

MICHIGAN STATE POLICE RETIREMENT SYSTEM

**Annual Comprehensive Financial Report
for the Fiscal Year Ended September 30, 2024**

MSPRS

A Fiduciary Component Unit of the State of Michigan

Prepared by:
Financial Services
For
Office of Retirement Services
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INTRODUCTORY SECTION

Certificate of Achievement
Public Pension Standards Award
Letter of Transmittal
Administrative Organization

INTRODUCTORY SECTION

CERTIFICATE OF ACHIEVEMENT



Government Finance Officers Association

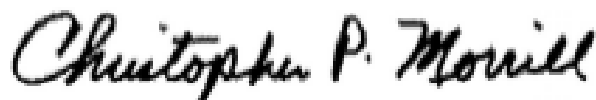
Certificate of Achievement for Excellence in Financial Reporting

Presented to

Michigan State Police Retirement System

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

September 30, 2023



Executive Director/CEO

INTRODUCTORY SECTION

PUBLIC PENSION STANDARDS AWARD



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2024***

Presented to

Michigan Office of Retirement Services

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in dark ink, reading 'Alan H. Winkle'.

Alan H. Winkle
Program Administrator

INTRODUCTORY SECTION

LETTER OF TRANSMITTAL

Michigan State Police
Retirement System
P.O. Box 30171
Lansing, Michigan 48909-7671
Telephone 517- 284-4400
Outside Lansing 1-800-381-5111

STATE OF MICHIGAN

GRETCHEN WHITMER, Governor

DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET

February 18, 2025

The Honorable Gretchen Whitmer
Governor, State of Michigan,

Members of the Legislature
State of Michigan,

Retirement Board Members
and
Members, Retirees and Beneficiaries

Ladies and Gentlemen:

We are pleased to present the annual comprehensive financial report of the Michigan State Police Retirement System (System) for fiscal year 2024.

INTRODUCTION TO REPORT

The System was established by legislation under Public Act 251 of 1935. It now operates under the provisions of Public Act 182 of 1986, as amended, and is administered by the Office of Retirement Services (ORS). The number of active and retired members and beneficiaries of the System is presented in Note 1 of the financial statements in the Financial Section in this report. The purpose of the System is to provide retirement, disability, death, and healthcare benefits for all State Police officers. The services performed by ORS staff provide benefits to members, retirees, and beneficiaries.

Responsibility

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the leadership team of the System. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the System.

Internal Control Structure

The leadership team of the System is responsible for maintaining adequate internal accounting controls designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization, and are recorded as necessary to maintain accountability for assets and to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America.

INTRODUCTORY SECTION

LETTER OF TRANSMITTAL

The internal control structure is designed to provide reasonable assurance regarding the safekeeping of assets and reliability of all financial records.

The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management. This internal control structure includes maintaining written policies and procedures. Discussion and analysis of fiduciary net position and related additions and deductions are presented in the Management Discussion and Analysis which can be found immediately following the Independent Auditor's Report.

Independent Auditors and Actuary

The Office of the Auditor General (OAG), independent auditors, conducted an annual audit of the System. The independent auditor's report on the System's financial statements is included in the Financial Section of this report.

An actuarial valuation is conducted annually. The purpose of the valuation is to evaluate the mortality, service, compensation, and other financial experience of the System and to recommend employer contribution rates. The annual actuarial valuation was completed by Gabriel, Roeder, Smith & Company for the fiscal year ended September 30, 2023, and recommends employer contribution rates for the fiscal year ended September 30, 2026. Actuarial certification and supporting statistics are included in the Actuarial Section in this report.

Management's Discussion and Analysis (MD&A)

Generally Accepted Accounting Principles (GAAP) require that management provide a narrative introduction, overview, and analysis to accompany the Basic Financial Statements in the form of MD&A. This letter of transmittal is intended to complement MD&A and should be read in conjunction with it. The MD&A can be found immediately following the Independent Auditor's Report.

PROFILE OF THE GOVERNMENT

The State Police Retirement System was created by Public Act 251 of 1935 and later superseded by Public Act 182 of 1986. A 9-member board, under the direction of a chairperson elected from the membership, and the director of the Department of Technology, Management, and Budget (DTMB), govern the System. All individuals hired before June 10, 2012, are members of the legacy defined benefit pension plan, and those hired on or after June 10, 2012 are members of the Pension Plus Plan. The System serves over 5,300 members and is funded by employer contributions, member contributions, and investment earnings. A detailed plan description is included in Note 1 of the Financial Section in this report.

ECONOMIC CONDITIONS AND OUTLOOK

Despite a long term mix of both challenging and robust economic times, the System continues to show steady performance.

Investments

The State of Michigan Investment Board is the investment fiduciary and custodian of all investments of the System pursuant to State law. The primary investment objective is to maximize the rate of return on the total investment portfolio, consistent with a high degree of prudence and sufficient diversity to eliminate inordinate risks and to meet the actuarial assumption for the investment rate of return. The investment activity for the year produced a total rate of return on the portfolio of 15.5 percent for the Pension Plan and 15.5 percent for the Other Postemployment Benefits (OPEB) Plan. For the last five years, the System has experienced an annualized rate of return of 9.7 percent for the Pension Plan and 9.6 percent for the OPEB Plan. A summary of asset allocation and rates of return can be found in the Investment Section of this report.

Accounting System

Transactions of the System are reported on the accrual basis of accounting. Revenues are recorded when earned, and expenses are recorded when incurred. Participants' benefits are recorded when payable by law. We believe that the accounting and administrative internal controls established by the System provide reasonable assurance

INTRODUCTORY SECTION

LETTER OF TRANSMITTAL

the System is carrying out its responsibilities in safeguarding its assets, in maintaining the reliability of the financial records for preparing financial statements, and in maintaining accountability for its assets.

Funding

Funds are derived from the excess of additions to plan fiduciary net position over deductions from plan fiduciary net position. Funds are accumulated by the System to meet future benefit obligations to retirees and beneficiaries. The percentage computed by dividing the actuarial value of assets by the actuarial accrued liability is referred to as the “funded ratio.” This ratio provides an indication of the funding status of the System and generally, the greater this percentage, the stronger the System.

Pension – The actuarial value of the assets and actuarial accrued liability of the System were \$1.9 billion and \$2.8 billion, respectively, resulting in a funded ratio of 69.6 percent on September 30, 2023. A historical perspective of funding levels for the Pension Plan is presented on the Schedule of Funding Progress in the Actuarial Section of this report.

OPEB – Prefunding for OPEB began in fiscal year 2013. The actuarial value of the assets and actuarial accrued liability for OPEB were \$435.2 million and \$751.5 million respectively resulting in a funded ratio of 57.9 percent on September 30, 2023. A historical perspective of funding levels is presented on the Schedule of Funding Progress in the Actuarial Section in this report.

MAJOR GOALS ACCOMPLISHED

Agile transformation

Implementing Agile methodology transformed our information technology (IT) team culture and development at ORS. The process shift laid the foundation for our technology modernization efforts underway.

The transformation, which started in 2021 and was fully implemented by March 2024, has cultivated transparency and collaboration.

The results are new teams and processes with enhanced collaboration and engagement, with the Microsoft Azure DevOps platform as the conduit for change.

Key achievements of our Agile adoption include reduced backlogs, shorter release testing times, and stronger alignment with our objectives.

We work as one with Agency Services Supporting Retirement and the DTMB Enterprise Portfolio Management Office to craft quality products for our customers and employers and optimize solutions for our organization.

We continue to seek further ways to draw Agile thinking and approaches into our business mindset. The results are clear: a doubling of IT development work, a two-thirds reduction in emergency releases, and more effective, efficient releases, all demonstrating improved business value.

Ask Our Experts

ORS wants to keep our members informed as their trusted partner.

That is why we enhanced our ORS YouTube channel, color-coding the offerings into dedicated playlists to make matters more accessible. Those include Ask Our Experts, 1½- to 2½-minute videos on varied topics tailored to life stages and retirement plans.

The “Ask Our Experts” column has been offered for years in our quarterly Connections retiree newsletter, answering commonly asked questions. To better serve our customers, we created Ask Our Experts videos hosted by our retirement experts and customer service representatives.

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LETTER OF TRANSMITTAL

The idea came from our Customer Education team to increase content for our social media channels, which also include Facebook, Instagram, and X. A new Ask Our Experts logo was created for the feature's video expansion.

Since its Sept. 25, 2023, debut in the Connections newsletters and Proactive newsletter's defined benefits (DB) edition, fifteen videos have been released. Topics include state tax changes and tax withholding updates, Medicare benefits clarification, snowbird advice, and avoiding phishing emails and spam. The series has more than 18,000 views.

Public Act 158 of 2023 – dependent eligibility

Public Act (PA) 158 of 2023 allows for a child to remain on retiree insurance until the month in which that child turns 26 years old, regardless of enrollment in post-secondary education or dependency status for tax purposes.

With PA 158 in effect Feb. 13, 2024, anyone wanting to enroll a child eligible could do so as soon as March 1, 2024, with submittal of a completed Insurance Enrollment/Change Request and required proofs on or before Feb. 29, 2024.

For requests received before Sept. 1, 2024, coverage is effective the first of the following month. For enrollments and required proofs received on or after Sept. 1, 2024, coverage starts the first of the sixth month after receipt.

PA 158 was among state laws passed to protect provisions in the federal Patient Protection and Affordable Care Act (ACA) after a challenge was filed in a north Texas federal district court.

Changes were made to all retiree healthcare plans (including dental and vision), publications, messaging, websites, forms, and social media for the Michigan Public School Employees' Retirement System (MPSERS), State Employees' Retirement System (SERS), State Police Retirement System (SPRS), and Judges Retirement System (JRS). In addition, Clarety and miAccount were updated; and Employee Benefits Division and MPSERS vendors were informed.

The sole required proof now is the child's birth certificate.

SECURE Act 2.0

The federal Setting Every Community Up for Retirement Enhancement (SECURE) Act 2.0 of 2022 makes changes to qualified retirement plans and Individual Retirement Accounts (IRAs).

This includes 401(k) and governmental 457 plans like the State of Michigan 401(k) and 457 Plans (the Plans), with provisions that expand coverage, increase retirement savings, and simplify rules for retirement plans. Some initial provisions, including increases in age for required minimum distributions for participants and spousal beneficiaries, are already in effect.

In effect Dec. 29, 2022, with provisions being rolled out through 2030, the law enhances the SECURE Act of 2019.

ORS is working with Voya Financial, the Plans' recordkeeper, to make the necessary changes to information technology systems, policies, websites, communications, and forms for affected participants in the State Employees' and Michigan Public School Employees' retirement systems.

