MSRS Minnesota State Retirement System

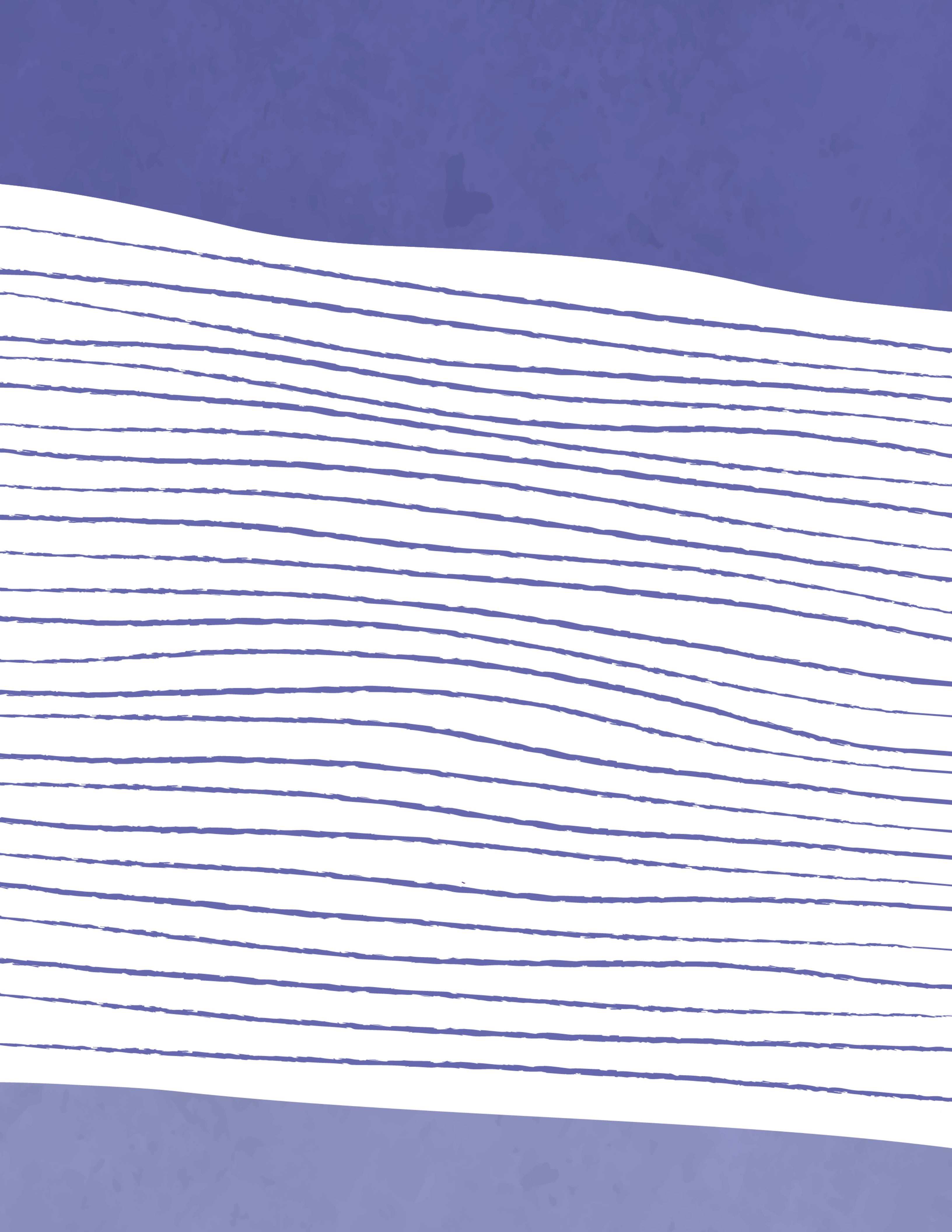
Annual Comprehensive

Financial Report

• For the Fiscal Year Ended June 30, 2022 •

Minnesota State Retirement System

Pension Trust Funds of the State of Minnesota



MSRS Minnesota State Retirement System

Annual Comprehensive Financial Report

For the Fiscal Year Ended June 30, 2022
Prepared by MSRS Finance and Executive Division Staff

Retirement Systems of Minnesota Building

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

Pension Trust Funds of the State of Minnesota

Executive Director, Erin Leonard

MSRS communications can be made available in alternative formats upon request.
Contact MSRS to obtain an alternate format.

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Introductory

Board Chairperson's Report

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

December 22, 2022

Dear Members, Benefit Recipients, and Employers:

While fiscal year 2022 brought some challenges, the plans of the Minnesota State Retirement Systems (MSRS) continue to be strong. After an exceptional investment return of 30.3 percent in fiscal year 2021, the past year has ended with an investment loss of 6.4 percent as of June 30, 2022. This is not a situation that MSRS alone experienced, as investment losses were seen worldwide. In spite of the loss, the funded status for MSRS' largest retirement plan, the State Employees Retirement Plan, was 98.5 percent based on fair value of assets. The results show that the MSRS Board's ongoing work to monitor and improve the MSRS plans continues to provide the stability to weather years when returns are disappointing.

This year also saw MSRS staff returning to the office after the minimal in-office staffing levels during the pandemic. While MSRS services to our members have been continuously accessible via phone or web conferencing, we recognize that many members prefer an in-person counseling experience, and it is exciting to be able to offer that option once again.

MSRS' fiduciary net position as of June 30, 2022, totaling over $29.0 billion, decreased 9.7 percent from the prior year as a result of investment losses. Total assets of almost $30.0 billion dropped 10.4 percent, while total liabilities also decreased by almost $336.0 million, or 25.6 percent, compared with our position on June 30, 2021. The Board monitors MSRS' financial position on an ongoing basis and reviews, identifies, and proposes proactive measures to ensure that MSRS provides financially secure retirement plans which pay promised retirement benefits now and in the future.

The MSRS Board remains committed to being a leader in public pension plan policy. We take our fiduciary duty very seriously, and strive to provide you with a secure, sustainable and reliable retirement plan. We truly appreciate your continued support.

Sincerely,

Mary Benner

Mary Benner, Chair
Board of Directors

Achievement Awards

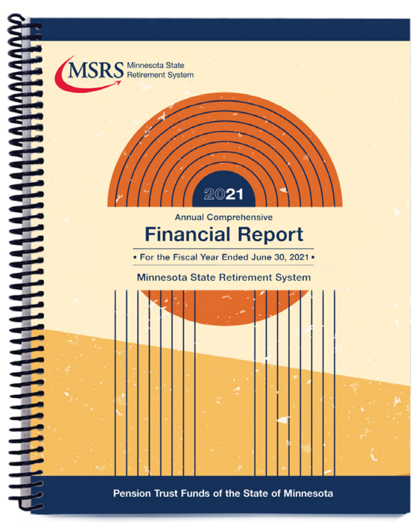
GFOA
Government Finance Officers Association

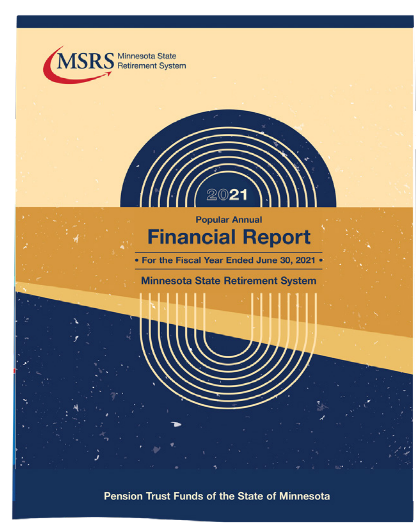
The Government Finance Officers Association (GFOA) recognizes public retirement systems that meet its rigorous reporting standards with its annual Certificate of Achievement for Excellence in Financial Reporting. It is the highest form of recognition for accounting and financial reporting in the public pension sector. MSRS received this award for our 2021 Annual Comprehensive Financial Report.

MSRS published its Popular Annual Financial Report in 2021 and was recognized by the GFOA with an award for Outstanding Achievement in Popular Annual Financial Reporting. This award recognizes conformance with the highest standards of creativity, presentation, understandability and reader appeal in government popular reports.

PPCC
Public Pension Coordinating Council

The Public Pension Coordinating Council (PPCC) recognized MSRS for meeting its professional standards for plan design, funding, member communications and administrative practices. The standards serve as a benchmark by which all public defined benefit plans are managed.





Letter of Transmittal

December 22, 2022

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 Annual Comprehensive Financial Report (ACFR) for the Minnesota State Retirement System (MSRS) for the fiscal year ended June 30, 2022, our 93rd year of operation.

Report Contents and Structure

This ACFR 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 the MSRS Finance Division staff under the direction of its Chief Financial Officer.

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 the MSRS website at www.msrs.state.mn.us/annual-reports-fy-2022.

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. 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, that financial records and reports are reliable, and that 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, 2022, 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 are presented in the *Financial Section* of this ACFR. The auditors reported no material weaknesses in our internal controls.

Letter of Transmittal

The *Financial Section* of this report also contains *Management's Discussion and Analysis*. This narrative presents financial highlights and an overview of the MSRS financial statements for fiscal year 2022, along with an analysis the MSRS defined benefit and defined contribution retirement funds. This letter of transmittal complements *Management's Discussion and Analysis* and these items should be read together. 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 Annual Comprehensive Financial Report. This report is available online at www.mn.gov/mmb/accounting/reports.

About MSRS Funds

MSRS administers five defined benefit and four defined contribution funds. The fiduciary net position (total assets minus total liabilities) of these funds that is reserved for payments of pension benefits is over $29.0 billion as of June 30, 2022.

For the defined benefit funds, MSRS serves 56,908 active employees from 15 employers and component units, 52,661 benefit recipients, and 31,298 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 over $18.4 billion as of June 30, 2022.

Alternatively, for the defined contribution funds, member participation and financial position as of June 30, 2022, varied significantly among the funds. MSRS serves 97,567 participants in the Minnesota Deferred Compensation Fund with a fiduciary net position totaling almost $8.5 billion. The Health Care Savings Fund has 151,572 participants and a fiduciary net position of almost $1.6 billion. The Unclassified Employees Retirement Fund has 3,404 participants with a fiduciary net position of nearly $334.0 million. Finally, the Supplemental Retirement Fund for Hennepin County has 976 participants with a fiduciary net position of $156.2 million.

Major Initiatives

Fiscal year 2022 accomplishments included additional progress in talent management, service delivery, participant success and financial sustainability strategic initiatives. These accomplishments contributed to MSRS fulfilling its mission of *empowering Minnesota public employees to build a strong foundation for retirement.* The year also included MSRS kicking off new strategic projects that will carry into the future. Accomplishments and goals are highlighted in the columns that follow.

Talent Management. MSRS had several fiscal year 2022 strategic accomplishments in talent management. Successes included:

- Developing and tracking individual goals as part of the annual performance review process; and
- Ensuring that 100 percent of required licenses and certifications remained current.

Service Delivery. Fiscal year 2022 service delivery successes included:

- Implementing electronic claims submission for the Health Care Savings Plan;
- Completing a continuous improvement evaluation of the defined benefit eligibility process;
- Making significant progress toward our goal of mailing estimates out within 7 days of request; and
- Moving to a fully hybrid work environment to provide both flexibility for staff and service to our members in the format that works for them.

Participant Success. Participant success achievements in fiscal year 2022 included:

- Standardizing best practices for counseling and other customer experiences;
- Enhancing our front-end scanning process;
- Implementing mid-career employee seminars; and
- Meeting our goal of increasing ongoing contributions to MNDCP by 2% per year.

Financial Sustainability. MSRS also had fiscal year 2022 strategic successes in financial sustainability. Accomplishments included:

- Implementing a risk management program; and
- Ensuring that our defined benefit retirement funds were projected to reach full funding withing the amortization period and were collecting sufficient contributions.

Letter of Transmittal

MSRS fiscal year 2023 goals continue to be based on the MSRS Strategic Plan categories of talent management, service delivery, participant success and financial sustainability.

Specific fiscal year 2023 objectives within talent management include:

- Completing a biennial employee engagement survey;
- Focusing on Diversity, Equity, Inclusion & Belonging (DEIB) by hiring a DEIB coordinator and completing cultural competency training;
- Having a 90 percent or more retention rate of staff within their first five years of service; and
- Expanding training through the University of MSRS and refreshing Strengths Finder training for all staff.

Fiscal year 2023 projects within service delivery include:

- Implementing and business intelligence tool;
- Performing accessibility policy development, including training and support to convert existing documents; and
- Initiating a call back feature for service center phone calls.

Participant success is a strategic objective with a goal of increasing retirement readiness of Minnesota public employees. Fiscal year 2023 projects for participant success include:

- Refining best practices for counseling and other customer experiences;
- Launching a customer relationship management system; and
- Implementing new employee seminars.

Finally, objectives in fiscal year 2023 for financial sustainability include:

- Creating financial reporting, risk management, investment and actuarial dashboards; and
- Reissuing unclaimed benefit checks to members, beneficiaries or estates routinely.

Financial Information

MSRS prepares its financial statements in accordance with generally accepted accounting principles promulgated by the Governmental Accounting Standards Board (GASB). Transactions are reported on the accrual basis of accounting. Contributions from members and employers 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 our accounting system, Microsoft Dynamics GP, and interfaced with the Statewide Integrated Financial Tools system under the oversight of the department of Minnesota Management and Budget.

Exhibit 1 is a comparative summary of total additions and total deductions that determine the change in fiduciary net position for the MSRS defined benefit and defined contribution funds for the fiscal years ended June 30, 2022, and 2021. 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 6.4 percent investment loss in fiscal year 2022, MSRS realized a reduction of over $3.1 billion in the fiduciary net position for all MSRS pension trust funds for fiscal year 2022. This amount includes a decrease of $1.8 billion for the MSRS defined benefit funds and a decrease of $1.3 billion for its defined contribution funds.

Letter of Transmittal

Exhibit 1: Summary Statement of Changes in Fiduciary Net Position for all MSRS Pension Trust Funds

For the Fiscal Years Ended June 30, 2022 and 2021

(Dollars in thousands)

	Defined Benefit Funds		Defined Contribution Funds	
Source	**FY 2022**	**FY 2021**	**FY 2022**	**FY 2021**
Total Additions	$(624,701)	$5,334,760	$(620,201)	$2,937,689
Total Deductions	1,189,482	1,132,809	693,926	589,381
Net Increase (Decrease) in Net Position	$(1,814,183)	$4,201,951	$(1,314,127)	$2,348,308
Fiduciary Net Position - beginning of year	20,255,506	16,053,555	11,875,075	9,526,767
Fiduciary Net Position - end of year	**$18,441,323**	**$20,255,506**	**$10,560,948**	**$11,875,075**

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 2022.

The first set of actuarial valuations is 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 the MSRS defined benefit retirement plans are detailed in the *Actuarial Section* of this report.

The second 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. More detail regarding these financial reporting actuarial valuations may be found in the *Notes to the Financial Statements* in the *Financial Section* of this ACFR.

Retirement Plan Funding Status

The traditional funding actuarial valuations for each defined benefit fund measure current costs and contribution requirements to determine how much members and employers should contribute to maintain appropriate funding levels to pay future benefits. These 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.

Exhibit 2 on the next page highlights the actuarial value of assets, actuarial accrued liability, funded ratio and the contribution sufficiency or 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, 2022.

For three of the four largest defined benefit retirement funds, the funded ratio (determined on an actuarial value of assets basis) as of the July 1, 2022, valuation date, improved in comparison to the funded ratio as of July 1, 2021. This improvement can be attributed to the large investment gains from the previous year that are partially recognized in subsequent years. For each of the four largest defined benefit retirement funds the contribution sufficiency as of the July 1, 2022, valuation date, increased in comparison to the contribution sufficiency as of July 1, 2021, again due to investment returns in the previous fiscal year. The Legislators fund has no assets, so continues to be unfunded. Please refer to *Management's Discussion and Analysis* in the *Financial Section* for additional actuarial valuation details.

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.

Exhibit 2: Highlights of the 2022 Actuarial Valuations
(Dollars in thousands)

Defined Benefit Retirement Fund	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	Contribution Sufficiency/ (Deficiency)
State Employees	$16,045,475	$16,068,758	99.86 %	3.92 %
State Patrol	897,216	1,067,605	84.04	12.38
Correctional Employees	1,498,885	1,878,449	79.79	4.18
Judges	257,514	403,368	63.84	5.54
Legislators (1)	0	165,961	0.00	$(42,342)

(1) The Legislators Fund is closed to new hires and is funded on a pay-as-you-go basis by annual appropriations from the State's general fund. The deficiency is expressed as an annual dollar amount rather than a percent of payroll.

Investment Results

In accordance with the Minnesota Constitution, the State Board of Investment (SBI) invests the assets of the MSRS funds. The Board includes the Governor, Attorney General, Secretary of State and State Auditor. 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 analysis of the funds under its control.

MSRS does not own specific securities, but instead owns shares in various pools invested by the SBI. The Combined Funds, which represent all defined benefit pension assets under the SBI's control, reported a 6.4 percent loss (net of fees) for the 2022 fiscal year. The Combined Funds generated a 9.4 percent return (net of fees) when annualized over the latest ten-year period, outperforming a composite market index by 0.3 percentage points.

During fiscal year 2022, the Combined Funds public equity investments, which include domestic, international, and global equities, reported a 15.5 percent loss (net of fees), still performing better than its benchmarks, the Russell 3000 and the Morgan Stanley Capital International All Country World Index excluding USA, by 0.1 percentage point. The Combined Funds fixed income investments, which include core bonds, return seeking fixed income, treasury protection, and laddered bonds, returned a loss of 10.5 percent for fiscal year 2022, 1.0 percentage points worse than benchmarks. Invested Private markets reported a gain of 24.8 percent in fiscal year 2022.

Please refer to the *Investment Section* for additional details on the investment results of the largest MSRS defined benefit retirement funds for fiscal year 2022.

Exhibit 3: Combined Funds Asset Mix & Market Indices

Investment Type	Target Allocation
Public Equity	50 %
Russell 3000, Morgan Stanley Capital International All Country World Index ex-US	
Fixed Income	25
Bloomberg Barclays U.S. Aggregate Index, Bloomberg Barclays Treasury 5+ Years Index, ICE BofA US 3 Month Treasury Bill	
Private Markets	25
Private Markets	

Letter of Transmittal

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 annual comprehensive financial report for the fiscal year ended June 30, 2021. This was the thirteenth 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 annual comprehensive financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. We believe our current ACFR 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.

In addition, the GFOA has given an Award for Outstanding Achievement in Popular Annual Financial Reporting to MSRS for its Popular Annual Financial Report for the fiscal year ended June 30, 2021. This was the fourth consecutive year MSRS received the award. The award is valid for one year. The Award for Outstanding Achievement in Popular Annual Financial Reporting is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government popular reports. In order to receive an Award for Outstanding Achievement in Popular Annual Financial Reporting, a government unit must publish a Popular Annual Financial Report, whose contents conform to program standards of creativity, presentation, understandability, and reader appeal.

We are also very pleased to report that MSRS received the Public Pension Coordinating Council's (PPCC) Public Pension Standards 2022 Award, in recognition of meeting professional standards for plan funding and 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 seventeen years. MSRS is proud to be a recipient of this award.

Acknowledgments

As the MSRS Chief Financial Officer, I wish to express my utmost appreciation to the team who have partnered with me to produce this ACFR including: Financial Reporting and Risk Management Director, Cheryl Jahnke; Accounting Director, Doris Hall; Accounting Officer, Jason White; and the entire MSRS Finance Division. It is always a pleasure to work with this team each year to complete our MSRS ACFR together.

We would also like to thank the Board of Directors for your continued dedication to create funding policies and advocate for legislation that preserves our defined benefits plans. We are grateful for your commitment to advance initiatives to allow us to administer financially secure retirement plans, a low-cost deferred compensation plan and a tax-free health savings plan.

Finally, we would like to recognize all of the staff at MSRS for their dedication to MSRS members during another challenging year. Their adaptability and resiliency directly contributed to MSRS fulfilling its mission of *empowering Minnesota public employees to build a strong foundation for retirement.*

Respectfully submitted,

Erin Leonard
Executive Director

Tim Rekow, CPA
Chief Financial Officer

MSRS Board of Directors, Management, and Consultants

As of June 30, 2022

MSRS Board of Directors

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

Mary Benner, Chair
Appointed by Governor
Term expires: January 2, 2023

Wesley Skoglund, Vice Chair
Elected by retirees of all plans
Term expires: May 1, 2024

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

Jim Schowalter, Commissioner of Minnesota Management & Budget
Appointed by Governor
Term expires: January 2, 2023

Daniel R. Gorman
Elected by Correctional Plan membership
Term expires: May 1, 2024

Chester Jorgenson
Elected by General & Unclassified Plans membership
Term expires: May 1, 2026

Michael LeDoux
Elected by State Patrol Plan membership
Term expires: May 1, 2026

Michael Roelofs
Appointed by Governor
Term expires: January 6, 2025

Michael Schweyen
Elected by General & Unclassified Plans membership
Term expires: May 1, 2024

Joseph Sullivan
Elected by General & Unclassified Plans membership
Term expires: May 1, 2024

Jacqueline Terry
Elected by General & Unclassified Plans membership
Term expires: May 1, 2026

Executive Management

Executive Director:
Erin Leonard

Chief Financial Officer:
Tim Rekow

Chief Benefits Officer - External:
Mark Manion

Chief Benefits Officer - Internal:
Linda Henderson

Chief Information Officer:
Kurt Augustin

Consultants

Actuary:
Gabriel Roeder Smith & Company

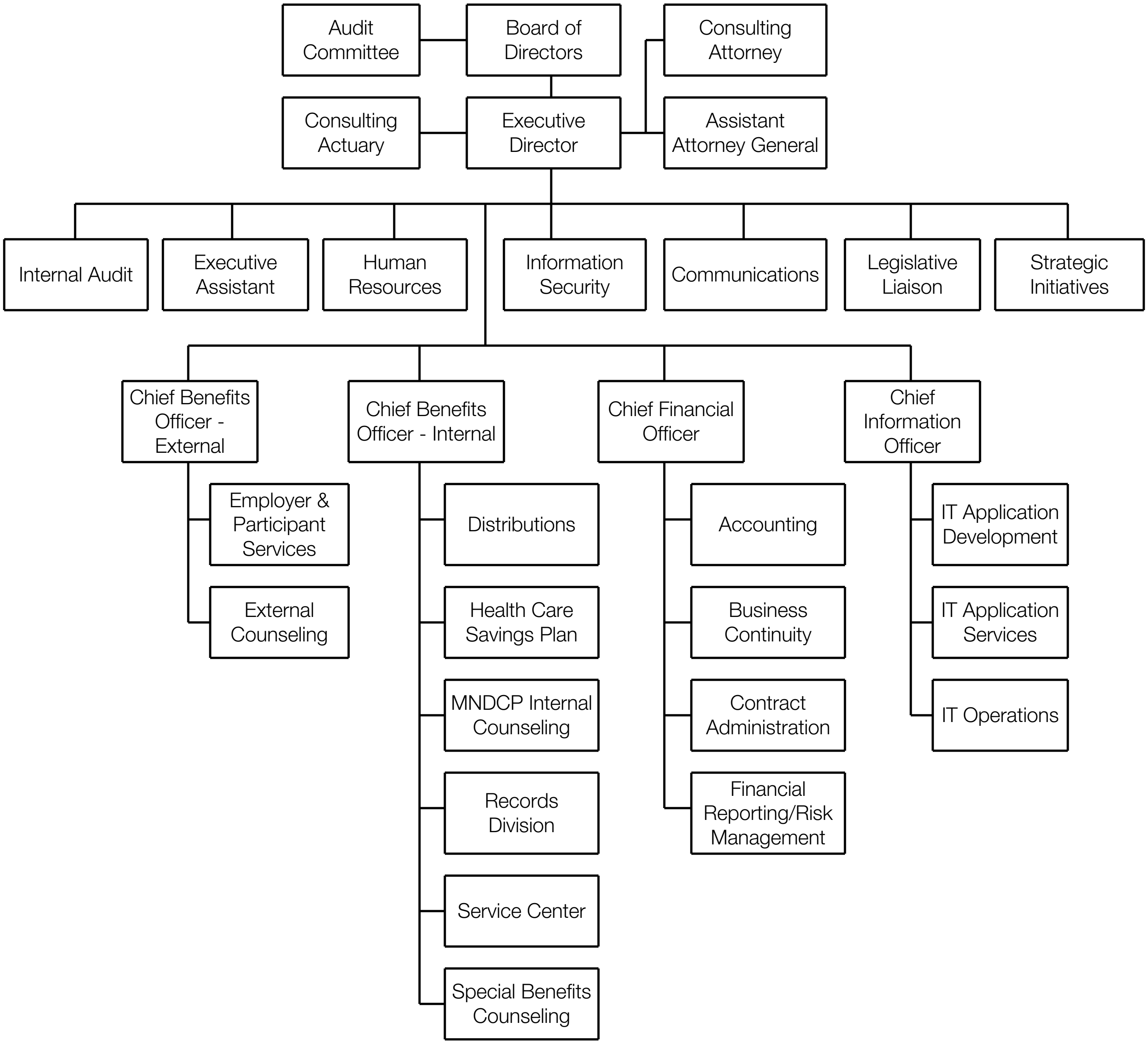
Legal Counsel:
Kathleen Reitz, Assistant Attorney General

Medical Advisor:
MMRO - Managed Medical Review Organization

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 the MSRS share of their fees is included on page 122 of the *Investment Section*.

Organization Chart

As of June 30, 2022



Mission Statement

We empower Minnesota public employees to build a strong foundation for retirement.

The vision of MSRS is to be a nationally recognized leader in public retirement plans by leveraging our engaged workforce, customer-focused culture and innovative technologies to promote sustainable retirement options for Minnesota public employees.

Summary of Plan Provisions - Defined Benefit Plans

The following table is a summary of the major plan provisions for the 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, and provide general information only. Plan provisions specific to the MSRS defined contribution plans follow this section.

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 who elect coverage within 90 days of employment • **Transportation Pilots:** Pilots and chief pilots employed by the Minnesota Department of Transportation who elected coverage before June 1, 2008. All current pilots began employment after 2008, therefore this is a closed plan. • **Fire Marshals:** Employees of the State Fire Marshal Division of the Minnesota Department of Public Safety who are employed as a deputy state fire marshal or fire/arson investigator, and who elect coverage within 90 days of employment	• State troopers, conservation officers, Department of Commerce fraud investigators, members of the Department of Corrections fugitive apprehension unit, and certain crime bureau and gambling enforcement agents
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

Summary of Plan Provisions - Defined Benefit Plans

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS
STATUTORY OR LEGAL REFERENCES:		
Minn. Stat. §352.90 - 352.955	Minn. Stat. §490	Minn. Stat. §3A
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 Tier 1 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. Legislators elected after this date are covered by the Unclassified Employees Retirement Plan.
VESTING:		
Members hired before July 1, 2010: • 100 percent vested after three years of allowable service **Members hired after June 30, 2010:** • Graded vesting, 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

Continued on next page

Summary of Plan Provisions - Defined Benefit Plans

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
CONTRIBUTION RATES:		
• **Employee:** 6.0 percent of salary • **Employer:** 6.25 percent of salary • Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h).	**Military Affairs:** • Employee: 7.6 percent of salary • Employer: 7.85 percent of salary **Transportation Pilots:** • There are no active, contributing transportation pilots. **Deputy Fire Marshals:** • Employee: 8.78 percent of salary • Employer: 10.45 percent of salary	• **Employee:** 15.4 percent of salary • **Employer:** 23.1 percent of salary • **Supplemental Contribution:** An employer contribution of 7.0 percent remains in effect until the plan is 100 percent funded. • **Supplemental Aid:** $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, or until July 1, 2048, whichever is earlier. • Employee contributions are "picked up" according to the provisions of Internal Revenue Code 414(h).
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, 4.0 percent until June 30, 2018, and 3.0 percent thereafter.	• Same as General Employees	• Same as General Employees

Summary of Plan Provisions - Defined Benefit Plans

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS
CONTRIBUTION RATES:		
• **Employee:** 9.6 percent of salary • **Employer:** 14.4 percent of salary • **Supplemental Contribution:** A supplemental employer contribution of 4.45 percent remains in effect until the plan is 100 percent funded. • 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 $6 million is paid to the fund annually until the plan is fully funded, or until July 1, 2048, whichever is earlier.	• **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).
REFUNDS:		
• Same as General Employees	• Same as General Employees	• Same as General Employees

Continued on next page

Summary of Plan Provisions - Defined Benefit Plans

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 • Reduced benefits at age 55 • Full retirement benefits if age plus years of service total 90 or more (Rule of 90) • 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:** • All pilots have retired. **For vested Fire Marshals:** • Full retirement benefits at age 55	**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 annuity 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

Summary of Plan Provisions - Defined Benefit Plans

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

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Summary of Plan Provisions - Defined Benefit Plans

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 high-five average salary for the first 10 years of allowable service, then 1.7 percent of high-five average salary for each subsequent year. The 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. **OR** (b) 1.7 percent of high-five average salary for each year of allowable service, with benefit reduced for each month the member is under age 65. • There is no benefit reduction if the member's age plus years of allowable service total 90 or more. **Employees hired after June 30, 1989:** • 1.7 percent of high-five average salary for each year of allowable service. The 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.	**Military Affairs:** • Same as General Employees **Transportation Pilots:** • Same as General Employees **Deputy Fire Marshals:** • 2.0 percent of high-five average salary for each year of allowable service	• 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.

Summary of Plan Provisions - Defined Benefit Plans

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS
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, then 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, then 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, then 2.5 percent for subsequent years **Legislators elected after December 31, 1978:** • 2.5 percent of high-five average salary

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Summary of Plan Provisions - Defined Benefit Plans

GENERAL EMPLOYEES	MILITARY AFFAIRS, TRANSPORTATION PILOTS, AND FIRE MARSHALS	STATE PATROL
POST-RETIREMENT BENEFIT INCREASES:		
• Benefit recipients receive annual 1.0 percent benefit increases on January 1. • Annual benefit increases will change to 1.5 percent per year beginning on January 1, 2024. • 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.
SURVIVOR BENEFITS:		
• If a member dies while still an active employee, the spouse is eligible for a refund or for a 100 percent survivor annuity if: (a) The member was hired prior to July 1, 2010, and had at least three years of service at death, **OR** (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, **OR** (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.

Summary of Plan Provisions - Defined Benefit Plans

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS
POST-RETIREMENT BENEFIT INCREASES:		
• Benefit recipients receive a 1.5 percent benefit increase on January 1.	• Benefit recipients receive a 1.5 percent benefit increase on January 1.	• Same as General Employees
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 **OR** (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.

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Summary of Plan Provisions - Defined Benefit Plans

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 **<u>OR</u>** (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:** • Unable to perform job duties due to injury, sickness, or other disability **Calculation:** • **Military Affairs:** Same as General Employees • **Pilots:** All pilots have retired. • **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.

Summary of Plan Provisions - Defined Benefit Plans

CORRECTIONAL EMPLOYEES	JUDGES	LEGISLATORS
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 of 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

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Summary of Plan Provisions - Defined Contribution Plans

The following table is a summary of the major plan provisions for the MSRS defined contribution retirement plans. Plan provisions specific to the MSRS defined benefit plans precede 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	• Minn. Stat. §352.98 • The trust is exempt from federal income tax through Private Letter Ruling.
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: 6.0 percent of salary • Employer: 6.25 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 reimbursement limit in 2022 is $37,000 for non-insurance premium, qualified health care expenses.
INVESTMENT OPTIONS:	
• The SBI Supplemental Investment Fund Stable Value Fund and Money Market Fund • Target Date Retirement Funds managed by State Street Global Advisors • Various retail mutual funds contracted by the Minnesota State Board of Investment (SBI)	• The SBI Supplemental Investment Fund Stable Value Fund and Money Market Fund • Various retail mutual funds contracted by the Minnesota State Board of Investment (SBI)

Summary of Plan Provisions - Defined Contribution Plans

MN DEFERRED COMPENSATION	HENNEPIN COUNTY SUPPLEMENTAL
STATUTORY OR LEGAL REFERENCES:	
• Minn. Stat. §352.965 - 352.97 • IRC Section 457(b) Plan	• Minn. Stat. §383B.46 - 383B.52 • Non-qualified Plan
COVERAGE:	
• Optional for all state employees and political subdivision employees	• Optional for employees of Hennepin County, MN, 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 2022 IRS contribution limit of $20,500 for members under 50 years old, $27,000 for members over 50	• **Employee:** 1.0 percent of salary • **Employer:** 1.0 percent of salary
BENEFITS:	
• Account balance	• Account balance
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 Stable Value Fund and Money Market Fund • Target Date Retirement Funds managed by State Street Global Advisors	• The SBI Supplemental Investment Fund Money Market Fund • Various retail mutual funds contracted by the Minnesota State Board of Investment (SBI)

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Summary of Plan Provisions - Defined Contribution Plans

UNCLASSIFIED EMPLOYEES	HEALTH CARE SAVINGS
ADMINISTRATIVE FEES:	
• $2 per month for an account balance of $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 to the fund after July 1, 1992. Prior to this date, 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 annuity with a bounce- back feature • 15-Year Certain and Life Thereafter	• Reimbursements for 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.
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 in their first year of employment in the Unclassified Plan, or if they have ten or more years of service. • Employees appointed after June 30, 2010, may elect to be covered by the General Plan within seven years of their appointment.	• Not applicable

Summary of Plan Provisions - Defined Contribution Plans

MN DEFERRED COMPENSATION	HENNEPIN COUNTY SUPPLEMENTAL
ADMINISTRATIVE FEES:	
• 0.10 percent of participant's account balance, prorated and deducted from participant accounts on a monthly basis • Maximum annual fee: $125 • $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	• 0.05 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 72.	• Lump-sum • Monthly withdrawals for five years • Annual withdrawals for five years
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*.
ANNUITY AND DISABILITY OPTIONS FOR EMPLOYEES ELECTING COVERAGE IN GENERAL EMPLOYEES RETIREMENT PLAN:	
• Not applicable	• Not applicable

Financial

OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA • Judy Randall, 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 Audit of the Financial Statements

Opinion

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, 2022, 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.

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, 2022, and the changes in financial position for the fiscal year then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

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. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of MSRS and to meet our ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

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Independent Auditor's Report

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about MSRS's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level assurance but is not absolute assurance and therefor is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatements of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 MSRS's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions of events, considered in the aggregate, that raise substantial doubt about MSRS's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

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 is the responsibility of management and, 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.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The supporting schedules, including the Supplementary Schedules and the Government Accounting Standards Board, Statement No. 68, *Supplemental Employer Schedules*, in the Financial Section, 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. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has 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 information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Introductory, Investment, Actuarial, and Statistical Sections, as listed in the Table of Contents, but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

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

Lori Leysen, CPA
Deputy Legislative Auditor

Jordan Bjonfald, CPA
Audit Director

December 21, 2022
Saint Paul, Minnesota

Management's Discussion and Analysis

We, the management of the Minnesota State Retirement System (MSRS), present this discussion and analysis of the financial activities of MSRS for the fiscal year ended June 30, 2022. We encourage you to read the information contained in this narrative in conjunction with the Letter of Transmittal that begins on page 10, the financial statements with explanatory notes, and required supplementary information contained in this section of the Annual Comprehensive Financial Report (ACFR).

Financial Highlights

Overall, the economic climate affected MSRS in much the same way it did others across the country in fiscal year 2022. MSRS' fiduciary net position for all pension trust funds decreased almost $3.13 billion, or 9.74 percent, from $32.13 billion as of June 30, 2021, to just over $29.00 billion as of June 30, 2022.

For the MSRS defined benefit retirement funds, the investment rate of return, net of fees, decreased from an impressive 30.30 percent in 2021 to a 6.40 percent loss in 2022. This is lower than the assumed rate of return of 7.50 percent used in the annual actuarial valuations, and slightly below the (6.30) percent benchmark the State Board of Investment uses for the Combined Funds.

For the MSRS defined contribution retirement funds, investment performance varied depending upon the types of assets held in the portfolios of plan participants. The fiscal year 2022 rates of return ranged from a low of a negative 23.20 percent for the T. Rowe Price Small Cap Equity Fund to a high of 1.80 percent for the Stable Value Fund within the Supplemental Investment Fund.

Total additions to all MSRS pension trust funds dropped almost $9.52 billion, or 115.05 percent, during fiscal year 2022, from over $8.27 billion for fiscal year 2021 to $(1.24) billion for fiscal year 2022. This decrease reflects the change in investment return, from 30.30 percent in 2021 to (6.40) percent in 2022.

Total deductions from all MSRS pension trust funds increased almost $161.22 million, or 9.36 percent, from over $1.72 billion for fiscal year 2021 to more than $1.88 billion for fiscal year 2022. The change was due in part to defined benefit annuity payments, which grew $50.84 million, or 4.61 percent, resulting from annual post-retirement benefit increases for retirees, as well as growth in the number of retirees. In addition, plan member refunds, which can fluctuate based on the economic climate, increased $76.36 million, or 19.42 percent.

On an actuarial valuation of assets basis, where gains or losses are smoothed over a five year period, MSRS' largest defined benefit retirement fund, the State Employees Retirement Fund, still reflects some of the substantial investment income from the previous year. The fund was 99.86 percent funded as of the July 1, 2022, valuation date, in comparison to 97.13 percent funded as of July 1, 2021. On a fair value of assets basis, where gains are not smoothed, this fund was 98.51 percent funded based on the 2022 actuarial valuation, a decrease from the 111.46 percent funded ratio reported as of the 2021 actuarial valuation. This decrease can be attributed to the investment loss of 6.40 percent, compared to the assumed 7.50 percent return.

Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 actuarial valuation results indicated that on June 30, 2022, the governmental employers participating in the State Employees Retirement Fund incurred a net pension liability of $1.64 billion, a $1.56 billion increase from the net pension liability of the previous year. The fiduciary net position as a percentage of the total pension liability was 90.60 percent, a decrease of 8.93 percent over the 99.53 percent ratio as of June 30, 2021. These changes are due to the significant drop in plan fiduciary net position as a result of investment losses during the fiscal year.

Management's Discussion and Analysis

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 Fund, the Health Care Savings Fund, the Minnesota Deferred Compensation Fund and the Hennepin County Supplemental Retirement Fund. All of these pension trust funds are fiduciary funds for governmental accounting and financial reporting purposes.

This ACFR includes two basic financial statements for the MSRS pension trust funds: the *Statement of Fiduciary Net Position* and the *Statement of Changes in Fiduciary Net Position*.

Consistent with Minnesota Statutes, Chapter 356.20, the purpose of these financial statements, along with the accompanying *Notes to the Financial Statements* and *Required Supplementary Information*, is to present the financial position and results of MSRS operations to our membership, participating employers, and other financial statements users. This ACFR 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 and 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 the MSRS pension trust funds on June 30, the last day of the 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 the sum of total liabilities is net position restricted for pensions. This amount is available for payment of future pension benefits or other obligations. Comparisons of total assets, total liabilities, and net position restricted for pensions as of June 30, 2022, and 2021, are depicted in the table below.

Summary Statement of Fiduciary Net Position - All MSRS Pension Trust Funds

As of June 30, 2022 and 2021

(Dollars in thousands)

	FY 2022	FY 2021	Change	Percent Change
Total Assets	$29,980,421	$33,444,696	$(3,464,275)	(10.36) %
Total Liabilities	978,150	1,314,115	(335,965)	(25.57)
Net Position Restricted for Pensions	**$29,002,271**	**$32,130,581**	**$(3,128,310)**	**(9.74) %**

Total assets as of June 30, 2022, totaling over $29.98 billion, decreased over $3.46 billion, or 10.36 percent, from the prior year. This decline can be attributed to a drop in investment returns for fiscal year 2022, which resulted in an investment loss for the year, net of fees, of almost $2.45 billion.

Total liabilities of $978.15 million as of June 30, 2022, decreased just over $335.96 million, or 25.57 percent, from the prior year. This is largely due to a decrease of $337.89 million in security lending cash collateral, driven by changes in the marketplace. A corresponding securities lending cash collateral asset is also recorded in the financial statements.

This fiscal year, the decrease in the net position restricted for pensions was nearly $3.13 billion, or 9.74 percent. This decrease was mostly due to investment loss resulting from the (6.40) percent investment return for fiscal year 2022, a drop from the 30.30 percent return recognized in fiscal year 2021.

MSRS had no deferred outflows or inflows of resources as of June 30, 2022.

Management's Discussion and Analysis

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, 2022, and 2021, are depicted below.

Summary Statement of Changes in Fiduciary Net Position – All MSRS Pension Trust Funds

For the Fiscal Years Ended June 30, 2022 and 2021

(Dollars in thousands)

	FY 2022	FY 2021	Change	Percent Change
Additions (by Major Source)				
Plan Member Contributions	$817,025	$762,464	$54,561	7.16 %
Employer Contributions	328,984	299,452	29,532	9.86
Investment Income (Net)	(2,447,712)	7,152,042	(9,599,754)	(134.22)
Other	56,801	58,491	(1,690)	(2.89)
Total Additions	**$(1,244,902)**	**$8,272,449**	**$(9,517,351)**	**(115.05) %**
Deductions (by Type)				
Benefits, Withdrawals and Reimbursements	$1,348,327	$1,261,730	$86,597	6.86 %
Refunds	469,587	393,224	76,363	19.42
Recordkeeper Expenses	3,884	3,715	169	4.55
Administrative Expenses	19,488	20,102	(614)	(3.06)
Other	42,122	43,419	(1,297)	(2.99)
Total Deductions	**$1,883,408**	**$1,722,190**	**$161,218**	**9.36 %**
Net Increase (Decrease) in Net Position Restricted for Pensions	**$(3,128,310)**	**$6,550,259**	**$(9,678,569)**	**(147.76) %**

Total additions decreased 115.05 percent, almost $9.52 billion, to $(1.24) billion. This decrease was primarily due to investment losses in fiscal 2022, compared to significant investment income in the previous fiscal year. Total plan member and employer contributions offset a minimal amount of the investment loss, increasing $84.09 million, or 7.92 percent, for fiscal year 2022. The change was caused by increases in employer contribution rates in two defined benefit retirement funds during fiscal year 2022, as well as increase in the number of active, contributing members in a number of funds.

Total deductions increased almost $161.22 million, or 9.36 percent, from just over $1.72 billion in fiscal year 2021 to over $1.88 billion in fiscal year 2022. This change was largely due to an increase in annuity benefits and refunds. Increases in annuity benefits are the result of post-retirement benefit increases in all funds. On January 1, 2022, retirees in the State Employees, State Patrol, and Legislators Retirement Funds received annual post-retirement benefit increases of 1.00 percent. Eligible members in the Correctional Employees Retirement Fund received a 1.50 percent annual post-retirement benefit increase, and retirees in the Judges Retirement Fund received a 1.75 percent annual post-retirement benefit increase. Growth in the number of benefit recipients in the defined benefit funds, from 51,030 as of June 30, 2021, to 52,661 as of June 30, 2022, also played a role in the increase in deductions.

Management's Discussion and Analysis

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

1. Description of Organization and Plans - This section describes MSRS as an organization, including key membership, contribution, and benefit or distribution provisions for each of its retirement funds.
2. Summary of Significant Accounting Policies - This section provides a summary of significant accounting policies, including the basis of financial statement presentation and accounting methods 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.
3. Deposits and Investments - This section provides information about cash deposits and MSRS investments, including risks and fair value reporting.
4. Capital Assets - This section of the notes provides information about capital assets, including balances, additions, and depreciation.
5. Liabilities - This section provides information about certain liabilities reflected in the *Statement of Fiduciary Net Position*.
6. Net Pension Liability of Participating Employers - This section provides information about the net pension liability of the employers participating in the MSRS retirement plans.

Required Supplementary Information (RSI) consists of three schedules with related notes.

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

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 nine years is presented. Additional yearly data will be displayed as it becomes available. The presentation of multi-year data is designed to provide economic context regarding amounts reported in the financial statements and to provide historical context for each pension fund'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 *Schedule of Payments to Consultants* and the *Schedule of Investment Expenses*. These schedules summarize the operating expenses MSRS incurred during fiscal year 2022 to administer its defined benefit and defined contribution retirement funds.

GASB Statements No. 67 and No. 68 require two schedules which MSRS includes in the *Financial Section* of this report: a *Schedule of Employer Allocations* for our cost-sharing pension funds (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 funds to report in their own financial statements.

Financial Analysis of the MSRS Funds

Each of the 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 shared investment pools. The following pages highlight events or conditions that had a significant effect on each fund's financial position or results of operations during fiscal year 2022.

Analysis of the Defined Benefit Funds

The following two tables compare various performance measures to the previous fiscal year for the four largest MSRS defined benefit retirement funds. The Legislators Retirement Fund has been closed to new membership since July 1, 1997. Funding is primarily by annual General Fund appropriation from the State of Minnesota, and therefore the Legislators Retirement Fund is not included in these tables.

Summary Statement of Fiduciary Net Position – MSRS Defined Benefit Funds

For the Fiscal Years Ended June 30, 2022 and 2021

(Dollars in thousands)

	State Employees	State Patrol	Correctional Employees	Judges
Total Assets, as of 06/30/2022	$16,655,889	$929,654	$1,553,040	$267,269
Total Assets, as of 06/30/2021	18,560,104	1,019,196	1,683,442	294,368
Change in Total Assets	$(1,904,215)	$(89,542)	$(130,402)	$(27,099)
Percentage Change	(10.26) %	(8.79) %	(7.75) %	(9.21) %
Total Liabilities, as of 06/30/2022	$826,039	$46,073	$79,119	$13,298
Total Liabilities, as of 06/30/2021	1,120,053	61,332	102,489	17,730
Change in Total Liabilities	$(294,014)	$(15,259)	$(23,370)	$(4,432)
Percentage Change	(26.25) %	(24.88) %	(22.80) %	(25.00) %
Total Net Position Restricted for Pensions, as of 06/30/2022	$15,829,850	$883,581	$1,473,921	$253,971
Total Net Position Restricted for Pensions, as of 06/30/2021	17,440,051	957,864	1,580,953	276,638
Change in Net Position Restricted for Pensions	$(1,610,201)	$(74,283)	$(107,032)	$(22,667)
Percentage Change	(9.23) %	(7.76) %	(6.77) %	(8.19) %

Management's Discussion and Analysis

Summary Statement of Changes in Fiduciary Net Position – MSRS Defined Benefit Funds

For the Fiscal Years Ended June 30, 2022 and 2021

(Dollars in thousands)

	State Employees	State Patrol	Correctional Employees	Judges
Total Additions, year ended 06/30/2022	$(613,520)	$(9,587)	$(15,778)	$5,440
Total Additions, year ended 06/30/2021	4,533,007	263,688	442,333	87,016
Change in Total Additions	$(5,146,527)	$(273,275)	$(458,111)	$(81,576)
Percentage Change	(113.53) %	(103.64) %	(103.57) %	(93.75) %
Total Deductions, year ended 06/30/2022	$996,681	$64,696	$91,254	$28,107
Total Deductions, year ended 06/30/2021	948,647	63,414	84,917	27,115
Change in Total Deductions	$48,034	$1,282	$6,337	$992
Percentage Change	5.06 %	2.02 %	7.46 %	3.66 %
Net Increase (Decrease) for the fiscal year ended 06/30/2022	$(1,610,201)	$(74,283)	$(107,032)	$(22,667)
Net Increase (Decrease) for the fiscal year ended 06/30/2021	3,584,360	200,274	357,416	59,901
Change in Net Increase (Decrease) of Net Position Restricted for Pensions	$(5,194,561)	$(274,557)	$(464,448)	$(82,568)
Percentage Change	(144.92) %	(137.09) %	(129.95) %	(137.84) %

State Employees Retirement Fund

Fiduciary Net Position Restricted for Pensions for the State Employees Retirement Fund, the largest MSRS defined benefit retirement fund, decreased $1.61 billion, or 9.23 percent, to nearly $15.83 billion as of June 30, 2022. Investment losses led to the decline.

Total additions decreased almost $5.15 billion, or 113.53 percent, to $(613.52) million. This change is almost entirely attributable to the fiscal year 2022 investment return of (6.40) percent, which was 36.70 percent lower than the return in fiscal year 2021. The investment return resulted in a decrease in investment income of $5.16 billion, or 125.88 percent.

Total deductions increased over $48.03 million to $996.68 million, an increase of 5.06 percent. The increase is due almost entirely to increased annuity benefit distributions, which rose 4.69 percent to nearly $966.70 million. The increase is the result of growth in the number of members receiving benefits, up 3.12 percent to 46,846 members, and to the payment of a 1.00 percent post-retirement benefit increase to retirees and other benefit recipients in January 2022.

State Patrol Retirement Fund

The Fiduciary Net Position Restricted for Pensions for the State Patrol Retirement Fund decreased during fiscal year 2022 by just over $74.28 million, or 7.76 percent, largely due to investment losses.

Total additions decreased $273.27 million, or 103.64 percent, to $(9.59) million. The investment return of (6.40) percent drove a drop in investment income, from a $224.27 million gain in fiscal year 2021 to a $59.36 million loss in fiscal year 2022, a change of 126.47 percent. This investment loss was slightly offset by an increase in contributions, with employee and employer contribution increasing by $10.36 million, or 26.96 percent, during the fiscal year. The contribution increase was a result of an employer contribution rate increase and an increase in active members in fiscal year 2022. Other income includes $1.00 million of supplemental state aid that will continue to be received annually until this fund and the Public Employees Retirement Association's Police and Fire Fund both reach a 90.00 percent funded ratio.

Total deductions increased $1.28 million, or 2.02 percent, to just under $64.70 million. The slight increase is mostly the result of higher annuity benefit distributions, which increased almost $1.24 million, or 1.96 percent, to $64.33 million. The higher benefit distributions are due to the payment of a 1.00 percent post-retirement benefit increase to retirees and other benefit recipients in January 2022, and to the minor increase in retirees and other benefit recipients, up to 1,140, a change of 1.69 percent.

Correctional Employees Retirement Fund

The Fiduciary Net Position Restricted for Pensions for the Correctional Employees Retirement Fund decreased $107.03 million, or 6.77 percent, to $1.47 billion. Like the other funds, lower investment returns accounted for this decrease.

Total additions were down $458.11 million, or 103.57 percent, to $(15.78) million. As in other funds, the decrease is the result of lower investment returns than were earned in the previous year. Investment income decreased 127.07 percent, from income of $366.35 million to a lost of $99.16 million. Increased employer contribution rates resulted in higher total contributions, up 9.76 percent to $83.37 million.

Total deductions increased $6.34 million, or 7.46 percent, to $91.25 million, due in large part to higher annuity benefit distributions. Benefits increased $5.27 million, or 6.44 percent, to $87.10 million due to growth in the number of benefit recipients and to the 1.50 percent post-retirement benefit increase to retirees and other benefit recipients in January 2022. Retiree, survivor and disabled member counts in fiscal year 2022 increased 4.99 percent to 3,914.

Judges Retirement Fund

Fiduciary Net Position Restricted for Pensions for the Judges Retirement Fund decreased $22.67 million, or 8.19 percent, to $253.97 million due to the unfavorable investment performance during fiscal year 2022.

Total additions decreased almost $81.58 million, or 93.75 percent, to $5.44 million. Investment income decreased from $64.93 million in fiscal year 2021 to a loss of $17.02 million in fiscal year 2022 due to poor investment returns. Additions for the Judges Retirement Fund also includes an appropriation of $6.00 million from the State's General Fund. Unlike other funds, membership in this fund is steady and there were no contribution rate changes.

Total deductions increased, from $27.12 million in fiscal year 2021 to $28.11 million in fiscal year 2022, a change of 3.66 percent. Annuity benefits increased $996.29 thousand, or 3.68 percent, primarily due to the payment of a 1.50 percent post-retirement benefit increase to retirees and other benefit recipients in January 2022.

Legislators Retirement Fund

There are no assets available for payment of benefits in the Legislators Retirement Fund so the Fiduciary Net Position Restricted for Pensions remains at $0. The Legislators Fund consists of two retirement plans closed to new membership. Benefit payments and administrative expenses are paid by contributions from the 12 remaining active members of the fund and by General Fund appropriation.

Total assets decreased $222.47 thousand, or 43.46 percent, to $289.39 thousand. These assets will be used for payment of administrative expenses, with any balance due back to the State's General Fund.

Management's Discussion and Analysis

Unlike most other plans, total additions increased during the year, an increase of $28.47 thousand, or 0.33 percent, to $8.74 million in 2022. The Legislators Fund has no assets invested, so was not impacted by the investment losses felt in other plans. There are only 12 contributing members, so contributions have declined, from $76.35 thousand in 2021 to $62.38 thousand in 2022. The remaining addition, a state General Fund appropriation, increased to ensure adequate funds to pay beneficiaries, which resulted in the increase in additions. Any balance not required for payments will be returned to the state's General Fund.

Total deductions increased $28.47 thousand, or 0.33 percent, to $8.74 million during fiscal year 2022, mainly due to the payment of some refunds during the fiscal year.

Analysis of the Defined Contribution Funds

MSRS administers four defined contribution funds. 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 2022 and 2021 for each defined contribution fund are not meaningful.

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

Unclassified Employees Retirement Fund

The fiduciary net position for the Unclassified Employees Retirement Fund declined $67.62 million, 16.84 percent, to $333.95 million as of June 30, 2022. The decrease, as with the defined benefit funds, is due to investment losses during fiscal year 2022. Contributions offset some of the loss with a increase of 13.90 percent, from $14.91 million in fiscal year 2021, to almost $16.99 million in fiscal year 2022. The increase is the result of fewer members transferring their contributions to the General Plan in fiscal year 2022.

Health Care Savings Fund

For the fastest-growing MSRS fund, the Health Care Savings Fund, membership again grew during fiscal year 2022. Total participants grew by 8,367 members, or 5.84 percent, to 151,572 as of June 30, 2022. Fiduciary Net Position Restricted for Pensions for the fund decreased over $48.43 million, 2.98 percent, to almost $1.58 billion as of June 30, 2022. The change was driven by investment losses, with investment income decreasing by 156.04 percent, to a loss of $134.44 million. The loss was partially offset by a 6.59 percent increase in contributions, from $186.61 million in fiscal year 2021 to $198.92 million in fiscal year 2022. The contribution increase was fueled by the increase in plan participants.

Deductions increased between fiscal year 2021 and 2022, with a total increase of $12.39 million, or 11.50 percent. This change is due largely to an additional $11.70 million in health care reimbursements during the year, partially the result of an additional 812 participants in the plan able to draw benefits. The required federal tax to finance operations of the Patient-Centered Outcomes Research Institute (PCORI) increased from $372,385 in fiscal year 2021 to $411,308 in fiscal year 2022, an increase of 10.45 percent. The PCORI tax increase was due both to an increased tax rate and a higher number of plan participants in fiscal year 2022.

Minnesota Deferred Compensation Fund

The Fiduciary Net Position Restricted for Pensions for the Minnesota Deferred Compensation Fund decreased over $1.16 billion, or 12.05 percent, from almost $9.66 billion on June 30, 2021, to $8.49 billion as of June 30, 2022. There was a significant increase in ongoing withdrawals and full refunds, from $423.08 million in 2021 to $512.25 million in 2022, a 21.08 percent change. Withdrawals increase as more participants become eligible and can fluctuate based on the economic climate. Withdrawing members increased from 9,687 in 2021 to 13,444 in 2022, a 38.78 percent increase. Member contributions increased by $38.69 million, or 11.95% due to an increase in membership in the plan. As with other plans, there was an investment loss in the fiscal year, a drop of $3.03 billion, or 149.76 percent from the previous fiscal year.

Hennepin County Supplemental Retirement Fund

The Fiduciary Net Position Restricted for Pensions for the Hennepin County Supplemental Retirement Fund decreased $34.29 million in fiscal year 2022, or 18.00 percent, to $156.22 million. Investment income decreased by 151.33 percent during the year, from income of $42.37 million in fiscal year 2021 to a loss of $21.75 million in fiscal year 2022. Only Hennepin County employees who began employment prior to April 14, 1982, are eligible for this fund, so the number of active participants has been slowly declining, resulting in ongoing decreases in contributions from participants and employers. Active participants decreased by 24 during the fiscal year, or 32.43 percent, leaving only 50 active employees. As a result, contributions decreased $23,806, or 18.08 percent, to $107,842 in fiscal year 2022. Decreasing numbers of inactive and withdrawing members reflect final payouts of account balances through refunds and benefit payments. Refunds and annuities increased $870,657, or 7.46 percent, to $12.54 million in fiscal year 2022.

Actuarial Valuation Results

MSRS' consulting actuaries conduct two actuarial valuations for each MSRS defined benefit retirement fund on an annual basis: one for 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.

Funding Actuarial Valuations

The July 1, 2022, actuarial valuation results indicate the State Employees Retirement Fund was 99.86 percent funded, the State Patrol Retirement Fund was 84.04 percent funded, the Correctional Employees Retirement Fund was 79.79 percent funded, and the Judges Retirement Fund was 63.84 percent funded. These funded ratios are calculated using the actuarial value of assets, which requires gains or losses be recognized over a five year period. For this reason, funded ratios improved for most plans, despite disappointing investment losses during the past year.

A brief discussion of the funding actuarial valuation results is below. Additional information about the funding actuarial valuation results for each defined benefit fund can be found in the *Actuarial Section* of this report.

State Employees Retirement Fund

For the State Employees Retirement Fund, the fiscal year 2021 contribution sufficiency of 3.12 percent improved to a contribution sufficiency of 3.92 percent reported in the July 1, 2022, valuation, due to recognition of a portion of the investment gains from the previous year. For this same reason, the funded ratio on an actuarial value of assets basis improved from the previous year, from 97.13 percent to 99.86 percent. The funded ratio on a fair value of assets basis, which has no smoothing of gains or losses and so reflects none of the investment gains from 2021, decreased from 111.46 percent to 98.51 percent.

State Patrol Retirement Fund

For the State Patrol Retirement Fund, the 11.99 percent contribution sufficiency as of July 1, 2021, showed improvement, ending with a contribution sufficiency of 12.38 percent as of July 1, 2022. The change was the result of favorable investment experience in fiscal year 2021, a portion of which is recognized in fiscal year 2022. Despite this, the actuarial value of assets funded ratio decreased slightly, from 84.21 percent on July 1, 2021, to 84.04 percent on July 1, 2022 due to more terminations and disability retirements than unexpected, as well has higher than expected salaries for active employees. On a fair value basis, the funded ratio decreased considerably, from 96.57 percent on July 1, 2021, to 82.76 percent on July 1, 2022, because this method of valuation does not include smoothing of gains and losses.

Correctional Employees Retirement Fund

For the Correctional Employees Retirement Fund, the contribution sufficiency of 3.70 percent on July 1, 2021, improved to a contribution sufficiency of 4.18 percent on July 1, 2022. The improvement is the result of greater than expected return on assets in the previous fiscal year. For the same reason, the actuarial value of assets funded ratio increased from 77.95 percent on July 1, 2021, to 79.79 percent on July 1, 2022. The fair value of assets, which is not subject to gain and loss smoothing, saw a decrease in funded ratio, from 89.27 percent to 78.46 percent.

Judges Retirement Fund

The Judges Retirement Fund improved from a contribution sufficiency of 4.84 percent on July 1, 2021, to a sufficiency of 5.54 percent on July 1, 2022. As with the other plans, the improvement is due to better than expected investment returns in the previous year, a portion of which is recognized in the current year. The actuarial value of assets funded ratio increased from 61.56 percent on July 1, 2021, to 63.84 percent on July 1, 2022, and the fair value of assets decreased, from 70.69 percent to 62.96 percent.

Legislators Retirement Fund

The Legislators Retirement Fund is a closed plan, with only 12 active, contributing members. Remaining assets in the fund were depleted in the fiscal year ending June 30, 2016, and benefits are paid by annual appropriations from the state's General Fund.

Management's Discussion and Analysis

Financial Reporting Actuarial Valuations

This is the ninth year since MSRS implemented pension accounting and financial reporting standards issued 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 expense, and deferred outflows and deferred inflows of resources for each of its defined benefit retirement funds as of June 30, 2022. MSRS' participating governmental employers are required to report their respective shares of these amounts in their financial statements in compliance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions, an amendment of GASB Statement No. 27*.

For the largest cost sharing, multiple-employer MSRS defined benefit fund, the State Employees Retirement Fund, the June 30, 2022, GASB-compliant actuarial valuation report revealed a net pension liability of over $1.64 billion, an over $1.56 billion increase from the fiscal year 2021 net pension liability of $81.53 million. The increase is the result of investment losses during the fiscal year. The other defined benefit plans showed similar increases in net pension liability due to investment losses.

Additional information on the financial reporting actuarial valuation results for the MSRS defined benefit retirement funds can be found in the *Actuarial Section* of this report, beginning on page 161.

Request for Information

This financial report is intended to provide a general overview of the financial position of MSRS as of June 30, 2022, and financial activities for fiscal year 2022. 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, 2022
(Dollars in thousands)

	Defined Benefit Funds				
	State Employees	State Patrol	Correctional Employees	Judges	Legislators
Assets					
Cash	$4,154	$126	$287	$99	$287
Short-term investments	286,299	17,256	28,083	5,225	0
Total Cash & Short-term Investments	$290,453	$17,382	$28,370	$5,324	$287
Receivables					
Member Contributions	$13,319	$1,444	$1,927	$139	$0
Employer Contributions	13,865	2,838	3,810	409	0
Other Receivables	512	17	26	4	1
Due from Other Funds	13,148	0	5	0	1
Total Receivables	$40,844	$4,299	$5,768	$552	$2
Investments, at Fair Value					
Bond Pool	$2,131,076	$118,024	$196,099	$34,096	$0
Treasuries Pool	1,492,377	83,181	139,422	23,924	0
Domestic Active Equity Pool	1,022,002	56,964	95,478	16,383	0
Domestic Equity Pool	4,183,397	233,174	390,743	67,075	0
Broad International Stock Pool	2,337,979	130,312	218,420	37,479	0
Global Equity Pool	164,281	8,990	14,665	2,618	0
Private Markets	4,164,354	231,880	388,089	66,731	0
Supplemental Investment Fund	0	0	0	0	0
Mutual Funds	0	0	0	0	0
Total Investments	$15,495,466	$862,525	$1,442,916	$248,306	$0
Securities Lending Collateral	$816,794	$45,448	$75,986	$13,087	$0
Capital Assets, Net of Depreciation					
Land	$88	$0	$0	$0	$0
Building, Improvements, and Equipment	4,080	0	0	0	0
Equipment, Furniture, and Fixtures	512	0	0	0	0
Internally Generated Software	7,556	0	0	0	0
Right to Use Assets	96	0	0	0	0
Total Capital Assets	$12,332	$0	$0	$0	$0
Total Assets	**$16,655,889**	**$929,654**	**$1,553,040**	**$267,269**	**$289**
Liabilities					
Accounts Payable	$5,514	$223	$380	$66	$3
Securities Lending Collateral	816,794	45,448	75,986	13,087	0
Due to Other Funds	5	387	1,845	145	73
Due to the State's General Fund	0	0	0	0	213
Bonds Payable	1,366	0	0	0	0
Other Payables	2,360	15	908	0	0
Total Liabilities	**$826,039**	**$46,073**	**$79,119**	**$13,298**	**$289**
Net Position Restricted for Pensions	**$15,829,850**	**$883,581**	**$1,473,921**	**$253,971**	**$0**

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

Statement of Fiduciary Net Position

As of June 30, 2022
(Dollars in thousands)

Defined Contribution Funds				
Unclassified Employees	Health Care Savings Plan	MN Deferred Compensation	Hennepin County Supplemental	Totals
$0	$0	$0	$0	$4,953
69	1,437	9,810	25	348,204
$69	$1,437	$9,810	$25	$353,157
$165	$5,682	$7,502	$1	$30,179
170	0	0	1	21,093
9	297	204	4	1,074
0	0	0	0	13,154
$344	$5,979	$7,706	$6	$65,500
$0	$0	$0	$0	$2,479,295
0	0	0	0	1,738,904
0	0	0	0	1,190,827
0	0	0	0	4,874,389
0	0	0	0	2,724,190
0	0	0	0	4,851,054
0	0	0	0	190,554
30,924	706,186	1,591,264	13,667	2,342,041
303,697	871,346	6,889,269	142,551	8,206,863
$334,621	$1,577,532	$8,480,533	$156,218	$28,598,117
$0	$0	$0	$0	$951,315
$0	$0	$0	$0	$88
0	0	0	0	4,080
0	0	0	0	512
0	0	0	0	7,556
0	0	0	0	96
$0	$0	$0	$0	$12,332
$335,034	**$1,584,948**	**$8,498,049**	**$156,249**	**$29,980,421**
$31	$795	$815	$14	$7,841
0	0	0	0	951,315
1,049	5,738	3,896	16	13,154
0	0	0	0	213
0	0	0	0	1,366
0	136	842	0	4,261
$1,080	**$6,669**	**$5,553**	**$30**	**$978,150**
$333,954	**$1,578,279**	**$8,492,496**	**$156,219**	**$29,002,271**

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

	Defined Benefit Funds				
	State Employees	State Patrol	Correctional Employees	Judges	Legislators
Additions					
Contributions					
Plan Member Contributions	$206,056	$16,515	$28,270	$4,214	$62
Employer Contributions	212,759	32,258	55,104	12,248	0
General Fund Contributions	0	0	0	6,000	8,682
Total Contributions	$418,815	$48,773	$83,374	$22,462	$8,744
Investment Income					
Investment Income	$(1,046,062)	$(58,560)	$(97,830)	$(16,789)	$0
Less Investment Expenses	18,344	1,015	1,684	295	0
Net Investment Income	$(1,064,406)	$(59,575)	$(99,514)	$(17,084)	$0
Income from Securities Lending Activities:					
Securities Lending Income	$6,714	$373	$623	$108	$0
Securities Lending Expenses:					
Borrower Rebates	$1,996	$111	$185	$32	$0
Management Fees	849	47	79	14	0
Total Securities Lending Expenses	$2,845	$158	$264	$46	$0
Net Income from Securities Lending Activities	3,869	215	359	62	0
Total Net Investment Income	$(1,060,537)	$(59,360)	$(99,155)	$(17,022)	$0
Other Additions					
Transfers from Other Plans	$28,084	$0	$0	$0	$0
Other Income	118	1,000	3	0	0
Total Other Additions	$28,202	$1,000	$3	$0	$0
Total Additions	**$(613,520)**	**$(9,587)**	**$(15,778)**	**$5,440**	**$8,744**
Deductions					
Annuity Benefits	$966,698	$64,332	$87,102	$28,035	$8,677
Ongoing Withdrawals	0	0	0	0	0
Health Care Reimbursements	0	0	0	0	0
Refunds	19,243	174	3,240	0	28
Transfers to Other Plans	214	0	0	0	0
Recordkeeper Expenses	0	0	0	0	0
Administrative Expenses	10,483	190	909	72	39
Other Expenses	43	0	3	0	0
Total Deductions	**$996,681**	**$64,696**	**$91,254**	**$28,107**	**$8,744**
Net Increase (Decrease) in Net Position	**$(1,610,201)**	**$(74,283)**	**$(107,032)**	**$(22,667)**	**$0**
Net Position Restricted for Pensions					
Beginning of Year	$17,440,051	$957,864	$1,580,953	$276,638	$0
End of Year	**$15,829,850**	**$883,581**	**$1,473,921**	**$253,971**	**$0**

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

Statement of Changes in Fiduciary Net Position

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

Defined Contribution Funds				
Unclassified Employees	**Health Care Savings Plan**	**MN Deferred Compensation**	**Hennepin County Supplemental**	**Totals**
$8,370	$198,915	$354,569	$54	$817,025
8,615	0	7,946	54	328,984
0	0	0	0	14,682
$16,985	$198,915	$362,515	$108	$1,160,691
$(47,078)	$(133,925)	$(1,005,486)	$(21,696)	$(2,427,426)
$109	$516	$2,777	$51	$24,791
$(47,187)	$(134,441)	$(1,008,263)	$(21,747)	$(2,452,217)
$0	$0	$0	$0	$7,818
$0	$0	$0	$0	$2,324
0	0	0	0	989
$0	$0	$0	$0	$3,313
0	0	0	0	4,505
$(47,187)	$(134,441)	$(1,008,263)	$(21,747)	$(2,447,712)
$214	$0	$0	$0	$28,298
219	7,225	5,147	109	13,821
$433	$7,225	$5,146	$109	$42,119
$(29,769)	**$71,699**	**$(640,601)**	**$(21,530)**	**$(1,244,902)**
$0	$0	$0	$0	$1,154,844
0	0	80,019	7,103	87,122
0	106,361	0	0	106,361
9,236	0	432,230	5,436	469,587
28,084	0	0	0	28,298
41	2,434	1,393	16	3,884
271	3,717	3,781	26	19,488
221	7,621	5,758	178	13,824
$37,853	**$120,133**	**$523,181**	**$12,759**	**$1,883,408**
$(67,622)	**$(48,434)**	**$(1,163,782)**	**$(34,289)**	**$(3,128,310)**
$401,576	$1,626,713	$9,656,278	$190,508	$32,130,581
$333,954	**$1,578,279**	**$8,492,496**	**$156,219**	**$29,002,271**

Notes to the Financial Statements

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

Note 1: Description of Organization 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, obligations of members and participating employers 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)

Minnesota Statutes Section 356.20 defines financial reporting requirements for the four largest MSRS defined benefit funds.

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)

Responsibility for the organization is vested in the 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 whom 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 Retirement 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 non-instructional employees at the University of Minnesota, approximately 79 counties, 319 cities and townships, 303 school districts and other educational entities and 253 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 Annual Comprehensive 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, 2022, for all MSRS defined benefit retirement funds are shown in **Exhibit 1** on the following page. Specific descriptions of each of these funds are contained in the narrative and schedules that follow.

Notes to the Financial Statements

Exhibit 1: Membership Statistics - MSRS Defined Benefit Funds

As of June 30, 2022	State Employees	State Patrol	Correctional Employees	Judges	Legislators	Totals
Members Receiving Benefits						
Retirees	40,610	888	3,294	324	257	45,373
Disabled Annuitants	1,731	85	330	14	0	2,160
Beneficiaries	4,505	167	290	74	92	5,128
Total Members Receiving Benefits	**46,846**	**1,140**	**3,914**	**412**	**349**	**52,661**
Deferred Members						
Vested, Not Receiving	17,822	78	1,475	19	25	19,419
Nonvested	10,668	41	1,169	1	0	11,879
Total Deferred Members	**28,490**	**119**	**2,644**	**20**	**25**	**31,298**
Active Members						
Vested	34,817	629	3,038	280	12	38,776
Nonvested	16,402	308	1,382	40	0	18,132
Total Active Members	**51,219**	**937**	**4,420**	**320**	**12**	**56,908**
Grand Total Members	**126,555**	**2,196**	**10,978**	**752**	**386**	**140,867**
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. All state of Minnesota employees are covered by the General Plan. Within the General Plan are three special groups: Military Affairs, Transportation Pilots and Fire Marshals. Only certain employees of the Department of Military Affairs, Department of Transportation, and the office of the State Fire Marshal are eligible to be members of those groups. The Transportation Pilots group has been closed to new entrants since July 1, 2008, and there are no active contributing members.

The General Plan provides retirement, disability and death benefits to plan members and their beneficiaries.

As of June 30, 2022, all MSRS employees are members of the General Plan, except for the Executive Director, who is a member of the Unclassified Employees Retirement Plan.

MSRS employee and employer contributions are funded at 100.0 percent of the required contributions set by statute. Total covered payroll for MSRS employees was approximately $10.4 million for fiscal year 2022, with employee contributions of $605,315 and employer contributions of $630,536.

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.

Notes to the Financial Statements

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 75.0 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.

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 both 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.

Legislators Retirement Fund

The Legislators Retirement 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 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 (Governor, Lieutenant 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. All members of the Elective State Officers Plan are in retirement status.

Both the Legislators and Elective State Officers Retirement Plans provide retirement and death benefits to plan members and their beneficiaries.

Benefits for both plans are financed on a pay-as-you-go basis, funded primarily by annual appropriations from the state's General Fund.

Contribution Rates

Minnesota statutes require that eligible employees contribute a percentage of their total compensation to the retirement fund. Participating employers are also required to contribute a percentage to the funds. Contribution rates are reflected in **Exhibit 2**.

The employer contribution for the State Patrol Retirement Fund includes a 7.0 percent supplemental employer contribution, which will remain in place until the plan is fully funded. A similar supplemental contribution of 4.45 percent exists in the Correctional Employees Retirement Fund, and will remain in place until the plan is fully funded.

Notes to the Financial Statements

Exhibit 2: Fiscal Year 2022 Contribution Rates for MSRS Defined Benefit Retirement Funds

Retirement Plan	Employee Contribution Rate	Employer Contribution Rate	Statutory Authority
State Employees (General Plan)	6.00 %	6.25 %	M.S. 352.04
State Patrol	15.40	30.10	M.S. 352B.02
Correctional Employees	9.60	18.85	M.S. 352.92
Judges - Tier 1 [1]	9.00	22.50	M.S. 490.123
Judges - Tier 2	7.00	22.50	M.S. 490.123
Legislators	9.00 % to the State's General Fund	Funded by General Fund appropriation	M.S. 3A.03

[1] Contributions for Tier 1 Judges are redirected to the Unclassified Employees Retirement Plan after the judge's maximum retirement benefit is reached.

In addition to the contributions noted above, the State Patrol Retirement Fund and the Judges Retirement Fund receive further funding.

The State Patrol Retirement Fund receives a $1 million supplemental state contribution on an annual basis until the earlier of July 1, 2048, or when 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.

The Judges Retirement Fund receives a general fund appropriation of $6 million on an annual basis until the Judges Retirement Fund is fully funded on a market value of assets basis or until July 1, 2048, whichever is earlier.

Post-Retirement Benefit Increases

Post-retirement benefit increases are effective on January 1 of each year. Benefit increase rates are noted in **Exhibit 3.**

Exhibit 3: Annual Post-Retirement Benefit Increases for MSRS Defined Benefit Retirement Plans

Retirement Plan	Benefit Increase Amount
State Employees (General Plan)	1.00 percent through 2023, 1.50 percent thereafter
State Patrol	1.00 percent
Correctional Employees	1.50 percent
Judges	1.50 percent
Legislators	1.00 percent through 2023, 1.50 percent thereafter

Optional Retirement Annuities

In the defined benefit funds, three joint-and-survivor annuity options are available: a 50.0 percent survivor benefit, a 75.0 percent survivor benefit, and a 100.0 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 50.0 percent benefit continuance to a surviving spouse. Legislators can also choose a 100.0 percent survivor coverage with an actuarially reduced benefit.

Notes to the Financial Statements

Vesting and Retirement Ages

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, 4.0 percent through June 30, 2018, and 3.0 percent thereafter. For monthly retirement benefits, members are vested in each plan as noted in **Exhibit 4**.

