton
ISD 480 Onamia
ISD 482 Little Falls
ISD 484 Pierz
ISD 485 Royalton
ISD 486 Swanville
ISD 487 Upsala Area
ISD 492 Austin
ISD 500 Southland
ISD 508 St. Peter
ISD 518 Worthington
ISD 533 Dover - Eyota
ISD 534 Stewartville
ISD 535 Rochester
ISD 542 Battle Lake
ISD 544 Fergus Falls
ISD 548 Pelican Rapids
ISD 550 Underwood
ISD 553 New York Mills
ISD 564 Thief River Falls
ISD 577 Willow River
ISD 581 Edgerton
ISD 593 Crookston
ISD 595 East Grand Forks
ISD 621 Mounds View
ISD 622 North St. Paul - Maplewood - Oakdale
ISD 623 Roseville
ISD 624 White Bear Lake
ISD 625 St. Paul
ISD 640 Wabasso
ISD 656 Faribault
ISD 659 Northfield
ISD 676 Badger
ISD 695 Chisholm
ISD 696 Ely
ISD 698 Floodwood
ISD 700 Hermantown
ISD 701 Hibbing
ISD 704 Proctor
ISD 706 Virginia
ISD 707 Nett Lake
ISD 709 Duluth
ISD 712 Mountain Iron - Buhl
ISD 716 Belle Plaine
ISD 717 Jordan
ISD 719 Prior Lake - Savage
ISD 720 Shakopee
ISD 721 New Prague Area
ISD 726 Becker
ISD 727 Big Lake
ISD 728 Elk River
ISD 738 Holdingford
ISD 739 Kimball
ISD 740 Melrose
ISD 741 Paynesville
ISD 742 St. Cloud
ISD 743 Sauk Centre
ISD 745 Albany
ISD 748 Sartell - St. Stephen
ISD 750 Cold Spring
ISD 756 Blooming Prairie
ISD 761 Owatonna
ISD 763 Medford
ISD 768 Hancock
ISD 771 Chokio - Alberta
ISD 775 Kerkhoven - Murdock - Sunburg
ISD 786 Bertha - Hewitt
ISD 787 Browerville
ISD 811 Wabasha - Kellogg
ISD 813 Lake City
ISD 818 Verndale
ISD 820 Sebeka
ISD 829 Waseca
ISD 831 Forest Lake
ISD 832 Mahtomedi
ISD 833 South Washington County
ISD 834 Stillwater Area
ISD 840 St. James
ISD 846 Breckenridge
ISD 857 Lewiston - Altura
ISD 858 St. Charles
ISD 861 Winona Area
ISD 876 Annandale
ISD 877 Buffalo - Hanover - Montrose
ISD 879 Delano
ISD 881 Maple Lake
ISD 882 Monticello
ISD 883 Rockford
ISD 885 St. Michael - Albertville
ISD 891 Canby
ISD 912 Milaca
ISD 914 Ulen - Hitterdal
ISD 916 Northeast Metro
ISD 935 Fergus Falls Area Special Education Cooperative
ISD 998 Bemidji Regional Interdistrict Council (BRIC)
ISD 2071 Lake Crystal Wellcome Memorial
ISD 2125 Triton
ISD 2135 Maple River
ISD 2142 St. Louis County

ISD 2143 Waterville - Elysian - Morristown
ISD 2144 Chisago Lakes
ISD 2154 Eveleth - Gilbert
ISD 2155 Wadena - Deer Creek
ISD 2159 Buffalo Lake - Hector - Stewart
ISD 2164 Dilworth - Glyndon - Felton
ISD 2165 Hinckley - Finlayson
ISD 2168 New Richland - Hartland - Ellendale - Genera
ISD 2169 Murray County Central
ISD 2170 Staples - Motley
ISD 2172 Kenyon - Wanamingo
ISD 2176 Warren - Alvarado - Oslo
ISD 2180 MACCRAY
ISD 2184 Luverne
ISD 2190 Yellow Medicine East
ISD 2198 Fillmore Central
ISD 2364 Belgrade - Brooten - Elrosa
ISD 2396 Atwater - Cosmos - Grove City
ISD 2448 Martin County West
ISD 2534 Bird Island - Olivia - Lake Lillian (BOLD)
ISD 2580 East Central
ISD 2609 Win-E-Mac
ISD 2687 Howard Lake - Waverly - Winsted
ISD 2689 Pipestone
ISD 2711 Mesabi East
ISD 2752 Fairmont Area
ISD 2753 Long Prairie - Grey Eagle
ISD 2759 Eagle Valley
ISD 2805 Zumbrota - Mazeppa
ISD 2835 Janesville - Waldorf - Pemberton
ISD 2859 Glencoe - Silver Lake
ISD 2860 Blue Earth Area
ISD 2884 Red Rock Central
ISD 2886 Glenville - Emmons
ISD 2887 McLeod West
ISD 2890 Renville County West
ISD 2895 Jackson County Central
ISD 2897 Redwood Area
ISD 2898 Westbrook - Walnut Grove
ISD 2899 Plainview - Elgin - Millville
ISD 2903 Ortonville
ISD 2904 Tracy Area
ISD 2906 Red Lake County Central
ISD 2907 Round Lake - Brewster