As more SECURE 2.0 details emerge and different provisions are phased in and implemented, ORS is publicizing the changes through its quarterly Proactive and Connections newsletters; on its websites; and through its Facebook, Instagram, and X social media channels. ORS is also monitoring IRS guidance for the SECURE 2.0 Act as it is issued.

Situational self-leadership

At ORS, we recognize true growth comes from continuous evolution. Our foundation for supporting this is Blanchard Exchange's Situational Leadership II (SLII) program.

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LETTER OF TRANSMITTAL

We are building to sustain the program through situational self-leadership. Staff learn and use a shared language to discuss task-level development and performance, yielding more effective conversations with supervisors.

Started in 2018, the SLII program's self-leadership focus builds the mindset and skillset of leaders. The focal points include challenging assumed constraints, goal setting, diagnosing, matching, activating points of power, and being proactive to gain the direction and support needed.

Participants achieve self-leadership individually and through one-on-ones with supervisors.

To foster better engagement, a 12-person SLII champions group guides ORS. The SLII champions meet regularly to brainstorm and collaborate on awareness, create posts on the ORS Intranet news feed, and create talking points and presentations for team meetings. The SLII champions also lead quarterly sessions for teams on topics including mastering self-leadership and the program's focal points.

Survivor option factors

The Michigan Public School Employees' Retirement Board, State of Michigan Retirement Board, Michigan State Police Retirement System Board, and Department of Technology, Management and Budget director approved new factors to calculate pensions when a survivor option is chosen.

As part of our fiduciary responsibility and fiscal best practices, an actuarial experience study is performed every five years. As part of this study, the actuary for ORS analyzed the existing survivor option factors and recommended changes to ensure the long-term health and stability of the retirement systems. The changes were implemented May 1, 2024, for MPSERS and June 1, 2024, for SERS, SPRS, and JRS.

ORS sent letters and emails to public school, state, judicial, and state police employees who submitted retirement applications. Because the survivor option was introduced for SPRS in 2006, the change did not affect many SPRS members.

The new factors apply to MPSERS members in the DB pension plan, retiring on or after May 1, 2024, regardless of their first day worked. For retiring and deferred state employees and judges, regardless of their first day worked, along with state police members who first worked on or after July 1, 2006, the new factors are used for those in the DB pension plans who retired on or after June 1, 2024.

If a member elects a survivor option at retirement, their pension is reduced throughout the retiree's lifetime. However, upon the retiree's death, the pension continues for the lifetime of the survivor pension beneficiary.

HONORS

Public Pension Standards Award

ORS was awarded the 2024 Standards Award from the Public Pension Coordinating Councils Standards Program (PPCC) for both funding and administration. ORS has received these awards every year since 2004. The PPCC Standards reflect expectations for public retirement system management and administration and serve as a benchmark for all DB public plans to be measured.

Government Finance Officers Association Award

The Government Finance Officers Association (GFOA) of the United States and Canada awarded the retirement System with the Certificate of Achievement for Excellence in Financial Reporting for our fiscal year 2023 Annual Comprehensive Financial Report (ACFR). This marks the 33rd consecutive year ORS has received this prestigious award.

INTRODUCTORY SECTION

LETTER OF TRANSMITTAL

Plan Sponsor of the Year Award

The Michigan Office of Retirement Services (ORS) has been named 2024 Plan Sponsor of the Year. The recognition was announced at the Excellence in Retirement Awards, as part of the PlanSponsor National Conference, held June 4-7 in Chicago. Plan Development and Compliance Director Allison Wardlaw accepted the honor on behalf of ORS.

ACKNOWLEDGEMENTS

The preparation of this report was accomplished with the dedication and cooperation of many people. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship of the funds of the System.

We would, therefore, like to express our appreciation for the assistance given by staff, the advisors, and the many people who contributed to its preparation. We believe their combined efforts have produced a report that will enable employers and plan members to better evaluate and understand the System. Their cooperation contributes significantly to the success of the System.

Sincerely,



Michelle Lange, Director
Department of Technology, Management & Budget



Anthony J. Estell, Director
Office of Retirement Services

INTRODUCTORY SECTION

ADMINISTRATIVE ORGANIZATION

RETIREMENT BOARD MEMBERS*

As of February 18, 2025

Major Chris Hawkins
for Colonel Joseph Gasper
Vice Chair
Representing Director,
Dept. of State Police
Statutory Member

Lisa Geminick
Representing Attorney General
Statutory Member

Trooper Jeremy Sloan
Representing Sergeants and Below
Term Expires December 31, 2026

Julian Darden
Representing General Public
Term Expires December 31, 2024

Cheryl Schmittiel
Representing Director,
Office of State Employer
Statutory Member

Craig Murray
Representing Deputy Auditor General
Statutory Member

Ann Marie Storberg
Representing State Treasurer
Statutory Member

Vacant
Representing Lieutenants and Above
Term Expires December 31, 2022*

Retired Detective Sergeant Mitchell
Stevens
Chair
Representing Retirees
Term Expires December 31, 2026

* Statute provides that board members may continue to serve after their term expires until they are replaced or reappointed.

ADVISORS AND CONSULTANTS

As of February 18, 2025

Actuaries

Gabriel, Roeder, Smith & Co.
Mita D. Drazilov
Southfield, Michigan

Independent Auditors

Doug A. Ringler, C.P.A., C.I.A.
Auditor General
State of Michigan

Investment Manager and Custodian

Rachael Eubanks
State Treasurer
State of Michigan

Legal Advisor

Dana Nessel
Attorney General
State of Michigan

Investment Performance Measurement

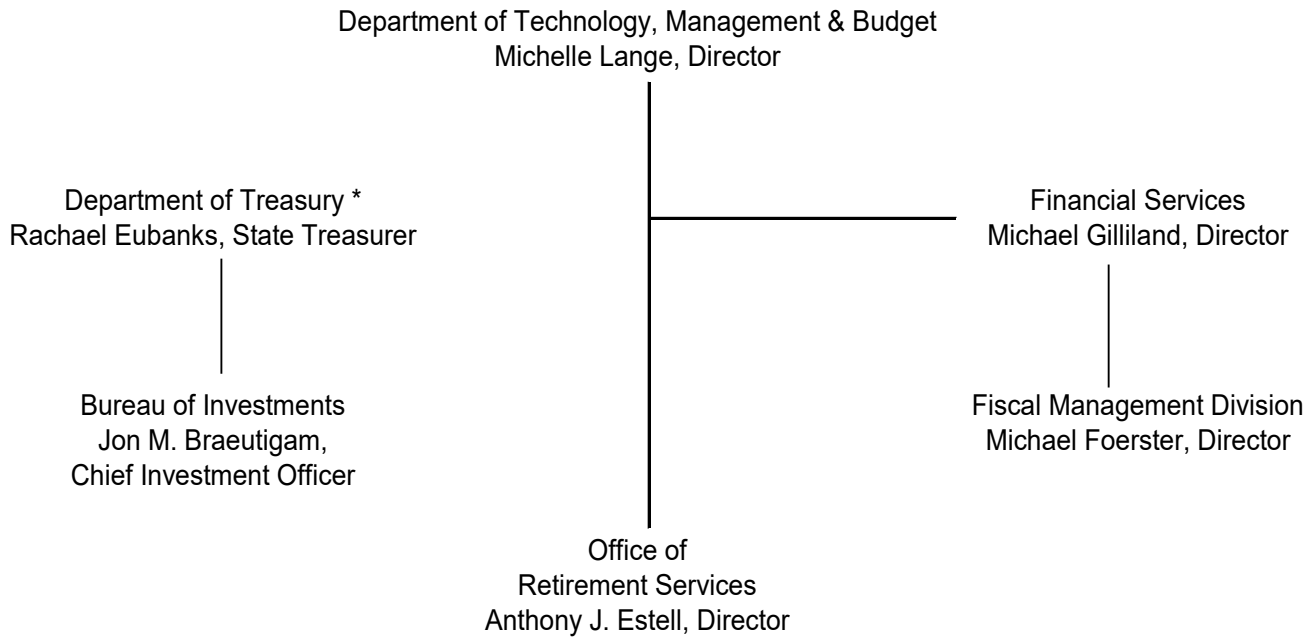
State Street Corporation
State Street Investment Analytics
Boston, MA

INTRODUCTORY SECTION

ADMINISTRATIVE ORGANIZATION

ORGANIZATION CHART

As of February 18, 2025



* The investments of the System are managed by the Michigan Department of Treasury. Information on the investments and the fiduciary, Michigan Department of Treasury, can be found in the Investment Section, Introduction. In addition, see the Investment Section, Schedule of Investment Fees (page 75) and Schedule of Investment Commissions (page 76), for information regarding the investment fees and commissions paid as well as investment professionals utilized by the System.

INTRODUCTORY SECTION

ADMINISTRATIVE ORGANIZATION

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FINANCIAL SECTION

Independent Auditor's Report
Management's Discussion and Analysis
Basic Financial Statements
Notes to Basic Financial Statements
Required Supplementary Information
Note to Required Supplementary Information
Supporting Schedules



OAG

Office of the Auditor General

201 N. Washington Square, Sixth Floor • Lansing, Michigan 48913 • Phone: (517) 334-8050 • audgen.michigan.gov

Doug A. Ringler, CPA, CIA
Auditor General

Independent Auditor's Report on the Financial Statements
and Other Reporting Required by *Government Auditing Standards*

Detective Sergeant Mitchell Stevens (retd.), Chair
Michigan State Police Retirement System Board
Stevens T. Mason Building
and
Michelle Lange, Director
Department of Technology, Management, and Budget
Elliott-Larsen Building
and
Anthony J. Estell, Director
Office of Retirement Services
Stevens T. Mason Building
Lansing, Michigan

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Michigan State Police Retirement System (System), a fiduciary component unit of the State of Michigan, as of and for the fiscal year ended September 30, 2024 and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Michigan State Police Retirement System as of September 30, 2024 and the changes in fiduciary net position for the fiscal year then ended 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 (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. 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 the System and to meet our other 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.

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 the System's ability to continue as a going concern for the twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.



OAG

Office of the Auditor General

Doug A. Ringler, CPA, CIA
Auditor General

Detective Sergeant Mitchell Stevens (reted.), Chair
Michelle Lange, Director
Anthony J. Estell, Director
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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 of 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 judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement 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 the System'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 or events, considered in the aggregate, that raise substantial doubt about the System'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 the management's discussion and analysis, schedule of changes in net pension liability, schedule of changes in net OPEB liability, schedules of contributions, schedules of investment returns, and related note, as listed in 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 the 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.