Exhibit 4: Fiscal Year 2022 Vesting and Retirement Ages for MSRS Defined Benefit Retirement Plans

Retirement Plan	Vesting Requirements	Full retirement Age	Reduced (Early) Retirement Age
State Employees (General Plan)	Hired before July 1, 2010: Three years of covered service Hired after June 30, 2010: Five years	Hired before July 1, 1989: - age 65, or - age 62 with 30 years of service, or - Rule of 90 eligible (age plus years of service equals 90 or more) Hired after June 30, 1989: - age 66	Age 55, if vested
State Patrol	Hired before July 1, 2013: Three years of covered service Hired after June 30, 2013: ten years for members, five years for survivor purposes	Age 55	Age 50
Correctional Employees	Hired before July 1, 2010: Three years of covered service Hired 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.	Age 55	Age 50
Judges - Tier 1	Five years of allowable service	Age 65, mandatory age 70	Age 60
Judges - Tier 2	Five years of allowable service	Age 66, mandatory age 70	Age 60
Legislators	Six years of allowable service	Age 62	Age 55

Notes to the Financial Statements

Benefit Formulas

Benefits are calculated based on years and months of service, member age and the average salary from the sixty successive-month period (five years) with the highest gross salary. Formulas for MSRS defined benefit plans are shown in **Exhibit 5**.

Exhibit 5: Benefit Formulas for MSRS Defined Benefit Retirement Plans

Retirement Plan	Benefit Formula
State Employees (General Plan)	Members hired before July 1, 1989: Step or Level formula, whichever is greater. It also includes full benefits under the Rule of 90 (age plus years of allowable service equals 90). Members hired on or after July 1, 1989: Level formula. Not Rule of 90 eligible. Step formula: 1.20 percent of the high-five average salary for each of the first 10 years of covered service, then 1.70 percent for each year thereafter. Level formula: 1.70 percent of the high-five average salary for all years of covered service, with full benefits at normal retirement age.
State Patrol	3.00 percent of the high-five 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.
Correctional Employees	For employees hired before July 1, 2010: 2.40 percent of the high-five average salary for each year of allowable service, prorated for completed months. For employees hired after June 30, 2010: 2.20 percent of the high-five average salary for each year of allowable service, prorated for completed months. Monthly benefits 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.
Judges - Tier 1	2.70 percent of the high-five average salary for each year of allowable service prior to July 1, 1980, then 3.20 percent for each year of allowable service after June 30, 1980. The maximum benefit a Tier 1 program member receives is 76.80 percent of high-five average salary.
Judges - Tier 2	2.50 percent of the high-five average salary for each year of allowable service. There is no maximum benefit for Tier 2 program members.
Legislators	For members first elected prior to January 1, 1979: 5.00 percent of high-five average salary for the first eight years of service prior to January 1, 1979, then 2.50 percent for subsequent years. For members elected after December 31, 1978: 2.50 percent of the high-five average salary for each year of allowable service.

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

MSRS contracts with a third-party administrator, Empower Retirement™ (Great-West Life & Annuity Insurance Company), to provide various recordkeeping services for the four MSRS defined contribution funds. Membership statistics as of June 30, 2022, are provided in **Exhibit 6.**

Exhibit 6: Membership Statistics – MSRS Defined Contribution Funds

(Dollars in thousands)

As of June 30, 2022	Unclassified Employees	Health Care Savings	MN Deferred Compensation	Hennepin County Supplemental	Totals
Active Members	1,354	73,575	54,684	50	129,663
Inactive Members	2,050	65,330	29,439	786	97,605
Withdrawing Members	0	12,667	13,444	140	26,251
Total Members	**3,404**	**151,572**	**97,567**	**976**	**253,519**
Annual Payroll	$139,507	NA	NA	$5,397	
Participating Employers	5	614	776	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. Minnesota Statute Section 352D.01 authorized creation of this plan. Participation is limited to certain, specified employees of the State of Minnesota and various statutorily designated entities.

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 6.0 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 6.25 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 10.0 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 to the General Plan, at the participant's option, 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, 2022, in the amount $7,256,000.

Notes to the Financial Statements

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 lump sum contributions 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 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 10.0 percent early withdrawal penalty.

Hennepin County Supplemental Retirement Fund

MSRS provides 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.

Plan Administrative Fees

Plan administrative fees in each defined contribution plan are collected near the middle of the month, and are based on each participant's account balance on that day. The fees are used to pay for recordkeeping and custodial services, and to reimburse MSRS for expenses incurred to administer the plan. The fiscal year 2022 plan administrative fee rate structure for each defined contribution fund is shown in **Exhibit 7.**

Exhibit 7: Fiscal Year 2022 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 between $10,000.01 and $30,000
	$6 per month for an account balance 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	0.10% or 10 basis points of a participant's account balance ($125 annual maximum fee)
Hennepin County Supplemental	0.05% or 5 basis points of a participant's account balance

Notes to the Financial Statements

Note 2: 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, 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.

The 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.

Changes in Accounting Principles

In June 2017, GASB issued Statement No. 87, *Leases*. This standard establishes a single model for lease accounting based on the principle that leases are financings of the right to use an underlying asset. There is no longer an operating versus capital lease classification. Lessees will recognize an intangible right-to-use asset and a lease liability. Lessors will recognize a lease receivable and a deferred inflow of resources. Lease arrangements are discussed further on page 65.

In June 2020, GASB issued Statement No. 97*, Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32*. One of the primary objectives of this standard is to enhance the relevance, consistency, and comparability of the accounting and financial reporting for Section 457 deferred compensation plans that meet the definition of a pension plan and for benefits provided through those plans. The Minnesota Deferred Compensation Plan is one of these plans, but the standards had no impact on MSRS reporting.

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

Cash and Cash Equivalents

For the 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 include U.S. Treasury issues, repurchase agreements, banker's 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.

For the defined contribution funds, accounts receivable includes any plan administrative fees, determined as a percentage of each participant's account balance, which were earned during the fiscal year, but received after fiscal year-end.

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 balances that may not be completely liquidated during the ensuing fiscal year are the interfund payables from the Unclassified Employees Retirement Fund and the Health Care Savings Plan 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 To the State's General Fund

The Legislators Retirement Fund is primarily funded on a pay-as-you-go basis with an annual appropriation from the State's General Fund. This appropriation, reported as a General Fund contribution on the *Statement of Changes in Fiduciary Net Position*, is used to finance annuity benefits paid to retirees or their survivors, member refunds, and the Legislators Fund's share of the MSRS administrative expenses. 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

Investment Policy

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 the Minnesota 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. The MSRS Executive Director is a permanent member of the IAC.

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.

The SBI, with assistance of the SBI staff and the IAC, has the authority for establishing and amending investment policy for all funds under its control by majority vote of the Board. The policy outlines the investment philosophy and guidelines within which the Combined Fund's investments will be managed.

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

The SBI had no significant investment policy changes during the fiscal year.

Valuation of Investments

Investments in the Combined Funds and the Participant Directed Investment Programs (which includes investments in the MSRS defined contribution plans) 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 various valuation systems which provide prices for both actively traded and privately placed bonds. For equity securities, the SBI uses various valuation services 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. Securities traded on a national or international exchange are valued using the last reported trade price.
- 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. 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 within the ACFR to maintain consistency with Minnesota State statute when referencing a specific asset valuation. “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. Details of these expenses are presented in the *Schedule of Investment Fees* found within the unaudited *Investment Section* of this annual comprehensive 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 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*.

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. 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 8.** The Legislators Retirement Fund had no assets at June 30, 2022, and therefore no rate of return.

Exhibit 8: Money-weighted Rate of Return

For the Fiscal Year Ended June 30, 2022

Retirement Fund	Money-weighted Rate of Return
State Employees	(6.21) %
State Patrol	(6.28)
Correctional Employees	(6.31)
Judges	(6.18)
Legislators	NA

Asset Allocation

To match the long-term nature of pension obligations, the SBI maintains a strategic asset allocation for the Combined Funds that includes allocations to public equity (both domestic and international), fixed income, and private markets. The current long-term asset allocation shown in **Exhibit 9.**

If a 25.0 percent allocation to Private Markets is less than the target, the uncommitted allocation is invested in Domestic Equities. When the actual asset allocation deviates beyond specified ranges, assets are redistributed to achieve the long-term allocation targets.

The long-term expected rate of return is based on an asset allocation completed by the SBI in 2016. A new study, typically completed once every five years, is anticipated in the near future. The SBI’s long-term expected rate of return was determined using a building-block method. Best estimates of 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.

Notes to the Financial Statements

Exhibit 9: 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 [1] [3]	33.5 %	5.10 %
International Equity [2] [3]	16.5	5.30
Fixed Income [4]	25.0	0.75
Private Markets [5]	25.0	5.90
Total	**100.0 %**	

[1] Domestic Equity includes the Domestic Active Equity Pool and the Domestic Equity Pool.

[2] International Equity includes Broad International Stock Pool.

[3] The Global Equity Pool includes both domestic and international equities. The assets in the pool are included in the target allocations of both Domestic Equity and International Equity.

[4] Fixed Income includes the Bond Pool and Treasuries Pool.

[5] If a 25 percent allocation cannot be achieved, the uncommitted allocation is invested in Domestic Equities.

Capital Assets

MSRS maintains two categories of capital assets: tangible capital assets and intangible right-to-use assets.

Tangible capital assets consist of land, building, building improvements, equipment (including purchased software), furniture and fixtures, and internally developed software.

Equipment, furniture, and fixtures are assets with an initial, individual cost of more than $30,000 and an estimated minimum useful life of two years. The capitalization threshold for property, which includes buildings and building improvements, is $300,000. The internally developed software threshold is $1,000,000 per application. The thresholds were increased in 2022 to match thresholds in other state plans and the state of Minnesota. Assets reflected in the statement prior to the increased limits will continue to be recorded until fully depreciated. All assets were capitalized at historical cost at the date of acquisition, issuance or completion. All tangible assets, except land, are depreciated or amortized when placed into operation using the straight-line method over the estimated useful lives shown in **Exhibit 10.**

Intangible Right-to-Use Assets are recorded under *GASB Statement No. 87, Leases*. Leases use the same threshold as tangible property, $30,000 for for equipment and $300,000 for property. The intangible right-to-use assets and related liabilities are recorded at the commencement date of the contract using the present value of expected payments over the contract term. Right-to-Use assets are amortized over the shorter of the term of the contract or the useful life of the underlying asset using the straight-line method. Lease liabilities are included within Other Payables on the *Statement of Fiduciary Net Position*, with interest expense recognized over the contract term.

Exhibit 10: Capital Assets Estimated Useful Lives

Capital Asset Types	Useful Life (in Years)
Land	NA
Building	30
Building Improvements and Equipment	10
Equipment, Furniture, and Fixtures	2-10
Internally Developed and Acquired Software	4-10

Notes to the Financial Statements

Deferred Outflows/Inflows of Resources

In addition to assets and liabilities, the *Statement of Fiduciary Net Position* may report a separate section for deferred outflows of resources or deferred inflows of resources. Deferred outflows represent a consumption of net assets that applies to future periods so will not be recognized until then. Deferred inflows represent an acquisition of net assets that applies to future periods so will not be recognized until that time. MSRS has no deferred outflows or inflows of resources in 2022.

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 the 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 the MSRS defined contribution retirement funds represents participant plan administrative fee income earned during the fiscal year. 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 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, 4.0 percent through June 30, 2018, and 3.0 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. 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.

Notes to the Financial Statements

Note 3: Deposits and Investments

A. Risks

Custodial Credit Risk

Custodial credit risk for cash deposits and investments is the risk that, in the event of a bank or custodian failure, MSRS will not be able to recover the value of its investments or collateral securities. 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 2022, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all MSRS deposits, eliminating exposure to custodial credit risk.

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 5.0 percent of the fund for which the SBI is investing;
- Participation is limited to 50.0 percent of a single offering; and,
- Participation is limited to 25.0 percent of an issuer's obligations.

The SBI may also invest in banker's 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, 2022, 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 11.** For clarity of reporting, Moody's ratings are displayed in this exhibit using the comparable Standard and Poor's rating. If only one rating exists, that rating is used.

Exhibit 11: Credit Risk Exposure

As of June 30, 2022

(Dollars in thousands)

Quality Rating	Fair Value
AAA	$137,664
AA	2,615,440
A	143,891
BBB	495,068
BB	249,592
B	225,513
CCC	98,860
CC	11,644
C	777
D	1,327
Unrated	1,025,543
Total	**$5,005,319**

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. The MSRS defined benefit retirement funds do not have exposure to a single issuer that equals or exceeds 5.0 percent of the MSRS fiduciary net position. Therefore, there is no concentration of credit risk.

Notes to the Financial Statements

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. The MSRS share of debt securities is held in external investment pools and as of June 30, 2022, had the weighted-average maturities shown in **Exhibit 12.**

Exhibit 12: Interest Rate Risk

As of June 30, 2022

(Dollars in thousands)

Security Type	Fair Value	Weighted Average Maturity in Years
U.S. Agencies	$78,953	11.19
Asset-Backed Securities	150,740	4.32
Short-Term Investment Securities	971,695	0.00
Collateralized Mortgage Obligations	179,462	8.61
Corporate Debt	723,187	8.10
Foreign Country Bonds	58,154	9.29
Yankee Bonds	286,154	8.13
Mortgage-Backed Securities (non-commercial)	345,861	8.09
State and Local Government Bonds	21,604	10.94
Bank Loans	61,517	5.36
U.S. Treasuries	2,127,992	12.77
Total Fair Value	**$5,005,319**	
Portfolio Weighted-Average Maturity		**8.46**

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 Canada or any Canadian province, must also be paid in U.S. dollars. The SBI uses a foreign currency overlay manager to implement an active hedging program for its international passive equity portfolio. In addition, the SBI active managers also have discretion to use forward currency contracts within their portfolios to hedge foreign currency risk as they deem appropriate. The MSRS share of foreign security investments at June 30, 2022, was distributed among the currencies shown in **Exhibit 13** on the following page.

Exhibit 13: Foreign Currency Risk
As of June 30, 2022
(Dollars in thousands)

Currency	Cash & Cash Equivalents	Equities	Fixed Income	Investment Totals
Australian Dollar	$643	$122,259	$0	$122,902
Brazilian Real	1,049	32,589	4,297	37,935
Canadian Dollar	976	207,461	5,592	214,029
Czech Koruna	112	2,701	1,869	4,682
Danish Krone	27	57,608	0	57,635
Euro Currency	1,647	932,559	17,244	951,450
Hong Kong Dollar	777	201,023	0	201,800
Indonesian Rupiah	92	14,028	3,658	17,778
Japanese Yen	4,570	361,338	0	365,908
Malaysian Ringgit	54	3,110	1,799	4,963
Mexican Peso	911	12,907	7,359	21,177
New Israeli Sheqel	45	10,230	0	10,275
New Taiwan Dollar	129	84,158	0	84,287
Norwegian Krone	120	20,450	0	20,570
Polish Zloty	9	3,874	3,853	7,736
Pound Sterling	1,473	279,031	4,588	285,092
Singapore Dollar	102	22,730	0	22,832
South African Rand	22	19,740	2,689	22,451
South Korean Won	375	81,076	0	81,451
Swedish Krona	143	51,319	0	51,462
Swiss Franc	236	171,409	0	171,645
Thailand Baht	61	8,247	1,570	9,878
UAE Dirham	10	4,655	0	4,665
Yuan Renminbi (1)	(4,762)	37,695	3,390	36,323
Yuan Renminbi Offshore	4,935	0	0	4,935
Other (2)	642	16,027	6,498	23,167
Totals	**$14,398**	**$2,758,224**	**$64,406**	**$2,837,028**

(1) Timing issues resulted in negative cash and cash equivalents in some currencies.

(2) Other currency includes Chilean Peso, Colombian Peso, Dominican Peso, Egyptian Pound, Ukrainian Hryvnia, Hungarian Forint, Kuwaiti Dinar, Moroccan Dirham, New Zealand Dollar, Philippine Peso, Qatari Rial, Romanian Leu, Russian Ruble, Peruvian Sol, Turkish Lira, and Uruguayan Peso.

Notes to the Financial Statements

Derivative Financial Instruments and Credit Risk

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, swaps and synthetic guaranteed investment contracts.

Minnesota Statutes, Section 11A.24, provides that any agreement for put and call options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. This 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, adjust the duration of the portfolio or to offset current futures positions.

The fair value balances and notional (face value) amounts at June 30, 2022, classified by derivative instrument type, and the changes in fair value for fiscal year 2022 are shown in **Exhibit 14** on the next page. Explanations of each derivative instrument type are presented below.

- **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. Gains and losses are included in investment income.
- **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** 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**, 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 similar 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.
- **Swaps** are a derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments. Most swaps involve cash flows based on a notional principal amount such as a loan, bond, or currency. Usually, the principal does not change hands. Each cash flow comprises one leg of the swap. One cash flow is generally fixed, while the other is variable and based on a benchmark interest rate, floating currency exchange rate or index price. The most common kind of swap is an interest rate swap, but currency swaps and credit default swaps on a reference security or basket of securities are also common.

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, 2022, the SBI's portfolio of well-diversified, high quality, investment grade fixed income securities had a fair value of $1,619,260,698 that is $75,497,737 below the value protected by a wrap contract. The Stable Value Fund also includes liquid investment pools with a combined fair value of $50,030,366.

Derivative Credit Risk

The SBI is exposed to credit risk through 26 counter-parties 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, 2022, if all counterparties failed to perform as contracted is $195,677,530. These counterparties have Standard and Poor's ratings of BBB+ or better.

Notes to the Financial Statements

Exhibit 14: Derivative Financial Instruments
As of June 30, 2022
(Dollars in thousands)

Derivative Investment Type	Changes in Fair Value During FY 2022	Fair Value at June 30, 2022	Notional Amount
Futures			
Equity Futures - Long	$(23,243)	$0	$585
Equity Futures - Short	809	0	(2)
Fixed Income Futures - Long	(57,437)	0	465,514
Fixed Income Futures - Short	48,085	0	(358,402)
Options			
Equity Options Bought	$48	$0	$0
Equity Options Written	10	(20)	(13)
Futures Options Bought	(1,298)	85	102
Futures Options Written	1,487	(308)	(1,633)
Currency Forwards			
Foreign Exchange Forwards	$74,628	$54,112	$6,229,499
Stock Warrants and Rights			
Stock Rights	$(522)	$4	$4
Stock Warrants	(31)	3	26
Swaps			
Credit Default Swaps Written	$(2,314)	$(529)	$47,406
Pay Fixed Interest Rate Swaps	5,427	5,332	46,655
Receive Fixed Interest Rate Swaps	(1,123)	(1,214)	35,499
Total Return Swaps Equity	(4)	0	(1,181)

B. 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 15.**

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.

Exhibit 15: Securities Loaned
(Dollars in thousands)

Investment Type	Amount as of June 30, 2022
Domestic Equities	$987,228
Domestic Corporate Bonds	73,535
U.S. Government Bonds	154,395
International Equities	71,116
Total	**$1,286,274**

Notes to the Financial Statements

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 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, 2022, the investment pool had an average duration of 1.02 days and an average weighted final maturity of 108.39 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, 2022, the SBI had no credit risk exposure to borrowers. The MSRS share of the collateral held and the fair value of securities on loan (in U.S. dollars) as of June 30, 2022, was $1,336,892,707 and $1,286,274,121 respectively. Cash collateral totaling $951,314,533 is reported on the *Statement of Fiduciary Net Position* as an asset and as a corresponding liability.

C. 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; and,
- 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 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 16** 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 March 31, 2022, 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 a portion of short-term investments are not leveled under GASB Statement No. 72, and therefore are not included in the exhibit.

The SBI has 60 investments that are valued at NAV that are currently in the liquidation mode, totaling 1.4 percent of the NAV value. MSRS' proportionate share of the unfunded commitments to the investments valued at NAV totals $2,745,868,833. Unfunded commitments are funds that have been committed to an investment but not yet transferred to investors.

Explanations of investment types follow the exhibit.

Exhibit 16: Fair Value of MSRS Investments
As of June 30, 2022
(Dollars in thousands)

Investments	Fair Value	Level 1	Level 2	Level 3
Equity				
Common Stock	$8,396,949	$8,390,357	$5,095	$1,497
Real Estate Investment Trust	232,853	232,853	0	0
Other Equity	327,061	170,912	2,060	154,089
Equity Total	**$8,956,863**	**$8,794,122**	**$7,155**	**$155,586**
Fixed Income				
Bank Loans	$61,517	$0	$58,825	$2,692
Asset-Backed Securities	444,637	0	405,204	39,433
Mortgage-Backed Securities	853,024	0	845,357	7,667
Corporate Bonds	1,548,979	0	1,548,979	0
Government Issues	2,648,599	0	2,648,221	378
Other Debt Instruments	652,354	0	652,354	0
Fixed Income Total	**$6,209,110**	**$0**	**$6,158,940**	**$50,170**
Investment Derivatives				
Rights	$4	$4	$0	$0
Warrants	3	3	0	0
Options	(30)	0	(30)	0
Swaps	(364)	0	0	(364)
Investment Derivatives Total	**$(387)**	**$7**	**$(30)**	**$(364)**
Total Investments by Fair Value	**$15,165,586**	**$8,794,129**	**$6,166,065**	**$205,392**

Note: Cash and cash equivalents are not leveled under GASB Statement No. 72, so are not included in the exhibit.

Investments Measured at the Net Asset Value (NAV)

	NAV	Number of Investments	Percent of NAV	Unfunded Commitments
Private Equity	$3,360,695	190	72.8 %	$1,833,286
Real Estate	402,253	33	8.7	437,709
Real Assets	516,897	33	11.2	143,942
Private Credit	337,137	42	7.3	330,932
NAV Total	**$4,616,982**	**298**	**100.0 %**	**$2,745,869**

Notes to the Financial Statements

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, Non-security assets - stock, and Mutual Funds.

Fixed Income

Bank Loans: Floating rate debt instruments issued by corporations, secured by company property, plant, equipment or other assets, and typically senior in the capital structure to other liabilities.

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

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

Corporate Bonds: Debt obligations issued by corporations as an alternative to offering equity ownership by issuing stock. Like most municipal bonds and Treasuries, most corporate bonds pay semi-annual interest and promise to return 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, 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 Fund) type instruments.

Investment Derivatives

Rights: The right to purchase newly issued securities in proportion to an investor's holdings of certain stocks.

Warrants: The right to purchase one or more shares of stock, usually attached to other issues purchased by an investor.

Options: 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.

Swaps: A derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments. The most common kind of swap is an interest rate swap, but currency swaps, credit default swaps, and total return swaps on a reference security or basket of securities are also common.

Net Asset Value (NAV)

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

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.

Real Assets: The strategy for real assets investments is to establish and maintain a portfolio of real assets investment vehicles that provide an inflation hedge and additional diversification. Real assets investments include oil and gas investments and energy service industry investments that are diversified by geographic area as well as by type.

Private Credit: The strategy for private credit investments is to target funds that typically provide a current return and may have an equity component. Structures such as subordinated debt investments and mezzanine investments are typical private credit investments.

Notes to the Financial Statements

Note 4: Capital Assets

Capital asset activity for the year ended June 30, 2022, is reported in **Exhibit 17.**

Exhibit 17: Capital Assets
(Dollars in thousands)

Capital Asset Types	June 30, 2021	Additions	Deductions	June 30, 2022
Capital Assets, Not Depreciated				
Land	$88	$0	$0	$88
Development in Progress	182	31	213	0
Total Capital Assets, Not Depreciated	**$270**	**$31**	**$213**	**$88**
Capital Assets, to be Depreciated or Amortized				
Building, Improvements, and Building Equipment	$8,233	$0	$0	$8,233
Equipment, Furniture, and Fixtures	2,312	213	0	2,525
Internally Generated Software	15,904	0	0	15,904
Intangible Right to Use Assets	0	122	0	122
Total Capital Assets, to be Depreciated or Amortized	**$26,449**	**$335**	**$0**	**$26,784**
Total Capital Assets	**$26,719**	**$366**	**$213**	**$26,872**
Less Accumulated Depreciation or Amortization				
Building, Improvements, and Building Equipment	$(3,950)	$(203)	$0	$(4,153)
Equipment, Furniture, and Fixtures	(1,891)	(122)	0	(2,013)
Internally Generated Software	(7,295)	(1,053)	0	(8,348)
Intangible Right to Use Assets	0	(26)	0	(26)
Total Accumulated Depreciation or Amortization	**$(13,136)**	**$(1,404)**	**$0**	**$(14,540)**
Total Capital Assets, Net of Depreciation or Amortization	**$13,583**	**$(1,038)**	**$213**	**$12,332**

Note 5: Liabilities

A. Long-term Debt

Legislation was passed in 1999 allowing MSRS, the Teachers Retirement Association (TRA) and the Public Employees Retirement Association (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 largest defined benefit plans in the three statewide retirement systems. Through the issuance of the refunding bonds, which received an AAA rating in late July 2012, the bond term was reduced by five years and the present value of the savings to the three systems was $9,582,538. The MSRS portion of the savings was $2,568,120.

Notes to the Financial Statements

Exhibit 18 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 $4,968,102. Bonds Payable on the *Statement of Fiduciary Net Position* is the MSRS share of the outstanding debt, calculated at the MSRS building ownership percentage on June 30, 2022, of 27.5 percent. Bonds Payable includes the principal balance as of June 30, 2022, the premium balance as of June 30, 2022, and interest accrued for the month of June. MSRS has no lines of credit or assets pledged as collateral for debt.

Exhibit 18: Debt Repayment Schedule by Fiscal Year

Fiscal Year	Principal	Interest	Premium	Total Principal, Interest, and Premium
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	**$1,309,000**	**$39,235**	**$55,419**	**$1,403,654**

Total Unpaid Principal, June 30, 2022	$1,309,000
Total Unpaid Premium, June 30, 2022	55,419
Accrued Interest for June 2022	1,809
Bonds Payable per Statement of Fiduciary Net Position	**$1,366,228**

B. 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 for the calendar year unless hired under a Post-Retirement Option agreement. The maximum earnings limits for calendar years 2021 and 2022 for individuals under the full retirement age are $18,960 and $19,560, respectively. For individuals that reach full retirement age during 2021 or 2022, the maximum earnings limits are $50,520 and $51,960, respectively.

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. Through December 31, 2010, any funds held in abeyance accrued 6.0 percent interest. 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, 2022, MSRS had 32 reemployed retirees with funds held in abeyance, which totaled $1,581,063 ($715,932 for the State Employees Retirement Fund and $865,131 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 13 distributions of these funds, totaling $178,854 during fiscal year 2022 ($112,087 for the State Employees Retirement Fund and $66,767 for the Correctional Employees Retirement Fund).

Note 6: Net Pension Liability of Participating Employers

Two actuarial valuations for each MSRS defined benefit retirement funds 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 less the fiduciary net position of the respective fund.

Exhibit 19 presents the components of the net pension liability of the participating employers for each MSRS defined benefit retirement fund as of June 30, 2022. This exhibit also depicts each retirement fund's net position as a percentage of the total pension liability.

Exhibit 19: Net Pension Liability of MSRS Participating Employers in MSRS Defined Benefit Retirement Funds

As of June 30, 2022

(Dollars in thousands)

Component of Net Pension Liability	State Employees	State Patrol	Correctional Employees	Judges	Legislators
Total Pension Liability (TPL)	$17,473,133	$1,164,176	$2,073,612	$431,898	$114,007
Fiduciary Net Position (FNP)	15,829,850	883,581	1,473,921	253,971	0
Employers' Net Pension Liability	**$1,643,283**	**$280,595**	**$599,691**	**$177,927**	**$114,007**
FNP as a percentage of the TPL	90.60 %	75.90 %	71.08 %	58.80 %	0.00 %

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, 2022, using the key actuarial assumptions shown in **Exhibit 21** on the following page, applied to all prior periods included in the measurement.

Actuarial assumptions are based on experience studies, generally conducted every four years for the four largest MSRS defined benefit funds. The most recent studies reflected in actuarial valuations and the periods covered are presented in **Exhibit 20.** An experience study for the State Employees Retirement Fund will be conducted in the coming fiscal year.

Exhibit 20: MSRS Experience Study Dates

Retirement Fund	Fiscal Years Covered
State Employees	2014 - 2018
State Patrol	2015 - 2019
Correctional Employees	2015 - 2019
Judges	2015 - 2019

Notes to the Financial Statements

Exhibit 21: Summary of Key Actuarial Methods and Assumptions for GASB-Compliant Valuations

	Defined Benefit Retirement Fund				
	State Employees	**State Patrol**	**Correctional Employees**	**Judges**	**Legislators**
Actuarial Valuation Date	June 30, 2022 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	6.75 percent for all funds				
Inflation	2.25 percent for all funds				
Salary Increases	Service related rates			2.50 percent	4.25 percent
Payroll Growth	3.00 percent			2.50 percent	NA
Mortality Rates	State Employees and Legislators: Pub-2010 mortality tables using projection scale MP-2018, adjusted by a multiplier to match fund experience All Other Funds: Pub-2010 mortality tables using projection scale MP-2019				
Retirement	Age-related rates				
Withdrawal	Service related rate based on actual experience			None	Rates based on actual experience
Disability	Age-related rates based on experience				None
Single Discount Rate	6.75 percent				3.69 percent

Notes to the Financial Statements

Single Discount Rate

Projected benefit payments are discounted to their actuarial present values using a single discount rate. The single discount rate reflects 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 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 6.75 percent, and a municipal bond rate of 3.69 percent, as published by the Fidelity Index in June 2022.

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 selected assumptions, the fiduciary net position for the four largest MSRS plans was projected to be available to make all future benefit payments of current plan members through fiscal year 2122. Therefore, the single 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 single discount rate used to measure the total pension liability was 6.75 percent, an increase of .25 percent from the single discount rate that was used for the four funds in fiscal year 2021. The MSRS board approved this change based on analysis and recommendation of the actuary.

For the Legislators Retirement Fund, assets are not sufficient to pay benefits in any future year, so the municipal bond rate of 3.69 percent was used in all years as the single discount rate. In the previous fiscal year, the municipal bond rate of 1.92 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 annual comprehensive financial report beginning on page 160.

Sensitivity Analysis

GASB Statement No. 67 requires the disclosure of the sensitivity of the net pension liability to changes in the discount rate. **Exhibit 22** presents the June 30, 2022, net pension liability for each of the MSRS defined benefit retirement funds calculated using the current single discount rate, as well as what each fund's net pension liability would be if it were calculated using a single discount rate that is one percentage-point lower or one percentage-point higher than the current rate. The actuaries believe that a 7.75 percent discount rate, one of the rates reflected in the table below, does not comply with the Actuarial Standards of Practice.

Exhibit 22: Sensitivity of the Fiscal Year 2022 MSRS Net Pension Liability to Changes in the Discount Rate
(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	5.75 %	$3,856,435	6.75 %	$1,643,283	7.75 %	$(187,478)
State Patrol	5.75	433,983	6.75	280,595	7.75	154,800
Correctional Employees	5.75	912,949	6.75	599,691	7.75	345,903
Judges	5.75	221,472	6.75	177,927	7.75	140,577
Legislators	2.69	125,022	3.69	114,007	4.69	104,596

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

State Employees Retirement Fund

	2014	2015	2016	2017	2018
Total Pension Liability (TPL)					
Service Cost	$256,155	$210,545	$211,491	$619,666	$455,709
Interest on the TPL	922,181	1,018,035	1,020,925	982,066	1,069,154
Changes of Benefit Terms	0	0	0	83,490	(1,711,128)
Difference between Expected and Actual Experience	(44,023)	(493,197)	21,209	49,659	(8,132)
Changes of Assumptions	(1,477,308)	0	9,911,319	(4,691,209)	(4,219,074)
Benefit and Refund Payments	(635,928)	(677,847)	(720,706)	(762,102)	(810,560)
Net Change in TPL	$(978,923)	$57,536	$10,444,238	$(3,718,430)	$(5,224,031)
TPL - Beginning	$14,099,099	$13,120,176	$13,177,712	$23,621,950	$19,903,520
TPL - Ending	**$13,120,176**	**$13,177,712**	**$23,621,950**	**$19,903,520**	**$14,679,489**
Plan Fiduciary Net Position (FNP)					
Contributions - Employer	$128,037	$146,333	$151,168	$158,352	$164,233
Contributions - Plan Member	131,033	149,293	153,854	161,670	166,726
Net Investment Income	1,829,621	501,185	(9,633)	1,667,562	1,276,550
Benefit and Refund Payments	(635,928)	(677,847)	(720,706)	(762,102)	(810,560)
Administrative Expense	(8,125)	(8,719)	(10,196)	(10,165)	(9,564)
Other Changes	20,528	29,470	20,259	47,232	20,423
Net Change in Plan FNP	**$1,465,166**	**$139,715**	**$(415,254)**	**$1,262,549**	**$807,808**
Plan FNP - Beginning	$10,033,438	$11,498,604	$11,638,319	$11,223,065	$12,485,614
Plan FNP - Ending	**$11,498,604**	**$11,638,319**	**$11,223,065**	**$12,485,614**	**$13,293,422**
NPL - Ending	**$1,621,572**	**$1,539,393**	**$12,398,885**	**$7,417,906**	**$1,386,067**
Plan FNP as a Percentage of the TPL	87.64 %	88.32 %	47.51 %	62.73 %	90.56 %
Covered Payroll	$2,620,660	$2,714,418	$2,797,345	$2,939,455	$3,031,382
NPL as a Percentage of Covered Payroll	61.88 %	56.71 %	443.24 %	252.36 %	45.72 %

Notes to this schedule may be found on the pages following the schedules.

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

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

State Employees Retirement Fund

	2019	2020	2021	2022
Total Pension Liability (TPL)				
Service Cost	$255,056	$267,779	$270,993	$340,333
Interest on the TPL	1,078,390	1,114,756	1,113,853	1,117,920
Changes of Benefit Terms	0	0	0	0
Difference between Expected and Actual Experience	23,180	(12,979)	13,632	(6,694)
Changes of Assumptions	0	(465,611)	1,875,179	(514,065)
Benefit and Refund Payments	(856,975)	(899,242)	(935,920)	(985,941)
Net Change in TPL	$499,651	$4,703	$2,337,737	$(48,447)
TPL - Beginning	$14,679,489	$15,179,140	$15,183,843	$17,521,580
TPL - Ending	**$15,179,140**	**$15,183,843**	**$17,521,580**	**$17,473,133**
Plan Fiduciary Net Position (FNP)				
Contributions - Employer	$182,939	$204,006	$206,381	$212,759
Contributions - Plan Member	182,210	197,897	199,525	206,056
Net Investment Income	948,366	569,670	4,098,129	(1,060,537)
Benefit and Refund Payments	(856,975)	(899,242)	(935,920)	(985,941)
Administrative Expense	(9,877)	(10,261)	(10,779)	(10,483)
Other Changes	32,204	21,332	27,024	27,945
Net Change in Plan FNP	**$478,867**	**$83,402**	**$3,584,360**	**$(1,610,201)**
Plan FNP - Beginning	$13,293,422	$13,772,289	$13,855,691	$17,440,051
Plan FNP - Ending	**$13,772,289**	**$13,855,691**	**$17,440,051**	**$15,829,850**
NPL - Ending	**$1,406,851**	**$1,328,152**	**$81,529**	**$1,643,283**
Plan FNP as a Percentage of the TPL	90.73 %	91.25 %	99.53 %	90.60 %
Covered Payroll	$3,168,870	$3,298,283	$3,325,417	$3,434,267
NPL as a Percentage of Covered Payroll	44.40 %	40.27 %	2.45 %	47.85 %

Notes to this schedule may be found on the pages following the schedules.

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

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

State Patrol Retirement Fund

	2014	2015	2016	2017	2018
Total Pension Liability (TPL)					
Service Cost	$14,514	$16,144	$16,555	$29,758	$24,935
Interest on the TPL	60,183	63,753	64,592	58,865	65,110
Changes of Benefit Terms	0	0	0	0	(2,604)
Difference between Expected and Actual Experience	(5,771)	(12,855)	(22,222)	(2,418)	(8,369)
Changes of Assumptions	30,058	0	283,584	(112,694)	(126,888)
Benefit and Refund Payments	(53,722)	(55,480)	(57,774)	(58,565)	(59,692)
Net Change in TPL	$45,262	$11,562	$284,735	$(85,054)	$(107,508)
TPL - Beginning	$781,411	$826,673	$838,235	$1,122,970	$1,037,916
TPL - Ending	**$826,673**	**$838,235**	**$1,122,970**	**$1,037,916**	**$930,408**
Plan Fiduciary Net Position (FNP)					
Contributions - Employer [1]	$12,894	$14,763	$14,938	$16,783	$16,952
Contributions - Plan Member	7,930	9,174	9,292	10,520	10,657
Net Investment Income	107,187	28,903	(774)	93,077	70,474
Benefit and Refund Payments	(53,722)	(55,480)	(57,774)	(58,565)	(59,692)
Administrative Expense	(150)	(170)	(220)	(208)	(184)
Other Changes	0	0	0	0	(7)
Net Change in Plan FNP	**$74,139**	**$(2,810)**	**$(34,538)**	**$61,607**	**$38,200**
Plan FNP - Beginning	$593,201	$667,340	$664,530	$629,992	$691,599
Plan FNP - Ending	**$667,340**	**$664,530**	**$629,992**	**$691,599**	**$729,799**
NPL - Ending	**$159,333**	**$173,705**	**$492,978**	**$346,317**	**$200,609**
Plan FNP as a Percentage of the TPL	80.73 %	79.28 %	56.10 %	66.63 %	78.44 %
Covered Payroll	$63,952	$68,463	$69,343	$73,056	$74,007
NPL as a Percentage of Covered Payroll	249.14 %	253.72 %	710.93 %	474.04 %	271.07 %

Notes to this schedule may be found on the pages following the schedules.

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

[1] Includes annual supplemental state aid of $1 million.