Other Educational Entities

Avalon Charter School
Benton Stearns Education District 6383
East Metro Integration District 6067
Freshwater Education District
Great Expectations School
Hiawatha Valley Educational District
Hmong College Prep Academy
Intermediate School District 287
Intermediate School District 917
International Spanish Language Academy
Lake Agassiz Special Education Cooperative
Meeker & Wright Special Education Cooperative
Metro Deaf School
Mid-State Education District 6979
Minnesota River Valley Special Education Cooperative
Minnesota Valley Education District
New Visions School
Northland Learning Center
Northwest Passage High School
PACT Charter School
Paladin Career & Technical High School
Region 1-ESV (Education Secondary Vocational)
Southern Plains Education Cooperative
SouthWest Metro Education Cooperative 6088
Special School District (SSD) 1 Minneapolis
Spectrum High School
SSD 6 South St. Paul
Technology & Information Education Services (TIES)
West Central Education District 6026
West Metro Education Program
Wright Technical Center

Other Employers

Adrian Public Utilities Commission
AFSCME
Agricultural Utilization Research Institute
Aitkin Public Utilities Commission
Alexandria Lake Area Sanitary District
Alexandria Light & Power
Amalgamated Transit Union
Anoka Conservation District
Anoka-Champlin Fire Department
Arrowhead Library System
Arrowhead Regional Computing Consortium
Arrowhead Regional Development Commission
Austin Utilities
Avera Marshall Regional Medical Center
Bagley Public Utilities
Becker County SWCD (Soil and Water Conservation District)
Beltrami Area Service Collaborative
Beltrami SWCD
Benton County SWCD
Blue Earth Light & Water
Brainerd HRA (Housing & Redevelopment Authority)
Brainerd Public Utilities
Brown County SWCD
Carlton County SWCD
Carver County CDA (Community Development Agency)
Carver County SWCD
CCLNS Joint Powers Board #3
Centennial Lakes Police Department
Chippewa County - Montevideo Hospital
Chippewa County SWCD
Chisholm Hibbing Airport Commission
Clearwater County Health Service
Clearwater County Highway Department
Columbia Heights HRA
Comfort-Forest Lake Watershed District
Cook County North Shore Hospital
Cook Hospital
Cottonwood County Welfare
Crosslake Communications
Crow Wing SWCD
Dakota Communications Center
Dakota County CDA
Dawson Municipal Liquor Store
Delano Municipal Utilities
Dodge SWCD
Douglas County Hospital
Duluth Entertainment Convention Center (DECC)
Duluth HRA
Duluth Seaway Port Authority
Duluth Teachers Retirement Fund Association
Duluth Transit Authority
East Central Regional Development Commission
East Central Regional Library
East Grand Forks Water & Light
East Range Public Safety Board
EdVisions Cooperative, Inc
Elk River Municipal Utilities
Enterprise Minnesota
Fair Oaks Lodge Nursing Home
Fillmore County SWCD
FirstLight Health System
Freeborn County SWCD
Gaylord Community Hospital
Gillette Children's Specialty Healthcare
Glencoe Area Health Center
Glencoe Light & Power Commission
Grand Marais Public Utilities Commission
Grand Rapids Public Utilities Commission
Great River Regional Library
Greater Staples Hospital & Care Center
Greenwood Connections
Halstad Municipal Utilities
Hennepin County Medical Center
Heritage Living Center - Hubbard County
Hibbing Public Utilities
Hinckley Firehouse Liquor
Horizon Public Health
Hutchinson Utilities Commission
International Union of Operating Engineers
Itasca County SWCD
Itasca Medical Center - Grand Rapids
Itasca Nursing Home - Grand Village
Kandiyohi Area Transit
Kandiyohi County & City of Willmar Economic Development Commission
Kandiyohi SWCD
Lake Agassiz Regional Library
Lakes Area Police
League of Minnesota Cities
Legislative Coordinating Commission
Lincoln County SWCD
Littlefork Medical Center
LOGIS (Local Government Information Systems)
Madelia Municipal Light & Power
Mahnomen SWCD
Marshall SWCD
Marshall Municipal Utilities
Meeker County/Meeker Memorial Hospital
Metropolitan Airports Commission
Metropolitan Library Service Agency (MELSA)
Metropolitan Mosquito Control District
Middle Management Association
Middle Mississippi River Watershed Management
Mid-Minnesota Development Commission
Mille Lacs SWCD
Minneapolis Public Housing Agency
Minnesota Association of Professional Employees