OAG

Office of the Auditor General

Doug A. Ringler, CPA, CIA
Auditor General

Detective Sergeant Mitchell Stevens (ret'd.), Chair
Michelle Lange, Director
Anthony J. Estell, Director
Page 3

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 financial statements that collectively comprise the System's basic financial statements. The supporting schedules, 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 supporting schedules are 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 and acknowledgments, 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 does 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 also issue a report dated February 18, 2025 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's 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 the System's internal control over financial reporting and compliance.

Doug Ringler
Auditor General
February 18, 2025

FINANCIAL SECTION

MANAGEMENT'S DISCUSSION AND ANALYSIS

Our discussion and analysis of the Michigan State Police Retirement System's (System) financial performance provides an overview of the System's financial activities for the fiscal year ended September 30, 2024. Please read it in conjunction with the transmittal letter in the Introductory Section on page 4 and the basic financial statements, which follow this discussion.

FINANCIAL HIGHLIGHTS

- System assets exceeded liabilities at the close of fiscal year 2024 by \$2.6 billion (reported as *Net Position Restricted for Pension Benefits and OPEB*). Fiduciary net position is restricted to meet future benefit payments.
- Additions for the year were \$506.6 million, which are comprised primarily of contributions of \$160.5 million and investment increases of \$346.1 million.
- Deductions increased over the prior year from \$203.5 million to \$221.4 million or 8.8%. This is the result of increased pension and health care benefit payments.

THE STATEMENT OF PLAN FIDUCIARY NET POSITION AND THE STATEMENT OF CHANGES IN PLAN FIDUCIARY NET POSITION

This Annual Comprehensive Financial Report (ACFR) consists of two financial statements; *The Statement of Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position* (page 20) and *The Statement of Changes in Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position* (page 21). These financial statements report information about the System, as a whole, and about its financial condition that should help answer the question: Is the System, as a whole, better off or worse off as a result of this year's activities? These statements include all assets and liabilities using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, all revenues and expenses are taken into account regardless of when cash is received or paid.

The Statement of Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position presents all of the System's assets and liabilities, with the difference between the two reported as fiduciary net position. Over time, increases and decreases in fiduciary net position measure whether the System's financial position is improving or deteriorating. *The Statement of Changes in Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position* presents how the System's fiduciary net position changed during the most recent fiscal year. These two financial statements should be reviewed along with the Schedule of Changes in Net Pension Liability (page 48), the Schedule of Changes in Net OPEB Liability (page 50), and Schedules of Contributions (page 51) to determine whether the System is becoming financially stronger or weaker.

FINANCIAL ANALYSIS

System total assets as of September 30, 2024, were \$2.7 billion and were mostly comprised of accounts receivables, investments, and securities lending collateral. Total assets increased \$0.3 billion or 12.1% between fiscal years 2023 and 2024, due primarily to increase in investments.

Total liabilities as of September 30, 2024, were \$81.0 million and were mostly comprised of accounts payable, other accrued liabilities, and obligations under securities lending. Total liabilities increased \$1.9 million or 2.4% between fiscal years 2023 and 2024, primarily due to increased obligations under securities lending.

System assets exceeded its liabilities at the close of fiscal year 2024 by \$2.6 billion. Total fiduciary net position restricted for pension and OPEB increased \$0.3 billion or 12.5% between fiscal years 2023 and 2024, due to an increase in investments.

FINANCIAL SECTION

MANAGEMENT'S DISCUSSION AND ANALYSIS

PLAN FIDUCIARY NET POSITION (in thousands)

	2024	2023	Increase (Decrease)
Assets			
Equity in common cash	\$ 16,216	\$ 25,318	(36.0) %
Receivables	33,161	29,495	12.4
Investments	2,524,808	2,233,540	13.0
Securities lending collateral	77,054	75,785	1.7
Total assets	2,651,238	2,364,139	12.1
Liabilities			
Unearned revenue	1	-	100.0
Accounts payable and other accrued liabilities	3,954	3,336	18.5
Obligations under securities lending	77,054	75,785	1.7
Other accrued liabilities long term	37	29	28.6
Total liabilities	81,046	79,151	2.4
Net Position Restricted for Pension Benefits and OPEB	\$ 2,570,193	\$ 2,284,988	12.5 %

ADDITIONS TO PLAN FIDUCIARY NET POSITION

The reserves needed to finance pension and other postemployment benefits are accumulated through the collection of employer and employee contributions and through earnings on investments. Contributions and net investment income for fiscal year 2024 totaled approximately \$506.6 million.

Total additions for fiscal year 2024 increased approximately \$87.8 million or 21.0% from those of fiscal year 2023 due primarily to an increase investment income. Total contributions decreased between fiscal years 2023 and 2024 by \$88.7 million or 35.6%, while net investment income increased \$177.1 million or 104.8%. The Investment Section of this report reviews the results of investment activity for fiscal year 2024.

DEDUCTIONS FROM PLAN FIDUCIARY NET POSITION

The expenses of the System include the payment of pension benefits to members and beneficiaries; payment for health, dental and vision benefits, refunds of contributions; and the cost of administering the System. Total deductions for fiscal year 2024 were \$221.4 million, an increase of 8.8% over fiscal year 2023 deductions.

The health, dental and vision care expenses during the year increased by \$5.3 million or 13.1%, from \$40.6 million to \$45.9 million. The payment of pension benefits increased by \$12.7 million or 7.9% between fiscal years 2023 and 2024. In fiscal year 2024, the increase in pension benefit expenses resulted from an increase of 15 retirees and an increase in benefit payments to retirees. Administrative and other expenses increased by \$16.0 thousand or 1.0% between fiscal years 2023 and 2024, primarily due to an increase in health administrative fees. Refunds of contributions decreased by \$74.7 thousand or 42.4% between fiscal years 2023 and 2024.

FINANCIAL SECTION

MANAGEMENT'S DISCUSSION AND ANALYSIS

CHANGES IN PLAN FIDUCIARY NET POSITION (in thousands)

	2024	2023	Increase (Decrease)	
Additions				
Member contributions	\$ 4,637	\$ 4,637	0.0	%
Employer contributions	147,340	238,623	(38.3)	
Other governmental contributions	8,487	5,898	43.9	
Net investment income (loss)	346,050	168,944	104.8	
Other non-operating revenue	-	675	N/A	
Miscellaneous income	134	57	132.9	
Total additions	506,648	418,835	21.0	
Deductions				
Pension benefits	173,810	161,157	7.9	
Health care benefits	45,905	40,603	13.1	
Refunds of contributions	101	176	(42.4)	
Uncollectible accounts	-	-	N/A	
Administrative and other expenses	1,627	1,611	1.0	
Total deductions	221,444	203,548	8.8	
Net Increase (Decrease) in Net Position	285,204	215,287	32.5	
Net Position Restricted for Pension Benefits and OPEB:				
Beginning of Year	2,284,988	2,069,701	10.4	
End of Year	\$ 2,570,193	\$ 2,284,989	12.5	%

RETIREMENT SYSTEM AS A WHOLE

The System's overall Fiduciary Net Position experienced an increase in fiscal year 2024. The System's rate of return for the Pension Plan's investments increased an overall 7.2% from a 8.3% return in fiscal year 2023 to a 15.5% return during fiscal year 2024. The System's rate of return for the OPEB Plan's investments increased an overall 7.3% from a 8.2% return in fiscal year 2023 to a 15.5% return during fiscal year 2024. Management believes that the System remains financially sound and positioned to meet its ongoing benefit obligations due, in part, to a prudent investment program, cost controls, and strategic planning.

CONTACTING SYSTEM FINANCIAL MANAGEMENT

This financial report is designed to provide the Retirement Board, our membership, taxpayers, investors, and creditors with a general overview of the System's finances and to demonstrate the System's accountability for the money it receives. If you have any questions about this report or need additional financial information, contact the Office of Retirement Services by phone at 1-800-381-5111, or visit the website at www.michigan.gov/ors/contact-ors.

FINANCIAL SECTION

BASIC FINANCIAL STATEMENTS

STATEMENT OF PENSION PLAN AND OTHER POSTEMPLOYMENT BENEFIT PLAN FIDUCIARY NET POSITION

As of September 30, 2024
(in thousands)

	Pension Plan	OPEB Plan	Total
Assets:			
Equity in common cash	\$ 8,447	\$ 7,768	\$ 16,216
Receivables:			
Amounts due from members	361	-	361
Amounts due from employers	15,717	7,153	22,871
Amounts due from federal agencies	-	2,094	2,094
Amounts due from other	-	1,992	1,992
Amounts due from employer - long term	3,049	1,435	4,484
Amounts due from federal agencies - long term	-	1,339	1,339
Interest and dividends	16	4	20
Total receivables	19,143	14,017	33,161
Investments:			
Short term investment pools	87,730	13,769	101,499
Fixed income pools	211,524	48,666	260,190
Domestic equity pools	441,851	101,696	543,547
Real estate and infrastructure pools	183,160	42,183	225,344
Private equity pools	437,637	100,721	538,358
International equity pools	295,321	67,955	363,276
Absolute return pools	205,786	47,370	253,156
Real return and opportunistic pools	194,618	44,820	239,439
Total investments	2,057,628	467,179	2,524,808
Securities lending collateral	62,646	14,409	77,054
Total assets	2,147,865	503,374	2,651,239
Liabilities:			
Unearned revenue	-	1	1
Accounts payable and other accrued liabilities	108	3,846	3,954
Obligations under securities lending	62,646	14,409	77,055
Other accrued liabilities long term	-	37	37
Total liabilities	62,753	18,293	81,046
Net Position Restricted for			
Pension Benefits and OPEB:	\$ 2,085,112	\$ 485,081	\$ 2,570,193

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

FINANCIAL SECTION

BASIC FINANCIAL STATEMENTS

STATEMENT OF CHANGES IN PENSION PLAN AND OTHER POSTEMPLOYMENT BENEFIT PLAN FIDUCIARY NET POSITION

For Fiscal Year Ended September 30, 2024
(in thousands)