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

State Patrol Retirement Fund

	2019	2020	2021	2022
Total Pension Liability (TPL)				
Service Cost	$19,375	$21,122	$21,795	$26,648
Interest on the TPL	68,227	70,465	72,625	71,049
Changes of Benefit Terms	0	0	0	0
Difference between Expected and Actual Experience	2,757	(535)	1,596	54,474
Changes of Assumptions	0	0	90,144	(35,484)
Benefit and Refund Payments	(60,803)	(61,971)	(63,210)	(64,506)
Net Change in TPL	$29,556	$29,081	$122,950	$52,181
TPL - Beginning	$930,408	$959,964	$989,045	$1,111,995
TPL - Ending	**$959,964**	**$989,045**	**$1,111,995**	**$1,164,176**
Plan Fiduciary Net Position (FNP)				
Contributions - Employer (1)	$20,479	$22,975	$25,809	$33,258
Contributions - Plan Member	12,038	12,595	13,606	16,515
Net Investment Income	51,823	31,073	224,273	(59,360)
Benefit and Refund Payments	(60,803)	(61,971)	(63,210)	(64,506)
Administrative Expense	(191)	(224)	(204)	(190)
Other Changes	(1)	(2)	0	0
Net Change in Plan FNP	**$23,345**	**$4,446**	**$200,274**	**$(74,283)**
Plan FNP - Beginning	$729,799	$753,144	$757,590	$957,864
Plan FNP - Ending	**$753,144**	**$757,590**	**$957,864**	**$883,581**
NPL - Ending	**$206,820**	**$231,455**	**$154,131**	**$280,595**
Plan FNP as a Percentage of the TPL	78.46 %	76.60 %	86.14 %	75.90 %
Covered Payroll	$80,792	$84,530	$88,351	$107,240
NPL as a Percentage of Covered Payroll	255.99 %	273.81 %	174.45 %	261.65 %

Notes to this schedule may be found on the pages following the schedules.

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

(1) Includes annual supplemental state aid of $1 million.

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

Correctional Employees Retirement Fund

	2014	2015	2016	2017	2018
Total Pension Liability (TPL)					
Service Cost	$54,443	$48,805	$56,718	$95,522	$85,364
Interest on the TPL	85,702	92,039	97,571	95,307	108,421
Changes of Benefit Terms	0	0	0	0	(164,182)
Difference between Expected and Actual Experience	4,103	7,115	(764)	6,566	(3,499)
Changes of Assumptions	(147,067)	118,399	576,552	(213,159)	(617,840)
Benefit and Refund Payments	(52,289)	(56,499)	(60,940)	(64,687)	(69,674)
Net Change in TPL	$(55,108)	$209,859	$669,137	$(80,451)	$(661,410)
TPL - Beginning	$1,408,494	$1,353,386	$1,563,245	$2,232,382	$2,151,931
TPL - Ending	**$1,353,386**	**$1,563,245**	**$2,232,382**	**$2,151,931**	**$1,490,521**
Plan Fiduciary Net Position (FNP)					
Contributions - Employer	$26,468	$29,480	$30,678	$31,763	$32,893
Contributions - Plan Member	18,855	21,061	21,953	22,648	23,417
Net Investment Income	137,523	38,624	(195)	135,359	105,263
Benefit and Refund Payments	(52,289)	(56,499)	(60,940)	(64,687)	(69,674)
Administrative Expense	(657)	(720)	(906)	(856)	(827)
Other Changes	(1)	0	0	(2)	(2)
Net Change in Plan FNP	**$129,899**	**$31,946**	**$(9,410)**	**$124,225**	**$91,070**
Plan FNP - Beginning	$747,157	$877,056	$909,002	$899,592	$1,023,817
Plan FNP - Ending	**$877,056**	**$909,002**	**$899,592**	**$1,023,817**	**$1,114,887**
NPL - Ending	**$476,330**	**$654,243**	**$1,332,790**	**$1,128,114**	**$375,634**
Plan FNP as a Percentage of the TPL	64.80 %	58.15 %	40.30 %	47.58 %	74.80 %
Covered Payroll	$219,244	$231,440	$241,242	$248,879	$257,330
NPL as a Percentage of Covered Payroll	217.26 %	282.68 %	552.47 %	453.28 %	145.97 %

Notes to this schedule may be found on the pages following the schedules.

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

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

Correctional Employees Retirement Fund

	2019	2020	2021	2022
Total Pension Liability (TPL)				
Service Cost	$44,912	$46,258	$47,383	$56,990
Interest on the TPL	110,664	117,205	123,942	130,414
Changes of Benefit Terms	0	0	0	0
Difference between Expected and Actual Experience	8,180	7,550	(4,738)	25,674
Changes of Assumptions	0	0	269,564	(72,164)
Benefit and Refund Payments	(74,903)	(79,533)	(83,965)	(90,342)
Net Change in TPL	$88,853	$91,480	$352,186	$50,572
TPL - Beginning	$1,490,521	$1,579,374	$1,670,854	$2,023,040
TPL - Ending	**$1,579,374**	**$1,670,854**	**$2,023,040**	**$2,073,612**
Plan Fiduciary Net Position (FNP)				
Contributions - Employer	$38,245	$43,658	$48,823	$55,104
Contributions - Plan Member	25,686	26,734	27,136	28,270
Net Investment Income	80,942	49,608	366,352	(99,155)
Benefit and Refund Payments	(74,903)	(79,533)	(83,965)	(90,342)
Administrative Expense	(856)	(924)	(950)	(909)
Other Changes	(6)	(1)	20	0
Net Change in Plan FNP	**$69,108**	**$39,542**	**$357,416**	**$(107,032)**
Plan FNP - Beginning	$1,114,887	$1,183,995	$1,223,537	$1,580,953
Plan FNP - Ending	**$1,183,995**	**$1,223,537**	**$1,580,953**	**$1,473,921**
NPL - Ending	**$395,379**	**$447,317**	**$442,087**	**$599,691**
Plan FNP as a Percentage of the TPL	74.97 %	73.23 %	78.15 %	71.08 %
Covered Payroll	$267,563	$278,479	$282,667	$294,479
NPL as a Percentage of Covered Payroll	147.77 %	160.63 %	156.40 %	203.64 %

Notes to this schedule may be found on the pages following the schedules.

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

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

Judges Retirement Fund

	2014	2015	2016	2017	2018
Total Pension Liability (TPL)					
Service Cost	$12,075	$12,251	$13,711	$9,483	$9,857
Interest on the TPL	20,535	21,773	21,349	25,367	26,746
Changes of Benefit Terms	0	0	0	0	0
Difference between Expected and Actual Experience	5,080	(4,366)	7,135	(4,958)	1,424
Changes of Assumptions	(8,416)	21,696	(85,756)	11,652	0
Benefit and Refund Payments	(20,802)	(21,893)	(22,378)	(23,094)	(23,585)
Net Change in TPL	$8,472	$29,461	$(65,939)	$18,450	$14,442
TPL - Beginning	$373,039	$381,511	$410,972	$345,033	$363,483
TPL - Ending	**$381,511**	**$410,972**	**$345,033**	**$363,483**	**$377,925**
Plan Fiduciary Net Position (FNP)					
Contributions - Employer [1]	$9,426	$9,776	$10,219	$13,758	$17,027
Contributions - Plan Member	3,578	3,629	3,763	3,932	3,973
Net Investment Income	28,011	7,572	(186)	24,729	19,265
Benefit and Refund Payments	(20,802)	(21,893)	(22,378)	(23,094)	(23,585)
Administrative Expense	(55)	(60)	(93)	(89)	(66)
Other Changes	0	0	0	0	0
Net Change in Plan FNP	**$20,158**	**$(976)**	**$(8,675)**	**$19,236**	**$16,614**
Plan FNP - Beginning	$155,398	$175,556	$174,580	$165,905	$185,141
Plan FNP - Ending	**$175,556**	**$174,580**	**$165,905**	**$185,141**	**$201,755**
NPL - Ending	**$205,955**	**$236,392**	**$179,128**	**$178,342**	**$176,170**
Plan FNP as a Percentage of the TPL	46.02 %	42.48 %	48.08 %	50.94 %	53.38 %
Covered Payroll	$41,893	$43,449	$45,418	$47,813	$49,009
NPL as a Percentage of Covered Payroll	491.62 %	544.07 %	394.40 %	373.00 %	359.46 %

Notes to this schedule may be found on the pages following the schedules.

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

[1] Includes General Fund appropriation of $3 million in fiscal year 2017, and $6 million annually thereafter.

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

Judges Retirement Fund

	2019	2020	2021	2022
Total Pension Liability (TPL)				
Service Cost	$9,881	$9,897	$10,204	$11,707
Interest on the TPL	27,769	28,721	29,568	27,360
Changes of Benefit Terms	0	0	(9,525)	0
Difference between Expected and Actual Experience	804	(802)	(1,481)	2,040
Changes of Assumptions	0	0	24,695	(10,257)
Benefit and Refund Payments	(25,233)	(26,302)	(27,038)	(28,035)
Net Change in TPL	$13,221	$11,514	$26,423	$2,815
TPL - Beginning	$377,925	$391,146	$402,660	$429,083
TPL - Ending	**$391,146**	**$402,660**	**$429,083**	**$431,898**
Plan Fiduciary Net Position (FNP)				
Contributions - Employer (1)	$17,287	$17,767	$17,916	$18,248
Contributions - Plan Member	4,049	4,168	4,166	4,214
Net Investment Income	14,491	8,955	64,934	(17,022)
Benefit and Refund Payments	(25,233)	(26,302)	(27,038)	(28,035)
Administrative Expense	(87)	(113)	(77)	(72)
Other Changes	0	0	0	0
Net Change in Plan FNP	**$10,507**	**$4,475**	**$59,901**	**$(22,667)**
Plan FNP - Beginning	$201,755	$212,262	$216,737	$276,638
Plan FNP - Ending	**$212,262**	**$216,737**	**$276,638**	**$253,971**
NPL - Ending	**$178,884**	**$185,923**	**$152,445**	**$177,927**
Plan FNP as a Percentage of the TPL	54.27 %	53.83 %	64.47 %	58.80 %
Covered Payroll	$50,164	$52,298	$52,960	$54,436
NPL as a Percentage of Covered Payroll	356.60 %	355.51 %	287.85 %	326.86 %

Notes to this schedule may be found on the pages following the schedules.

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

(1) Includes General Fund appropriation of $3 million in fiscal year 2017, and $6 million annually thereafter.

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

Legislators Retirement Fund

	2014	2015	2016	2017	2018
Total Pension Liability (TPL)					
Service Cost	$398	$428	$495	$546	$437
Interest on the TPL	6,177	6,113	5,333	4,293	5,094
Changes of Benefit Terms	0	0	0	0	(9,839)
Difference between Expected and Actual Experience	(237)	(7,303)	(1,597)	1,517	6,119
Changes of Assumptions	11,201	7,057	14,653	(5,017)	(856)
Benefit and Refund Payments	(8,486)	(8,441)	(8,536)	(8,716)	(8,912)
Net Change in TPL	$9,053	$(2,146)	$10,348	$(7,377)	$(7,957)
TPL - Beginning	$137,446	$146,499	$144,353	$154,701	$147,324
TPL - Ending	**$146,499**	**$144,353**	**$154,701**	**$147,324**	**$139,367**
Plan Fiduciary Net Position (FNP)					
Contributions - State General Fund	$3,436	$3,216	$5,087	$8,716	$8,856
Contributions - Plan Member	101	153	89	80	93
Net Investment Income	1,750	281	(69)	0	0
Benefit and Refund Payments	(8,486)	(8,441)	(8,536)	(8,716)	(8,912)
Administrative Expense	(36)	(37)	(42)	(39)	(37)
Other Changes	0	0	41	(41)	0
Net Change in Plan FNP	**$(3,235)**	**$(4,828)**	**$(3,430)**	**$0**	**$0**
Plan FNP - Beginning	$11,493	$8,258	$3,430	$0	$0
Plan FNP - Ending	**$8,258**	**$3,430**	**$0**	**$0**	**$0**
NPL - Ending	**$138,241**	**$140,923**	**$154,701**	**$147,324**	**$139,367**
Plan FNP as a Percentage of the TPL	5.64 %	2.38 %	0.00 %	0.00 %	0.00 %
Covered Payroll	$1,122	$1,700	$989	$889	$1,033
NPL as a Percentage of Covered Payroll	12,320.94 %	8,289.59 %	15,642.16 %	16,571.88 %	13,491.48 %

Notes to this schedule may be found on the pages following the schedules.

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

Required Supplementary Information

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

For the Nine Years Ended June 30, 2022
(Dollars in thousands)

Legislators Retirement Fund

	2019	2020	2021	2022
Total Pension Liability (TPL)				
Service Cost	$496	$527	$657	$532
Interest on the TPL	4,894	4,258	3,498	2,625
Changes of Benefit Terms	0	0	0	0
Difference between Expected and Actual Experience	(2,441)	645	(527)	(415)
Changes of Assumptions	6,722	9,986	(942)	(20,826)
Benefit and Refund Payments	(8,853)	(8,812)	(8,679)	(8,705)
Net Change in TPL	$818	$6,604	$(5,993)	$(26,789)
TPL - Beginning	$139,367	$140,185	$146,789	$140,796
TPL - Ending	**$140,185**	**$146,789**	**$140,796**	**$114,007**
Plan Fiduciary Net Position (FNP)				
Contributions - State General Fund	$8,798	$8,764	$8,639	$8,682
Contributions - Plan Member	91	87	77	62
Net Investment Income	0	0	0	0
Benefit and Refund Payments	(8,853)	(8,812)	(8,679)	(8,705)
Administrative Expense	(36)	(39)	(37)	(39)
Other Changes	0	0	0	0
Net Change in Plan FNP	**$0**	**$0**	**$0**	**$0**
Plan FNP - Beginning	$0	$0	$0	$0
Plan FNP - Ending	**$0**	**$0**	**$0**	**$0**
NPL - Ending	**$140,185**	**$146,789**	**$140,796**	**$114,007**
Plan FNP as a Percentage of the TPL	0.00 %	0.00 %	0.00 %	0.00 %
Covered Payroll	$1,011	$967	$856	$689
NPL as a Percentage of Covered Payroll	13,865.97 %	15,179.83 %	16,448.13 %	16,546.73 %

Notes to this schedule may be found on the pages following the schedules.

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

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

State Employees Retirement Fund

Fiscal Year 2022 Changes Since the Fiscal Year 2021 Actuarial Valuation

Actuarial Assumptions: The investment return and single discount rates increased from 6.50 percent to 6.75 percent.

Plan Provisions: There were no changes to plan provisions in fiscal year 2022.

Additional Significant Changes to Actuarial Assumptions or Plan Provisions are noted below:

Actuarial Assumptions:

Single Discount Rate: The single discount rate assumption changed over time, from 7.90 percent in 2013, to 4.17 percent in 2016, to 5.42 percent in 2017, to 7.50 percent in 2018, and finally to 6.50 percent in 2021.

Long Term Rate of Return: The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent in 2016, and to 6.50 percent in 2021.

Post Retirement Benefit Increases: Post-retirement benefit increases fluctuated within a range of 2.0 to 2.5 percent annually based upon funded ratio, until the assumption was eliminated in fiscal 2019 with the implementation of a fixed post retirement benefit increase rate.

Mortality: In fiscal year 2016, the base mortality tables were changed from the RP-2000 fully generational table and the RP-2000 disabled mortality table to the RP-2014 fully generational table and the RP-2014 disabled annuitant mortality table. The mortality improvement scale was changed from Scale AA to Scale MP-2015.

In fiscal year 2020, the base mortality tables were changed to the Pub-2010 General Mortality table and Pub-2010 General/Teacher disabled annuitant mortality table, with the mortality improvement scale changing to Scale MP-2018.

Fiscal Year 2016 Experience Study Assumption Changes: Based on an experience study, various assumption changes were implemented, including changes to the inflation and payroll growth assumptions, salary increase rates, rates of retirement, disability, and termination, the percentage of married members, and the percentage of members electing joint and survivor annuities.

Fiscal Year 2020 Experience Study Assumption Changes: Based on an experience study, various assumption changes were implemented, including changes to price inflation, payroll growth, salary increase rates, rates of retirement, disability, and termination, the percentage of married members and age differences with spouses, and the percentage of members electing joint and survivor annuities.

Plan Provisions:

Member Contribution Rates: In 2014, the member and employer contribution rates increased from 5.0 percent to 5.5 percent of pay, then to 5.75 percent of pay in fiscal year 2019, and to 6.00 percent of pay in fiscal year 2020.

Employer Contribution Rates: In fiscal year 2018, employer contributions increased from 5.50 percent to 5.875 percent of pay, then to 6.25 percent of pay in fiscal year 2020.

Post Retirement Benefit Increases: Post-retirement benefit increases assumptions were eliminated with the implementation of a fixed rate of 1.0 percent for five years beginning January 1, 2019, and 1.5 percent annually thereafter.

Detailed Changes to Actuarial Assumptions or Plan Provisions can be found in actuarial valuations posted on the MSRS website at [www.msrs.state.mn.us/annual-reports-fy-2022.](www.msrs.state.mn.us/annual-reports-fy-2022)

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

State Patrol Retirement Fund

Fiscal Year 2022 Changes Since the Fiscal Year 2021 Actuarial Valuation

Actuarial Assumptions: The investment return and single discount rates increased from 6.50 percent to 6.75 percent.

Plan Provisions: There were no changes to plan provisions in fiscal year 2022.

Additional Significant Changes to Actuarial Assumptions are noted below:

Actuarial Assumptions:

Single Discount Rate: The single discount rate assumption changed over time, from 7.90 percent in 2013, to 5.31 percent in 2016, to 6.38 percent in 2017, to 7.50 percent in 2018, and finally to 6.50 percent in 2021.

Long Term Rate of Return: The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent in 2016, then to 6.50 percent in 2021.

Post Retirement Benefit Increases: Post-retirement benefit increases fluctuated within a range of 1.0 to 2.5 percent annually based upon funded ratio, until the assumption was eliminated in fiscal 2019 with the implementation of a fixed rate.

Mortality: In fiscal year 2017, the base mortality tables were changed from the RP-2000 fully generational tables to the RP-2014 fully generational tables. Mortality improvement scales changed from Scale AA to Scale MP-2015.

In fiscal year 2021, the base mortality tables were changed to the Pub-2010 mortality tables, and the mortality improvement scale was changed to MP-2019.

Fiscal Year 2016 Economic Assumption Changes: The assumed future salary increases, payroll growth, and inflation rates were decreased by 0.25 percent.

Fiscal Year 2017 Experience Study Assumption Changes: Based on the experience study, various new assumption changes were implemented, including changes to salary increase rates, rates of retirement, disability, and termination, the percentage of members electing joint and survivor annuities, and the form of payment assumptions.

Fiscal Year 2021 Experience Study Assumption Changes: Based on an experience study, various assumption changes were implemented, including changes to price inflation, payroll growth, salary increase rates, rates of retirement, disability, and termination, and the form of payment selected.

Plan Provisions:

Member Contribution Rates: Member contributions increased from 14.4 to 15.4 percent of pay over three years, effective July 1, 2018.

Employer Contribution Rates: Regular employer contributions increased from 21.6 percent to 23.1 percent of pay over two years, effective July 1, 2018.

Supplemental Employer Contributions: Supplemental employer contributions totaling 7.0 percent of pay will be phased in between fiscal year 2018 and fiscal year 2022, remaining in effect until the plan is 100 percent funded.

Post Retirement Benefit Increases: A fixed rate of 1.0 percent annually was implemented in fiscal year 2018.

Detailed Changes to Actuarial Assumptions or Plan Provisions can be found in actuarial valuations posted on the MSRS website at www.msrs.state.mn.us/annual-reports-fy-2022.

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

Correctional Employees Retirement Fund

Fiscal Year 2022 Changes Since the Fiscal Year 2021 Actuarial Valuation

Actuarial Assumptions: The investment return and single discount rates increased from 6.50 percent to 6.75 percent.

Plan Provisions: There were no changes to plan provisions in fiscal year 2022.

Additional Significant Changes to Actuarial Assumptions or Plan Provisions are noted below:

Actuarial Assumptions:

Single Discount Rate: The single discount rate assumption changed over time, from 6.08 percent in 2013, to 6.82 percent in 2014, to 6.25 percent in 2015, to 4.24 percent in 2016, to 5.02 percent in 2017, to 7.50 percent in 2018, and finally to 6.50 percent in 2021.

Long Term Rate of Return: The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent in 2016, then to 6.50 percent in 2021.

Post Retirement Benefit Increases: Post-retirement benefit increases fluctuated within a range of 2.0 to 2.5 percent annually based upon funded ratio, until the assumption was eliminated in fiscal 2019 with the implementation of a fixed rate.

Mortality: In fiscal year 2017, the base mortality tables were changed from the RP-2000 fully generational table and the RP-2000 disabled mortality table to the RP-2014 fully generational table and the RP-2014 disabled annuitant mortality table. Mortality improvement scales changed from Scale AA to Scale MP-2015.

In fiscal year 2021, the base mortality tables were changed to the Pub-2010 mortality tables, and the mortality improvement scale was changed to MP-2019.

Fiscal Year 2016 Economic Assumption Changes: The assumed future salary increases, payroll growth, and inflation rates were decreased by 0.25 percent.

Fiscal Year 2017 Experience Study Assumption Changes: Based on the experience study, various new assumption changes were implemented, including changes to salary increase rates, rates of retirement, disability, and termination, the percentage of married members and age differences with spouses, and the percentage of members electing joint and survivor annuities.

Fiscal Year 2021 Experience Study Assumption Changes: Based on an experience study, various assumption changes were implemented, including changes to price inflation, payroll growth, salary increase rates, rates of retirement, disability, and termination, the percentage of married members, and the form of payment selected.

Plan Provisions:

Member Contribution Rates: Member contribution rates increased from 8.6 percent to 9.1 percent of pay in 2014, and then to 9.6 percent of pay in 2019.

Employer Contribution Rates: Employer contribution rates increased from 12.10 percent to 12.85 percent of pay in 2014, and then to 14.40 percent of pay in 2019.

Supplemental Employer Contributions: Supplemental employer contributions totaling 4.45 percent of pay will be phased in between fiscal year 2018 and fiscal year 2022, and will remain in effect until the plan is 100 percent funded.

Post Retirement Benefit Increases: A fixed rate of 1.5 percent annually was implemented in fiscal year 2018.

Detailed Changes to Actuarial Assumptions or Plan Provisions can be found in actuarial valuations posted on the MSRS website at [www.msrs.state.mn.us/annual-reports-fy-2022.](www.msrs.state.mn.us/annual-reports-fy-2022)

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

Judges Retirement Fund

Fiscal Year 2022 Changes Since the Fiscal Year 2021 Actuarial Valuation

Actuarial Assumptions: The investment return and single discount rates increased from 6.50 percent to 6.75 percent.

Plan Provisions: There were no changes to plan provisions in fiscal year 2022.

Additional Significant Changes to Actuarial Assumptions or Plan Provisions are noted below:

Actuarial Assumptions:

Single Discount Rate: The single discount rate assumption changed over time, from 5.57 percent in 2013, to 5.78 percent in 2014, to 5.25 percent in 2015, to 7.50 percent in 2016, and finally to 6.50 percent in 2021.

Long Term Rate of Return: The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent in 2016, and to 6.50 percent in 2021.

Post Retirement Benefit Increases: Post-retirement benefit increases were changed in 2016 from 1.75 percent annually, to a range between 1.75 and 2.50 percent annually based on funded ratio. The post-retirement benefit increase assumption was eliminated in fiscal year 2020 with the implementation of a fixed rate.

Mortality: In fiscal year 2017, the base mortality tables were changed from the RP-2000 fully generational tables to the RP-2014 fully generational tables. The mortality improvement scale was changed from Scale AA to Scale MP-2015.

In fiscal year 2021, the base mortality tables were changed to the Pub-2010 mortality tables, and the mortality improvement scale was changed to MP-2019.

Fiscal Year 2016 Economic Assumption Changes: The assumed future salary increases, payroll growth, and inflation rates were decreased by 0.25 percent.

Fiscal Year 2017 Experience Study Assumption Changes: Based on the experience study, various new assumption changes were implemented, including rates of retirement and disability.

Fiscal Year 2021 Experience Study Assumption Changes: Based on an experience study, various assumption changes were implemented, including changes to price inflation, rates of retirement and disability, and the age differences with spouses.

Plan Provisions:

Post Retirement Benefit Increases: A fixed rate of 1.5 percent annually was implemented in January 2022.

Additional Contributions: Legislation provides state contributions equal to $3,000,000 for fiscal year 2017 and $6,000,000 per year thereafter until the plan is fully funded or until July 1, 2048, whichever is earlier.

Detailed Changes to Actuarial Assumptions or Plan Provisions can be found in actuarial valuations posted on the MSRS website at www.msrs.state.mn.us/annual-reports-fy-2022.

Required Supplementary Information

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

Legislators Retirement Fund

Fiscal Year 2022 Changes Since the Fiscal Year 2021 Actuarial Valuation

Actuarial Assumptions:

- The investment return was changed from 6.50 percent to 6.75 percent.
- The Single Discount Rate changed from 1.92 percent to 3.69 percent.

Plan Provisions: There were no changes to plan provisions in fiscal year 2022.

Additional Significant Changes to Actuarial Assumptions or Plan Provisions are noted below:

Actuarial Assumptions:

Single Discount Rate: The single discount rate assumption changed over time, from 4.63 percent in 2013, to 4.29 percent in 2014, to 3.80 percent in 2015, to 2.85 percent in 2016, to 3.56 percent in 2017, to 3.62 percent in 2018, to 3.13 percent in 2019, to 2.45 in 2020, and finally to 1.92 percent in 2021.

Long Term Rate of Return: The long-term expected rate of return on investments was reduced from 7.90 percent to 7.50 percent in 2016, and to 6.50 percent in 2021.

Post Retirement Benefit Increases: Post-retirement benefit increases fluctuated within a range of 2.0 to 2.5 percent annually based upon funded ratio, until the assumption was eliminated in fiscal 2019 with the implementation of a fixed rate.

Mortality: In fiscal year 2017, the base mortality tables were changed from the RP-2000 fully generational tables to the RP-2014 fully generational tables. Mortality improvement scales changed from Scale AA to Scale MP-2015.

In fiscal year 2021, the base mortality table for retirees and employees was changed to the Pub-2010 General Mortality table, and the mortality improvement scale was changed to MP-2018.

Fiscal Year 2016 Economic Assumption Changes: The assumed future salary increases and inflation rates were decreased by 0.25 percent.

Fiscal Year 2021 Experience Study Assumption Changes: Based on an experience study, various assumption changes were implemented, including changes to price inflation and the salary increase rates.

Plan Provisions:

Post Retirement Benefit Increases: Post-retirement benefit increases assumptions were eliminated with the implementation of a fixed rate of 1.0 percent for five years beginning January 1, 2019, and 1.5 percent annually thereafter.

Detailed Changes to Actuarial Assumptions or Plan Provisions can be found in actuarial valuations posted on the MSRS website at www.msrs.state.mn.us/annual-reports-fy-2022.

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)	Actual Contributions (b)	Contribution Deficiency (Sufficiency) (c=a-b)	Covered Payroll [2] (d)	Contributions as a Percentage of Covered Payroll (e=b/d)
2013	$181,756	$121,673	$60,083	$2,483,000	4.90 %
2014	195,239	128,037	67,202	2,620,660	4.89
2015	198,695	146,333	52,362	2,714,418	5.39
2016	194,136	151,168	42,968	2,797,345	5.40
2017	264,257	158,352	105,905	2,939,455	5.39
2018	234,629	164,233	70,396	3,031,382	5.42
2019	183,161	182,939	222	3,168,870	5.77
2020	184,044	204,006	(19,962)	3,298,283	6.19
2021	151,639	206,381	(54,742)	3,325,417	6.21
2022	107,493	212,759	(105,266)	3,434,267	6.20

Notes to Schedule

[1] The Actuarially Determined Contribution rates are calculated as of June 30 each year and apply to the fiscal year beginning on the day after the measurement date.

[2] Assumption: Actual member contributions divided by employee contribution rate.

Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	27 years
Asset Valuation Method:	Fair value smoothed over 5 years; no corridor
Investment Rate of Return:	7.50%
Projected Salary Increases:	Service-related rates ranging from 13.00% (one year of service) to 3.00% (29 or more years of service), including inflation
Inflation Rate:	2.25%
Payroll Growth:	3.00%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition
Healthy Post-Retirement Mortality:	Pub-2010 General Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2018. Rates are multiplied by a factor of 1.04 for males and 1.10 for females.
Post-Retirement Benefit Increases:	1.00% per year through 2023, 1.50% per year thereafter

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

State Patrol Retirement Fund

Fiscal Year Ended June 30	Actuarially Determined Contribution [1] (a)	Actual Contributions [2] (b)	Contribution Deficiency (Sufficiency) (c=a-b)	Covered Payroll [3] (d)	Contributions as a Percentage of Covered Payroll (e=b/d)
2013	$18,711	$11,482	$7,229	$62,121	18.48 %
2014	18,444	12,894	5,550	63,952	20.16
2015	20,648	14,763	5,885	68,463	21.56
2016	20,463	14,938	5,525	69,343	21.54
2017	19,031	16,783	2,248	73,056	22.97
2018	20,900	16,952	3,948	74,007	22.91
2019	21,281	20,479	802	80,792	25.35
2020	21,580	22,975	(1,395)	84,530	27.18
2021	22,203	25,809	(3,606)	88,351	29.21
2022	20,611	33,258	(12,647)	107,240	31.01

Notes to Schedule

(1) The Actuarially Determined Contribution rates are calculated as of June 30 each year and apply to the fiscal year beginning on the day after the measurement date.

(2) Includes supplemental state aid of $1 million from 2014 through 2022.

(3) Assumption: Actual member contributions divided by employee contribution rate.

Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	27 years
Asset Valuation Method:	Fair value smoothed over 5 years; no corridor
Investment Rate of Return:	7.50%
Projected Salary Increases:	Service-related rates ranging from 12.50% (one year of service) to 3.00% (25 or more years of service), including inflation
Inflation Rate:	2.25%
Payroll Growth:	3.00%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition
Healthy Post-Retirement Mortality:	Pub-2010 General Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2019.
Post-Retirement Benefit Increases:	1.00% per year

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)	Actual Contributions (b)	Contribution Deficiency (Sufficiency) (c=a-b)	Covered Payroll [2] (d)	Contributions as a Percentage of Covered Payroll (e=b/d)
2013	$34,060	$24,632	$9,428	$204,198	12.06 %
2014	38,390	26,468	11,922	219,244	12.07
2015	40,109	29,480	10,629	231,440	12.74
2016	44,171	30,678	13,493	241,242	12.72
2017	45,943	31,763	14,180	248,879	12.76
2018	49,665	32,893	16,772	257,330	12.78
2019	43,265	38,245	5,020	267,563	14.29
2020	45,726	43,658	2,068	278,479	15.68
2021	46,781	48,823	(2,042)	282,667	17.27
2022	44,614	55,104	(10,490)	294,479	18.71

Notes to Schedule

[1] The Actuarially Determined Contribution rates are calculated as of June 30 each year and apply to the fiscal year beginning on the day after the measurement date.

[2] Assumption: Actual member contributions divided by employee contribution rate.

Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	27 years
Asset Valuation Method:	Fair value smoothed over 5 years; no corridor
Investment Rate of Return:	7.50%
Projected Salary Increases:	Service-related rates ranging from 11.50% (one year of service) to 3.00% (25 or more years of service), including inflation
Inflation Rate:	2.25%
Payroll Growth:	3.00%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition
Healthy Post-Retirement Mortality:	Pub-2010 General Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2019.
Post-Retirement Benefit Increases:	1.50% per year

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

Judges Retirement Fund

Fiscal Year Ended June 30	Actuarially Determined Contribution (1) (a)	Actual Contributions (2) (b)	Contribution Deficiency (Sufficiency) (c=a-b)	Covered Payroll (3) (d)	Contributions as a Percentage of Covered Payroll (e=b/d)
2013	$13,524	$8,177	$5,347	$39,888	20.50 %
2014	14,193	9,426	4,767	41,893	22.50
2015	14,298	9,776	4,522	43,449	22.50
2016	15,644	10,219	5,425	45,418	22.50
2017	16,790	13,758	3,032	47,813	28.77
2018	18,032	17,027	1,005	49,009	34.74
2019	17,491	17,287	204	50,164	34.46
2020	18,304	17,767	537	52,298	33.97
2021	18,167	17,916	251	52,960	33.83
2022	15,661	18,248	(2,587)	54,436	33.52

Notes to Schedule

(1) The Actuarially Determined Contribution rates are calculated as of June 30 each year and apply to the fiscal year beginning on the day after the measurement date.

(2) Includes General Fund appropriation of $3 million in 2017 and $6 million annually beginning in 2018.

(3) Assumption: Actual employer contributions divided by employer contribution rate.

Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level percentage of payroll, closed period
Remaining Amortization Period:	27 years
Asset Valuation Method:	Fair value smoothed over 5 years; no corridor
Investment Rate of Return:	7.50%
Projected Salary Increases:	2.50%
Inflation Rate:	2.25%
Payroll Growth:	2.50%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition
Healthy Post-Retirement Mortality:	Pub-2010 General Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2019 from a base year of 2010.
Post-Retirement Benefit Increases:	1.75% per year through 2021, 1.50% per year thereafter

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

Legislators Retirement Fund [1]

Fiscal Year Ended June 30	Actuarially Determined Contribution [2] (a)	Actual Contributions [3] (b)	Contribution Deficiency (Sufficiency) (c=a-b)	Covered Payroll [4] (d)	Contributions as a Percentage of Covered Payroll (e=b/d)
2013	$16,411	$3,399	$13,012	$1,233	275.67 %
2014	22,157	3,436	18,721	1,122	306.24
2015	38,736	3,216	35,520	1,700	189.18
2016	21,711	5,087	16,624	989	514.36
2017	22,844	8,716	14,128	889	980.43
2018	33,560	8,856	24,704	1,033	857.31
2019	27,373	8,798	18,575	1,011	870.23
2020	30,274	8,764	21,510	967	906.31
2021	30,358	8,639	21,719	856	1,009.23
2022	33,699	8,682	25,017	689	1,260.09

Notes to Schedule

[1] Effective July 1, 2013, the Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund for cost-savings purposes. The 2014-2022 figures in the schedule above represent the combined totals for both funds.

[2] The Actuarially Determined Contribution rates are calculated as of June 30 each year and apply to the fiscal year beginning on the day after the measurement date.

[3] Contributions to the Legislators Retirement Fund include appropriations from the State's General Fund.

[4] Assumption: Actual member contributions divided by employee contribution rate.

Valuation Date:	June 30, 2021
Actuarial Cost Method:	Entry age normal
Amortization Method:	Level dollar, closed period
Remaining Amortization Period:	5 years
Asset Valuation Method:	Fair value of assets
Investment Rate of Return:	0.00%
Projected Salary Increases:	4.25% including inflation
Inflation Rate:	2.25%
Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality Rates:	Pub-2010 General Retiree Mortality Table adjusted for mortality improvements using projection scale MP-2018. Rates are multiplied by a factor of 1.04 for males and 1.10 for females.
Post-Retirement Benefit Increases:	1.00% per year through 2023, 1.50% per year thereafter

Required Supplementary Information
Schedule of Employer Contributions

For the Last Ten Fiscal Years
(Dollars in thousands)

Elective State Officers Retirement Fund [1]

Fiscal Year Ended June 30	Actuarially Determined Contribution [2] (a)	Actual Contributions (b)	Contribution Deficiency (Sufficiency) (c=a-b)	Covered Payroll (d)	Contributions as a Percentage of Covered Payroll (e=b/d)
2013	$991	$470	$521	$0	NA

Notes to Schedule

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

[2] 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.

Required Supplementary Information
Schedule of Investment Returns

For the Nine Years Ended June 30, 2022

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

Fiscal Year	State Employees	State Patrol	Correctional Employees	Judges	Legislators
2014	18.67 %	18.69 %	18.62 %	18.66 %	19.30 %
2015	4.45	4.46	4.44	4.45	5.00
2016	(0.08)	(0.12)	(0.02)	(0.11)	NA
2017	15.24	15.24	15.23	15.18	NA
2018	10.49	10.51	10.43	10.46	NA
2019	7.30	7.29	7.34	7.20	NA
2020	4.23	4.22	4.22	4.23	NA
2021	30.30	30.28	30.23	30.14	NA
2022	(6.21)	(6.28)	(6.31)	(6.18)	NA

Notes to Schedule

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

Schedule of Administrative Expenses

Supplementary Information

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

Administrative Expenses by Type

Personnel Services		Office Building and Maintenance Expenses	
Staff Salaries	$10,279	Building Services	$562
Health Insurance	2,076	Building, Improvements, Depreciation	203
Social Security and Medicare	753	Office Space Rentals	91
Retirement	682	Bond Interest and Issuance	29
Other Personnel Services	7	Other Building and Maintenance	7
Total	**$13,797**	**Total**	**$892**

Professional Service Fees		Other Miscellaneous Expenses	
Data Processing	$277	Depreciation and Amortization	$1,201
Actuarial	275	Computer Components and Supplies	884
Disability Examinations	146	Statewide Indirect Costs	237
Cyber Insurance	110	Travel	39
Audit Services	53	Training and Licenses	69
Legal Counsel	68	State and Local Sales Taxes	94
Health Screenings	65	Office Supplies	41
Security Assessment	57	Equipment Repairs and Maintenance	11
Other Professional Services	359	Subscriptions and Memberships	29
Total	**$1,410**	Other Expenses	8
		Total	**$2,613**

Communication-Related Expenses			
Printing	$308		
Postage	316		
Telephone	152		
Total	**$776**	**Total Administrative Expenses**	**$19,488**

Allocation of Administrative Expenses by Retirement Fund

State Employees	$10,483
State Patrol	190
Correctional Employees	909
Judges	72
Legislators	39
Unclassified Employees	271
Health Care Savings	3,717
Minnesota Deferred Compensation	3,781
Hennepin County Supplemental	26
Total Administrative Expenses	**$19,488**

Schedule of Payments to Consultants

Supplementary Information

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

Individual or Firm Name	Services Received	Fees Paid
Gabriel Roeder Smith & Company	Actuarial Services	$275
Managed Medical Review Organization (MMRO)	Medical and Disability Evaluations	146
Cprime Inc	Information Technology	92
Clifton Larson Allen	Network Penetration Testing	57
BKD LLP	Internal Auditing	53
Survey & Ballot	Board Election	46
Goff Public Inc	Public Relations	26
State of Minnesota		
Office of Legislative Auditor	Financial Audit	142
Office of Minnesota Attorney General	Legal Advice	50
Office of Administrative Hearings	Legal Advice	11

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, 2022
(Dollars in thousands)

	State Employees	State Patrol	Correctional Employees	Judges	Defined Contribution Funds	Totals
External Managers						
Domestic Equity - Active	$3,493	$194	$323	$56	$0	$4,066
Domestic Equity - Semi-Passive	612	33	57	10	0	712
Domestic Equity - Passive	184	10	17	3	0	214
International Equity	7,480	415	691	121	0	8,707
Global Equity	825	45	74	13	0	957
Fixed Income	0	0	0	0	3,311	3,311
Domestic Bond	933	52	86	15	0	1,086
Treasury	732	41	68	11	0	852
Return Seeking Fixed Income	2,176	119	194	35	0	2,524
Ladder Portfolio	179	10	16	3	0	208
Uninvested Private Markets	117	6	10	2	0	135
Other Investment Expenses						
MN State Board of Investment	1,074	60	99	18	142	1,393
Aon Consulting	112	6	10	2	0	130
Broadridge Financial Solutions	67	4	6	1	0	78
Meketa Investment Group	76	4	7	1	0	88
Albourne Partners	284	16	26	4	0	330
Total Investment Expenses	**$18,344**	**$1,015**	**$1,684**	**$295**	**$3,453**	**$24,791**

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 proportionate share of the expenses charged to the investment pools in which MSRS participates.