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Schedule of Participating Employers

As of June 30, 2016

Minnesota Association of Secondary School Principals
Minnesota Counties Intergovernmental Trust
Minnesota Crop Improvement Association
Minnesota Government Engineers Council (MGEC)
Minnesota Historical Society
Minnesota Horticultural Society
Minnesota Inter-County Association
Minnesota Prairie County Alliance
Minnesota River Area Agency on Aging, Inc.
Minnesota Safety Council
Minnesota Valley Regional Library
Minnesota Valley Transit Authority
Moorhead Public Housing Agency
Moose Lake Water & Light Commission
Mora Public Utilities
Morrison SWCD
Mower SWCD
Murray County Memorial Hospital
National Joint Powers Alliance
New Prague Golf Course
New Prague Municipal Utilities
New River Medical Center
New Ulm Public Utilities
Nicollet SWCD
Norman County SWCD
Norman - Mahnomen Public Health
North Branch Municipal Water & Light
North St. Louis SWCD
Northeast Minnesota Office of Job Training
Northeast Service Coop #927
Northern Dakota County Cable Communications Commission (NDC4)
Northfield Hospital
Northwest Regional Development Commission
Ottertail Water Management District
Owatonna Public Utilities
Paynesville Area Health Care System
Pelican River Watershed District
Pennington County SWCD
Pine County SWCD
Pioneerland Library System
Pipestone County Medical Center
Pope - Douglas Solid Waste Management
Port Authority of City of St. Paul
Preston Public Utilities
Prior Lake-Spring Lake Watershed District
Proctor Public Utilities
Quad Cities Cable Communication Commission
Ramsey - Washington Metro Watershed District
Red River Valley Conservation Service Area
Red Rock Rural Water System
Redwood Area Hospital
Redwood SWCD
Regions Hospital
Renville County SWCD
Resource Training & Solutions
Rice County SWCD
Rice County District One Hospital
Rice Creek Watershed District
Rice Home Medical
Rice Memorial Hospital
River's Edge Hospital & Clinic
Sauk Centre Public Utilities
Scott County SWCD
Shakopee Public Utilities Commission
Sherburne County SWCD
Sleepy Eye Public Utilities
South Central Service Cooperative
South Country Health Alliance
South Metro Fire Department
South St. Louis County SWCD
South Washington Watershed District
Southern Minnesota Municipal Power Agency
Southwest Health & Human Services
Southwest Prairie Technical Service Area
Southwest Regional Development Commission
Spirit Mountain Recreation Area
Spring Lake Park Fire Department
St. Cloud Area Planning Organization
St. Cloud HRA
St. Cloud Metropolitan Transit Commission
St. Louis & Lake Counties Regional Railroad Authority
St. Michael's Hospital & Nursing Home
St. Paul Public Housing Agency
St. Paul Teachers Retirement Fund
State Fair
Stearns County SWCD
Steele County SWCD
Stevens SWCD
Sunnyside Care Center-Becker County
Sunrise Home - Two Harbors
Southwest Health and Human Services
Three Rivers Park District
Todd County SWCD
Traverse Des Sioux Library
Tri-County Community Corrections
United Hospital District
Upper Minnesota Valley Regional Development Commission
Utilities Plus
Veolia Environmental Services
Viking Library System
Virginia Public Utilities
Virginia Regional Medical Center
Wabasha County SWCD
Waseca-Le Sueur Regional Library
Washington County HRA
Washington County SWCD
Wells Public Utilities
West Hennepin County Public Safety
West Ottertail County SWCD
Western Lake Superior Sanitary District
Wild Rice Electric Coop
Wilkin County SWCD
Willmar Municipal Utilities
Windom Area Hospital
Worthington Regional Hospital

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MSRS Minnesota State Retirement System
MNDCP Minnesota Deferred Compensation Plan
HCSP Health Care Savings Plan

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