	Pension Plan	OPEB Plan	Total
Additions:			
Contributions:			
Member contributions	\$ 4,637	\$ -	\$ 4,637
Employer contributions	101,725	45,615	147,340
Other governmental contributions	-	8,487	8,487
Total contributions	106,362	54,102	160,464
Investment income (loss):			
Net increase (decrease) in fair value of investments	248,966	55,656	304,622
Interest, dividends, and other	41,701	9,679	51,380
Investment expenses:			
Other investment expenses	(8,305)	(1,871)	(10,176)
Securities lending activities:			
Securities lending income	3,557	812	4,370
Securities lending expenses	(3,375)	(771)	(4,146)
Net investment income (loss)	282,546	63,504	346,050
Non-operating revenue	-	-	-
Miscellaneous income	1	133	134
Total additions	388,909	117,739	506,649
Deductions:			
Benefits paid to plan members and beneficiaries:			
Retirement benefits	173,810	-	173,810
Health benefits	-	42,879	42,879
Dental/vision benefits	-	3,026	3,026
Refunds of contributions	101	-	101
Administrative and other expenses	777	850	1,627
Total deductions	174,689	46,755	221,444
Net Increase (Decrease) in Net Position	214,220	70,984	285,205
Net Position Restricted for Pension Benefits and OPEB:			
Beginning of Year	1,870,891	414,097	2,284,988
End of Year	\$ 2,085,112	\$ 485,081	\$ 2,570,193

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

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

NOTE 1 – PLAN DESCRIPTION

ORGANIZATION

The Michigan State Police Retirement System (System) is a single employer, state-wide, defined benefit public employee retirement plan and a fiduciary component unit of the State of Michigan (State), created under Public Act 251 of 1935, recodified and currently operating under Public Act 182 of 1986. Section 7 of this act establishes the board's authority to promulgate or amend the provisions of the System. The board consists of nine members. Four members are appointed by the governor and consist of one officer having rank of sergeant or below, one officer having rank of lieutenant or above, one retirant, and one member of the general public to meet requirements within the act. The System's pension plan was established by the State to provide retirement, survivor, and disability benefits to Michigan State Police. In addition, the System's OPEB plan provides retirees hired prior to June 10, 2012 with the option of receiving health, dental, and vision coverage under the State Police Retirement Act. The System is a qualified pension trust fund under section 401(a) of the Internal Revenue Code.

A hybrid defined benefit and defined contribution plan was introduced for troopers and sergeants who became a member of the System on or after June 10, 2012. This plan is called the Pension Plus plan for Michigan State Police.

The System is a fiduciary component unit of the State of Michigan and its financial statements are included as a pension and other employee benefit trust fund in the State of Michigan Annual Comprehensive Financial Report.

The System is administered by the Office of Retirement Services within the Michigan Department of Technology, Management & Budget (DTMB). The Department Director appoints the Office Director, with whom the general oversight of the System resides. The State of Michigan Investment Board serves as the investment fiduciary and custodian for the System.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

MEMBERSHIP

At September 30, 2024, the System's pension plan membership consisted of the following:

Inactive plan members or their beneficiaries currently receiving benefits:	
Regular benefits	2,690
Survivor benefits	556
Disability benefits	202
Total	<u>3,448</u>
Inactive plan members entitled to but not yet receiving benefits:	<u>23</u>
Active plan members:	
Vested	581
Non-vested	1,035
Total	<u>1,616</u>
DROP program participants	308
Total plan members	<u><u>5,395</u></u>

Enrollment in the OPEB plan is voluntary. The number of participants is as follows:

Health, Dental and Vision Plan

Eligible participants:	
Retirees and survivors	3,179
Inactive vested and DROP members	331
Active members ¹	1,616
Participants receiving benefits:	
Health	3,030
Dental	3,044
Vision	3,040
Expenses for the year (in thousands)	\$ 46,755
Employer payroll contribution rates	32.55%

¹ Active member count includes Personal Healthcare Fund members eligible for the \$2,000 lump sum at termination benefit.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

BENEFIT PROVISIONS – PENSION

Introduction

Benefit provisions of the defined benefit plan are established by State statute, which may be amended. Public Act 182 of 1986, Michigan State Police Retirement Act, as amended, establishes eligibility and benefit provisions for the defined benefit pension plan and the Pension Plus plan. Retirement benefits for defined benefit plan members are determined by final average compensation and members are eligible to receive a monthly benefit when they meet certain age and service requirements. The pension benefit for Pension Plus plan members is determined by final average compensation and years of service and members are eligible to receive a monthly benefit when they meet certain age and service requirements. In addition, the Pension Plus members' savings component includes the employee contributions into any combination of a member's 401(k), 457, or Roth 401(k) accounts, and an employer match into their 401(k) account. The System also provides duty disability, nonduty disability, and survivor benefits.

A member who leaves Michigan State Police employment may request a refund of his or her member pension contribution account. Effective in 2012, the System is contributory except for command officers. A refund cancels a former member's rights to a future pension and there is no provision for repaying the refund of contributions to restore the service represented by the refund.

Pension Reform 2012

The State Troopers' union and the State of Michigan negotiated a new retirement plan for new State Troopers and Sergeants. As a result, a State Trooper who became a member of the System on or after June 10, 2012, is a Pension Plus member. The Pension Plus plan pairs a guaranteed retirement income (Defined Benefit pension) with a flexible and transferable retirement investment (Defined Contribution) account. The Pension Plus plan was codified in the State Police Retirement act with the passage of Public Act 674 of 2018.

Regular Retirement

A pension is available to a defined benefit plan member after 25 years of credited service (employment). The pension equals 60% of a member's final average compensation and is payable monthly over the lifetime of a member. Final average compensation is the average annual salary for a member's last two years of service with the Department of State Police.

For a Pension Plus member, who became a member of the System on or after June 10, 2012, a pension is available at age 55 with 25 years of service or age 60 with 10 or more years of service. The pension equals 2% of a five-year final average compensation (excluding overtime) multiplied by the total number of years of credited service, not to exceed 25 years. After 25 years of credited service, the pension multiplier declines by 0.4% each year until reaching 0% at 30 years of service. The reduced pension multiplier applies only to years 26 through 30, not the first 25 years. Pension benefits are paid over the lifetime of a member.

Deferred Retirement

A defined benefit plan member with 10 or more years of credited service who terminates employment but has not reached the age of 50 is a deferred member and is entitled to receive a monthly allowance upon reaching age 50, provided the member's accumulated contributions have not been refunded. The deferred pension is equal to 2% of the final average compensation times the years and partial years of service credit.

A Pension Plus plan member who became a member of the System on or after June 10, 2012, with 10 or more years of credited service who terminates employment but has not reached the age of 60 is a deferred member and is entitled to receive a monthly allowance upon reaching age 60, provided the member's accumulated contributions have not been refunded.

Nonduty Disability Benefit

A member with 10 or more years of credited service who becomes totally and permanently disabled not due to performing duties as an employee of the Michigan State Police may be eligible for a nonduty disability pension. The nonduty disability pension for a defined benefit plan member is 2.4% of the final average compensation times years and partial years of credited service (but not more than 25 years).

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Duty Disability Benefit

A member who becomes totally and permanently disabled from performing duties as a Michigan State Police Officer is eligible for a duty disability pension. The amount, for a defined benefit plan member is equal to 60% of the final average compensation.

Survivor Benefit

Upon the nonduty death of a defined benefit plan member who completed at least 10 years of service, the surviving spouse receives a benefit based on 2.4% of the final average compensation for each year and partial year of credited service. If there is no spouse, surviving children are entitled to equally share the benefit until age 18. If death occurs in the line of duty (a duty death), the surviving spouse receives a benefit of 60% of the final average compensation. Children receive \$100 each month until age 18. A \$1,500 funeral expense is also authorized by State statute payable by the System.

Postretirement Adjustments

Effective October 1, 1996, the monthly pension was increased 10% if certain requirements were met. This was a one-time increase.

Each October 1, the benefits of all pension recipients increase 2% (not to exceed \$500). This non-compounding increase is paid to persons who have been retired 12 months.

A Pension Plus member who became a member of the System on or after June 10, 2012, does not receive an annual post-retirement increase.

Effective fiscal year 2016, ORS issued a supplemental payment to eligible recipients. This supplemental payment continues to be issued to eligible recipients each fiscal year, subject to an annual budget appropriation.

Member Contributions

Command Officers currently participate on a noncontributory basis. Effective October 1, 2012, troopers and sergeants hired before June 10, 2012 began contributing 1% of their compensation. Effective October 1, 2013 troopers and sergeants hired before June 10, 2012 began contributing 2% of their compensation. Troopers hired on or after June 10, 2012 contribute 4% of their compensation as described below. Under certain circumstances, defined benefit plan members may contribute to the System for the purchase of creditable service, such as military, maternity or paternity leave, Peace Corps or VISTA service. Pension Plus plan members are only eligible to receive active duty military service. If a member terminates employment before a retirement benefit is payable, the member's contribution and interest on deposit are available to be refunded. If the member dies before being vested, the member's contribution and interest are refunded to the designated beneficiaries.

Pension Plus members who became members of the System on or after June 10, 2012, contribute 4% of their gross wages for the pension component of their plan. An additional, optional, 4% contribution of their gross wages is withheld for the savings component of their plan. The first 2% of employee contributions are directed to the member's Personal Healthcare Fund and receive an employer match of 100% up to a maximum of 2%. The next 2% employee contributions are identified as retirement savings and receive an employer match of 50% up to a maximum of 1%. These members will also receive a credit into a health reimbursement account (HRA) at termination if they have at least 10 years of service at termination. The credit will be up to \$2,000 for participants.

Employer Contributions

The statute requires that the employer contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level-percent-of-payroll funding principles so that the contribution rates do not have to increase over time.

For a Pension Plus member who became a member of the System on or after June 10, 2012, there is an employer match for retirement of 100% of the first 2% of employee deferrals for retiree healthcare up to a maximum employer contribution of 2%. In addition, employers match 50% of the next 2% of employee deferrals, up to a maximum employer contribution of 1%.

Deferred Retirement Option Plan

Public Act 83 of 2004 amended the State Police Retirement Act to create a Deferred Retirement Option Plan (DROP) for members with 25 years of service. This benefit program allows state police who are eligible to retire to

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

defer their retirement and keep working for up to six years. The participant's pension amount is calculated on the day before the DROP period starts, and a percentage of the equivalent monthly pension is credited to an interest-bearing account in the participant's name. The DROP balance will be available at the time their DROP participation ends. At this time, only Defined Benefit members are eligible for DROP. The balance at the end of the fiscal year 2024 for the DROP accounts was \$81.5 million.

Banked Leave Time

Public Act 50 of 2004 amended the State Police Retirement Act to include Banked Leave Time (BLT) for members. BLT is an extension of the State's current annual leave program, which banks a predetermined number of hours per pay period. However, the BLT program will not have an effect on a member's Final Average Compensation calculation.

BENEFIT PROVISIONS – OTHER POSTEMPLOYMENT

Introduction

Benefit provisions of the postemployment benefit plan are established by State statute, which may be amended. Public Act 182 of 1986, as amended, establishes eligibility and benefit provisions for the OPEB plan. Defined benefit plan members are eligible to receive health, prescription drug, dental, and vision coverage on the first day they start receiving pension benefits (this benefit does not apply to Pension Plus members). There are no ad hoc or automatic increases. The State Police Retirement Act requires joint authorization by DTMB and the Civil Service Commission to make changes to retiree medical benefit plans.