The Legislators Retirement Fund has no assets, and therefore no investment expenses.

GASB Statement No. 68
Supplemental Employer Schedules

The schedules on the following pages are provided for financial reporting purposes for the employer units of the defined benefit plans of MSRS.

OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA • Judy Randall, 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 Schedules

Opinion

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, 2022. 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, 2022.

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 expenses for the total of all participating entities for the Minnesota State Retirement System as of and for the year ended June 30, 2022, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

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. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of MSRS and to meet our ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management 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, and for 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.

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Independent Auditor's Report

Auditor's Responsibility for the Audit of the Schedules

Our objective is to obtain reasonable assurance about whether the Schedule of Employer Allocations and the specified column totals included in the Schedule of Pension Amounts by Employer are free of material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgement and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatements of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 MSRS's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions of events, considered in the aggregate, that raise substantial doubt about MSRS's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matters

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, 2022, and our report thereon, also dated December 21, 2022, expressed an unmodified opinion on those financial statements.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we will also issue a report on our consideration of the Minnesota State Retirement System's internal control 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 control over financial reporting and compliance and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering MSRS's internal control over financial reporting and compliance.

Independent Auditor's Report

Restriction on Use

Our report is intended solely for the information and use of the Minnesota State Retirement System'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, 2022. It is not suitable for any other purpose.

Lori Leysen, CPA
Deputy Legislative Auditor

Jordan Bjonfald, CPA
Audit Director

December 21, 2022
Saint Paul, Minnesota

Schedule of Employer Allocations

As of the Measurement Date of June 30, 2022

State Employees Retirement Fund

Employer	2022 Employer Contributions	Employer Allocation Percentage
State of Minnesota and Select Component Units[1]	$164,387,902	77.276 %
Other State of Minnesota Component Units[1]:		
University of Minnesota	27,917,896	13.124
Metropolitan Council	19,155,674	9.005
Minnesota Sports Facilities Authority	23,836	0.011
Total State of Minnesota and its Component Units	**$211,485,308**	**99.416 %**
Minnesota Historical Society	$297,649	0.140 %
Minnesota State Fair	402,786	0.189
Gillette Children's Hospital	85,321	0.040
Minnesota Association of Professional Employees (MAPE)	141,967	0.067
Minnesota Safety Council	79,723	0.037
Veolia	24,931	0.012
Minnesota Crop Improvement Association	77,376	0.036
Amalgamated Transit Union	36,327	0.017
American Federation of State, County and Municipal Employees (AFSCME)	20,618	0.010
Middle Management Association (MMA)	33,584	0.016
Minnesota State Horticultural Society	20,280	0.010
Minnesota Government Engineers Council (MGEC)	7,123	0.003
Enterprise Minnesota	7,864	0.004
Agricultural Utilization Research Institute	6,076	0.003
Total Non-State of Minnesota/Component Units	**$1,241,625**	**0.584 %**
Grand Total	**$212,726,933**	**100.000 %**

[1] Component units of the State of Minnesota include the Housing Finance Agency, Metropolitan Council, University of Minnesota, Agricultural and Economic Development Board, Minnesota Comprehensive Health Association, Minnesota Sports Facilities Authority, 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	2022 Employer Contributions	Employer Allocation Percentage
State of Minnesota	$55,071,839	99.949 %
AFSCME	23,625	0.043
MAPE	4,250	0.008
Total	**$55,099,714**	**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, 2022

State Employees Retirement Fund

Employer	Net Pension Liability	Deferred Outflows of Resources (1): Differences Between Expected and Actual Experience in 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 (2)	$1,269,862,454	$9,903,692	$869,437,686	$60,510,199	$44,051,959	$983,903,536
Other State of Minnesota Component Units: (2)						
University of Minnesota	215,664,306	1,681,972	147,659,042	10,276,617	3,992	159,621,623
Metropolitan Council	147,977,527	1,154,081	101,315,885	7,051,275	2,400,546	111,921,787
MN Sports Facilities Authority	180,763	1,410	123,762	8,613	32,547	166,332
Total State of Minnesota and its Component Units	**$1,633,685,050**	**$12,741,155**	**$1,118,536,375**	**$77,846,704**	**$46,489,044**	**$1,255,613,278**
Minnesota Historical Society	$2,300,594	$17,942	$1,575,150	$109,626	$156,179	$1,858,897
Minnesota State Fair	3,105,802	24,223	2,126,452	147,994	228,890	2,527,559
Gillette Children's Hospital	657,311	5,126	450,043	31,321	576	487,066
MAPE	1,100,998	8,586	753,822	52,464	160,062	974,934
Minnesota Safety Council	608,014	4,742	416,290	28,973	111,294	561,299
Veolia	197,192	1,538	135,013	9,396	640	146,587
MN Crop Improvement Assoc.	591,583	4,614	405,039	28,189	134,676	572,518
Amalgamated Transit Union	279,358	2,178	191,269	13,312	102,553	309,312
AFSCME	164,330	1,282	112,510	7,831	75,606	197,229
MMA	262,926	2,051	180,017	12,529	55,070	249,667
MN State Horticultural Society	164,328	1,282	112,510	7,830	103,529	225,151
MGEC	49,298	384	33,753	2,350	48,396	84,883
Enterprise Minnesota	65,731	513	45,004	3,131	33,048	81,696
Agricultural Utilization Research Institute	49,298	384	33,753	2,350	124,838	161,325
Total Non State/Component Unit	**$9,596,763**	**$74,845**	**$6,570,625**	**$457,296**	**$1,335,357**	**$8,438,123**
Grand Total	**$1,643,281,813**	**$12,816,000**	**$1,125,107,000**	**$78,304,000**	**$47,824,401**	**$1,264,051,401**

(1) Deferred Outflows of Resources figures and Deferred Inflows of Resources figures represent balances at June 30, 2022, not the activity during fiscal year 2022.

(2) Refer to the note on page 109 for details regarding State of Minnesota component units.

Schedule of Pension Amounts by Employer

As of and For the Year Ended June 30, 2022

Deferred Inflows of Resources [1]					Pension Expense (Income)		
Differences Between Expected and Actual Experience in 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 (Income)
$8,149,527	$461,721,782	$0	$2,409,168	$472,280,477	$(541,425,021)	$20,955,269	$(520,469,752)
1,384,056	78,415,506	0	28,890,208	108,689,770	(91,951,731)	(15,677,615)	(107,629,346)
949,668	53,804,605	0	12,721,115	67,475,388	(63,092,451)	(3,630,966)	(66,723,417)
1,160	65,725	0	82,328	149,213	(77,069)	(28,262)	(105,331)
$10,484,411	**$594,007,618**	**$0**	**$44,102,819**	**$648,594,848**	**$(696,546,272)**	**$1,618,426**	**$(694,927,846)**
$14,765	$836,495	$0	$1,074,926	$1,926,186	$(980,894)	$(650,631)	$(1,631,525)
19,932	1,129,269	0	931,184	2,080,385	(1,324,206)	(250,183)	(1,574,389)
4,219	238,998	0	660,426	903,643	(280,256)	(511,588)	(791,844)
7,066	400,323	0	83,374	490,763	(469,428)	(36,947)	(506,375)
3,902	221,074	0	179,201	404,177	(259,236)	(82,942)	(342,178)
1,266	71,700	0	229,992	302,958	(84,077)	(154,078)	(238,155)
3,797	215,098	0	41,283	260,178	(252,230)	40,907	(211,323)
1,792	101,575	0	87,989	191,356	(119,109)	25,062	(94,047)
1,054	59,749	0	130,400	191,203	(70,064)	11,180	(58,884)
1,687	95,599	0	17,385	114,671	(112,103)	22,996	(89,107)
1,054	59,750	0	83,745	144,549	(70,063)	(913)	(70,976)
316	17,926	0	61,227	79,469	(21,019)	(25,334)	(46,353)
423	23,900	0	77,071	101,394	(28,024)	(48,170)	(76,194)
316	17,926	0	63,379	81,621	(21,019)	42,215	21,196
$61,589	**$3,489,382**	**$0**	**$3,721,582**	**$7,272,553**	**$(4,091,728)**	**$(1,618,426)**	**$(5,710,154)**
$10,546,000	**$597,497,000**	**$0**	**$47,824,401**	**$655,867,401**	**$(700,638,000)**	**$0**	**$(700,638,000)**

Schedule of Pension Amounts by Employer

As of and For the Year Ended June 30, 2022

Employer	Net Pension Liability	Deferred Outflows of Resources [1]: Differences Between Expected and Actual Experience in 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 [2]	**$280,595,251**	**$47,377,000**	**$60,096,000**	**$6,030,000**	**$0**	**$113,503,000**
Correctional Employees Retirement Fund						
State of Minnesota	$599,385,062	$23,898,805	$161,655,514	$12,340,704	$264,786	$198,159,809
AFSCME	257,867	10,282	69,547	5,308	34,321	119,458
MAPE	47,975	1,913	12,939	988	36,047	51,887
Total	**$599,690,904**	**$23,911,000**	**$161,738,000**	**$12,347,000**	**$335,154**	**$198,331,154**
Judges Retirement Fund						
State of Minnesota	**$177,928,050**	**$1,792,000**	**$14,817,000**	**$1,354,000**	**$0**	**$17,963,000**
Legislators Retirement Fund						
State of Minnesota	**$114,006,521**	**$0**	**$0**	**$0**	**$0**	**$0**

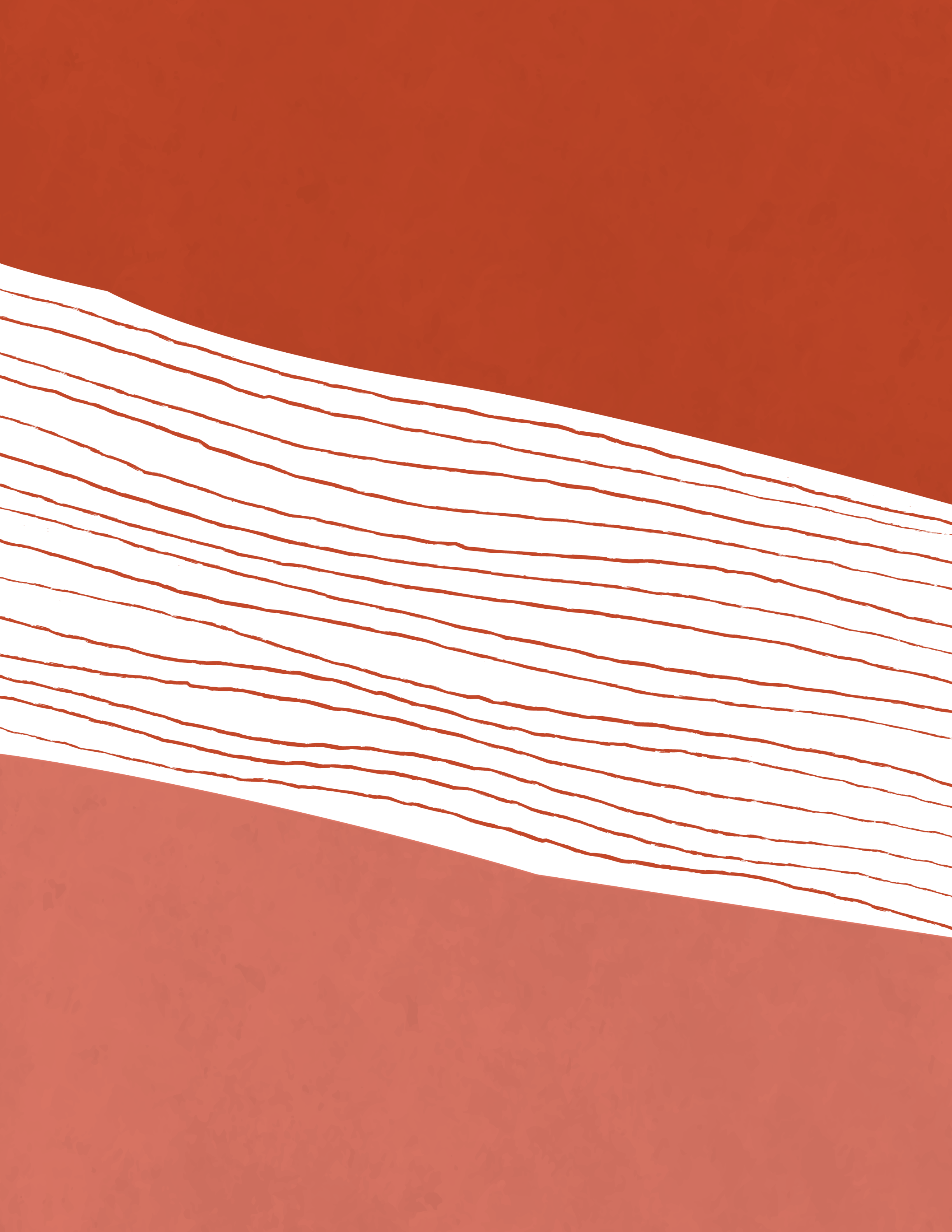
(1) Deferred Outflows of Resources figures and Deferred Inflows of Resources figures represent balances at June 30, 2022, not the activity during fiscal year 2022.

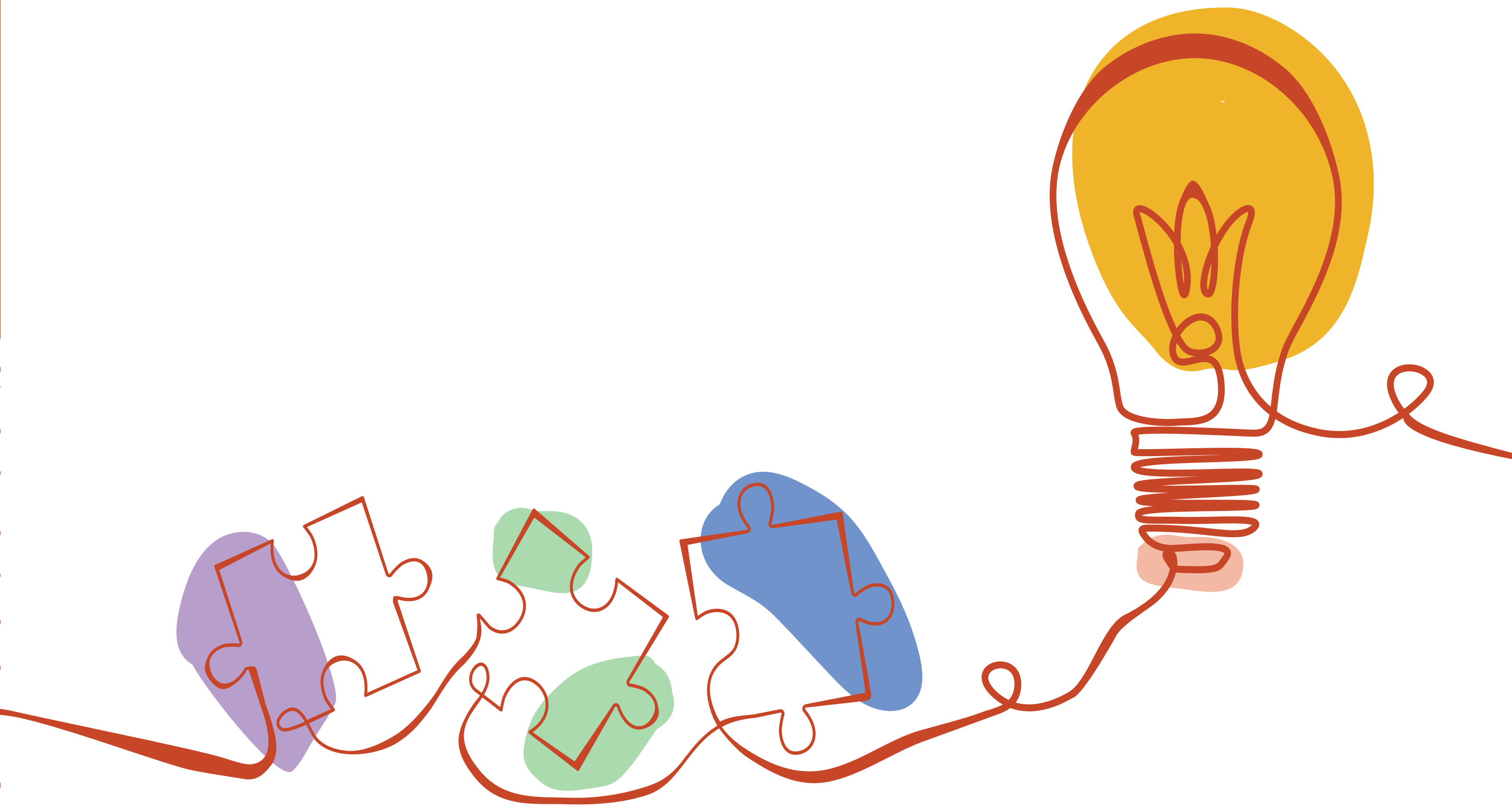
(2) No component units of the State of Minnesota participate in the plans listed on these pages.

Schedule of Pension Amounts by Employer

As of and For the Year Ended June 30, 2022

Deferred Inflows of Resources (1)					Pension Expense (Income)		
Differences Between Expected and Actual Experience in 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 (Income)
$1,662,000	**$50,718,000**	**$0**	**$0**	**$52,380,000**	**($11,463,000)**	**$0**	**($11,463,000)**
$2,840,551	$54,095,397	$0	$66,242	$57,002,190	$(34,467,413)	$50,708	$(34,416,705)
1,222	23,273	0	262,898	287,393	(14,827)	(59,928)	(74,755)
227	4,330	0	6,014	10,571	(2,760)	9,220	6,460
$2,842,000	**$54,123,000**	**$0**	**$335,154**	**$57,300,154**	**$(34,485,000)**	**$0**	**$(34,485,000)**
$1,211,000	**$8,206,000**	**$0**	**$0**	**$9,417,000**	**$17,965,000**	**$0**	**$17,965,000**
$0	**$0**	**$0**	**$0**	**$0**	**$(18,107,000)**	**$0**	**$(18,107,000)**





Investment

Investment Report

Minnesota State Board of Investment
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Email: minn.sbi@state.mn.us
Website: https://mn.gov/sbi/
An Equal Opportunity Employer

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 rule. 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 *Minnesota Statutes*, 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 *Minnesota Statutes*, 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 2018 Legislature reduced the actuarial interest rate assumption for MSRS to 7.5%.

Investment Report

The long term objectives of the Combined Funds are:

- Provide returns that are 3-5 percentage points greater than inflation over the latest 20-year period; and

- Outperform a composite market index weighted in a manner that reflects the actual asset mix of the Combined Funds over the latest 10-year period.

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

- Public Equity 50%
- Total Fixed Income 25%
- Private Markets 25%

Based on values as of June 30, 2022, the Combined Funds' 20-year annualized return was 8.2%, which exceeded inflation as measured by CPI by 5.7 percentage points. Over the last 10-year period, the Combined Funds returned 9.4%, outperforming the composite index by 0.3%. Investment returns ranked in the 25th and 17th percentile over the past 5 and 10-year time periods respectively, and in the top 13th percentile over the past 20 years, compared to other public plans with over $20 billion in assets in the Trust Universe Comparison Service.

INVESTMENT PRESENTATION

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

Respectfully submitted,

Jill E. Schurtz
Executive Director and Chief Investment Officer
Minnesota State Board of Investment
November 21, 2022

Schedule of Investment Results

	Rates of Return (Annualized)			
Funds	**FY 2022**	**Three-Year**	**Five-Year**	**Ten-Year**
Combined Funds	(6.4) %	8.3 %	8.5 %	9.4 %
Combined Funds-Composite Index	(6.3)	7.9	8.2	9.0
Difference	(0.1) %	0.5 %	0.3 %	0.3 %

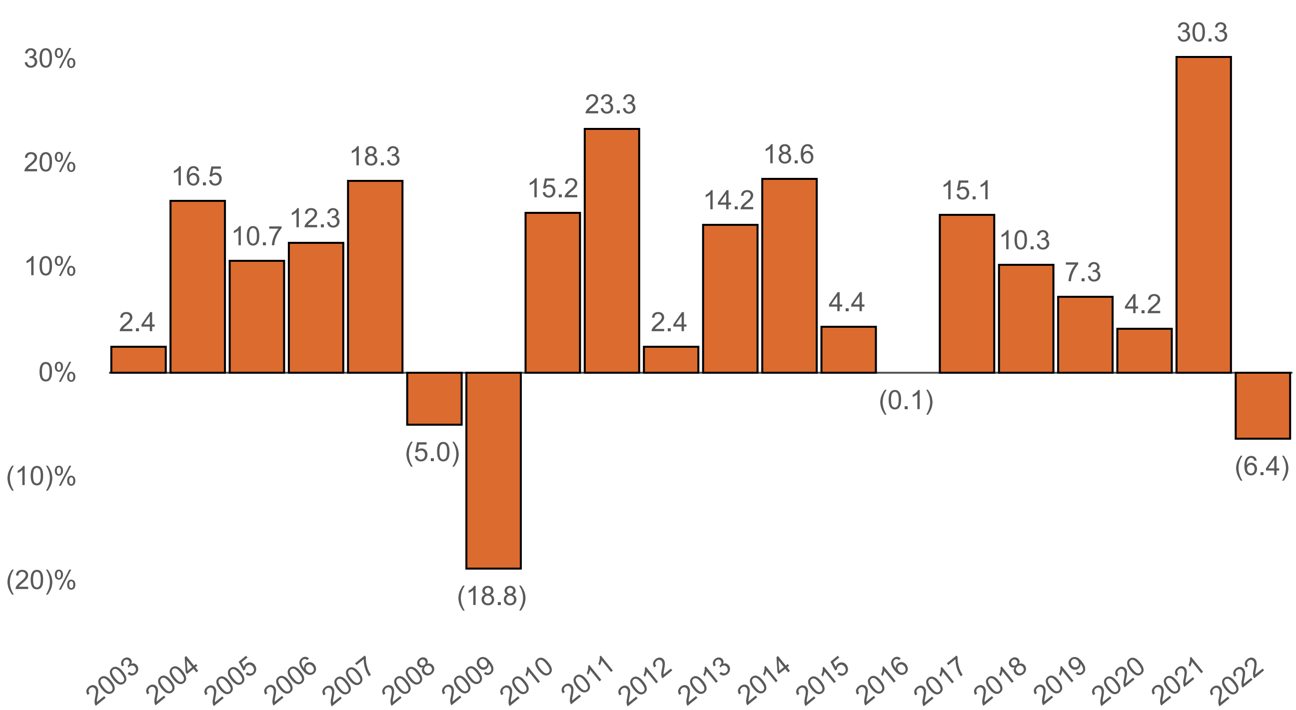
Investment Return percentages are the time-weighted rate of return, net of all management fees. Differentials within columns may occur due to rounding.

The composite index is composed of the market indicators listed below, weighted according to asset allocation.

Investment Type	Market Indicator
Public Equity	Russell 3000 (67%)
	Morgan Stanley Capital International All Country World Index ex-U.S. (33%)
Fixed Income	Bloomberg Barclays U.S. Aggregate Index (40%)
	Bloomberg Barclays Treasury 5+ Years Index (40%)
	ICE BofA US 3-Month Treasury Bill (20%)
Private Markets	Private Markets

History of Investment Results

SBI Combined Funds



Combined Funds Asset Allocation

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

Investment Type	Actual Asset Mix 06/30/2022	Long-Term Policy Target
Domestic Equity	33.0 %	33.5 %
International Equity	14.8	16.5
Bonds	10.0	10.0
Treasuries	9.5	10.0
Private Markets [1]		25.0
Private Markets - Invested	25.2	
Private Markets - Uninvested	1.2	
Cash and Laddered Bonds	5.3	5.0
Global Equity	1.0	0.0
Totals	**100.0 %**	**100.0 %**

[1] If a 25 percent allocation cannot be achieved, the allocation not invested in Private Markets is invested in Domestic and International Equities. Private Markets include Private Equity, Private Credit, Resources, and Real Estate.

Defined Contribution Fund Investment Results

	Rates of Return (Annualized)		
	FY 2022	Three-Year	Five-Year
Supplemental Investment Fund Accounts			
Balanced Fund	(12.4) %	6.3 %	7.3 %
U.S. Stock Actively Managed Fund	(17.3)	9.6	11.1
U.S. Stock Index Fund	(13.7)	10.0	10.8
Broad International Stock Fund	(17.4)	2.6	3.3
Bond Fund	(11.7)	(0.5)	1.3
Money Market Fund	0.3	0.7	1.2
Stable Value Fund	1.8	2.2	2.3
Large Cap Equity			
Vanguard Total Stock Market Institutional Index Plus (passive)	(14.2) %	9.7 %	NA
Vanguard Institutional Index Plus (passive)	(10.6)	10.6	11.3 %
Vanguard Dividend Growth (active)	0.0	10.4	12.1
Mid Cap Equity			
Vanguard Mid Cap Index (passive)	(16.0) %	7.2 %	8.3 %
Small Cap Equity			
T. Rowe Price Small Cap (active)	(23.2) %	5.7 %	9.2 %
International Equity			
Fidelity Diversified International (active)	(22.6) %	3.0 %	3.5 %
Vanguard Total International Stock Index (passive)	(18.9)	2.0	2.8
Balanced			
Vanguard Balanced Index (passive)	(12.5) %	5.7 %	6.9 %
Fixed Income			
Dodge & Cox Income Fund (active)	(10.0) %	0.3 %	1.7 %
Vanguard Total Bond Market Index (passive)	(10.5)	(0.9)	0.8
MN Target Retirement Accounts			
Income Fund	(8.1) %	3.4 %	4.0 %
2025 Fund	(9.1)	4.2	5.0
2030 Fund	(12.0)	4.9	5.7
2035 Fund	(14.6)	5.0	5.9
2040 Fund	(15.7)	5.2	6.2
2045 Fund	(16.3)	5.4	6.4
2050 Fund	(16.9)	5.7	6.6
2055 Fund	(17.5)	5.7	6.6
2060 Fund	(17.5)	5.7	6.6
2065 Fund	(17.5)	NA	NA

Investment Returns by Sector

Investment Performance Compared to Benchmarks (Net of Fees)

	Rates of Return (Annualized)			
	FY 2022	Three-Year	Five-Year	Ten-Year
Domestic Equity	(14.2) %	9.8 %	10.6 %	12.6 %
Russell 3000	(13.9)	9.7	10.5	12.5
International Equity	(17.4) %	2.6 %	3.3 %	5.6 %
MSCI ACWI ex U.S. (net)	(19.4)	1.3	2.5	4.8
Global Equity	(27.9) %	NA	NA	NA
MSCI ACWI Net	(15.8)	NA	NA	NA
Core / Core Plus Bonds	(11.7) %	(0.5) %	1.3 %	2.1 %
Bloomberg Barclays U.S. Aggregate Index (Dly)	(10.3)	(0.9)	0.9	1.5
Return Seeking Fixed Income	(12.3) %	NA	NA	NA
Bloomberg U.S. Aggregate	(10.3)	NA	NA	NA
Treasury Protection	(13.5) %	(1.8) %	NA	NA
Bloomberg Barclays 5+ Years U.S. Treasury Index	(13.5)	(1.8)	NA	NA
Laddered Bond + Cash	(0.3) %	0.5 %	1.0 %	0.7 %
ICE BofA US 3-Month Treasury Bill	0.2	0.6	1.1	0.6
Private Markets - Invested	24.8 %	18.7 %	16.3 %	13.8 %
Private Markets - Uninvested	(10.2)	NA	NA	NA
Private Equity Investments	22.1	23.6	20.9	17.5
Private Credit Investments	21.3	13.0	12.3	13.4
Resource Investments	33.8	5.3	4.2	2.9
Real Estate Investments	43.7	19.4	15.8	14.0

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

Private Markets have no benchmarks.

The uninvested portion of the Private Markets allocation is invested in a combination of a passively managed S & P 500 Index strategy and a cash overlay strategy invested in equity derivatives and cash.

Schedule of Investment Fees

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

Outside Money Managers - Public Equity

Domestic Equity - Active Managers

ArrowMark Colorado Holdings, LLC	$313
Barrow, Hanley, Mewhinney & Strauss, LLC	262
Goldman Sachs Asset Management, L.P.	399
Hood River Capital Management, LLC	427
Hotchkis and Wiley Capital Management, LLC	356
LSV Asset Management	228
Martingale Asset Management, L.P.	196
Peregrine Capital Management	386
Rice Hall James & Associates, LLC	331
Sands Capital Management, LLC	406
Wellington Management Company LLP	351
Winslow Capital Management, LLC	145
Zevenbergen Capital Investments, LLC	266
Total	**$4,066**

Domestic Equity - Semi Passive Managers

BlackRock Financial Management, Inc.	$353
J.P. Morgan Investment Management Inc.	359
Total	**$712**

Domestic Equity - Passive Managers

BlackRock Financial Management, Inc.	**$214**

Uninvested Private Markets

BlackRock Financial Management, Inc.	$38
NISA Investment Advisors, LLC	97
Total	**$135**

International Equity Managers

Acadian Asset Management, LLC	$340
AQR Capital Management, LLC	289
Ashmore Investment Management Limited	1
Columbia Threadneedle Investments	290
Earnest Partners, LLC	687
Fidelity Institutional Asset Management, LLC	300
J.P. Morgan Investment Management Inc.	300
Macquarie Investment Management Advisers	480
Marathon Asset Management, LLP	285
Martin Currie Inc.	533
McKinley Capital Management, LLC	237
Morgan Stanley Investment Management Inc.	769
Neuberger Berman Investment Advisor, LLC	619
Pzena Investment Management, LLC	612
Record Currency, LLC	1,547
The Rock Creek Group, LLC	1,156
State Street Global Advisors (Emerging)	113
State Street Global Advisors	149
Total	**$8,707**

Global Equity

Ariel Investments, LLC	$405
Baillie Gifford Overseas Limited	310
Martin Currie Inc.	242
Total	**$957**

Schedule of Investment Fees

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

Outside Money Managers - Fixed Income

Domestic Bond Managers

BlackRock Financial Management, Inc.	$142
Dodge & Cox Investment Management	240
Goldman Sachs Asset Management	212
Neuberger Berman Investment Advisors, LLC	229
Western Asset Management Company, LLC	263
Total	**$1,086**

Treasury Protection Pool

BlackRock Financial Management, Inc.	$276
Goldman Sachs Asset Management	303
Neuberger Berman Investment Advisors, LLC	273
Total	**$852**

Fixed Income Manager

Galliard Capital Management, Inc.	**$3,311**

Return Seeking Fixed Income

Ashmore Investment Management Limited	$296
BlackRock Financial Management, Inc.	427
Columbia Threadneedle Investments	304
KKR & Co, Inc.	192
Oaktree Asset Management	199
Payden & Rygel	236
Prudential Global Investment Management	223
Pacific Investment Management Company, LLC	433
TCW	214
Total	**$2,524**

Ladder Portfolio

Goldman Sachs Asset Management	$107
Neuberger Berman Investment Advisors, LLC	101
Total	**$208**

SBI and Consultants

MN State Board of Investment	$1,393
Aon Investments USA Inc	130
Broadridge Financial Solutions Inc.	78
Meketa Investment Group, LLC	88
Albourne America, LLC	330
Total	**$2,019**

Total Investment Expenses	**$24,791**

MSRS assets are commingled in various pooled investment accounts administered by the 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.

List of Largest Assets Held at Fair Value

As of June 30, 2022
(Dollars in thousands)

Top Ten Equity Holdings

Company	Fair Value	Percent of Portfolio
Apple Inc.	$329,219	1.59 %
Microsoft Corporation	320,157	1.54
BlackRock Long Term Private Capital	269,231	1.30
Amazon.com Inc.	156,634	0.76
Alphabet Inc. Class A	106,724	0.51
Tesla Inc.	96,905	0.47
Alphabet Inc. Class C	95,217	0.46
UnitedHealth Group Inc.	79,904	0.39
Johnson & Johnson	78,258	0.38
Berkshire Hathaway Inc. Class B	77,318	0.37

Top Ten Bond Holdings

Security	Coupon Rate	Maturity Date	Fair Value	Percent of Portfolio
U.S. Treasury Note / Bond	3.130 %	11/15/2028	$105,129	0.51 %
U.S. Treasury Note / Bond	1.250	08/15/2031	77,356	0.37
U.S. Treasury Note / Bond	2.380	05/15/2051	70,929	0.34
U.S. Treasury Note / Bond	3.630	02/15/2044	60,447	0.29
U.S. Treasury Note / Bond	0.750	01/31/2028	54,633	0.26
U.S. Treasury Note / Bond	2.380	05/15/2029	46,477	0.22
U.S. Treasury Note / Bond	0.500	08/31/2027	45,103	0.22
U.S. Treasury Note / Bond	2.000	08/15/2051	41,820	0.20
U.S. Treasury Note / Bond	2.000	02/15/2050	39,517	0.19
U.S. Treasury Note / Bond	2.880	08/15/2028	32,662	0.16

MSRS assets are commingled in various pooled investment accounts administered by the 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 the MSRS 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 Summary at Fair Value

As of June 30, 2021 and 2022
(Dollars in thousands)

Description	Fair Value June 30, 2021	Percent of 2021 Portfolio	Fair Value June 30, 2022	Percent of 2022 Portfolio
State Employees Retirement Fund				
Money Market	$252,076	2 %	$286,299	2 %
Bond Pool	2,262,136	13	2,131,076	14
Treasuries Pool	1,689,822	10	1,492,377	9
Domestic Active Equity Pool	1,393,672	8	1,022,002	6
Domestic Equity Pool	4,358,400	25	4,183,397	27
Broad International Stock Pool	2,733,085	16	2,337,979	15
Global Equity Pool	227,699	1	164,281	1
Private Markets	4,467,986	25	4,164,354	26
Totals	**$17,384,876**	**100 %**	**$15,781,765**	**100 %**
State Patrol Retirement Fund				
Money Market	$14,368	2 %	$17,256	2 %
Bond Pool	123,977	13	118,024	14
Treasuries Pool	92,745	10	83,181	9
Domestic Active Equity Pool	76,491	8	56,964	6
Domestic Equity Pool	239,210	25	233,174	27
Broad International Stock Pool	150,005	16	130,312	15
Global Equity Pool	12,461	1	8,990	1
Private Markets	244,983	25	231,880	26
Totals	**$954,240**	**100 %**	**$879,781**	**100 %**
Correctional Employees Retirement Fund				
Money Market	$24,244	2 %	$28,083	2 %
Bond Pool	204,065	13	196,099	14
Treasuries Pool	153,364	10	139,422	9
Domestic Active Equity Pool	126,486	8	95,478	6
Domestic Equity Pool	395,557	25	390,743	27
Broad International Stock Pool	248,048	16	218,420	15
Global Equity Pool	20,326	1	14,665	1
Private Markets	403,275	25	388,089	26
Totals	**$1,575,365**	**100 %**	**$1,470,999**	**100 %**
Judges Retirement Fund				
Money Market	$4,361	2 %	$5,225	2 %
Bond Pool	35,860	13	34,096	14
Treasuries Pool	26,721	10	23,924	9
Domestic Active Equity Pool	22,038	8	16,383	6
Domestic Equity Pool	68,918	25	67,075	27
Broad International Stock Pool	43,218	16	37,479	15
Global Equity Pool	3,629	1	2,618	1
Private Markets	70,835	25	66,731	26
Totals	**$275,580**	**100 %**	**$253,531**	**100 %**

Actuarial

Actuarial Section

MSRS actuaries prepare actuarial valuations for each of the five MSRS defined benefit plans on an annual basis. Each plan has two separate valuations completed, a valuation used for funding purposes, and a valuation used for financial reporting purposes.

The schedules found in much of the *Actuarial Section* of this *Annual Comprehensive Financial Report* are compiled based on the funding actuarial valuations. These valuations are based on actuarial assumptions and methods 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 to meet future benefit payments. The actuarial assumptions are based on experience studies of the MSRS demographic and economic data for each plan, conducted by the MSRS actuary.

MSRS implemented GASB Statement No. 67 in fiscal year 2014, which requires pension plans to calculate and disclose a net pension liability in financial statement footnote disclosures using a fairly specific set of actuarial methods and assumptions. The data required for these disclosures is obtained through the financial reporting actuarial valuations.