Under the Michigan State Police Retirement Act, all defined benefit retirees have the option of continuing health, dental, and vision coverage. Retirees with this coverage contribute 5%, 10%, and 10% of the monthly premium amount for the health, dental, and vision coverage, respectively. The State funds 95% of the health and 90% of the dental and vision insurance. The employer payroll contribution rate to provide these benefits was 32.55% for non-Pension Plus members and 32.55% for Pension Plus members for fiscal year 2024.

The State Health Plan PPO is by far the most often selected health care option. This plan includes comprehensive coverage traditionally referred to as basic and major medical, with full coverage for most services received in-network after an annual deductible is met. Preventive services are not subject to a deductible and are fully covered if received in-network subject to an annual maximum. Both retail and mail order prescription drug coverage are included. Retiree health, dental, and vision plan benefits have generally matched those in place for active employees.

Personal Healthcare Fund

A Pension Plus member who became a member of the System on or after June 10, 2012 will be enrolled into a Personal Healthcare Fund (PHF), which is a separate account within the State of Michigan 401(k) and 457 Plans. The first optional 2% of their contributions plus their employer match are directed into the PHF. These members will also receive a credit into a health reimbursement account (HRA) at termination if they have at least 10 years of service at termination. The credit will be up to \$2,000 for participants.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING AND PRESENTATION

The System's financial statements are prepared using the accrual basis of accounting. Contributions from the employers are recognized as revenue when due and payable. Benefits and refunds are recognized when due and payable in accordance with the terms of the System. The reserves are described below and details are provided in the supporting schedules.

Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, as amended, and Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended, which were adopted during the year ended September 30, 2014 and 2017, addresses accounting and financial reporting requirements for pension and other postemployment benefit plans, respectively. The requirements for both GASB Statement No. 67 and 74 require changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of the total and net, pension and other postemployment benefit liabilities. It also includes comprehensive note disclosures regarding the pension and other postemployment benefit liability, the sensitivity of the net pension and other postemployment benefit liability to the discount rate, and increased investment activity disclosures. The implementation of GASB Statement No. 67 and 74 did not significantly impact the accounting for accounts

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

receivable and investment balances. The total pension and other postemployment benefit liability, determined in accordance with GASB Statement No. 67 and 74, is presented in Note 4 on page 30, Note 5 on page 32, and in the Required Supplementary Information beginning on page 47.

As of September 30, 2016, the System applied GASB Statement No. 72, *Fair Value Measurement and Application*, as amended. GASB Statement No. 72 provides guidance for determining a fair value measurement for reporting purposes and applying fair value to certain investments and disclosures related to all fair value measurements.

RESERVES

Public Act 182 of 1986, as amended, created the Reserve for Employee Contributions, Reserve for Employer Contributions, Reserve for Retired Benefit Payments, Reserve for Undistributed Investment Income, and Reserve for Health (OPEB) Related Benefits. The financial transactions of the System are recorded in these reserves as required by Public Act 182 of 1986, as amended. The reserves are described below, and details are provided in the supporting schedules.

Reserve for Employee Contributions

Command Officers currently participate on a noncontributory basis. Effective October 1, 2012, troopers and sergeants hired before June 10, 2012 began contributing 1% of their compensation, and the contribution increased to 2%, effective October 1, 2013. This reserve represents active member contributions and interest less amounts transferred to the Reserve for Retired Benefit Payments for regular and disability retirement, amounts refunded to terminated members, and unclaimed amounts transferred to the income reserve. At September 30, 2024, the balance in this reserve was \$11.6 million.

Reserve for Pension Plus Employee Contributions

Troopers hired on or after June 10, 2012 contribute 4.0% of their compensation. This reserve represents active member contributions and interest less amounts transferred to the Pension Plus Reserve for Retired Benefit Payments for regular and disability retirement, amounts refunded to terminated members. At September 30, 2024, the balance in this reserve was \$27.2 million.

Reserve for Employer Contributions

Defined Benefit employer contributions are credited to this reserve. Interest from the Reserve for Undistributed Investment Income is credited annually. Amounts are transferred annually from this reserve to the Reserve for Retired Benefit Payments to fund that reserve. At September 30, 2024, the balance in this reserve was (\$226.1) million.

Reserve for Pension Plus Employer Contributions

Pension Plus employer contributions are credited to this reserve. Interest from the Reserve for Undistributed Investment Income is credited annually. Amounts are transferred annually from this reserve to the Pension Plus Reserve for Retired Benefit Payments to fund that reserve. At September 30, 2024, the balance in this reserve was \$71.1 million.

Reserve for Retired Benefit Payments

This represents the reserve for payment of future retirement benefits to current Defined Benefit retirees. At retirement, a member's accumulated contributions plus interest are transferred into this reserve from the Reserve for Employee Contributions. Monthly benefits, which are paid to the retirees, reduce this reserve. At the end of each fiscal year, an amount is transferred from the Reserve for Employer Contributions to bring the reserve into balance with the actuarial present value of retirement allowances. Also included are reserves for casualty experience (injury or death of a member or vested former member). The initial actuarial casualty valuation determined the full funding reserve requirements to be allocated from assets of the reserve. All retiree casualty payments are made from this reserve. At September 30, 2024, the balance in this reserve was \$1.9 billion.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Reserve for Pension Plus Retired Benefit Payments

This represents the reserve for payment of future retirement benefits to current Pension Plus retirees. At retirement, a member's accumulated contributions plus interest are transferred into this reserve from the Reserve for Pension Plus Employee Contributions. Monthly benefits, which are paid to the retirees, reduce this reserve. At the end of each fiscal year, an amount is transferred from the Reserve for Pension Plus Employer Contributions to bring the reserve into balance with the actuarial present value of retirement allowances. Also included are reserves for casualty experience (injury or death of a member, or vested former member). All Pension Plus retiree casualty payments are made from this reserve. At September 30, 2024, the balance in this reserve was \$639.0 thousand.

Reserve for Undistributed Investment Income

The net investment earnings (losses) are recorded in this reserve. Interest as authorized by the board is transferred annually to the other reserves. Administrative expenses are paid from this reserve. At September 30, 2024, the balance of this reserve was \$320.1 million.

Reserve for Health (OPEB) Related Benefits

This reserve is credited with member and employer contributions for retirees' health (including prescription coverage), dental, and vision benefits. Starting in fiscal year 2012, the employer contribution is based on a prefunded basis and represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liability (or funding excess) over a period not to exceed thirty years. In addition, in fiscal year 2024, this reserve includes revenue from the federal government for the Employee Group Waiver Plan (EGWP). Premiums for health, dental and vision benefits are paid from this reserve. At September 30, 2024, the balance in this reserve was \$485.1 million.

REPORTING ENTITY

The System is a fiduciary component unit of the State of Michigan. As such, the System's financial statements are included as a pension (and other employee benefit) trust fund in the State of Michigan Annual Comprehensive Financial Report. The System and its Board are not financially accountable for any other entities or other organizations. Accordingly, the System is the only entity included in this financial report.

BENEFIT PROTECTION

Public Act 100 of 2002 was passed by the Michigan Legislature to protect pension benefits of public employees from alienation (being transferred). Alienation is attachment, garnishment, levy, execution, bankruptcy or other legal process except for divorce orders or eligible domestic relation orders. The statutes governing the System contained an "anti-alienation" clause to provide for this protection; however, many smaller public pension systems did not have the benefit of this protection. Therefore, Public Act 100 of 2002 was passed to establish legal protection of pension assets that encompasses all public employees.

INVESTMENTS

Generally, investments are reported at fair value, consistent with the provisions of GASB Statement No. 72. Short-term, highly liquid debt instruments including commercial paper are reported at amortized cost. Additional disclosures describing investments are provided in Note 6 on page 37.

INVESTMENT INCOME

Dividend and interest income are recognized on the accrual basis. Fair value changes are recorded as investment income or loss. Purchases and sales of investments are recorded as of the trade date (the date upon which the transaction is initiated), except for purchase and sale of mortgages, real estate, and private equity investments, which are recorded as of the settlement date (the date upon which the transaction is ultimately completed). The effect of recording such transactions as of the settlement date does not materially affect the financial statements.

COSTS OF ADMINISTERING THE SYSTEM

Each year a restricted general fund appropriation is requested to fund the on-going business operations of the System. These administrative costs are ultimately funded by the System through the regular transfer of funds from the System to the State's general fund based on either a direct cost or allocation basis depending on the nature of the expense. Costs of administering the System are financed by undistributed investment income of the System.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

PROPERTY AND EQUIPMENT

Office space is leased from the State on a year-to-year basis. Office equipment is capitalized if the value exceeds \$5,000. These assets are recorded at cost and are reported net of depreciation in the *Statement of Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position*. Such assets are depreciated on a straight-line basis over 10 years. The System does not have equipment that falls within these parameters.

RELATED PARTY TRANSACTIONS

Leases and Services

The System leases operating space and purchases certain administrative, data processing, legal and investment services from the State. The space and services are not otherwise available by competitive bid. The schedule below summarizes costs incurred by the System for such services.

	2024 (in thousands)
Building Rentals	\$ 13
Technological Support	180
Attorney General	36
Investment Services	390
Personnel Services	477

Cash

At September 30, 2024, the System had \$16.2 million in a common cash investment pool maintained for various State operating funds. The participating funds in the common cash pool earn interest at various rates depending upon prevailing short-term interest rates. Earnings from these activities amounted to \$555.0 thousand for the year ended September 30, 2024.

NOTE 3 – CONTRIBUTIONS

The State is required by Public Act 182 of 1986, as amended to contribute amounts necessary to finance the coverage of member and retiree benefits. Command officers currently participate in the System on a noncontributory basis. Effective October 1, 2012, troopers and sergeants hired before June 10, 2012, began contributing 1% of their compensation, and the contribution increased to 2%, effective October 1, 2013. Troopers hired on or after June 10, 2012 contribute 4% of their compensation. Under certain circumstances, members may contribute to the System for the purchase of creditable service, such as military service or maternity leave. The State is required by Public Act 182 of 1986, as amended, to contribute amounts necessary to finance the benefits of its employee and retiree OPEB. Contribution provisions are specified by State statute and may be amended only by action of the State Legislature.

Employer contributions to the System are determined on an actuarial basis using the entry age normal actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the actuarial valuation is allocated on a level basis over the service of the individual between entry age and assumed exit age. The normal cost is the annual cost assigned, under the actuarial funding method, to the current and subsequent plan years. The remainder is called the actuarial accrued liability. Normal cost is funded on a current basis.

Pension and OPEB contributions made in the fiscal year ending September 30, 2024, were determined as of the September 30, 2021 actuarial valuations. The pension and OPEB unfunded (overfunded) actuarial accrued liabilities (UAAL) as of September 30, 2021 are amortized over a 15 year period beginning October 1, 2023 and ending September 30, 2038. The schedules on the next page summarize pension and OPEB contribution rates in effect for fiscal year 2024.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Pension Contribution Rates

Benefit Structure	Member	Employer
Non Command Officers	2.00 %	81.18 %
Command Officers	-	82.72
Pension Plus	4.00	66.92

OPEB Contribution Rates

Benefit Structure	Member	Employer
Premium Subsidy	- %	32.55 %
Personal Healthcare Fund	-	32.55

The System is required to reconcile with actuarial requirements annually. Any funding deficiency for pension and/or OPEB benefits is smoothed over five years. One fifth (20%) of the funding deficiency is included in each of the subsequent years' contribution and is not recognized as a receivable in the accounting records.

NOTE 4 – NET PENSION LIABILITY

MEASUREMENT OF THE NET PENSION LIABILITY

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the fair value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Net Pension Liability (in thousands)

Total Pension Liability	\$ 2,775,487
Plan Fiduciary Net Position	<u>2,085,112</u>
Net Pension Liability	<u>\$ 690,375</u>
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	75.13%
Net Pension Liability as a Percentage of Covered Payroll	486.67%
Total Covered Payroll	\$ 141,857

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

LONG-TERM EXPECTED RETURN ON PLAN ASSETS

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2024, are summarized in the following table:

<i>Asset Allocation</i>		
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Domestic Equity Pools	25.0 %	5.3 %
Private Equity Pools	16.0	9.0
International Equity Pools	15.0	6.5
Fixed Income Pools	13.0	2.2
Real Estate and Infrastructure Pools	10.0	7.1
Absolute Return Pools	9.0	5.2
Real Rate and Opportunistic Pools	10.0	6.9
Short-Term Investment Pools	2.0	1.4
TOTAL	100.0 %	

* Long-term rates of return are net of administrative expenses and 2.3% inflation.

RATE OF RETURN

For the fiscal year ended September 30, 2024, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was 15.47%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

DISCOUNT RATE

A single discount rate of 6.15% was used to measure the total pension liability. The DTMB Director and the Board modified the dedicated gains policy to limit the reduction in the discount rate to no lower than 6.00%. This single discount rate was based on the expected rate of return on pension plan investments of 6.15%. The projection of cash flows used to determine this single discount rate was based on the assumption that in the future, plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

SENSITIVITY OF THE NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

As required by GASB Statement No. 67, we determined the sensitivity of the net pension liability to changes in the single discount rate. The following table presents the plan's net pension liability, in thousands, calculated using a single discount rate of 6.15% as well as what the plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher:

1% Decrease	Current Discount Rate Assumption	1% Increase
5.15%	6.15%	7.15%
\$1,018,104	\$690,375	\$420,053

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

TIMING OF THE VALUATION

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total pension liability is required to be rolled forward from the actuarial valuation date to the pension plan's fiscal year end.

The total pension liability as of September 30, 2024, is based on the results of an actuarial valuation date of September 30, 2023, and rolled-forward using generally accepted actuarial procedures.

ACTUARIAL VALUATIONS AND ASSUMPTIONS

Actuarial valuations for the pension plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment and mortality. Amounts determined regarding the funded status of the plan and the actuarially determined contributions (ADC) are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

The Schedules of Contributions in Required Supplementary Information present trend information about the amounts contributed to the plan by employers in comparison to the ADC, an amount that is actuarially determined in accordance with the parameters of GASB Statement No. 67 for pension.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

The information presented in the Net Pension Liability schedules and notes was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Summary of Actuarial Assumptions

Valuation Date	September 30, 2023
Actuarial Cost Method	Entry Age, Normal
Asset Valuation Method	Fair Value
Actuarial Assumptions:	
Wage Inflation Rate	2.75%
Investment Rate of Return	
- Non-Hybrid Plans	6.15%, net of investment expenses
- Hybrid Plan	6.15%, net of investment expenses
Projected Salary Increases	3.25% - 82.75%, including wage inflation at 2.75%
Cost-of-Living Pension Adjustments ¹	2% annual non-compounded with maximum annual increase of \$500 for those eligible
Mortality	
Retirees	PubS-2010 Male and Female Retiree Mortality Tables scaled by 89% for males and 99% for females and adjusted for mortality improvements using projection scale MP-2021 from 2010.
Active	PubS-2010 Male and Female Employee Mortality Tables scaled by 100% and adjusted for mortality improvements using projection scale MP-2021 from 2010.
Disabled Retirees	PubNS-2010 Male and Female Disabled Retiree Mortality Tables scaled by 100% and adjusted for mortality improvements using projection scale MP-2010 from 2010.
Notes	Assumption changes as a result of an experience study for the period 2017 through 2022 have been adopted by the System for use in the determination of the Total Pension Liability beginning with the September 30, 2023 valuation.

¹ Applies to individuals hired before June 10, 2012.

NOTE 5 – NET OPEB LIABILITY

MEASUREMENT OF THE NET OPEB LIABILITY

The net OPEB liability is to be measured as the total OPEB liability, less the amount of the OPEB plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the fair value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Net OPEB Liability (in thousands)

Total OPEB Liability	\$	762,419
Plan Fiduciary Net Position		485,081
Net OPEB Liability	\$	<u>277,338</u>
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability		63.62%
Net OPEB Liability as a Percentage of Covered Payroll		195.51%
Total Covered Payroll	\$	141,857

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

LONG-TERM EXPECTED RETURN ON PLAN ASSETS

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return were provided by the Bureau of Investments (BOI) for each major asset class included in the OPEB plan's target asset allocation as of September 30, 2024. These best estimates are summarized in the following table:

Asset Class	Asset Allocation	
	Target	Long-Term Expected
	Allocation	Real Rate of Return*
Domestic Equity Pools	25.0 %	5.3 %
Private Equity Pools	16.0	9.0
International Equity Pools	15.0	6.5
Fixed Income Pools	13.0	2.2
Real Estate and Infrastructure Pools	10.0	7.1
Absolute Return Pools	9.0	5.2
Real Rate and Opportunistic Pools	10.0	6.9
Short-Term Investment Pools	2.0	1.4
TOTAL	100.0 %	

* Long-term rates of return are net of administrative expenses and 2.3% inflation.

RATE OF RETURN

For the fiscal year ended September 30, 2024, the annual money-weighted rate of return on OPEB plan investment, net of OPEB plan investment expense, was 15.10%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

DISCOUNT RATE

A single discount rate of 6.25% was used to measure the total OPEB liability. The DTMB Director and the Board modified the dedicated gains policy to limit the reduction in the discount rate to no lower than 6.00%. This single discount rate was based on the expected rate of return on OPEB plan investments of 6.25%. The projection of cash flows used to determine this single discount rate was based upon the assumption that in the future plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the OPEB plan's fiduciary net position was projected to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

SENSITIVITY OF THE NET OPEB LIABILITY TO CHANGES IN THE DISCOUNT RATE

As required by GASB Statement No. 74, we have determined the sensitivity of the net OPEB liability to changes in the single discount rate. The following table presents the plan's net OPEB liability, in thousands, calculated using a single discount rate of 6.25%, as well as what the plan's net OPEB liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

1% Decrease	Current Single Discount Rate Assumption	1% Increase
5.25%	6.25%	7.25%
\$357,769	\$277,338	\$209,541

SENSITIVITY OF THE NET OPEB LIABILITY TO HEALTHCARE COST TREND RATE

As required by GASB Statement No. 74, we have determined the sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The following table presents the plan's net OPEB liability, in thousands, calculated using assumed trend rates, as well as what the plan's net OPEB liability would be if it were calculated using a trend rate that is 1-percentage-point lower or 1-percentage-point higher:

1% Decrease	Current Healthcare Cost Trend Rate Assumption	1% Increase
\$206,469	\$277,338	\$358,935

TIMING OF THE VALUATION

An actuarial valuation to determine the total OPEB liability is required to be performed at least every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total OPEB liability is required to be rolled forward from the actuarial valuation date to the OPEB plan's fiscal year end.

The total OPEB liability as of September 30, 2024, is based on the results of an actuarial valuation date of September 30, 2023, and rolled-forward using generally accepted actuarial procedures.

ACTUARIAL VALUATIONS AND ASSUMPTIONS

Actuarial valuations for the OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the actuarially determined contributions (ADC) are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

The Schedules of Contributions in Required Supplementary Information present trend information about the amounts contributed to the plan by employers in comparison to the ADC, an amount that is actuarially determined in accordance with the parameters of GASB Statement No. 74 for OPEB.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

The information presented in the Net OPEB Liability schedules and notes was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Summary of Actuarial Assumptions

Valuation Date	September 30, 2023
Actuarial Cost Method	Entry Age, Normal
Asset Valuation Method	Fair Value
Actuarial Assumptions:	
Wage Inflation Rate	2.75%
Investment Rate of Return	6.25%, net of investment expenses
Projected Salary Increases	3.25% - 82.75%, including wage inflation at 2.75%
Healthcare Cost Trend Rate ¹	Pre-65: 7.25% Year 1 graded to 3.50% Year 15 Post-65: 6.50% Year 1 graded to 3.50% Year 15
Mortality	
Retirees	PubS-2010 Male and Female Retiree Mortality Tables scaled by 89% for males and 99% for females and adjusted for mortality improvements using projection scale MP-2021 from 2010.
Active	PubS-2010 Male and Female Employee Mortality Tables scaled by 100% and adjusted for mortality improvements using projection scale MP-2021 from 2010.
Disabled Retirees	PubNS-2010 Male and Female Disabled Retiree Mortality Tables scaled by 100% and adjusted for mortality improvements using projection scale MP-2010 from 2010.
Other Assumptions OPEB only: ²	
Opt Out Assumption	6% of future eligible participants are assumed to opt out of the retiree health plan.
Survivor Coverage	100% of male and female retirees are assumed to have coverage continuing after the retiree's death when 2-person coverage was assumed to be elected.
Coverage Election at Retirement	Of those not opting out, 85% of male and 60% of female future retirees who elect coverage are assumed to elect coverage for 1 or more dependents.
Notes:	Assumption changes as a result of an experience study for the period 2017 through 2022 have been adopted by the System for use in the determination of the Total OPEB Liability beginning with the September 30, 2023 valuation.

¹ Applies to Medical and Rx payments.