While most of the actuarial methods and assumptions used for financial reporting purposes are the same as those used for funding purposes, there are a few differences. For example, following GASB standards, the fair value of assets is used when calculating the net pension liability for reporting purposes. In contrast, for funding purposes, gains and losses are smoothed over a five-year period to calculate the asset value, as prescribed by Minnesota statute. Differences in actuarial assumptions between the two types of valuations is generally limited to the assumed rate of return, which is set in statute only for the funding valuations, whereas the assumed rate of return for financial reporting valuations can be set by the MSRS Board as recommended by the MSRS actuary.

Actuarial assumptions used in the funding valuations are found beginning on page 134. Methods and assumptions used for financial reporting purposes, if they differ from those used for funding purposes, are found beginning on page 169. Both types of actuarial valuations for each MSRS fund can be found online at www.msrs.state.mn.us/annual-reports-fy-2022.

A summary of plan provisions is available in the *Notes to the Financial Statements* beginning on page 54, as well as in the *Introductory Section* beginning on page 18.

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, and the Minnesota state Legislature establishes contribution rates within state statute.

The valuation results can be found beginning on page 130.

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 beginning on page 161.

Actuary's Certification Letter

| P: 800.521.0498 | www.grsconsulting.com

December 7, 2022

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

Re: 2022 Annual Comprehensive Financial Report (ACFR)

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, 2022.

In this Annual Comprehensive Financial Report (ACFR), 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). Specifically, these exhibits are:

- Summary of Actuarial Methods and Assumptions;
- Changes in Actuarial Assumptions;
- Changes in Plan Provisions;
- Other Assumptions;
- Actuarial Tables;
- Actuarial Accrued Liability (AAL);
- Contributions Sufficiency / (Deficiency);
- Schedule of Changes in Unfunded Actuarial Accrued Liabilities;
- Schedule of Actuarial and Fair Value Funding Progress;
- Schedule of Active Member Valuation Data;
- Schedule of Retirees and Beneficiaries;
- Solvency Test; and
- Summary of Unfunded Actuarial Accrued Liabilities (UAAL).

Reading the ACFR is not a substitute for reading the actuarial reports. In order to gain a full understanding of the actuarial condition of the Funds, it is important to read and understand the full actuarial reports and potentially other relevant information in addition to this ACFR 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 ACFRs.

277 Coon Rapids Boulevard | Suite 212 | Coon Rapids, Minnesota 55433-2629

Board of Directors
Minnesota State Retirement System
December 7, 2022
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Valuation Results

The results of the valuations are summarized in the following table and are based upon the 7.5% statutory discount rate. The results would appear less favorable if they were based upon a discount rate that satisfied the requirements of Actuarial Standard of Practice No. 27. For all plans, except LRF, because the asset returns are smoothed over five years in the valuation, the market value of assets is lower than the actuarial value of assets. LRF assets have been zero since July 1, 2016.

	Accrued Liability Funded Ratio		Contribution (Deficiency)/Sufficiency (% of Pay)		
Plan	**Actuarial Value of Assets**	**Market Value of Assets**	**Actuarial Value of Assets**	**Market Value of Assets**	**Statutory Amortization Date**
SERF	99.86%	98.51%	3.92%	3.52%	2048
SPRF	84.04%	82.76%	12.38%	11.56%	2048
CERF	79.79%	78.46%	4.18%	3.64%	2048
JRF	63.84%	62.96%	5.54%	5.10%	2048
LRF*	0.00%	0.00%	($42,342,000)*	($42,342,000)*	2026

* *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. The deficiency is expressed as an annual dollar amount rather than a percent of payroll.*

Note: The term "market value" can be used interchangeably with the term "fair value."

SERF, SPRF, CERF, and JRF currently have a contribution sufficiency on an Actuarial Value of Assets basis and on a Market Value of Assets basis. A contribution sufficiency means that the fund is expected to meet the goal of full funding by (or before) the statutory amortization date. LRF is funded on a pay-as-you-go basis.

No changes in plan provisions or actuarial assumptions were reflected in any of the plans.

The fundamental financing objective of the fund is to establish contribution rates which will remain approximately level as a percentage of active member payroll from generation to generation and meet the required deadline for full funding.

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

GRS

Board of Directors
Minnesota State Retirement System
December 7, 2022
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GRS performed a brief review of the basic financial and membership data provided to us as of June 30, 2022 by MSRS, and determined that the data appears reasonable in comparison to last year. We did not audit the data. 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 and investment return are specified by State Statute, and the earnings progression and active member payroll growth are defined in the standards for actuarial work adopted by the Legislative Commission on Pensions and Retirement (LCPR). All other assumptions are based on actual experience, with changes adopted by the MSRS Board, and approved by the LCPR. The assumptions and methods meet the parameters established by Actuarial Standards of Practice.

Except as noted in the following paragraph, the assumptions and methods used for funding purposes meet the guidance set by the Actuarial Standards of Practice.

In our professional judgment, the statutory investment return assumption of 7.5% used in the report deviates materially from the guidance set forth in Actuarial Standards of Practice No. 27 (ASOP No. 27). In a 2022 analysis of long-term rate of investment return and inflation assumptions, GRS suggested that an investment return assumption in the range of 5.64% to 6.84% would be reasonable for this valuation. Please see our letter dated July 12, 2022 for additional information.

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 did not make such a determination.

This report reflects the impact of COVID-19 through June 30, 2022. It does not reflect the ongoing impact of COVID-19, which is likely to influence demographic and investment experience, at least in the short term. We will continue to monitor these developments and their impact on the plan.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

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.

GRS

Actuary's Certification Letter

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Minnesota State Retirement System
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Brian B. Murphy, Bonita J. Wurst, and Sheryl L. Christensen 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, GRS 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,
Gabriel, Roeder, Smith & Company

Brian B. Murphy

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

Bonita J. Wurst

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

Sheryl Christensen

Sheryl L. Christensen, FSA, EA, FCA, MAAA

BBM/BJW/SLC:sc

GRS

Summary of Actuarial Methods and Assumptions

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:** fair 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 July 1, 2021 Valuation:** None.

Actuarial Assumptions [1]

1. **Investment Return:** 7.50% per year (2018)

2. **Salary Increases:** Service-related rates as shown in the table on page 141 (2020)

3. **Inflation:** 2.25% per year (2020)

4. **Payroll Growth:** 3.00% per year (2020)

5. **Mortality Rates:**

   a. Healthy Pre-retirement: Pub-2010 General Employee Mortality Table adjusted for mortality improvements using projection scale MP-2018. Rates are multiplied by a factor of 0.97 for males and 1.06 for females. (2020)

   b. Healthy Post-retirement: Pub-2010 Healthy Retired General Mortality Table, adjusted for mortality improvements using projection scale MP-2018. Rates are multiplied by a factor of 1.04 for males and 1.10 for females. (2020)

   c. Disabled: Pub-2010 General/Teacher Disabled Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2018. Rates are set forward two years for males and set forward five years for females. (2020)

6. **Retirement:** Age-based rates as shown in the table on page 144 (2020)

7. **Withdrawal:** Service-related rates based on experience as shown in the table on page 145 (2020)

8. **Disability:** Age-related rates based on actual experience as shown in the table on page 147 (2020)

9. **Allowance for Combined Service Annuity:** Liabilities for former vested members are increased by 4%, and liabilities for former, non-vested members are increased by 5% to account for the effect of some participants having eligibility for a Combined Service Annuity (2017)

10. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)

11. **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)

[1] Year in parentheses is the date of adoption

Summary of Actuarial Methods and Assumptions

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:** fair 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 July 1, 2021 Valuation:** None.

Actuarial Assumptions [1]

1. **Investment Return:** 7.50% per year (2018)
2. **Salary Increases:** Service-related rates as shown in the table on page 141 (2021)
3. **Inflation:** 2.25% per year (2021)
4. **Payroll Growth:** 3.00% per year (2021)
5. **Mortality Rates:**
    a. Healthy Pre-retirement: Pub-2010 General Employee Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)
    b. Healthy Post-retirement: Pub-2010 General Retired Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)
    c. Disabled: Pub-2010 General Disabled Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)
6. **Retirement:** Age-based rates as shown in the table on page 144 (2021)
7. **Withdrawal:** Service-related rates based on experience as shown in the table on page 145 (2021)
8. **Disability:** Age-related rates based on experience as shown in the table on page 147. All incidences are assumed to be duty-related (2021)
9. **Allowance for Combined Service Annuity:** Liabilities for former, vested members are increased by 13% to account for the effect of some participants having eligibility for a Combined Service Annuity (2017)
10. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)
11. **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)

[1] Year in parentheses is the date of adoption.

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:** fair 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 July 1, 2021 Valuation:** None.

Actuarial Assumptions [1]

1. **Investment Return:** 7.50% per year (2018)

2. **Salary Increases:** Service-related rates as shown in the table on page 141 (2021)

3. **Inflation:** 2.25% per year (2021)

4. **Payroll Growth:** 3.00% per year (2021)

5. **Mortality Rates**

    a. Healthy Pre-retirement: Pub-2010 General Employee Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)

    b. Healthy Post-retirement: Pub-2010 General Retired Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)

    c. Disabled: Pub-2010 General Disabled Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)

6. **Retirement:** Age-based rates as shown in the table on page 144 (2021)

7. **Withdrawal:** Service-related rates based on experience as shown in the table on page 146 (2021)

8. **Disability:** Age-related rates based on experience as shown in the table on page 147. All incidences are assumed to be duty-related (2021)

9. **Allowance for Combined Service Annuity:** Liabilities for former, vested members are increased by 17% and liabilities for former, non-vested members are increased by 6% to account for the effect of some participants having eligibility for a Combined Service Annuity (2017)

10. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)

11. **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)

[1] Year in parentheses is the date of adoption

Summary of Actuarial Methods and Assumptions

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:** fair 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 July 1, 2021 Valuation:** None.

Actuarial Assumptions [1]

1. **Investment Return:** 7.50% per year (2018)

2. **Salary Increases:** 2.50% per year (2018)

3. **Inflation:** 2.25% per year (2021)

4. **Payroll Growth:** 2.50% per year (2018)

5. **Mortality Rates:**

    a. Healthy Pre-retirement: Pub-2010 General Employee Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)

    b. Healthy Post-retirement: Pub-2010 General Retired Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)

    c. Disabled: Pub-2010 General Disabled Mortality Table adjusted for mortality improvements using mortality improvement scale MP-2019 (2021)

6. **Retirement:** Age-based rates as shown in the table on page 144 (2021)

7. **Withdrawal:** None

8. **Disability:** Age-related rates are based on actual experience as shown in the table on page 147 (2021)

9. **Allowance for Combined Service Annuity:** None

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

[1] Year in parentheses is the date of adoption.

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:** fair 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 July 1, 2021 Valuation:** None.

Actuarial Assumptions [1]

1. **Investment Return:** 0% per year (2011)

2. **Salary Increases:** 4.25% per year (2021)

3. **Inflation:** 2.25% per year (2021)

4. **Payroll Growth:** Not applicable; closed plan with decreasing payroll

5. **Mortality Rates:**

   a. Healthy Pre-retirement: Pub-2010 General Employee Mortality Table adjusted for mortality improvements using projection scale MP-2018. Rates are multiplied by a factor of 0.97 for males and 1.06 for females. (2021)

   b. Healthy Post-retirement: Pub-2010 Healthy Retired General Mortality Table, adjusted for mortality improvements using projection scale MP-2018. Rates are multiplied by a factor of 1.04 for males and 1.10 for females. (2021)

   c. Disabled: Not applicable

6. **Retirement:** Age-based rates as shown in the table on page 144 (2012)

7. **Withdrawal:** Ultimate rates based on actual experience as shown on page 146

8. **Disability:** No disability benefits

9. **Allowance for Combined Service Annuity:** None (2017)

10. **Administrative Expenses:** Prior year administrative expenses expressed as a percentage of prior year projected payroll (1994)

11. **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)

[1] Year in parentheses is the date of adoption

Changes in Actuarial Assumptions and Plan Provisions

There were no changes to actuarial assumptions or plan provisions since the July 1, 2021, actuarial valuations for the State Employees, State Patrol, Correctional Employees, Judges, or Legislators Retirement Plans.

A description of the system and plans may be found in the *Notes to the Financial Statements* beginning on page 54. Additional plan provisions are summarized in the *Introductory Section* beginning on page 18.

Other Assumptions

Used in the July 1, 2022 Actuarial Valuations

Member Information

Active Member Percentage Married and Beneficiary Age

	Percent Married [1]		Age of Beneficiaries for:	
Retirement Fund	**Males**	**Females**	**Males**	**Females**
State Employees	80 %	60 %	2 years younger	2 years older
State Patrol	85	85	2 years younger	2 years older
Correctional Employees	75	60	2 years younger	2 years older
Judges	marital status as indicated in member data file		3 years younger	2 years older
Legislators	85	85	3 years younger	3 years older

[1] 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.

Other Assumptions

Used in the July 1, 2022 Actuarial Valuations

Form of Payment

Annuity Benefit Option Selected

Retirement Fund	50% Joint and Survivor	75% Joint and Survivor	100% Joint and Survivor	Straight Life
State Employees				
Male - Married	10 %	15 %	65 %	10 %
Female - Married	15	10	40	35
All Unmarried	0	0	0	100
All Deferred	0	0	0	100
State Patrol				
All Married	13 %	13 %	70 %	5 %
All Unmarried	0	0	0	100
Correctional Employees				
Male - Married	13 %	13 %	65 %	10 %
Female - Married	15	10	50	25
All Unmarried	0	0	0	100
All Deferred [(1)]	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

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

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Salary Increase Rates

State Employees Retirement Fund

Service Years	Increase
1	13.00 %
2	9.00
3	5.80
4	5.40
5	5.00
6	4.90
7	4.80
8	4.60
9	4.50
10	4.20
11	4.10
12	4.00
13	3.90
14	3.80
15	3.70
16	3.60
17	3.50
18	3.50
19	3.50
20	3.40
21	3.30
22	3.30
23	3.20
24	3.20
25	3.20
26	3.20
27	3.10
28	3.10
29	3.00
30+	3.00

State Patrol Retirement Fund

Service Years	Increase
1	12.50 %
2	8.50
3	7.50
4	7.25
5	7.00
6	6.75
7	6.50
8	5.50
9	5.00
10	4.50
11	4.25
12	4.00
13	4.00
14	4.00
15	4.00
16	3.75
17	3.50
18	3.50
19	3.50
20	3.50
21	3.40
22	3.30
23	3.20
24	3.10
25+	3.00

Correctional Employees Retirement Fund

Service Years	Increase
1	11.50 %
2	7.00
3	5.00
4	5.00
5	4.75
6	4.75
7	4.75
8	4.75
9	4.50
10	4.50
11	4.50
12	4.50
13	4.25
14	4.00
15	3.75
16	3.75
17	3.75
18	3.50
19	3.50
20	3.50
21	3.25
22	3.25
23	3.25
24	3.25
25+	3.00

Judges Retirement Fund

2.50% per year

Legislators Retirement Fund

4.25% per year

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Mortality Rates [1]

State Employees and Legislators Retirement Funds

Age in 2022	Rates [2] Healthy Pre-Retirement Mortality Male	Healthy Pre-Retirement Mortality Female	Healthy Post-Retirement Mortality Male	Healthy Post-Retirement Mortality Female	Disability Mortality [3] Male	Disability Mortality [3] Female
20	0.04 %	0.01 %	0.04 %	0.01 %	0.34 %	0.17 %
25	0.03	0.01	0.03	0.01	0.29	0.29
30	0.04	0.02	0.05	0.02	0.49	0.50
35	0.06	0.03	0.06	0.03	0.69	0.80
40	0.08	0.04	0.08	0.04	0.90	1.12
45	0.09	0.06	0.11	0.07	1.20	1.45
50	0.13	0.08	0.28	0.23	1.65	1.66
55	0.20	0.13	0.43	0.33	2.17	2.02
60	0.32	0.21	0.65	0.44	2.73	2.36
65	0.46	0.30	0.95	0.65	3.37	2.74
70	0.64	0.46	1.48	1.05	4.06	3.58
75	0.95	0.76	2.49	1.85	5.31	5.36
80	1.50	1.29	4.43	3.39	7.65	8.55
85	6.33	5.28	8.08	6.38	11.39	12.77
90	13.03	11.42	13.97	11.85	17.52	18.10

[1] Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. The adjustment had no material effect on results.

[2] These rates were adjusted for mortality improvements using Projection Scale MP-2018 from a base year of 2010.

[3] No disability benefits are available with the Legislators Retirement Plan.

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Mortality Rates [1]

State Patrol, Correctional Employees, and Judges Retirement Funds

	Rates [2]					
	Healthy Pre-Retirement Mortality		Healthy Post-Retirement Mortality		Disability Mortality	
Age in 2022	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
20	0.04 %	0.01 %	0.04 %	0.01 %	0.44 %	0.26 %
25	0.03	0.01	0.03	0.01	0.34	0.20
30	0.05	0.02	0.05	0.02	0.50	0.36
35	0.07	0.03	0.07	0.03	0.68	0.55
40	0.09	0.04	0.09	0.04	0.84	0.75
45	0.10	0.06	0.11	0.06	1.05	0.98
50	0.14	0.08	0.28	0.21	1.50	1.42
55	0.21	0.13	0.42	0.30	2.04	1.81
60	0.33	0.20	0.64	0.41	2.59	2.08
65	0.47	0.29	0.92	0.59	3.06	2.18
70	0.65	0.44	1.42	0.95	3.63	2.57
75	0.99	0.73	2.40	1.69	4.67	3.59
80	1.57	1.23	4.32	3.12	6.65	5.57
85	6.65	5.05	7.90	5.87	9.95	8.83
90	13.68	10.92	13.68	10.92	15.15	12.99

[1] Generally, mortality rates are expected to increase as age increases. These standard mortality rates have been adjusted slightly to prevent decreasing mortality rates. The adjustment has no material effect on results.

[2] These rates were adjusted for mortality improvements using Projection Scale MP-2019 from a base year of 2010.

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Retirement Rates

State Employees Retirement Fund

	Percent Retiring		
Age	Rule of 90 Eligible	Hired Prior to 7/1/1989	Hired after 6/30/1989
55	16.0 %	3.0 %	4.0 %
56	12.5	3.0	4.0
57	12.5	4.0	4.0
58	11.5	4.0	4.0
59	12.5	5.0	4.0
60	14.0	7.0	5.0
61	15.0	8.0	7.5
62	25.0	16.0	13.0
63	22.0	16.0	13.0
64	20.0	16.0	13.0
65	35.0	35.0	20.0
66	35.0	35.0	35.0
67	30.0	30.0	30.0
68	25.0	25.0	25.0
69	25.0	25.0	25.0
70	30.0	30.0	30.0
71+	100.0	100.0	100.0

Correctional Employees Retirement Fund

Age	Percent Retiring
50	4.0 %
51	3.0
52	3.0
53	3.0
54	3.0
55	50.0
56	30.0
57	15.0
58	15.0
59	15.0
60	15.0
61	15.0
62	30.0
63	30.0
64	15.0
65	30.0
66	30.0
67	25.0
68	25.0
69	25.0
70+	100.0

State Patrol Retirement Fund

Age	Percent Retiring
50	3.0 %
51	5.0
52	5.0
53	3.0
54	4.0
55	65.0
56	40.0
57	30.0
58	15.0
59	20.0
60+	100.0

Judges Retirement Fund

Age	Percent Retiring
60	0.0 %
61	2.5
62	4.0
63	8.0
64	8.0
65	25.0
66	23.0
67	15.0
68	20.0
69	40.0
70	100.0

Legislators Retirement Fund

Age	Percent Retiring
60	0.0 %
61	0.0
62	40.0
63	30.0
64	30.0
65	40.0
66	30.0
67	25.0
68	25.0
69	25.0
70	30.0
71+	100.0

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Withdrawal Rates

State Employees Retirement Fund

Years of Service	Withdrawal Rates Male	Withdrawal Rates Female
1	20.00 %	20.50 %
2	15.00	17.00
3	10.00	13.00
4	8.50	10.50
5	7.50	9.50
6	7.00	8.50
7	6.00	8.00
8	4.75	6.75
9	4.25	6.00
10	4.00	5.00
11	3.50	4.50
12	3.00	4.25
13	2.75	4.00
14	2.50	3.75
15	2.25	3.50
16	2.25	3.25
17	2.25	2.75
18	2.25	2.50
19	2.00	2.50
20	1.50	2.50
21	1.25	2.50
22	1.25	2.40
23	1.00	2.30
24	1.00	2.20
25	1.00	2.10
26	1.00	2.00
27	1.00	1.75
28	1.00	1.75
29	1.00	1.50
30+	1.00	1.00

State Patrol Retirement Fund

Years of Service	Withdrawal Rates
1	5.00 %
2	3.50
3	2.50
4	2.25
5	2.00
6	1.75
7	1.50
8	1.25
9	1.00
10	0.75
11	0.75
12	0.75
13	0.75
14	0.75
15	0.50
16	0.50
17	0.50
18	0.50
19	0.50
20	0.50
21	0.50
22+	0.00

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Withdrawal Rates

Correctional Employees Retirement Fund

Years of Service	Withdrawal Rates	
	Male	Female
1	20.00 %	25.00 %
2	15.00	15.00
3	10.00	15.00
4	10.00	15.00
5	8.50	12.50
6	7.75	10.00
7	6.75	10.00
8	5.50	10.00
9	5.00	10.00
10	2.75	7.50
11	2.75	7.25
12	2.50	7.00
13	2.25	5.00
14	2.25	5.00
15	2.00	4.00
16	2.00	4.00
17	2.00	4.00
18	1.50	4.00
19	1.25	3.00
20	1.00	3.00
21	1.00	2.50
22	1.00	2.25
23	1.00	1.50
24	1.00	0.75
25+	0.00	0.00

Legislators Retirement Fund

Years of Service	Withdrawal Rates	
	House	Senate
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

Judges Retirement Fund

Members in the Judges Plan are assumed not to withdraw.

Actuarial Tables

Used in the July 1, 2022 Actuarial Valuations

Disability Retirement Rates

State Employees Retirement Fund

Age	Disability Retirement Rates
20	0.01 %
25	0.01
30	0.01
35	0.01
40	0.04
45	0.08
50	0.15
55	0.22
60	0.33
65	0.00

State Patrol Retirement Fund

Age	Disability Retirement Rates
20	0.030 %
25	0.050
30	0.090
35	0.135
40	0.155
45	0.239
50	0.481
55	0.800
60+	0.000

Correctional Employees Retirement Fund

Age	Disability Retirement Rates
20	0.05 %
25	0.08
30	0.11
35	0.15
40	0.22
45	0.28
50	0.38
55	0.70
60	0.70
65	0.70
70	0.70

Judges Retirement Fund

Age	Disability Retirement Rates
20	0.000 %
25	0.000
30	0.000
35	0.000
40	0.006
45	0.018
50	0.030
55	0.072
60	0.186
65	0.000
70	0.000

Legislators Retirement Fund

No disability benefits are available with this plan.

Actuarial Accrued Liability (AAL)

As of June 30, 2022
(Dollars in thousands)

	State Employees	State Patrol	Correctional Employees	Judges	Legislators
Active Members					
Retirement Annuities	$5,072,863	$354,814	$694,024	$115,027	$12,159
Disability Benefits	107,901	14,111	22,395	808	0
Survivor Benefits	58,166	2,469	6,286	1,360	109
Deferred Retirements	4,237	(747)	8,726	0	(46)
Refunds	(84,836)	(1,030)	(15,030)	110	(6)
Total Active Members	$5,158,331	$369,617	$716,401	$117,305	$12,216
Deferred Retirements	910,742	15,698	140,871	7,850	19,094
Former Members Not Vested	14,538	175	4,463	17	0
Benefit Recipients	9,977,891	682,115	1,016,714	278,196	134,651
Unclassified Employees Retirement Fund Contingent Liability	7,256	0	0	0	0
Total AAL	**$16,068,758**	**$1,067,605**	**$1,878,449**	**$403,368**	**$165,961**

Contribution Sufficiency / (Deficiency)

As of June 30, 2022
(Dollars in thousands)

	Actuarial	Actual Contribution Rates				Recommended	Sufficiency/
Retirement Fund	**Valuation Date**	**Employee**	**Employer**	**State**	**Total**	**Rate**	**(Deficiency)**
State Employees	July 1, 2022	6.00 %	6.25 %	NA	12.25 %	8.33 %	3.92 %
State Patrol [1]	July 1, 2022	15.40	30.10	0.93 %	46.43	34.05	12.38
Correctional Employees	July 1, 2022	9.60	18.85	NA	28.45	24.27	4.18
Judges [2] [3]	July 1, 2022	7.62	22.50	10.84	40.96	35.42	5.54
Legislators	July 1, 2022	9.00	NA	NA	9.00	$42,408,000	$(42,342,000)

[1] Annual state contribution of $1 million is statutorily required until the earlier of July 1, 2048, or until the Public Employee Retirement Association Police and Fire Retirement Fund and the MSRS State Patrol Retirement Fund both reach a 90 percent funded ratio on an actuarial value of assets basis.

[2] Annual state appropriation of $6 million is statutorily required until the earlier of July 1, 2048, or until the Judges Retirement Fund is fully funded.

[3] 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 7.83 percent and 41.17 percent, respectively, instead of 7.62 and 40.96 percent as shown above. The distinction between the Tier 1 and Tier 2 benefit programs is explained in the *Notes to the Financial Statements*.

Schedule of Changes in Unfunded Actuarial Accrued Liabilities

For the Fiscal Year Ended June 30, 2022
(Dollars in thousands)

	State Employees	State Patrol	Correctional Employees	Judges	Legislators
A. Unfunded Actuarial Accrued Liabilities (UAAL) at the Beginning of the Year	$448,791	$156,570	$390,588	$150,435	$174,301
B. Changes Due to Interest Requirements and Current Rate of Funding					
1. Normal Cost, including Expenses	$285,368	$21,279	$46,884	$9,790	$921
2. Contributions	(418,815)	(49,773)	(83,374)	(22,462)	(8,744)
3. Interest on A, B1, and B2	28,655	10,674	27,926	10,807	0
4. Totals (B1+B2+B3)	$(104,792)	$(17,820)	$(8,564)	$(1,865)	$(7,823)
C. Expected UAAL at End of the Year (A+B4)	$343,999	$138,750	$382,024	$148,570	$166,478
D. Increase (Decrease) Due to Actuarial Losses (Gains) Because of Experience Deviations from the Expected					
1. Age and Service Requirements	$14,459	$(201)	$4,791	$1,408	$55
2. Disability Requirements	(665)	5,398	(1,316)	(38)	0
3. Death-in-Service Benefits	(2,061)	469	118	(101)	20
4. Withdrawals	(11,165)	(791)	(1,268)	17	0
5. Salary Increases	(24,831)	31,245	17,698	11	(292)
6. Investment Return	(296,437)	(14,575)	(22,174)	(4,322)	0
7. Mortality of Annuitants	(19,593)	677	(628)	(122)	504
8. Other items	19,577	9,417	319	431	(804)
9. Totals	$(320,716)	$31,639	$(2,460)	$(2,716)	$(517)
E. UAAL at End of Year Before Actuarial Assumption and Plan Changes (C + D9)	$23,283	$170,389	$379,564	$145,854	$165,961
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	0	0	0	0	0
H. UAAL at the End of the Year	**$23,283**	**$170,389**	**$379,564**	**$145,854**	**$165,961**

Schedule of Actuarial and Fair Value Funding Progress

State Employees Retirement Fund

Actuarial Valuation Date	Actuarial Basis Assets	Actuarial Basis Funded Ratio	Actuarial Basis Contribution Sufficiency/ (Deficiency)	Fair Value Basis Assets	Fair Value Basis Funded Ratio	Fair Value Basis Contribution Sufficiency/ (Deficiency)
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)
07/01/17	12,364,957	85.22	(2.24)	12,485,614	86.05	(1.98)
07/01/18	13,035,350	88.80	0.10	13,293,422	90.56	0.58
07/01/19	13,489,773	88.87	0.67	13,772,289	90.73	1.19
07/01/20	13,954,562	91.90	1.69	13,855,691	91.25	1.51
07/01/21	15,197,610	97.13	3.12	17,440,051	111.46	7.08
07/01/22	16,045,475	99.86	3.92	15,829,850	98.51	3.52

State Patrol Retirement Fund

Actuarial Valuation Date	Actuarial Basis Assets	Actuarial Basis Funded Ratio	Actuarial Basis Contribution Sufficiency/ (Deficiency)	Fair Value Basis Assets	Fair Value Basis Funded Ratio	Fair Value Basis Contribution Sufficiency/ (Deficiency)
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)
07/01/17	685,077	77.77	(5.33)	691,599	78.52	(4.72)
07/01/18	715,964	76.95	(0.96)	729,799	78.44	0.08
07/01/19	737,700	76.85	1.74	753,144	78.46	2.82
07/01/20	762,865	77.13	4.10	757,590	76.60	3.74
07/01/21	835,280	84.21	11.99	957,864	96.57	20.62
07/01/22	897,216	84.04	12.38	883,581	82.76	11.56

Schedule of Actuarial and Fair Value Funding Progress

Correctional Employees Retirement Fund

	Actuarial Basis			Fair Value Basis		
Actuarial Valuation Date	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)
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)
07/01/17	1,013,173	71.63	(6.45)	1,023,817	72.38	(6.15)
07/01/18	1,092,719	73.31	(1.77)	1,114,887	74.80	(1.29)
07/01/19	1,160,399	73.47	(0.57)	1,183,995	74.97	(0.06)
07/01/20	1,233,590	73.83	0.80	1,223,537	73.23	0.58
07/01/21	1,380,410	77.95	3.70	1,580,953	89.27	8.09
07/01/22	1,498,885	79.79	4.18	1,473,921	78.46	3.64

Judges Retirement Fund

	Actuarial Basis			Fair Value Basis		
Actuarial Valuation Date	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)	Assets	Funded Ratio	Contribution Sufficiency/ (Deficiency)
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)
07/01/17	183,361	52.54	(1.97)	185,141	53.05	(1.69)
07/01/18	197,852	52.35	(0.40)	201,755	53.38	0.10
07/01/19	208,012	53.18	(0.65)	212,262	54.27	(0.11)
07/01/20	218,311	54.22	(0.47)	216,737	53.83	(0.67)
07/01/21	240,906	61.56	4.84	276,638	70.69	9.23
07/01/22	257,514	63.84	5.54	253,971	62.96	5.10

The Legislators Retirement Fund has no assets.

Schedule of Active Member Valuation Data

State Employees Retirement Fund

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percentage Increase In Average Pay
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
07/01/17	50,578	2,939,455,000	56,713	2.25
07/01/18	51,223	3,031,382,000	58,136	2.51
07/01/19	51,997	3,168,870,000	59,807	2.87
07/01/20	51,742	3,298,283,000	62,386	4.31
07/01/21	50,889	3,325,417,000	64,519	3.42
07/01/22	51,219	3,434,267,000	65,772	1.94

State Patrol Retirement Fund

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percentage Increase In Average Pay
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)
07/01/17	902	73,056,000	80,141	2.62
07/01/18	921	74,007,000	80,187	0.06
07/01/19	943	80,792,000	85,990	7.24
07/01/20	937	84,530,000	89,271	3.82
07/01/21	912	88,351,000	94,044	5.35
07/01/22	937	107,240,000	108,694	15.58

Correctional Employees Retirement Fund

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percentage Increase In Average Pay
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
07/01/17	4,579	248,879,000	53,380	1.63
07/01/18	4,650	257,330,000	54,750	2.57
07/01/19	4,582	267,563,000	57,486	5.00
07/01/20	4,523	278,479,000	60,194	4.71
07/01/21	4,504	282,667,000	61,427	2.05
07/01/22	4,420	294,479,000	64,939	5.72

Schedule of Active Member Valuation Data

Judges Retirement Fund

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percentage Increase In Average Pay
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
07/01/17	317	47,813,000	150,265	(0.31)
07/01/18	317	49,009,000	153,339	2.05
07/01/19	315	50,164,000	157,199	2.52
07/01/20	322	52,298,000	161,101	2.48
07/01/21	320	52,960,000	165,705	2.86
07/01/22	320	54,436,000	168,816	1.88

Legislators Retirement Fund

Actuarial Valuation Date	Active Member Count	Annual Payroll	Average Annual Pay	Percentage Increase In Average Pay
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)
07/01/17	19	889,000	40,819	10.18
07/01/18	19	1,033,000	51,657	26.55
07/01/19	17	1,011,000	53,481	3.53
07/01/20	17	967,000	53,326	(0.29)
07/01/21	12	856,000	58,378	9.47
07/01/22	12	689,000	58,228	(0.26)

Schedule of Retirees and Beneficiaries

State Employees Retirement Fund

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Annual Allowances at Year End	% Change in Annual Allowances	Average Annual Allowances
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
06/30/17	2,481	50,812,764	1,100	21,950,949	39,333	750,526,000	6.10	19,081
06/30/18	2,705	55,152,884	1,217	23,707,118	40,821	797,027,000	6.20	19,525
06/30/19	2,791	58,013,228	1,239	24,093,519	42,373	841,776,000	5.61	19,866
06/30/20	2,849	59,688,946	1,303	26,876,587	43,919	885,517,000	5.20	20,163
06/30/21	2,936	62,574,088	1,425	29,253,228	45,430	923,364,000	4.27	20,617
06/30/22	2,921	61,170,858	1,505	31,118,064	46,846	966,698,000	4.69	20,833

State Patrol Retirement Fund

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Annual Allowances at Year End	% Change in Annual Allowances	Average Annual Allowances
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
06/30/17	44	2,344,952	40	1,952,046	1,052	58,560,000	1.50	55,665
06/30/18	47	2,112,033	28	1,511,936	1,071	59,653,000	1.87	55,698
06/30/19	43	1,927,569	36	1,901,474	1,078	60,375,000	1.21	56,006
06/30/20	55	2,859,172	26	1,632,597	1,107	61,859,000	2.46	55,880
06/30/21	51	2,692,576	37	2,139,100	1,121	63,094,000	2.00	56,378
06/30/22	58	2,811,527	39	2,168,849	1,140	64,332,000	1.96	56,565

Correctional Employees Retirement Fund

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Annual Allowances at Year End	% Change in Annual Allowances	Average Annual Allowances
06/30/13	214	$2,524,880	37	$327,671	2,374	$46,226,000	8.59 %	$9,472
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
06/30/17	208	4,863,463	42	844,411	3,084	63,221,000	7.07	20,500
06/30/18	215	5,096,589	40	930,452	3,259	67,622,000	6.96	20,749
06/30/19	222	5,507,267	53	1,093,704	3,428	72,419,000	7.09	21,126
06/30/20	215	5,730,091	57	1,174,940	3,586	77,045,000	6.39	21,485
06/30/21	229	6,213,721	87	1,943,197	3,728	81,829,000	6.21	22,304
06/30/22	264	7,359,681	78	1,589,552	3,914	87,102,000	6.44	22,743

Schedule of Retirees and Beneficiaries

Judges Retirement Fund

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Annual Allowances at Year End	% Change in Annual Allowances	Average Annual Allowances
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
06/30/17	17	991,663	16	1,223,853	351	22,785,000	1.82	64,915
06/30/18	31	2,036,076	13	904,562	369	23,585,000	3.51	63,916
06/30/19	29	1,959,657	15	761,539	383	25,233,000	6.99	65,883
06/30/20	23	1,409,710	16	1,047,563	390	26,272,000	4.12	67,364
06/30/21	24	1,582,527	20	1,439,525	394	27,038,000	2.92	68,625
06/30/22	31	2,130,811	13	975,524	412	28,035,000	3.69	69,414

Legislators Retirement Fund

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Annual Allowances at Year End	% Change in Annual Allowances	Average Annual Allowances
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
06/30/17	20	559,014	17	475,881	375	8,716,000	2.59	23,243
06/30/18	13	433,800	16	568,833	372	8,912,000	2.25	23,957
06/30/19	17	432,809	19	483,535	370	8,853,000	(0.66)	23,927
06/30/20	7	138,945	17	444,719	360	8,812,000	(0.46)	24,478
06/30/21	23	656,052	26	706,741	357	8,679,000	(1.51)	24,303
06/30/22	14	257,826	22	482,877	349	8,677,000	(0.02)	24,457

Elective State Officers Retirement Fund

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Annual Allowances at Year End	% Change in Annual Allowances	Average Annual Allowances
06/30/13	0	$0	0	$0	14	$469,000	2.40 %	$33,500

Solvency Test

(Dollars in thousands)