² Applies to individuals hired before June 10, 2012.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

NOTE 6 – INVESTMENTS

INVESTMENT AUTHORITY

The State of Michigan Investment Board (Board) was created by Executive Order 2018-10 (Order) and serves as the investment fiduciary over the assets of the State sponsored defined benefit retirement systems. The Board is responsible for investing the System's assets in accordance with the duties and powers enumerated in the Order and with Public Act 380 of 1965, as amended. Investments are made subject to the Public Employee Retirement System Investment Act, Public Act 314 of 1965, as amended. The Public Employee Retirement System Investment Act authorizes, with certain restrictions, the investment of System assets in stocks, corporate and government bonds and notes, mortgages, real estate, and certain short-term and private equity investments. Investments must be made for the exclusive purposes of providing benefits to active members, retired members and beneficiaries, and for defraying the expenses of investing the assets.

DERIVATIVES INSTRUMENTS

The Board employs the use of derivative instrument in the investment of the pension and other employee benefit trust funds (the trust funds).

Derivative instruments are used in managing the trust funds' portfolios but uses do not include speculation or leverage of investments. State investment statutes limit total derivative instrument exposure to 15% of a fund's total asset value and restrict uses to replication of returns and hedging of assets. Swap agreements represent the largest category of derivative instrument investments subject to this limitation. Option and Future contracts traded daily on an exchange and settling in cash daily or having a limited and fully defined risk profile at an identified, fixed cost are not subject to the derivative instrument exposure limitation. Less than 15% of the total trust funds' portfolio has been invested from time to time in future contracts, swap agreements, structured notes, options and forward contracts.

The derivative instrument fair values are reported on the *Statement of Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position* as of September 30, 2024, in their respective investment pool's fair value. Derivative instrument net increase and decrease are reported on the *Statement of Changes in Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position* for fiscal year ended September 30, 2024, under "Investment income (loss)", in "Net increase (decrease) in fair value of investments". Bond interest, swap payments, and dividends are reported under "Investment income (loss)", in "Interest, dividends, and other".

Derivative Instrument Investments

As of September 30, 2024
(in millions)

Investment & Investment Type	Percent of Fair Value	Notional Value	Investments at Fair Value	Net Increase (Decrease) in Fair Value	Investment Income Gain (Loss)	Fair Value Subject to Credit Risk
Future contracts - fixed Income and international equity investments	- %	\$ 2.8	\$ (0.0)	\$ 0.2	\$ -	\$ -
Option contracts - equity, fixed income and international equity investments	0.9	1,278.4	21.9	23.1	-	-
Swap agreements - fixed income and international equity investments	2.1	93.6	54.6	25.0	(3.3)	0.5
Totals		<u>\$ 1,374.8</u>	<u>\$ 76.5</u>	<u>\$ 48.3</u>	<u>\$ (3.3)</u>	<u>\$ 0.5</u>

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

To diversify the trust funds' portfolio, the Board will enter into international swap agreements with investment grade counterparties, which are tied to stock market indices in approximately forty-six foreign countries. Generally, the notional amount of equity swaps tied to foreign stock market indices is executed via a net total return USD index. The swap agreements provide that the System will pay quarterly or at maturity over the term of the swap agreements, interest indexed to Secured Overnight Financing Rate (SOFR) or the U.S. Federal Funds Rate, adjusted for an interest rate spread, on the notional amount stated in the agreements. International equity swap agreement maturity dates range from October 2024 to June 2025. U.S. Treasury Bonds, U.S. Corporate Bonds and other public market fixed income securities, as well as other investments are held to correspond with the notional amount of the international swap agreements.

The value of the international synthetic equity structures is a combination of the value of the swap agreements and the value of the notes and other investments in the collateral portfolio. The book value represents the cost of the bonds, notes, and other investments. The current value represents the current value of the bonds, notes, and other investments and the change in the value of the underlying indices from the inception of the swap agreements. The current value is used as a representation of the fair value based on the intention to hold all swap agreements until maturity. At the maturity of the swap agreements, the trust funds will either receive the increase in the value of the equity indices from the level at the inception of the agreements or pay the decrease in the value of the indices. U.S. Treasuries, cash, publicly traded fixed income investments and private market investments are held in the collateral portfolio to correspond with the notional amount of the swap agreements. The combined swap structure generally realizes gains and losses on a rolling basis.

To reduce the risk in the Fixed Income and International Equity portfolios, the Board has entered into foreign exchange (FX) swap agreements, interest rate swap agreements and credit default swap agreements with investment grade counterparties. The FX swap agreements are tied to foreign currency forward exchange rates and are used to reduce the currency risk within the Fixed Income portfolio. The swap agreements are entered into on an as-needed basis and are generally tied to the maturity of a foreign government bond indenture denominated in a foreign currency. The purpose of the FX swap agreement that has a final maturity date of less than three months, is to reduce or eliminate the currency risk on foreign bond transactions. U.S. Domestic SOFR-based floating rate notes, U.S. Treasury securities, and portfolio cash are held to correspond with the notional amount of FX swap agreements within the Fixed Income and International Equity Portfolios. Interest rate swaps are used to adjust interest rate and yield curve exposures and substitute for physical securities. Long swap positions that received fixed rate increase exposure to long-term interest rates; short swap positions that pay fixed rate, decrease exposure. Credit default swaps (CDS) are used to manage credit exposure without buying or selling securities outright. Written CDS increase credit exposure, selling protection, obligating the portfolio to buy bonds from counterparties in the event of a default. Purchased CDS decrease exposure, buying protection, providing the right to "Put" bonds to the counterparty in the event of a default.

Counterparty credit risk is the maximum loss amount that would be incurred if the counterparties to the derivative instrument failed to perform according to the terms of the contract, without respect to any collateral or other security, or netting arrangement. For the Over-the-Counter (OTC) derivative instrument investments, the System held collateral of \$3.7 million in cash deposits and \$5.6 million in securities on behalf of counterparties. Collateral securities in the amount of \$0 were held on our behalf by counterparties.

The Board traded bond future contracts to manage duration, yield curve exposure, adjust interest rate exposures and replicate bond positions.

To enhance returns while limiting downside risk, the Board traded equity options in single securities and on indices in the Large Cap Core and All Cap GARP funds. Attractively priced equity options were used for the purpose of stock replacement in order to drive excess returns over the S&P 500, as well as to provide added exposure to strong equity markets while limiting principal at risk. Put options are used to protect against large negative moves in the market indices. Options traded by the Board in the Fixed Income and International Equity pools are used to manage interest rate and volatility exposures. Written options generate income in expected interest rate scenarios and may generate capital losses, if unexpected interest rate environments are realized. Both written and purchased options will become worthless at expiration if the underlying instrument does not reach the strike price of the option. However, purchased options are often sold well before expiration in order to lock in profits at prices well below listed strike prices, and thereby generate consistent returns.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

SECURITIES LENDING

The System, pursuant to a Securities Lending Authorization Agreement, has authorized State Street Bank and Trust Company ("State Street") to act as System's agent in lending System's securities to approved borrowers. State Street, as agent, enters into Securities Loan Agreements with borrowers.

During the fiscal year, State Street lent, on behalf of the Board, certain securities of the System held by State Street as custodian and received cash or other collateral including securities issued or guaranteed by the United States government. The types of securities lent were equity, and fixed income, which includes government and corporate bonds and notes. 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% of the fair value of the loaned securities.

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

During the fiscal year, the System 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 September 30, 2024, such investment pool had an average duration of 5 days and an average weighted final maturity of 99 days for USD. Because the loans were terminable at will their duration did not generally match the duration of the investments made with cash collateral. On September 30, 2024, the System had no credit risk exposure to borrowers. The fair value of collateral held and the fair value (USD) of securities on loan for the System as of September 30, 2024, was \$77.1 million and \$75.2 million respectively.

RISK

In accordance with GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, as amended, investments require certain disclosures regarding policies and practices and the risks associated with them. The credit risk (including custodial credit risk and concentration of credit risk), the interest rate risk, and foreign currency risk are discussed in the following paragraphs. Amounts represent the pro rata share of the underlying investments as required by GASB Statement No. 40. These investments are held in internal investment pools and reported as such in the financial statements.

Credit Risk

Credit risk is the risk that an issuer will not fulfill its obligations.

- Short-Term Fixed Income Investments – Eligible commercial paper investments must be rated within one of the two highest ratings classifications ("1" or "2") at the time of purchase from one of the nationally recognized statistical ratings organizations (NRSROs) specified in Public Act 314 of 1965, as amended. Borrowers must have at least \$400.0 million in commercial paper outstanding, and the Board may not invest in more than 10% of the borrower's outstanding debt.
- Long-Term Fixed Income Investments – Investment grade and noninvestment grade securities may be acquired in compliance with the parameters set forth in Public Act 314 of 1965, as amended, and the Board's Investment Policy Statement for the System. Public Act 314 defines investment grade as investments in the top four major grades, rated by one of the NRSROs. At September 30, 2024, the System was in compliance with Public Act 314 and the Investment Policy Statement in all material aspects.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Rated Debt Investments

(in thousands)

As of September 30, 2024

Investment Type	Fair Value	S&P	Fair Value	Moody's
Short Term	\$ 127,025	A-1	\$ 124,382	P-1
	6,883	A-2	1,961	P-2
	-	NR	7,565	NR
Money Market	2,747	AAA	2,747	Aaa
Government Securities				
U.S. Agencies - Sponsored	5	AAA	65,204	Aaa
	65,142	AA	-	Aa
	56	A	-	A
Fixed Income	2,878	AAA	8,074	Aaa
	4,867	AA	3,345	Aa
	11,305	A	12,112	A
	20,690	BBB	16,145	Baa
	5,557	BB	6,338	Ba
	3,619	B	5,060	B
	1,399	CCC	2,030	Caa
	242	CC	1,439	Ca
	85	C	241	C
	314	D	-	D
	48,027	NR	44,202	NR
Fixed Income ETF	16,542	NR	16,542	NR
Mutual Fund	259	BB	-	Ba
	3,372	NR	3,631	NR
Securities Lending Collateral				
Short Term	8,345	A-1	9,955	P-1
Fixed Income	2,667	AA	16,437	Aa
	64,468	A	20,719	A
	1,609	NR	29,980	NR
Total	<u>\$ 398,107</u>		<u>\$ 398,107</u>	

NR – Not Rated

Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty, the State will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party.

Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the government and are held by either the counterparty or the counterparty's trust department or agent, but not in the government name. The Board does not have a policy for custodial credit risk. However, the State's custodial bank had a credit rating of A at September 30, 2024. As of September 30, 2024, no securities were exposed to custodial credit risk.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer.