Actuarial Valuation Date	Aggregate Accrued Liabilities: (a) Active Member Contributions	(b) Retired and Beneficiaries	(c) Active Member (Employer Financed)	Total Actuarial Accrued Liabilities	Reported Assets	Portion Covered by Reported Assets: (a)	(b)	(c)
State Employees Retirement Fund								
07/01/13	$1,090,373	$5,807,381	$4,530,887	$11,428,641	$9,375,780	100.0 %	100.0 %	54.7 %
07/01/14	1,128,164	6,471,998	4,844,964	12,445,126	10,326,272	100.0	100.0	56.3
07/01/15	1,161,369	6,949,000	4,982,333	13,092,702	11,223,285	100.0	100.0	62.5
07/01/16	1,206,968	7,746,511	5,363,407	14,316,886	11,676,370	100.0	100.0	50.8
07/01/17	1,260,721	8,207,943	5,040,486	14,509,150	12,364,957	100.0	100.0	57.5
07/01/18	1,309,528	8,512,016	4,857,945	14,679,489	13,035,350	100.0	100.0	66.2
07/01/19	1,365,782	8,974,283	4,839,075	15,179,140	13,489,773	100.0	100.0	65.1
07/01/20	1,429,966	9,117,035	4,636,842	15,183,843	13,954,562	100.0	100.0	73.5
07/01/21	1,493,476	9,563,516	4,589,409	15,646,401	15,197,610	100.0	100.0	90.2
07/01/22	1,539,574	9,977,891	4,551,293	16,068,758	16,045,475	100.0	100.0	99.5
State Patrol Retirement Fund								
07/01/13	$63,504	$507,005	$171,341	$741,850	$552,319	100.0 %	96.4 %	0.0 %
07/01/14	67,030	537,866	195,525	800,421	597,870	100.0	98.7	0.0
07/01/15	67,543	570,541	194,949	833,033	639,863	100.0	100.0	0.9
07/01/16	70,738	581,343	181,805	833,886	654,842	100.0	100.0	1.5
07/01/17	76,399	611,782	192,665	880,846	685,077	100.0	99.5	0.0
07/01/18	81,702	647,308	201,398	930,408	715,964	100.0	98.0	0.0
07/01/19	89,141	654,242	216,581	959,964	737,700	100.0	99.1	0.0
07/01/20	93,380	676,416	219,249	989,045	762,865	100.0	99.0	0.0
07/01/21	99,116	665,806	226,928	991,850	835,280	100.0	100.0	31.0
07/01/22	107,695	682,115	277,795	1,067,605	897,216	100.0	100.0	38.7
Correctional Employees Retirement Fund								
07/01/13	$113,276	$498,718	$414,104	$1,026,098	$701,091	100.0 %	100.0 %	21.5 %
07/01/14	122,102	543,049	457,323	1,122,474	790,304	100.0	100.0	27.4
07/01/15	126,918	634,592	477,748	1,239,258	878,624	100.0	100.0	24.5
07/01/16	136,511	673,129	503,876	1,313,516	937,000	100.0	100.0	25.3
07/01/17	146,482	741,694	526,267	1,414,443	1,013,173	100.0	100.0	23.8
07/01/18	154,678	792,275	543,568	1,490,521	1,092,719	100.0	100.0	26.8
07/01/19	164,401	842,753	572,220	1,579,374	1,160,399	100.0	100.0	26.8
07/01/20	173,958	894,918	601,978	1,670,854	1,233,590	100.0	100.0	27.4
07/01/21	186,049	948,754	636,195	1,770,998	1,380,410	100.0	100.0	38.6
07/01/22	192,603	1,016,714	669,132	1,878,449	1,498,885	100.0	100.0	43.3

Solvency Test

(Dollars in thousands)

Actuarial Valuation Date	Aggregate Accrued Liabilities: (a) Active Member Contributions	(b) Retired and Beneficiaries	(c) Active Member (Employer Financed)	Total Actuarial Accrued Liabilities	Reported Assets	Portion Covered by Reported Assets: (a)	(b)	(c)
Judges Retirement Fund								
07/01/13	$26,359	$180,641	$77,513	$284,513	$144,918	100.0 %	65.6 %	0.0 %
07/01/14	28,112	190,570	79,551	298,233	157,528	100.0	67.9	0.0
07/01/15	29,164	205,115	81,354	315,633	168,235	100.0	67.8	0.0
07/01/16	30,486	211,594	89,254	331,334	172,525	100.0	67.1	0.0
07/01/17	32,460	219,587	96,929	348,976	183,361	100.0	68.7	0.0
07/01/18	31,888	246,060	99,977	377,925	197,852	100.0	67.4	0.0
07/01/19	31,085	263,979	96,082	391,146	208,012	100.0	67.0	0.0
07/01/20	32,684	270,913	99,063	402,660	218,311	100.0	68.5	0.0
07/01/21	33,581	262,676	95,084	391,341	240,906	100.0	78.9	0.0
07/01/22	32,869	278,196	92,303	403,368	257,514	100.0	80.8	0.0
Legislators Retirement Fund								
07/01/13	$1,930	$149,331	$84,616	$235,877	$11,493	100.0 %	6.4 %	0.0 %
07/01/14	2,011	162,938	85,911	250,860	8,258	100.0	3.8	0.0
07/01/15	2,024	154,999	73,196	230,219	3,430	100.0	0.9	0.0
07/01/16	2,103	151,293	65,118	218,514	0	0.0	0.0	0.0
07/01/17	1,769	172,400	53,531	227,700	0	0.0	0.0	0.0
07/01/18	1,857	156,501	54,650	213,008	0	0.0	0.0	0.0
07/01/19	1,743	159,573	39,666	200,982	0	0.0	0.0	0.0
07/01/20	1,830	152,264	41,311	195,405	0	0.0	0.0	0.0
07/01/21	1,355	140,715	32,231	174,301	0	0.0	0.0	0.0
07/01/22	1,418	134,651	29,892	165,961	0	0.0	0.0	0.0
Elective State Officers Retirement Fund								
07/01/13	$0	$7,751	$844	$8,595	$0	0.0 %	0.0 %	0.0 %

Summary of Unfunded Actuarial Accrued Liabilities (UAAL)

(Dollars in thousands)

State Employees Retirement Fund

Actuarial Valuation Date	Actuarial Accrued Liabilities	Actuarial Value of Assets	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
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
07/01/17	14,509,150	12,364,957	2,144,193	2,939,455	72.95
07/01/18	14,679,489	13,035,350	1,644,139	3,031,382	54.24
07/01/19	15,179,140	13,489,773	1,689,367	3,168,870	53.31
07/01/20	15,183,843	13,954,562	1,229,281	3,298,283	37.27
07/01/21	15,646,401	15,197,610	448,791	3,325,417	13.50
07/01/22	16,068,758	16,045,475	23,283	3,434,267	0.68

State Patrol Retirement Fund

Actuarial Valuation Date	Actuarial Accrued Liabilities	Actuarial Value of Assets	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
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
07/01/17	880,846	685,077	195,769	73,056	267.97
07/01/18	930,408	715,964	214,444	74,007	289.76
07/01/19	959,964	737,700	222,264	80,792	275.11
07/01/20	989,045	762,865	226,180	84,530	267.57
07/01/21	991,850	835,280	156,570	88,351	177.21
07/01/22	1,067,605	897,216	170,389	107,240	158.89

Correctional Employees Retirement Fund

Actuarial Valuation Date	Actuarial Accrued Liabilities	Actuarial Value of Assets	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
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
07/01/17	1,414,443	1,013,173	401,270	248,879	161.23
07/01/18	1,490,521	1,092,719	397,802	257,330	154.59
07/01/19	1,579,374	1,160,399	418,975	267,563	156.59
07/01/20	1,670,854	1,233,590	437,264	278,479	157.02
07/01/21	1,770,998	1,380,410	390,588	282,667	138.18
07/01/22	1,878,449	1,498,885	379,564	294,479	128.89

Summary of Unfunded Actuarial Accrued Liabilities (UAAL)

(Dollars in thousands)

Judges Retirement Fund

Actuarial Valuation Date	Actuarial Accrued Liabilities	UAAL as a Percent of Payroll	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
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
07/01/17	348,976	183,361	165,615	47,813	346.38
07/01/18	377,925	197,852	180,073	49,009	367.43
07/01/19	391,146	208,012	183,134	50,164	365.07
07/01/20	402,660	218,311	184,349	52,298	352.50
07/01/21	391,341	240,906	150,435	52,960	284.05
07/01/22	403,368	257,514	145,854	54,436	267.94

Legislators Retirement Fund

Actuarial Valuation Date	Actuarial Accrued Liabilities	UAAL as a Percent of Payroll	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
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
07/01/17	227,700	0	227,700	889	25,613.05
07/01/18	213,008	0	213,008	1,033	20,620.33
07/01/19	200,982	0	200,982	1,011	19,879.53
07/01/20	195,405	0	195,405	967	20,207.34
07/01/21	174,301	0	174,301	856	20,362.27
07/01/22	165,961	0	165,961	689	24,087.23

Elective State Officers Retirement Fund

Actuarial Valuation Date	Actuarial Accrued Liabilities	UAAL as a Percent of Payroll	Unfunded Actuarial Accrued Liabilities	Member Payroll	UAAL as a Percent of Payroll
07/01/13	$8,595	$0	$8,595	$0	NA

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 ACFR. In addition, each employer participating in a MSRS defined benefit retirement plan 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.

Actuary's Certification Letter

| P: 800.521.0498 | www.grsconsulting.com

December 7, 2022

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

Re: 2022 Annual Comprehensive Financial Report (ACFR)

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, 2022. 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 Annual Comprehensive Financial Report (ACFR), MSRS was responsible for preparing the Schedule of Employer Allocations and the Schedule of Pension Amounts by Employer. MSRS prepared the following exhibits in the Financial Section and the Actuarial Section based on information included in the annual actuarial valuation prepared by Gabriel, Roeder, Smith & Company (GRS):

- Schedule of Changes in the Employers' Net Pension Liability and Related Ratios;
- Schedule of Employer Contributions (and Notes to Schedule);
- Summary of GASB Statements No. 67 and No. 68 Actuarial Valuation Results;
- Summary of Deferred Outflows (Inflows) of Resources Arising from Current Reporting Period;
- Summary of Pension Expense (Income); and
- Summary of Actuarial Methods and Assumptions.

Reading the ACFR 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.

277 Coon Rapids Boulevard | Suite 212 | Coon Rapids, Minnesota 55433-2629

Actuary's Certification Letter

Board of Directors
Minnesota State Retirement System
December 7, 2022
Page 2

Valuation Results

The results of the June 30, 2022 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	$17,473,133	15,829,850	1,643,283	90.60%	$(700,638)	6.75 %
SPRF	1,164,176	883,581	280,595	75.90	(11,463)	6.75
CERF	2.073,612	1,473,921	599,691	71.08	(34,485)	6.75
JRF	431,898	253,971	177,927	58.80	17,965	6.75
LRF[2]	114,007	0	114,007	0.00	(18,107)	3.69

[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.*

The following changes were recognized this year in the valuations for GASB Statements No. 67 and No. 68 purposes:

- For all plans, the long-term expected rate of return on plan investments was changed from 6.50% to 6.75% (assumption is not used for LRF since plan assets are $0).
- For LRF, the Single Discount Rate was changed from 1.92% to 3.69%.
- For SERF, SPRF, CERF, and JRF, the Single Discount Rate was changed from 6.50% to 6.75%.

GRS performed a brief review of the basic financial and membership data provided to us as of June 30, 2022 by MSRS, and determined that the data appears reasonable in comparison to last year. We did not audit the data. We have relied upon the data as submitted in performing the actuarial valuation and in preparing trend data schedules. The assumptions are based on the last experience study (dated June 27, 2019 for SERF, June 30, 2020 for CERF, JRF and SPRF and July 15, 2020 for LRF) and a review of inflation and investment assumptions (dated July 12, 2022). The MSRS Board selected the long-term expected rate of investment return based on input from GRS that the proposed selection would be reasonable for the purpose of the measurement. The assumptions and methods meet the parameters established by Actuarial Standards of Practice.

This report reflects the impact of COVID-19 through June 30, 2022. It does not reflect the ongoing impact of COVID-19, which is likely to influence demographic and investment experience, at least in the short term. We will continue to monitor these developments and their impact on the plan.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

GRS

Actuary's Certification Letter

To the best of our knowledge and belief, the methods and assumptions used in the actuarial valuations comply with Actuarial Standards of Practice (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 these assumptions, methods, and procedures.

Brian B. Murphy, Bonita J. Wurst, and Sheryl L. Christensen 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, GRS 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,
Gabriel, Roeder, Smith & Company

Brian B. Murphy

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

Bonita J. Wurst

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

Sheryl Christensen

Sheryl L. Christensen, FSA, EA, FCA, MAAA

BBM/BJW/SLC:sc

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

As of and For the Year Ended June 30, 2022
(Dollars in thousands)

	State Employees Retirement Fund	State Patrol Retirement Fund
Actuarial Valuation Date	June 30, 2022	June 30, 2022
Measurement Date of the Net Pension Liability	June 30, 2022	June 30, 2022
Net Pension Liability		
Total Pension Liability (TPL)	$17,473,133	$1,164,176
Fiduciary Net Position (FNP)	15,829,850	883,581
Net Pension Liability (NPL)	$1,643,283	$280,595
Covered Payroll	$3,434,267	$107,240
FNP as a percentage of TPL	90.60 %	75.90 %
NPL as a percentage of Covered Payroll	47.85 %	261.65 %
Deferred Outflows (Inflows) of Resources		
Arising from the Current Reporting Period due to:		
Differences Between Expected and Actual Experience	$(6,694)	$54,474
Assumption Changes	(514,065)	(35,484)
Differences Between Expected and Actual Investment Earnings	2,176,276	121,136
Total Pension Expense (Income)	$(700,638)	$(11,463)
Single Discount Rate		
Long-Term Expected Rate of Investment Return	6.75 %	6.75 %
Long-Term Municipal Bond Rate	3.69	3.69
Single Discount Rate	6.75	6.75
Last fiscal year for which projected benefits are fully funded (using a 100-year projection)	2122	2122

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

As of and For the Year Ended June 30, 2022
(Dollars in thousands)

	Correctional Employees Retirement Fund	Judges Retirement Fund	Legislators Retirement Fund
Actuarial Valuation Date	June 30, 2022	June 30, 2022	June 30, 2022
Measurement Date of the Net Pension Liability	June 30, 2022	June 30, 2022	June 30, 2022
Net Pension Liability			
Total Pension Liability (TPL)	$2,073,612	$431,898	$114,007
Fiduciary Net Position (FNP)	1,473,921	253,971	0
Net Pension Liability (NPL)	$599,691	$177,927	$114,007
Covered Payroll	$294,479	$54,436	$689
FNP as a percentage of TPL	71.08 %	58.80 %	0.00 %
NPL as a percentage of Covered Payroll	203.64 %	326.86 %	16,546.73 %
Deferred Outflows (Inflows) of Resources			
Arising from the Current Reporting Period due to:			
Differences Between Expected and Actual Experience	$25,674	$2,040	$(415)
Assumption Changes	(72,164)	(10,257)	(20,826)
Differences Between Expected and Actual Investment Earnings	201,661	34,820	0
Total Pension Expense (Income)	$(34,485)	$17,965	$(18,107)
Single Discount Rate			
Long-Term Expected Rate of Investment Return	6.75 %	6.75 %	6.75 %
Long-Term Municipal Bond Rate	3.69	3.69	3.69
Single Discount Rate	6.75	6.75	3.69
Last fiscal year for which projected benefits are fully funded (using a 100-year projection)	2122	2122	NA

Summary of Pension Expense (Income)

For the Year Ended June 30, 2022
(Dollars in thousands)

	State Employees Retirement Fund	State Patrol Retirement Fund
Service Cost	$340,333	$26,648
Interest on the Total Pension Liability	1,117,920	71,049
Current-Period Benefit Changes	0	0
Employee Contributions	(206,056)	(16,515)
Projected Earnings on Plan Investments	(1,115,739)	(61,776)
Pension Plan Administrative Expenses	10,483	190
Other Changes in Fiduciary Net Position	(27,945)	0
Recognition of Outflow (Inflow) of Resources Arising from the Current Reporting Period due to:		
Difference between expected and actual experience	(1,339)	9,079
Assumption Changes	(102,813)	(5,914)
Differences Between Expected and Actual Investment Earnings	435,255	24,227
Recognition of Outflow (Inflow) of Resources Arising from Prior Reporting Periods due to:		
Difference between expected and actual experience	3,139	(1,162)
Assumption Changes	(561,900)	(24,908)
Differences Between Expected and Actual Investment Earnings	(591,976)	(32,381)
Total Pension Expense (Income)	**$(700,638)**	**$(11,463)**

Summary of Pension Expense (Income)

For the Year Ended June 30, 2022
(Dollars in thousands)

	Correctional Employees Retirement Fund	Judges Retirement Fund	Legislators Retirement Fund
Service Cost	$56,990	$11,707	$532
Interest on the Total Pension Liability	130,414	27,360	2,625
Current-Period Benefit Changes	0	0	0
Employee Contributions	(28,270)	(4,214)	(62)
Projected Earnings on Plan Investments	(102,506)	(17,798)	0
Pension Plan Administrative Expenses	909	72	39
Other Changes in Fiduciary Net Position	0	0	0
Recognition of Outflow (Inflow) of Resources Arising from the Current Reporting Period due to:			
Difference between expected and actual experience	6,419	408	(415)
Assumption Changes	(18,041)	(2,051)	(20,826)
Differences Between Expected and Actual Investment Earnings	40,332	6,964	0
Recognition of Outflow (Inflow) of Resources Arising from Prior Reporting Periods due to:			
Difference between expected and actual experience	1,499	(11)	0
Assumption Changes	(69,655)	4,939	0
Differences Between Expected and Actual Investment Earnings	(52,576)	(9,411)	0
Total Pension Expense (Income)	**$(34,485)**	**$17,965**	**$(18,107)**

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

For the Fiscal Year Ended June 30, 2022
(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 here. In the situations noted in the schedule below, the change in net pension 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.

Deferred Outflows (Inflows) of Resources Due to Differences Between Expected and Actual Experience

Plan	Total Difference	Recognition period	Recognized in Current Pension Expense	Recognized in Future Pension Expense
State Employees	$(6,694)	5 years	$(1,339)	$(5,355)
State Patrol	54,474	6 years	9,079	45,395
Correctional Employees	25,674	4 years	6,419	19,255
Judges	2,040	5 years	408	1,632
Legislators	(415)	1 year	(415)	0

Deferred Outflows (Inflows) of Resources Due to Changes in Actuarial Assumptions

Plan	Total Difference	Recognition period	Recognized in Current Pension Expense	Recognized in Future Pension Expense
State Employees	$(514,065)	5 years	$(102,813)	$(411,252)
State Patrol	(35,484)	6 years	(5,914)	(29,570)
Correctional Employees	(72,164)	4 years	(18,041)	(54,123)
Judges	(10,257)	5 years	(2,051)	(8,206)
Legislators	(20,826)	1 year	(20,826)	0

Deferred Outflows (Inflows) of Resources Due to Differences Between Expected and Actual Earnings on Pension Plan Investments

Plan	Total Difference	Recognition period	Recognized in Current Pension Expense	Recognized in Future Pension Expense
State Employees	$2,176,276	5 years	$435,255	$1,741,021
State Patrol	121,136	5 years	24,227	96,909
Correctional Employees	201,661	5 years	40,332	161,329
Judges	34,820	5 years	6,964	27,856
Legislators	0	5 years	0	0

Summary of Actuarial Methods and Assumptions

For the Year Ended June 30, 2022

Actuarial Methods

1. Actuarial Cost Method: Entry age normal

2. Asset Valuation Method: Fair value of assets

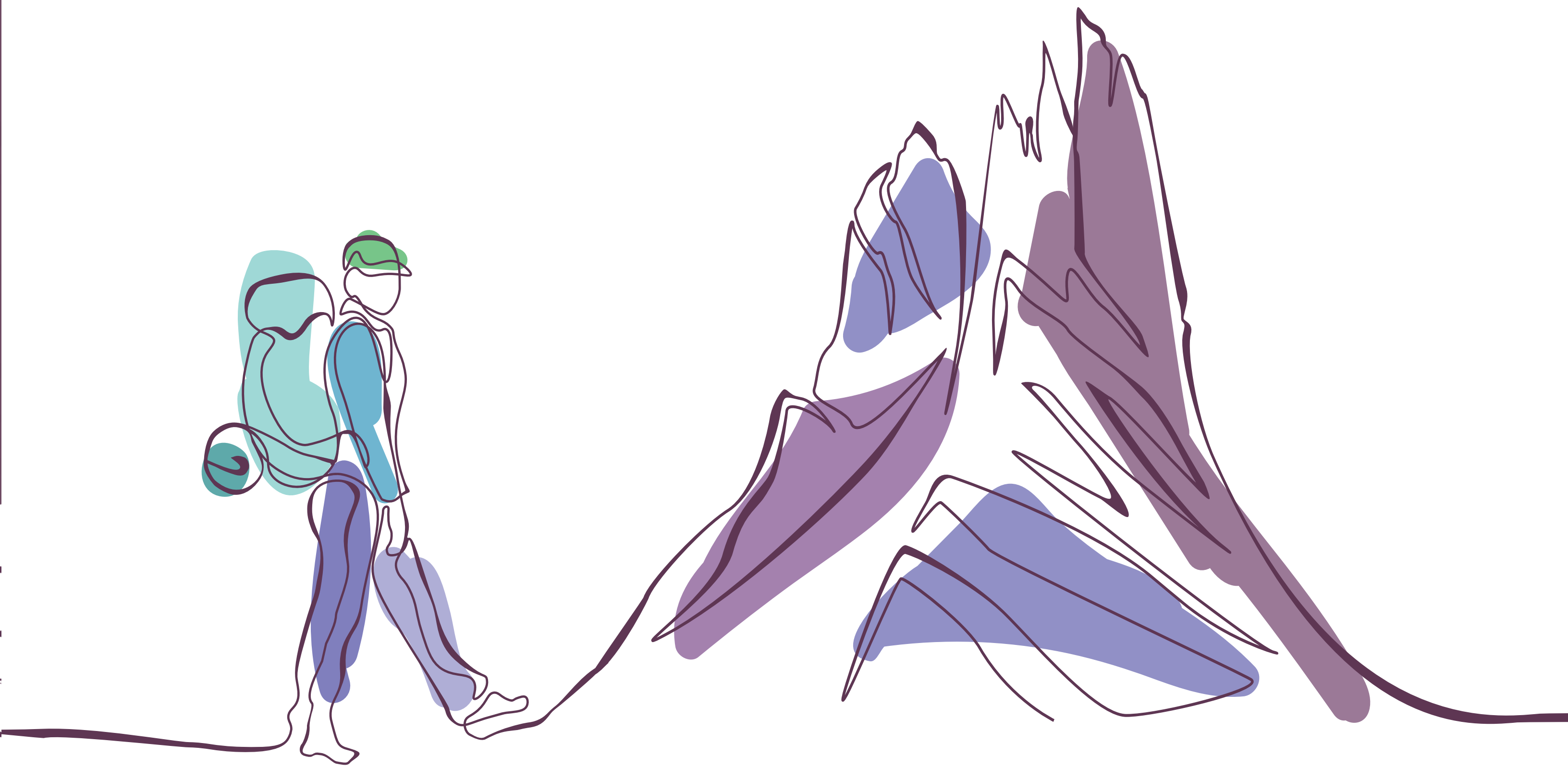
Actuarial Assumptions

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 beginning on page 134 of this section. Only the assumptions that differ are listed below, and the funds to which they pertain are noted parenthetically.

1. Investment Rate of Return: 6.75 percent (State Employees, State Patrol, Correctional Employees, Judges)

2. Single Discount Rate as of the June 30, 2022, Measurement Date:

6.75 percent (State Employees, State Patrol, Correctional Employees, Judges)
3.69 percent (Legislators)



Statistical

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 annual comprehensive financial report. The information that follows is intended to provide financial statement users with 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 the overall financial condition of MSRS.

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 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 *Membership Summary* reports member counts, average age, and 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, 2022, 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 *Membership Summary*, 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*.

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.

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended 2022
(Dollars in thousands)

State Employees Retirement Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$206,056	$199,525	$197,897	$182,210	$166,726
Employer Contributions	212,759	206,381	204,006	182,939	164,233
Investment Income (Net of Expenses)	(1,060,537)	4,098,129	569,670	948,366	1,276,550
Other Additions	28,202	28,972	21,803	32,434	21,447
Total Additions	$(613,520)	$4,533,007	$993,376	$1,345,949	$1,628,956
Deductions					
Annuity Benefits	$966,698	$923,364	$885,517	$841,776	$797,027
Refunds	19,243	12,556	13,725	15,199	13,533
Administrative Expenses	10,483	10,779	10,261	9,877	9,564
Other Expenses	257	1,948	471	230	1,024
Total Deductions	$996,681	$948,647	$909,974	$867,082	$821,148
Change in Fiduciary Net Position	**$(1,610,201)**	**$3,584,360**	**$83,402**	**$478,867**	**$807,808**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$161,670	$153,854	$149,293	$131,033	$124,150
Employer Contributions	158,352	151,168	146,333	128,037	121,673
Investment Income (Net of Expenses)	1,667,562	(9,633)	501,185	1,829,621	1,275,308
Other Additions	47,702	20,751	30,401	21,014	21,565
Total Additions	$2,035,286	$316,140	$827,212	$2,109,705	$1,542,696
Deductions					
Annuity Benefits	$750,526	$707,361	$665,821	$623,942	$586,256
Refunds	11,576	13,345	12,026	11,986	12,222
Administrative Expenses	10,165	10,196	8,719	8,125	8,589
Other Expenses	470	492	931	486	227
Total Deductions	$772,737	$731,394	$687,497	$644,539	$607,294
Change in Fiduciary Net Position	**$1,262,549**	**$(415,254)**	**$139,715**	**$1,465,166**	**$935,402**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

State Patrol Retirement Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$16,515	$13,606	$12,595	$12,038	$10,657
Employer Contributions	32,258	24,809	21,975	19,479	15,952
Investment Income (Net of Expenses)	(59,360)	224,273	31,073	51,823	70,474
Other Additions	1,000	1,000	1,000	1,000	1,000
Total Additions	$(9,587)	$263,688	$66,643	$84,340	$98,083
Deductions					
Annuity Benefits	$64,332	$63,094	$61,859	$60,375	$59,653
Refunds	174	116	112	428	39
Administrative Expenses	190	204	224	191	184
Other Expenses	0	0	2	1	7
Total Deductions	$64,696	$63,414	$62,197	$60,995	$59,883
Change in Fiduciary Net Position	**$(74,283)**	**$200,274**	**$4,446**	**$23,345**	**$38,200**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$10,520	$9,292	$9,174	$7,930	$7,703
Employer Contributions	15,783	13,938	13,763	11,894	11,482
Investment Income (Net of Expenses)	93,077	(774)	28,903	107,187	76,315
Other Additions	1,000	1,000	1,000	1,000	0
Total Additions	$120,380	$23,456	$52,840	$128,011	$95,500
Deductions					
Annuity Benefits	$58,560	$57,695	$55,465	$53,697	$52,057
Refunds	5	79	15	25	7
Administrative Expenses	208	220	170	150	190
Other Expenses	0	0	0	0	1
Total Deductions	$58,773	$57,994	$55,650	$53,872	$52,255
Change in Fiduciary Net Position	**$61,607**	**$(34,538)**	**$(2,810)**	**$74,139**	**$43,245**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Correctional Employees Retirement Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$28,270	$27,136	$26,734	$25,686	$23,417
Employer Contributions	55,104	48,823	43,658	38,245	32,893
Investment Income (Net of Expenses)	(99,155)	366,352	49,608	80,942	105,263
Other Additions	3	22	0	0	0
Total Additions	$(15,778)	$442,333	$120,000	$144,873	$161,573
Deductions					
Annuity Benefits	$87,102	$81,829	$77,045	$72,419	$67,622
Refunds	3,240	2,136	2,488	2,484	2,052
Administrative Expenses	909	950	924	856	827
Other Expenses	3	2	1	6	2
Total Deductions	$91,254	$84,917	$80,458	$75,765	$70,503
Change in Fiduciary Net Position	**$(107,032)**	**$357,416**	**$39,542**	**$69,108**	**$91,070**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$22,648	$21,953	$21,061	$18,855	$17,561
Employer Contributions	31,763	30,678	29,480	26,468	24,632
Investment Income (Net of Expenses)	135,359	(195)	38,624	137,523	93,392
Other Additions	0	0	0	0	0
Total Additions	$189,770	$52,436	$89,165	$182,846	$135,585
Deductions					
Annuity Benefits	$63,221	$59,045	$54,909	$50,842	$46,226
Refunds	1,466	1,895	1,590	1,447	1,032
Administrative Expenses	856	906	720	657	692
Other Expenses	2	0	0	1	1
Total Deductions	$65,545	$61,846	$57,219	$52,947	$47,951
Change in Fiduciary Net Position	**$124,225**	**$(9,410)**	**$31,946**	**$129,899**	**$87,634**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Judges Retirement Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$4,214	$4,166	$4,168	$4,049	$3,973
Employer Contributions	12,248	11,916	11,767	11,287	11,027
Investment Income (Net of Expenses)	(17,022)	64,934	8,955	14,491	19,265
Other Additions	6,000	6,000	6,000	6,000	6,000
Total Additions	$5,440	$87,016	$30,890	$35,827	$40,265
Deductions					
Annuity Benefits	$28,035	$27,038	$26,272	$25,233	$23,585
Refunds	0	0	30	0	0
Administrative Expenses	72	77	113	87	66
Other Expenses	0	0	0	0	0
Total Deductions	$28,107	$27,115	$26,415	$25,320	$23,651
Change in Fiduciary Net Position	**$(22,667)**	**$59,901**	**$4,475**	**$10,507**	**$16,614**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$3,932	$3,763	$3,629	$3,578	$3,037
Employer Contributions	10,758	10,219	9,776	9,426	8,177
Investment Income (Net of Expenses)	24,729	(186)	7,572	28,011	19,943
Other Additions	3,000	0	0	0	0
Total Additions	$42,419	$13,796	$20,977	$41,015	$31,157
Deductions					
Annuity Benefits	$22,785	$22,378	$21,893	$20,802	$19,772
Refunds	309	0	0	0	0
Administrative Expenses	89	93	60	55	72
Other Expenses	0	0	0	0	1
Total Deductions	$23,183	$22,471	$21,953	$20,857	$19,845
Change in Fiduciary Net Position	**$19,236**	**$(8,675)**	**$(976)**	**$20,158**	**$11,312**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Legislators Retirement Fund [1]

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$62	$77	$87	$91	$93
Investment Income (Net of Expenses)	0	0	0	0	0
Other Additions	8,682	8,639	8,764	8,798	8,856
Total Additions	$8,744	$8,716	$8,851	$8,889	$8,949
Deductions					
Annuity Benefits	$8,677	$8,679	$8,812	$8,853	$8,912
Refunds	28	0	0	0	0
Administrative Expenses	39	37	39	36	37
Other Expenses	0	0	0	0	0
Total Deductions	$8,744	$8,716	$8,851	$8,889	$8,949
Change in Fiduciary Net Position	**$0**	**$0**	**$0**	**$0**	**$0**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$80	$89	$153	$101	$111
Investment Income (Net of Expenses)	0	(69)	281	1,750	1,763
Other Additions	8,716	5,087	3,216	3,436	3,399
Total Additions	$8,796	$5,107	$3,650	$5,287	$5,273
Deductions					
Annuity Benefits	$8,716	$8,496	$8,441	$8,407	$7,826
Refunds	0	40	0	79	101
Administrative Expenses	39	42	37	36	38
Other Expenses	0	0	0	0	1,338
Total Deductions	$8,755	$8,578	$8,478	$8,522	$9,303
Change in Fiduciary Net Position	**$41**	**$(3,471)**	**$(4,828)**	**$(3,235)**	**$(4,030)**

Elective State Officers Retirement Fund [1]

2013				
Additions		**Deductions**		**Change in Fiduciary Net Position**
Contributions	$0	Annuity Benefits	$469	
Other Additions	470	Administrative Expenses	1	
Total Additions	$470	**Total Deductions**	$470	**$0**

[1] The Elective State Officers Retirement Fund was merged with the Legislators Retirement Fund in fiscal year 2014.

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Unclassified Employees Retirement Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$8,370	$7,455	$7,438	$6,918	$6,407
Employer Contributions	8,615	7,457	7,832	7,542	7,421
Investment Income (Net of Expenses)	(47,187)	89,912	19,233	23,215	30,779
Other Additions	433	2,138	654	317	1,147
Total Additions	$(29,769)	$106,962	$35,157	$37,992	$45,754
Deductions					
Refunds	$9,236	$6,732	$4,836	$6,433	$4,790
Administrative Expenses	271	317	408	279	127
Other Expenses	28,346	29,059	21,868	32,519	21,511
Total Deductions	$37,853	$36,108	$27,112	$39,231	$26,428
Change in Fiduciary Net Position	**$(67,622)**	**$70,854**	**$8,045**	**$(1,239)**	**$19,326**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$6,635	$5,810	$6,173	$5,430	$5,096
Employer Contributions	6,945	6,187	6,256	6,099	5,867
Investment Income (Net of Expenses)	37,605	4,673	14,839	49,457	36,246
Other Additions	623	682	1,102	147	139
Total Additions	$51,808	$17,352	$28,370	$61,133	$47,348
Deductions					
Refunds	$4,068	$6,751	$8,461	$7,496	$6,197
Administrative Expenses	148	155	125	140	144
Other Expenses	47,775	20,743	30,451	21,001	21,155
Total Deductions	$51,991	$27,649	$39,037	$28,637	$27,496
Change in Fiduciary Net Position	**$(183)**	**$(10,297)**	**$(10,667)**	**$32,496**	**$19,852**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Health Care Savings Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$198,915	$186,610	$155,367	$153,595	$140,286
Investment Income (Net of Expenses)	(134,441)	239,898	48,611	59,593	63,676
Other Additions	7,225	6,710	5,795	5,299	4,850
Total Additions	$71,699	$433,218	$209,773	$218,487	$208,812
Deductions					
Health Care Reimbursements	$106,361	$94,664	$87,488	$84,976	$79,448
Administrative Expenses	3,717	3,892	3,657	3,365	2,800
Other Expenses	10,055	9,190	9,069	8,359	7,471
Total Deductions	$120,133	$107,746	$100,214	$96,700	$89,719
Change in Fiduciary Net Position	**$(48,434)**	**$325,472**	**$109,559**	**$121,787**	**$119,093**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$138,807	$130,016	$130,894	$116,971	$112,359
Investment Income (Net of Expenses)	65,084	7,485	18,678	50,333	28,116
Other Additions	4,220	3,959	3,673	3,610	2,789
Total Additions	$208,111	$141,460	$153,245	$170,914	$143,264
Deductions					
Health Care Reimbursements	$74,686	$71,541	$67,688	$64,762	$62,482
Administrative Expenses	2,559	2,290	2,048	1,838	1,506
Other Expenses	7,051	6,316	5,250	4,600	941
Total Deductions	$84,296	$80,147	$74,986	$71,200	$64,929
Change in Fiduciary Net Position	**$123,815**	**$61,313**	**$78,259**	**$99,714**	**$78,335**

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Minnesota Deferred Compensation Plan

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$354,569	$323,824	$313,601	$295,457	$283,558
Employer Contributions [(1)]	7,946	0	0	0	0
Investment Income (Net of Expenses)	(1,008,263)	2,026,177	299,338	552,287	560,524
Other Additions	5,147	4,904	4,560	4,410	4,320
Total Additions	$(640,601)	$2,354,905	$617,499	$852,154	$848,402
Deductions					
Ongoing Withdrawals	$80,019	$56,067	$61,618	$56,430	$49,160
Refunds	432,230	367,011	313,524	298,379	277,223
Administrative Expenses	3,781	3,817	3,592	3,358	2,975
Other Expenses	7,151	6,772	6,780	6,520	6,356
Total Deductions	$523,181	$433,667	$385,514	$364,687	$335,714
Change in Fiduciary Net Position	**$(1,163,782)**	**$1,921,238**	**$231,985**	**$487,467**	**$512,688**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$270,665	$240,934	$246,013	$234,805	$229,187
Employer Contributions	0	54	0	0	0
Investment Income (Net of Expenses)	665,340	55,177	238,537	748,675	642,247
Other Additions	3,839	4,843	4,857	5,320	4,237
Total Additions	$939,844	$301,008	$489,407	$988,800	$875,671
Deductions					
Ongoing Withdrawals	$41,524	$42,472	$33,205	$29,754	$28,961
Refunds	255,567	232,986	262,855	218,492	192,774
Administrative Expenses	3,444	3,522	3,463	3,372	2,959
Other Expenses	4,939	3,582	3,998	3,851	1,721
Total Deductions	$305,474	$282,562	$303,521	$255,469	$226,415
Change in Fiduciary Net Position	**$634,370**	**$18,446**	**$185,886**	**$733,331**	**$649,256**

[(1)] Employer contributions have not been consistently available until 2022. In earlier years, employer contributions are included with member contributions.

Schedule of Changes in Fiduciary Net Position

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Hennepin County Supplemental Retirement Fund

	2022	2021	2020	2019	2018
Additions					
Plan Member Contributions	$54	$65	$88	$107	$133
Employer Contributions	54	66	89	106	133
Investment Income (Net of Expenses)	(21,747)	42,367	10,112	12,036	15,677
Other Income	109	106	90	94	95
Total Additions	$(21,530)	$42,604	$10,379	$12,343	$16,038
Deductions					
Ongoing Withdrawals	$7,103	$6,995	$7,211	$6,194	$6,500
Refunds	5,436	4,673	3,871	4,362	3,302
Administrative Expenses	26	29	27	26	21
Other Expenses	194	163	161	159	165
Total Deductions	$12,759	$11,860	$11,270	$10,741	$9,988
Change in Fiduciary Net Position	**$(34,289)**	**$30,744**	**$(891)**	**$1,602**	**$6,050**

	2017	2016	2015	2014	2013
Additions					
Plan Member Contributions	$160	$197	$235	$270	$227
Employer Contributions	160	197	231	270	228
Investment Income (Net of Expenses)	17,757	2,296	7,450	22,473	15,968
Other Income	90	86	83	57	52
Total Additions	$18,166	$2,776	$7,999	$23,070	$16,475
Deductions					
Ongoing Withdrawals	$5,396	$4,665	$6,130	$5,182	$4,225
Refunds	3,434	3,174	1,911	1,933	2,491
Administrative Expenses	21	25	25	27	16
Other Expenses	155	141	134	87	37
Total Deductions	$9,006	$8,005	$8,200	$7,229	$6,769
Change in Fiduciary Net Position	**$9,160**	**$(5,229)**	**$(201)**	**$15,841**	**$9,706**

Schedule of Revenues by Source

(Dollars in thousands)

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total	Actual Covered Payroll	Percentage Employer Contributions [1]
State Employees Retirement Fund							
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
2017	161,670	158,352	1,667,562	47,702	2,035,286	2,939,455	5.50
2018	166,726	164,233	1,276,550	21,447	1,628,956	3,031,382	5.50
2019	182,210	182,939	948,366	32,434	1,345,949	3,168,870	5.88
2020	197,897	204,006	569,670	21,803	993,376	3,298,283	6.25
2021	199,525	206,381	4,098,129	28,972	4,533,007	3,325,417	6.25
2022	206,056	212,759	(1,060,537)	28,202	(613,520)	3,434,267	6.25
State Patrol Retirement Fund							
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 [2]
2015	9,174	13,763	28,903	1,000	52,840	68,463	20.10 [2]
2016	9,292	13,938	(774)	1,000	23,456	69,343	20.10 [2]
2017	10,520	15,783	93,077	1,000	120,380	73,056	21.60 [2]
2018	10,657	15,952	70,474	1,000	98,083	74,007	21.60 [2]
2019	12,038	19,479	51,823	1,000	84,340	80,792	24.10 [2]
2020	12,595	21,975	31,073	1,000	66,643	84,530	26.10 [2]
2021	13,606	24,809	224,273	1,000	263,688	88,351	28.10 [2]
2022	16,515	32,258	(59,360)	1,000	(9,587)	107,240	30.10 [2]
Correctional Employees Retirement Fund							
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
2017	22,648	31,763	135,359	0	189,770	248,879	12.85
2018	23,417	32,893	105,263	0	161,573	257,330	12.85
2019	25,686	38,245	80,942	0	144,873	267,563	14.40
2020	26,734	43,658	49,608	0	120,000	278,479	15.85
2021	27,136	48,823	366,352	22	442,333	282,667	17.35
2022	28,270	55,104	(99,155)	3	(15,778)	294,479	18.85

[1] Actual employer contributions may exceed the statutorily required percentage due to employer-paid interest, penalties and leaves of absence.

[2] Percentage excludes statutorily required annual supplemental state contribution of $1 million.

Schedule of Revenues by Source

Dollars in thousands)

Fiscal Year Ended June 30	Employee Contributions	Employer Contributions	Investment Income	Other Income (2)	Total	Actual Covered Payroll	Percentage Employer Contributions (1)
Judges Retirement Fund							
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
2017	3,932	10,758	24,729	3,000	42,419	47,813	22.50 (3)
2018	3,973	11,027	19,265	6,000	40,265	49,009	22.50 (3)
2019	4,049	11,287	14,491	6,000	35,827	50,164	22.50 (3)
2020	4,168	11,767	8,955	6,000	30,890	52,298	22.50 (3)
2021	4,166	11,916	64,934	6,000	87,016	52,960	22.50 (3)
2022	4,214	12,248	(17,022)	6,000	5,440	54,436	22.50 (3)
Legislators Retirement Fund							
2013	$111	NA	$1,763	$3,399	$5,273	$1,233	NA
2014	101	NA	1,750	3,436	5,287	1,122	NA
2015	153	NA	281	3,216	3,650	1,700	NA
2016	89	NA	(69)	5,087	5,107	989	NA
2017	80	NA	0	8,716	8,796	889	NA
2018	93	NA	0	8,856	8,949	1,033	NA
2019	91	NA	0	8,798	8,889	1,011	NA
2020	87	NA	0	8,764	8,851	967	NA
2021	77	NA	0	8,639	8,716	856	NA
2022	62	NA	0	8,682	8,744	689	NA
Elective State Officers Retirement Fund							
2013	$0	$0	$0	$470	$470	NA	NA

(1) Actual employer contributions may exceed the statutorily required percentage due to employer-paid interest, penalties and leaves of absence.

(2) Other income for the Legislators Retirement Fund and the Elective State Officers Retirement Fund includes appropriations from the State's General Fund.

(3) Percentage excludes statutorily required general fund appropriation of $3 million in 2017 and $6 million annually thereafter.

Schedule of Expenses by Type

(Dollars in thousands)

State Employees Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
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
2017	750,526	10,165	11,576	470	772,737
2018	797,027	9,564	13,533	1,024	821,148
2019	841,776	9,877	15,199	230	867,082
2020	885,517	10,261	13,725	471	909,974
2021	923,364	10,779	12,556	1,948	948,647
2022	966,698	10,483	19,243	257	996,681

State Patrol Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
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
2017	58,560	208	5	0	58,773
2018	59,653	184	39	7	59,883
2019	60,375	191	428	1	60,995
2020	61,859	224	112	2	62,197
2021	63,094	204	116	0	63,414
2022	64,332	190	174	0	64,696

Correctional Employees Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
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
2017	63,221	856	1,466	2	65,545
2018	67,622	827	2,052	2	70,503
2019	72,419	856	2,484	6	75,765
2020	77,045	924	2,488	1	80,458
2021	81,829	950	2,136	2	84,917
2022	87,102	909	3,240	3	91,254

Schedule of Expenses by Type

(Dollars in thousands)

Judges Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
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
2017	22,785	89	309	0	23,183
2018	23,585	66	0	0	23,651
2019	25,233	87	0	0	25,320
2020	26,272	113	30	0	26,415
2021	27,038	77	0	0	27,115
2022	28,035	72	0	0	28,107

Legislators Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
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
2017	8,716	39	0	0	8,755
2018	8,912	37	0	0	8,949
2019	8,853	36	0	0	8,889
2020	8,812	39	0	0	8,851
2021	8,679	37	0	0	8,716
2022	8,677	39	28	0	8,744

Elective State Officers Retirement Fund

Fiscal Year Ended June 30	Annuity Benefits	Administrative Expenses	Refunds	Other Expenses	Total
2013	$469	$1	$0	$0	$470

Schedule of Benefits and Refunds by Type

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

State Employees Retirement Fund

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Total Benefits	Separation Refunds	Death Refunds	Refund Interest	Total Refunds
2013	$502,520	$59,150	$24,586	$586,256	$7,309	$618	$4,295	$12,222
2014	536,403	62,122	25,417	623,942	7,227	829	3,930	11,986
2015	574,893	65,000	25,928	665,821	7,207	1,653	3,166	12,026
2016	613,101	67,674	26,586	707,361	7,390	2,037	3,918	13,345
2017	653,158	70,400	26,968	750,526	7,191	1,376	3,009	11,576
2018	696,294	73,168	27,565	797,027	8,175	1,906	3,452	13,533
2019	738,113	75,781	27,882	841,776	9,569	1,625	4,005	15,199
2020	779,260	78,080	28,177	885,517	8,456	1,867	3,402	13,725
2021	815,661	80,090	27,613	923,364	8,183	1,517	2,856	12,556
2022	856,293	82,681	27,724	966,698	11,976	2,826	4,441	19,243

State Patrol Retirement Fund

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Total Benefits	Separation Refunds	Death Refunds	Refund Interest	Total Refunds
2013	$44,296	$5,598	$2,163	$52,057	$5	$0	$2	$7
2014	45,737	5,612	2,348	53,697	24	0	1	25
2015	47,363	5,590	2,512	55,465	14	0	1	15
2016	49,727	5,453	2,515	57,695	73	0	6	79
2017	50,677	5,434	2,449	58,560	4	0	1	5
2018	51,439	5,568	2,646	59,653	35	0	4	39
2019	51,957	5,730	2,688	60,375	314	29	85	428
2020	53,048	5,904	2,907	61,859	107	0	5	112
2021	53,981	5,905	3,208	63,094	109	0	7	116
2022	53,992	6,523	3,817	64,332	154	0	20	174

Correctional Employees Retirement Fund

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Total Benefits	Separation Refunds	Death Refunds	Refund Interest	Total Refunds
2013	$39,120	$2,197	$4,909	$46,226	$818	$27	$187	$1,032
2014	43,087	2,519	5,236	50,842	1,058	107	282	1,447
2015	46,700	2,806	5,403	54,909	1,311	21	258	1,590
2016	50,313	3,106	5,626	59,045	1,516	73	306	1,895
2017	54,178	3,277	5,766	63,221	1,186	53	227	1,466
2018	58,272	3,435	5,915	67,622	1,651	95	306	2,052
2019	62,380	3,780	6,259	72,419	1,908	143	433	2,484
2020	66,383	4,021	6,641	77,045	1,816	268	404	2,488
2021	70,468	4,480	6,881	81,829	1,758	74	304	2,136
2022	75,166	4,894	7,042	87,102	2,593	218	429	3,240

Schedule of Benefits and Refunds by Type

For the Ten Fiscal Years Ended June 30, 2022
(Dollars in thousands)

Judges Retirement Fund

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Total Benefits	Separation Refunds	Death Refunds	Refund Interest	Total Refunds
2013	$13,415	$4,624	$1,733	$19,772	$0	$0	$0	$0
2014	14,700	4,363	1,739	20,802	0	0	0	0
2015	15,874	4,307	1,712	21,893	0	0	0	0
2016	16,650	4,113	1,615	22,378	0	0	0	0
2017	17,328	4,211	1,246	22,785	17	291	1	309
2018	18,372	4,138	1,075	23,585	0	0	0	0
2019	19,918	4,221	1,094	25,233	0	0	0	0
2020	20,904	4,255	1,113	26,272	28	0	2	30
2021	21,595	4,271	1,172	27,038	0	0	0	0
2022	22,699	4,204	1,132	28,035	0	0	0	0

Legislators Retirement Fund

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Total Benefits	Separation Refunds	Death Refunds	Refund Interest	Total Refunds
2013	$6,565	$1,261	NA	$7,826	$34	$0	$67	$101
2014	7,032	1,375	NA	8,407	0	58	21	79
2015	6,987	1,454	NA	8,441	0	0	0	0
2016	7,114	1,382	NA	8,496	0	16	24	40
2017	7,269	1,447	NA	8,716	0	0	0	0
2018	7,205	1,707	NA	8,912	0	0	0	0
2019	7,081	1,772	NA	8,853	0	0	0	0
2020	7,017	1,795	NA	8,812	0	0	0	0
2021	6,932	1,747	NA	8,679	0	0	0	0
2022	6,773	1,904	NA	8,677	0	6	22	28

Elective State Officers Retirement Fund

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Total Benefits	Separation Refunds	Death Refunds	Refund Interest	Total Refunds
2013	$345	$124	NA	$469	$0	$0	$0	$0

Summary of Membership

Fiscal Year	Active Member Count: Vested	Active Member Count: Non Vested	Active Member Count: Total	Total Benefit Recipient Count	Non Active Member Count: Vested	Non Active Member Count: Non Vested	Non Active Member Count: Total	Active Members: Average Age	Active Members: Years of Service Credit
State Employees Retirement Fund									
2013	38,980	10,141	49,121	33,286	16,062	5,574	21,636	47.0	12.2
2014	35,535	14,128	49,663	34,729	16,472	5,818	22,290	47.0	12.0
2015	34,418	14,619	49,037	36,476	16,787	6,941	23,728	47.0	11.9
2016	33,436	16,036	49,472	37,952	17,019	7,571	24,590	46.9	11.6
2017	33,398	17,180	50,578	39,333	17,006	9,468	26,474	46.7	11.3
2018	33,876	17,347	51,223	40,821	17,109	8,235	25,344	46.6	11.1
2019	33,898	18,099	51,997	42,373	17,154	9,110	26,264	46.5	10.8
2020	34,268	17,474	51,742	43,919	17,333	9,670	27,003	46.5	10.7
2021	34,718	16,171	50,889	45,430	17,317	9,562	26,879	46.5	10.7
2022	34,817	16,402	51,219	46,846	17,822	10,668	28,490	46.3	10.4
State Patrol Retirement Fund									
2013	744	101	845	983	41	18	59	41.8	12.5
2014	746	112	858	985	44	17	61	41.8	12.4
2015	735	108	843	1,027	52	17	69	41.3	11.9
2016	730	162	892	1,048	55	20	75	40.6	11.1
2017	696	206	902	1,052	59	28	87	40.6	11.2
2018	724	197	921	1,071	56	22	78	40.6	11.1
2019	704	239	943	1,078	56	31	87	40.7	11.2
2020	691	246	937	1,107	63	30	93	40.6	11.1
2021	644	268	912	1,121	69	36	105	40.8	11.4
2022	629	308	937	1,140	78	41	119	40.8	11.2
Correctional Employees Retirement Fund									
2013	3,522	862	4,384	2,374	1,196	413	1,609	41.5	8.7
2014	3,163	1,341	4,504	2,517	1,232	384	1,616	41.4	8.7
2015	3,022	1,427	4,449	2,769	1,276	531	1,807	41.4	8.7
2016	2,970	1,551	4,521	2,918	1,316	661	1,977	41.4	8.7
2017	2,983	1,596	4,579	3,084	1,310	818	2,128	41.4	8.8
2018	2,985	1,665	4,650	3,259	1,347	843	2,190	41.2	8.8
2019	2,981	1,601	4,582	3,428	1,386	950	2,336	41.5	9.0
2020	3,028	1,495	4,523	3,586	1,426	1,008	2,434	41.6	9.1
2021	3,078	1,426	4,504	3,728	1,428	1,068	2,496	41.7	9.4
2022	3,038	1,382	4,420	3,914	1,475	1,169	2,644	41.8	9.5

Summary of Membership

Fiscal Year	Active Member Count: Vested	Active Member Count: Non Vested	Active Member Count: Total	Total Benefit Recipient Count	Non Active Member Count: Vested	Non Active Member Count: Non Vested	Non Active Member Count: Total	Active Members: Average Age	Active Members: Years of Service Credit
Judges Retirement Fund									
2013	194	115	309	332	16	0	16	56.7	9.6
2014	262	54	316	335	16	0	16	56.7	9.6
2015	276	36	312	346	16	0	16	56.8	9.6
2016	278	33	311	350	17	0	17	56.8	9.7
2017	279	38	317	351	15	0	15	57.0	9.9
2018	283	34	317	369	15	0	15	56.3	9.4
2019	285	30	315	383	19	1	20	55.7	8.8
2020	286	36	322	390	17	0	17	55.8	8.9
2021	283	37	320	394	19	0	19	55.9	9.0
2022	280	40	320	412	19	1	20	55.2	8.6
Legislators Retirement Fund									
2013	24	0	24	362	70	1	71	data unavailable	
2014	24	0	24	375	63	0	63	66.6	26.9
2015	23	0	23	377	56	0	56	67.2	28.2
2016	23	0	23	372	52	0	52	68.2	29.2
2017	19	0	19	375	44	0	44	67.9	29.0
2018	19	0	19	372	39	0	39	68.9	30.0
2019	17	0	17	370	32	0	32	70.7	31.0
2020	17	0	17	360	31	0	31	71.7	32.0
2021	12	0	12	357	27	0	27	70.6	32.3
2022	12	0	12	349	25	0	25	71.6	33.3
Elective State Officers Retirement Fund									
2013	0	0	0	14	1	0	1	data unavailable	

Schedule of Retired Members by Type of Benefit

As of June 30, 2022

State Employees Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type			Option Selected			
		1	2	3	Life	I	II	III
$0-$499	9,487	8,273	314	900	5,288	3,658	235	306
$500-$999	7,942	6,622	400	920	3,955	3,579	214	194
$1,000-$1,499	6,710	5,558	381	771	3,238	3,209	137	126
$1,500-$1,999	5,527	4,614	303	610	2,472	2,885	85	85
$2,000-$2,499	5,097	4,473	167	457	2,109	2,860	61	67
$2,500-$2,999	3,927	3,536	92	299	1,682	2,169	27	49
$3,000-$3,499	2,933	2,690	47	196	1,195	1,677	21	40
$3,500-$3,999	2,033	1,900	14	119	773	1,225	9	26
$4,000-$4,499	1,289	1,199	4	86	489	784	7	9
$4,500-$4,999	773	707	8	58	302	466	2	3
$5,000+	1,128	1,038	1	89	474	630	9	15
Totals	**46,846**	**40,610**	**1,731**	**4,505**	**21,977**	**23,142**	**807**	**920**

State Patrol Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type			Option Selected			
		1	2	3	Life	I	II	III
$0-$499	22	19	0	3	8	12	2	0
$500-$999	27	12	3	12	6	10	10	1
$1,000-$1,499	38	29	0	9	15	18	4	1
$1,500-$1,999	29	18	3	8	8	21	0	0
$2,000-$2,499	47	32	3	12	8	36	2	1
$2,500-$2,999	67	26	5	36	17	40	10	0
$3,000-$3,499	77	48	6	23	17	55	4	1
$3,500-$3,999	103	63	23	17	32	68	2	1
$4,000-$4,499	91	62	20	9	25	63	2	1
$4,500-$4,999	109	86	11	12	27	80	2	0
$5,000+	530	493	11	26	198	326	4	2
Totals	**1,140**	**888**	**85**	**167**	**361**	**729**	**42**	**8**

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, 2022

Correctional Employees Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type			Option Selected			
		1	2	3	Life	I	II	III
$0-$499	535	458	21	56	269	239	21	6
$500-$999	607	532	14	61	291	286	15	15
$1,000-$1,499	593	465	83	45	265	308	10	10
$1,500-$1,999	614	471	95	48	272	327	6	9
$2,000-$2,499	479	369	66	44	170	296	9	4
$2,500-$2,999	351	310	29	12	133	213	3	2
$3,000-$3,499	254	232	13	9	97	152	1	4
$3,500-$3,999	188	174	6	8	67	120	0	1
$4,000-$4,499	116	111	2	3	46	70	0	0
$4,500-$4,999	74	71	1	2	25	49	0	0
$5,000+	103	101	0	2	31	71	0	1
Totals	**3,914**	**3,294**	**330**	**290**	**1,666**	**2,131**	**65**	**52**

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	3	3	0	0	0	3	0	0
$1,000-$1,499	6	5	0	1	2	4	0	0
$1,500-$1,999	9	7	0	2	2	4	2	1
$2,000-$2,499	14	11	1	2	7	6	1	0
$2,500-$2,999	18	11	0	7	4	13	1	0
$3,000-$3,499	22	16	0	6	3	18	1	0
$3,500-$3,999	25	12	0	13	4	17	3	1
$4,000-$4,499	24	18	0	6	8	13	2	1
$4,500-$4,999	31	17	2	12	6	21	4	0
$5,000+	260	224	11	25	62	189	6	3
Totals	**412**	**324**	**14**	**74**	**98**	**288**	**20**	**6**

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, 2022

Legislators Retirement Fund

Monthly Benefit Amount	Number of Retirees	Retirement Type		Option Selected		
		1	2	Life	I	II
$0-$499	20	13	7	16	4	0
$500-$999	64	41	23	45	18	1
$1,000-$1,499	73	50	23	49	21	3
$1,500-$1,999	61	49	12	35	25	1
$2,000-$2,499	38	32	6	18	20	0
$2,500-$2,999	23	19	4	14	9	0
$3,000-$3,499	22	16	6	9	12	1
$3,500-$3,999	12	9	3	9	2	1
$4,000-$4,499	11	9	2	6	4	1
$4,500-$4,999	6	5	1	4	2	0
$5,000+	19	14	5	9	10	0
Totals	**349**	**257**	**92**	**214**	**127**	**8**

Type:

1 Retired members

2 Survivors

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 of Credited Service							
		0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Retirements During Fiscal Year									
	Average Monthly Benefit	$200	$520	$847	$1,201	$1,619	$2,024	$3,136	$1,595
2013	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
	Average Monthly Benefit	$158	$462	$850	$1,209	$1,757	$2,079	$2,724	$1,517
2014	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
	Average Monthly Benefit	$186	$509	$930	$1,245	$1,723	$2,111	$2,850	$1,650
2015	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
	Average Monthly Benefit	$195	$536	$950	$1,289	$1,742	$2,073	$2,797	$1,620
2016	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
	Average Monthly Benefit	$211	$517	$923	$1,398	$1,899	$2,244	$2,898	$1,717
2017	Number of New Retirees	215	266	255	238	207	219	650	2,050
	Average Final Average Salary	$4,666	$4,050	$4,297	$4,629	$5,128	$5,464	$5,460	$4,920
	Average Monthly Benefit	$220	$574	$1,019	$1,451	$1,868	$2,304	$3,019	$1,737
2018	Number of New Retirees	262	274	308	282	228	226	670	2,250
	Average Final Average Salary	$4,593	$4,403	$4,511	$4,848	$4,920	$5,761	$5,641	$5,053
	Average Monthly Benefit	$202	$590	$1,032	$1,575	$1,985	$2,284	$3,071	$1,767
2019	Number of New Retirees	244	322	333	306	229	220	690	2,344
	Average Final Average Salary	$4,756	$4,280	$4,487	$4,958	$5,391	$5,632	$5,787	$5,127
	Average Monthly Benefit	$217	$607	$1,001	$1,583	$1,854	$2,233	$3,285	$1,755
2020	Number of New Retirees	264	356	348	309	247	236	650	2,410
	Average Final Average Salary	$4,720	$4,317	$4,562	$4,724	$5,224	$5,738	$6,079	$5,156
	Average Monthly Benefit	$225	$556	$986	$1,498	$1,788	$2,255	$3,161	$1,792
2021	Number of New Retirees	194	347	366	294	284	197	749	2,431
	Average Final Average Salary	$4,800	$4,191	$4,465	$4,931	$5,333	$5,507	$5,710	$5,079
	Average Monthly Benefit	$236	$611	$1,023	$1,533	$1,861	$2,414	$3,400	$1,766
2022	Number of New Retirees	252	402	342	286	272	190	625	2,369
	Average Final Average Salary	$4,569	$4,704	$4,884	$4,995	$5,624	$6,048	$6,135	$5,342
Ten Years Ending June 30, 2022									
	Average Monthly Benefit	$205	$554	$963	$1,409	$1,812	$2,192	$3,035	$1,697
	Number of New Retirees	2,411	3,021	3,023	2,760	2,322	2,307	6,467	22,311
	Average Final Average Salary	$4,673	$4,209	$4,432	$4,669	$5,097	$5,388	$5,605	$4,966

The number of new retirees added in the *Schedule of Retirees and Beneficiaries* in the *Actuarial Section* is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations order 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 of Credited Service							
		0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Retirements During Fiscal Year									
	Average Monthly Benefit	$395	$0	$2,323	$3,202	$4,297	$4,756	$6,296	$4,596
2013	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
	Average Monthly Benefit	$323	$1,086	$2,448	$2,685	$4,672	$5,218	$5,700	$4,035
2014	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
	Average Monthly Benefit	$85	$2,226	$2,704	$3,122	$4,426	$5,841	$6,234	$4,850
2015	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
	Average Monthly Benefit	$1,145	$0	$3,599	$3,062	$3,687	$5,551	$5,135	$4,612
2016	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
	Average Monthly Benefit	$0	$1,724	$2,294	$3,944	$4,099	$4,760	$6,926	$4,788
2017	Number of New Retirees	0	2	2	2	6	6	8	26
	Average Final Average Salary	$0	$7,540	$7,371	$7,700	$6,803	$7,274	$7,660	$7,345
	Average Monthly Benefit	$0	$621	$2,469	$3,012	$4,384	$5,450	$6,864	$3,971
2018	Number of New Retirees	0	2	6	9	6	5	5	33
	Average Final Average Salary	$0	$5,787	$7,040	$6,925	$7,494	$7,195	$7,729	$7,143
	Average Monthly Benefit	$266	$2,138	$2,835	$3,668	$3,505	$5,364	$6,812	$4,070
2019	Number of New Retirees	1	1	3	4	9	4	4	26
	Average Final Average Salary	$2,977	$10,536	$8,014	$7,706	$7,499	$4,339	$7,868	$7,104
	Average Monthly Benefit	$336	$1,349	$2,592	$3,374	$4,846	$5,690	$6,249	$4,499
2020	Number of New Retirees	3	3	2	8	9	6	14	45
	Average Final Average Salary	$6,787	$5,508	$6,912	$7,253	$7,914	$7,592	$8,513	$7,660
	Average Monthly Benefit	$0	$1,372	$2,964	$3,396	$4,205	$4,826	$6,766	$4,363
2021	Number of New Retirees	0	2	4	2	11	7	5	31
	Average Final Average Salary	$0	$4,945	$7,807	$7,684	$7,507	$5,483	$7,776	$6,978
	Average Monthly Benefit	$533	$2,122	$0	$4,242	$4,765	$6,336	$8,755	$5,448
2022	Number of New Retirees	1	1	0	1	4	10	1	18
	Average Final Average Salary	$7,272	$10,106	$0	$8,402	$7,748	$8,696	$10,016	$8,541
Ten Years Ending June 30, 2022									
	Average Monthly Benefit	$385	$1,395	$2,619	$3,235	$4,252	$5,488	$6,171	$4,509
	Number of New Retirees	11	16	27	44	74	80	86	338
	Average Final Average Salary	$5,864	$6,567	$7,094	$6,979	$7,266	$7,196	$7,497	$7,178

The number of new retirees added in the *Schedule of Retirees and Beneficiaries* in the *Actuarial Section* is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations order 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

Correctional Employees Retirement Fund

		Years of Credited Service							
		0-5	**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**	**Totals**
Retirements During Fiscal Year									
	Average Monthly Benefit	$267	$630	$1,178	$1,769	$2,031	$2,679	$3,136	$1,386
2013	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
	Average Monthly Benefit	$272	$700	$1,266	$1,558	$1,957	$2,454	$3,099	$1,441
2014	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
	Average Monthly Benefit	$233	$790	$1,243	$1,669	$2,026	$2,715	$2,966	$1,648
2015	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
	Average Monthly Benefit	$275	$761	$1,164	$1,536	$2,034	$2,518	$3,352	$1,438
2016	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
	Average Monthly Benefit	$345	$953	$1,114	$1,896	$2,255	$2,827	$3,684	$1,598
2017	Number of New Retirees	28	26	43	30	23	26	8	184
	Average Final Average Salary	$5,090	$4,797	$4,363	$5,305	$5,073	$5,476	$6,378	$5,022
	Average Monthly Benefit	$289	$781	$1,198	$1,821	$2,249	$2,753	$4,135	$1,675
2018	Number of New Retirees	24	19	54	27	24	29	11	188
	Average Final Average Salary	$5,114	$5,042	$5,083	$4,994	$5,209	$5,673	$6,232	$5,244
	Average Monthly Benefit	$324	$813	$1,359	$1,694	$2,355	$2,985	$3,851	$1,716
2019	Number of New Retirees	19	26	46	32	29	18	12	182
	Average Final Average Salary	$6,483	$5,160	$5,218	$5,163	$5,445	$5,661	$6,517	$5,498
	Average Monthly Benefit	$313	$870	$1,402	$2,022	$2,397	$2,787	$3,736	$1,847
2020	Number of New Retirees	20	26	31	36	30	22	14	179
	Average Final Average Salary	$5,000	$4,857	$5,176	$5,176	$5,569	$5,848	$6,241	$5,342
	Average Monthly Benefit	$235	$883	$1,318	$2,123	$2,506	$3,111	$4,166	$1,897
2021	Number of New Retirees	21	26	36	28	27	32	9	179
	Average Final Average Salary	$5,196	$5,822	$5,287	$6,095	$5,888	$6,066	$6,584	$5,775
	Average Monthly Benefit	$235	$829	$1,424	$2,135	$2,732	$3,227	$3,496	$1,939
2022	Number of New Retirees	29	23	49	45	27	35	16	224
	Average Final Average Salary	$5,335	$5,462	$5,284	$5,586	$6,303	$6,156	$6,007	$5,680
Ten Years Ending June 30, 2022									
	Average Monthly Benefit	$278	$791	$1,271	$1,846	$2,245	$2,874	$3,455	$1,669
	Number of New Retirees	241	297	375	312	284	227	142	1,878
	Average Final Average Salary	$5,146	$4,873	$4,884	$5,156	$5,206	$5,688	$5,855	$5,180

The number of new retirees added in the *Schedule of Retirees and Beneficiaries* in the *Actuarial Section* is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations order 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 of Credited Service							
		0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Retirements During Fiscal Year									
	Average Monthly Benefit	$807	$0	$3,087	$4,980	$6,216	$0	$0	$5,354
2013	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
	Average Monthly Benefit	$0	$1,104	$3,423	$5,464	$6,914	$0	$0	$5,568
2014	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
	Average Monthly Benefit	$0	$2,176	$3,904	$4,999	$6,870	$0	$0	$5,495
2015	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
	Average Monthly Benefit	$0	$2,479	$3,834	$5,135	$7,648	$0	$0	$5,740
2016	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
	Average Monthly Benefit	$0	$3,029	$3,505	$4,836	$6,902	$0	$0	$4,840
2017	Number of New Retirees	0	2	5	2	5	0	0	14
	Average Final Average Salary	$0	$11,759	$11,706	$11,279	$11,363	$0	$0	$11,530
	Average Monthly Benefit	$0	$2,032	$4,171	$5,965	$7,407	$0	$0	$5,664
2018	Number of New Retirees	0	3	6	8	10	0	0	27
	Average Final Average Salary	$0	$9,997	$11,848	$11,971	$11,308	$0	$0	$11,479
	Average Monthly Benefit	$0	$0	$4,020	$4,637	$6,957	$0	$0	$5,680
2019	Number of New Retirees	0	0	7	6	14	0	0	27
	Average Final Average Salary	$0	$0	$12,196	$12,065	$12,238	$0	$0	$12,189
	Average Monthly Benefit	$0	$2,073	$0	$6,527	$8,468	$0	$0	$5,463
2020	Number of New Retirees	0	6	0	5	5	0	0	16
	Average Final Average Salary	$0	$11,059	$0	$12,911	$12,690	$0	$0	$12,148
	Average Monthly Benefit	$0	$3,088	$5,037	$6,518	$6,842	$0	$0	$5,699
2021	Number of New Retirees	0	3	3	5	5	0	0	16
	Average Final Average Salary	$0	$13,455	$12,937	$13,052	$12,978	$0	$0	$13,083
	Average Monthly Benefit	$0	$3,630	$4,176	$6,517	$8,582	$0	$0	$6,020
2022	Number of New Retirees	0	3	8	8	7	0	0	26
	Average Final Average Salary	$0	$13,253	$10,016	$13,538	$13,397	$0	$0	$12,384
Ten Years Ending June 30, 2022									
	Average Monthly Benefit	$807	$2,493	$3,963	$5,635	$7,135	$0	$0	$5,585
	Number of New Retirees	1	23	39	55	88	0	0	206
	Average Final Average Salary	$10,472	$11,320	$11,205	$12,101	$11,597	$0	$0	$11,621

The number of new retirees added in the *Schedule of Retirees and Beneficiaries* in the *Actuarial Section* is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations order 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

Legislators Retirement Fund

		Years of Credited Service							
		0-5	5-10	10-15	15-20	20-25	25-30	30+	Totals
Retirements During Fiscal Year									
	Average Monthly Benefit	$664	$0	$2,518	$2,439	$1,851	$3,232	$3,290	$2,347
2013	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
	Average Monthly Benefit	$0	$1,008	$1,490	$0	$0	$6,118	$0	$1,888
2014	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
	Average Monthly Benefit	$831	$0	$1,681	$2,220	$1,979	$0	$0	$1,679
2015	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
	Average Monthly Benefit	$0	$2,335	$3,084	$2,406	$0	$0	$0	$2,727
2016	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
	Average Monthly Benefit	$485	$652	$2,150	$3,465	$0	$0	$3,767	$2,379
2017	Number of New Retirees	1	2	3	3	0	0	2	11
	Average Final Average Salary	$9,847	$3,052	$6,532	$5,804	$0	$0	$1,790	$5,140
	Average Monthly Benefit	$0	$1,085	$0	$3,309	$1,830	$0	$7,397	$3,386
2018	Number of New Retirees	0	1	0	2	1	0	1	5
	Average Final Average Salary	$0	$4,018	$0	$7,471	$3,383	$0	$7,149	$5,899
	Average Monthly Benefit	$813	$821	$2,618	$0	$0	$0	$6,207	$2,815
2019	Number of New Retirees	1	2	4	0	0	0	2	9
	Average Final Average Salary	$12,183	$3,193	$7,914	$0	$0	$0	$7,636	$7,277
	Average Monthly Benefit	$0	$0	$1,655	$1,004	$0	$0	$0	$1,221
2020	Number of New Retirees	0	0	1	2	0	0	0	3
	Average Final Average Salary	$0	$0	$3,328	$3,466	$0	$0	$0	$3,420
	Average Monthly Benefit	$0	$731	$1,270	$4,014	$2,350	$2,475	$4,355	$3,102
2021	Number of New Retirees	0	1	1	2	1	1	3	9
	Average Final Average Salary	$0	$0	$2,060	$9,123	$4,064	$4,063	$1,290	$3,589
	Average Monthly Benefit	$0	$0	$1,228	$3,327	$0	$0	$0	$2,278
2022	Number of New Retirees	0	0	1	1	0	0	0	2
	Average Final Average Salary	$0	$0	$3,131	$6,071	$0	$0	$0	$4,601
Ten Years Ending June 30, 2022									
	Average Monthly Benefit	$691	$1,012	$2,034	$2,849	$1,972	$3,764	$4,699	$2,414
	Number of New Retirees	5	10	25	14	5	4	10	73
	Average Final Average Salary	$7,822	$2,902	$5,342	$5,651	$3,519	$6,849	$3,697	$4,969

The number of new retirees added in the *Schedule of Retirees and Beneficiaries* in the *Actuarial Section* is greater than the number of new retirees here because it includes benefit restarts and qualified domestic relations order 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 Principal Participating Employers

Current Year and Nine Years Ago

Defined Benefit Participating Employer	Fiscal Year 2022 Active Employees	Fiscal Year 2022 Rank	Fiscal Year 2022 Percent of Total Active Members	Fiscal Year 2013 Active Employees	Fiscal Year 2013 Rank	Fiscal Year 2013 Percent of Total Active Members
State Employees Retirement Fund						
State of Minnesota and its component units (1)	50,900	1	99.38 %	48,601	1	98.94 %
All Others	319		0.62	520		1.06
Totals	51,219		100.00 %	49,121		100.00 %
State Patrol Retirement Fund						
State of Minnesota	937	1	100.00 %	845	1	100.00 %
Correctional Employees Retirement Fund						
State of Minnesota	4,417	1	99.93 %	4,366	1	99.59 %
All Others	3		0.07	18		0.41
Totals	4,420		100.00 %	4,384		100.00 %
Judges Retirement Fund						
State of Minnesota	320	1	100.00 %	309	1	100.00 %
Legislators Retirement Fund						
State of Minnesota	12	1	100.00 %	24	1	100.00 %

Defined Contribution Participating Employer (2)	Fiscal Year 2022 Covered Employees	Fiscal Year 2022 Rank	Fiscal Year 2022 Percent of Total Fund	Fiscal Year 2013 Covered Employees	Fiscal Year 2013 Rank	Fiscal Year 2013 Percent of Total Fund
Unclassified Employees Retirement Fund						
State of Minnesota and its component units (1)	3,270	1	96.06 %	3,037	1	92.55 %
All Others	134		3.94	244		7.45
Totals	3,404		100.00 %	3,281		100.00 %
Hennepin County Supplemental Retirement Fund						
Hennepin County	759	1	77.78 %	1,265	1	77.63 %
Hennepin County Medical Center	217	2	22.22	364	2	22.37
Totals	976		100.00 %	1,629		100.00 %

(1) Component units of the State of Minnesota include the Housing Finance Agency, Metropolitan Council, University of Minnesota, Agricultural and Economic Development Board, Minnesota Comprehensive Health Association, Minnesota Sports Facilities Authority, National Sports Center Foundation, Office of Higher Education, Public Facilities Authority, Rural Finance Authority, and the Workers' Compensation Assigned Risk Plan.

(2) Includes all members with account balances.

Schedule of Principal Participating Employers

Current Year and Nine Years Ago

Defined Contribution Participating Employer [2]	Fiscal Year 2022 Covered Employees	Rank	Percent of Total Fund	Fiscal Year 2013 Covered Employees	Rank	Percent of Total Fund
Health Care Savings Plan						
State of Minnesota and its component units [1]	70,272	1	46.36%	39,807	1	47.59 %
Hennepin County	10,280	2	6.78	3,113	2	3.72
Ramsey County	5,871	3	3.87	2,565	3	3.07
Dakota County	3,209	4	2.12	2,090	4	2.50
City of Minneapolis	2,734	5	1.80	1,935	5	2.31
Independent School District (ISD) 623 Roseville	2,374	6	1.57	1,452	7	1.73
Special School District 1 (SSD) Minneapolis	1,844	7	1.22	1,741	6	2.08
ISD 728 Elk River	1,750	8	1.16	1,012	9	1.21
Alomere Health	1,552	9	1.02			
City of Duluth	1,520	10	1.00	1,094	8	1.31
Scott County				978	10	1.17
All Others	50,166		33.10	27,860		33.31
Totals	151,572		100.00%	83,647		100.00 %
Minnesota Deferred Compensation Fund						
State of Minnesota and its component units [1]	55,584	1	56.97%	44,509	1	54.15 %
SSD 1 Minneapolis	4,097	2	4.20	5,031	2	6.12
Ramsey County	3,702	3	3.79	3,233	3	3.93
City of Minneapolis	3,608	4	3.70	3,200	4	3.89
Hennepin County	2,540	5	2.60	2,051	5	2.49
Anoka County	2,098	6	2.15	1,289	8	1.57
ISD 625 St. Paul	1,601	7	1.64	1,852	6	2.26
City of St. Paul	1,392	8	1.43	1,802	7	2.19
Hennepin County Medical Center	1,363	9	1.40			
Dakota County	1,265	10	1.30	1,168	10	1.42
ISD 279 Osseo				1,231	9	1.50
All Others	20,317		20.82	16,832		20.48
Totals	97,567		100.00%	82,198		100.00 %

[1] Component units of the State of Minnesota include the Housing Finance Agency, Metropolitan Council, University of Minnesota, Agricultural and Economic Development Board, Minnesota Comprehensive Health Association, Minnesota Sports Facilities Authority, National Sports Center Foundation, Office of Higher Education, Public Facilities Authority, Rural Finance Authority, and the Workers' Compensation Assigned Risk Plan.

[2] Includes all members with account balances.

MSRS is committed to empowering Minnesota public employees to build a strong foundation for retirement.