Other than obligations issued, assumed or guaranteed by the United States, its agencies or United States government sponsored enterprises, the System is prohibited by Public Act 314 of 1965, as amended, from investing more than 5% of the outstanding obligations of any one issuer or investing more than 5% of a System's assets in the obligations of any one issuer. When calculating the amount of outstanding obligations, the System includes publicly issued and privately held debt.

At September 30, 2024, there were no investment in any single issuer that accounted for more than 5% of the System's assets. The System held no investments that exceeded the 5% cap in obligations of any one issuer.

Interest Rate Risk – Fixed Income Investments

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment.

The Board's policy states that cash equivalents are invested in short-term fixed income securities with an average weighted maturity of less than one year to provide liquidity and safety of principal from capital market and default risk. At September 30, 2024, the fair value of the System's short term investments was \$136.7 million with the weighted average maturity of 35 days.

The Board does not have a policy regarding interest rate risk for long-term debt investments. However, the trust funds are invested with a long-term strategy. The goal is to balance higher returns while accepting minimum risk for the return. Analyzing the yield curve on individual securities as compared to U.S. Treasuries determines, in part, what is an acceptable risk for the return. Therefore, market conditions such as lower interest rates result in shorter duration and higher interest rates result in longer duration.

Debt Securities

(in thousands)

As of September 30, 2024

	Fair Value	Effective Duration in Years
Government		
U. S. Treasury	\$ 60,132	12.3
U. S. Agencies - Backed	21,027	5.6
U. S. Agencies - Sponsored	65,204	4.9
Corporate	119,160	2.6
International*		
U. S. Treasury	36,636	1.0
Total	<u>\$ 302,158</u>	

Debt securities are exclusive of securities lending collateral.

* International contains Domestic Government and Corporate Debt Securities as a part of their derivative instrument strategies. The interest rates reset on a quarterly basis for these securities.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit.

The System invests in various securities denominated in foreign currencies. Authorized global securities include equities, fixed income, mutual funds, real estate, and limited partnerships. These investments are limited to 30% of the total assets of the System with additional limits of not more than 5% of the outstanding global securities of any one issuer and no more than 5% of the System's assets in the global securities of any one issuer. In addition to these limits, the Board cannot acquire securities with companies that have active business operations in the state sponsors of terror as identified by the United States Secretary of State. At September 30, 2024, the total amount of foreign investment subject to foreign currency risk was \$224.3 million, which amounted to 8.8% of total investments (exclusive of securities lending collateral) of the System.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Foreign Currency Risk

(in thousands)

As of September 30, 2024

Region	Country	Currency	Equity Fair Value in U.S. \$	Fixed Income Fair Value in U.S. \$	International & Absolute Return Fair Value in U.S. \$	Private Equity, Real Estate, & Infrastructure Fair Value in U.S. \$
AMERICA						
	Brazil	Real	\$ -	\$ 102	\$ 805	\$ -
	Canada	Dollar	562	53	3,215	136
	Mexico	Peso	35	92	983	-
	Peru	Sol	-	23	-	-
	Columbia	Peso	-	-	-	-
	Chile	Peso	-	61	25	-
PACIFIC						
	Australia	Dollar	243	244	2,444	-
	Hong Kong	Dollar	-	-	4,050	-
	India	Rupee	-	144	1,174	-
	Indonesia	Rupiah	33	226	147	-
	Japan	Yen	46	665	5,866	-
	Malaysia	Ringgit	-	270	64	-
	Taiwan	New Dollar	-	-	859	-
	China	Renminbi	142	-	647	-
	Singapore	Dollar	42	127	218	-
	South Korea	Won	-	278	1,388	-
	Thailand	Baht	-	49	1,208	-
	Sri Lanka	Rupee	-	-	-	-
	New Zealand	Dollar	-	62	415	-
	China	Yuan	4	(59)	149	-
	China	Yuan Offshore	-	308	100	-
	Philippines	Peso	-	-	10	-
	United Arab Emirates	Dirham	3	-	23	-
EUROPE						
	Denmark	Krone	261	-	2,326	-
	European Union	Euro	4,734	862	15,444	15,690
	Hungary	Forint	-	23	59	-
	Norway	Krone	-	-	48	630
	Poland	Zloty	-	17	241	-
	United Kingdom	Pound Sterling	777	244	5,784	1,381
	Romania	Leu	-	10	-	-
	Sweden	Krona	356	28	3,599	-
	Switzerland	Franc	177	-	1,630	-
	Türkiye	Lira	-	-	135	-
	Czech Republic	Koruna	-	13	-	-
AFRICA						
	South Africa	Rand	-	30	110	-
	Egypt	Pound	-	87	-	-
	Liberia	Dollar	265	-	-	-
MIDDLE EAST						
	Israel	New Shekel	-	-	36	-
	Saudi Arabia	Riyal	-	-	11	-
WORLD-WIDE						
	Various	Various	-	-	141,645	-
TOTAL			<u>\$ 7,677</u>	<u>\$ 3,959</u>	<u>\$ 194,858</u>	<u>\$ 17,836</u>

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

FAIR VALUE MEASUREMENTS

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Not all investments held by the System are recorded at fair value. GASB Statement No. 72 allows for certain investments to be recorded at cost (or amortized cost or any other valuation method), and therefore, they are not presented in the fair value hierarchy table. Equity and Fixed Income securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Equity Swaps and Fixed Income securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique and other significant observable inputs. Equity and Fixed Income securities classified as Level 3 of the fair value hierarchy are valued using third party data and reports that are unobservable. Securities reported at Net Asset Value (NAV) are valued using the most recent third-party statement adjusted for cash flows as of September 30, 2024. Investments that are measured at fair value using the Net Asset Value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy on the following page.

In instances where inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

		Fair Value Measurement Using (in thousands)			
		Balance at September 30, 2024	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level:					
Total cash and cash equivalents		\$ 100	\$ 100	\$ -	\$ -
Equity					
Depository Receipts		4,736	4,736	-	-
Common Stocks		489,327	489,305	-	22
Preferred Stocks		262	262	-	-
Real Estate Investment Trusts		25,205	25,205	-	-
Swaps		10,563	-	10,563	-
Commingled Funds, ETF's and PTP's		133,852	133,879	(27)	-
Options		21,435	21,435	-	-
Convertible Bonds		1,080	-	1,080	-
Rights		1	1	-	-
Total Equity		686,461	674,823	11,616	22
Fixed Income					
Asset Backed		25,657	-	25,657	-
Corporate Bonds		36,719	-	36,312	407
Commercial mortgage-backed		40,696	-	40,470	226
Government Issues		102,137	96,039	6,098	-
Swaps		318	-	318	-
US Agency Issues		75,693	-	75,693	-
Commingled Funds, ETF's and PTP's		20,387	20,387	-	-
Options		62	-	62	-
Total Fixed Income		301,669	116,426	184,610	633
Total investments by fair value		\$ 988,230	\$ 791,349	\$ 196,226	\$ 655
Investments measured at the net asset value (NAV)					
Private Equity	\$	534,595			
Real Estate & Infrastructure		207,624			
Absolute Return		251,403			
Real Return & Opportunistic		238,307			
Other Limited Partnerships		167,754			
Total investments measured at the NAV		1,399,684			
Total investments measured at fair value	\$	2,387,914			

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

Additional disclosures for fair value measurements of investments in certain entities that calculate the Net Asset Value per Share (or its equivalent):

Private Equity Funds (in millions)

Total investments measured at the NAV	\$	534.6
Unfunded commitments		172.1

This type includes investments in approximately 300 partnerships that invest in leveraged buyouts, venture capital, mezzanine debt, distressed debt, secondary funds and other investments. These types of investments can never be redeemed with the funds, but distributions are received through the liquidation of the underlying assets of the fund. It's expected that the underlying assets of the fund are liquidated over a period of five to eight years. However, as of September 30, 2024, it is probable that all of the investments in this group will be sold at an amount different from the NAV per share (or its equivalent). Therefore, the fair values of the investments in this type have been determined using recent observable transaction information for similar investments and nonbinding bids received from potential buyers of the investments. As of September 30, 2024, a buyer for these investments has not been identified.

Real Estate and Infrastructure (in millions)

Total investments measured at the NAV	\$	207.6
Unfunded commitments		64.0

Real Estate and Infrastructure funds include approximately 117 accounts (limited partnerships, limited liability companies, etc.) that invest in real estate or infrastructure related assets. The fair value of the Real Estate and Infrastructure funds have been determined in accordance with generally accepted accounting principles using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. These types of investments cannot be redeemed with the funds. Distributions from these funds will be received as the underlying investments are sold and liquidated over time. It is expected that the underlying assets will be sold over the next 5 – 15 years. However, buyers have not been determined so the fair value has been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital.

Absolute Return Portfolio (in millions)

Total investments measured at the NAV	\$	251.4
Unfunded commitments		75.8

This type includes approximately 5 investments in hedge funds and hedge funds and approximately 61 investments in private credit strategies. These investments seek to diversify risk and reduce volatility. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Most of the investments are redeemable or have a final fund term that is 10 years or less.

Real Return and Opportunistic Portfolio (in millions)

Total investments measured at the NAV	\$	238.3
Unfunded commitments		74.8

This type includes approximately 40 funds that invest in private credit, tangible and intangible real assets, or other real return and opportunistic strategies. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital. These investments can never be redeemed with the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 5 to 10 years.

FINANCIAL SECTION

NOTES TO BASIC FINANCIAL STATEMENTS

All Other Investments (in millions)

Total investments measured at the NAV	\$	167.8
Unfunded commitments		12.9

The balance of plan assets reported at fair value include 19 investments:

- LPs that invest in fixed income investments such as: residential rehabilitation, middle market business loans and senior secured debt financing. These investments cannot be redeemed by limited partners. Distributions are received through the liquidation of the underlying assets of the fund.
- LPs that invest in fixed income type investments permitting partners to request redemption monthly or quarterly, after initial lock up period of 1 year or less, requiring 45 to 65 days' advance notice.
- LPs investing in global investments permitting partners to request partial redemptions quarterly or monthly, with advanced notice, subject to the sole discretion of the general partner.
- LPs that invest in private equity, private credit/loans, and tangible real assets that cannot be redeemed by limited partners. Distributions from each fund will be received as the underlying investments of the funds are liquidated.

NOTE 7 – COMMITMENTS AND CONTINGENCIES

Under the Administrative Procedures Act, members may appeal a decision made by the Retirement Board. Once the administrative procedure has been exhausted, the decision may be appealed in Michigan's court system. Various cases that have exhausted the administrative procedures have been appealed in the court system. These cases are in the normal course of business and the System does not anticipate any material loss as a result of the contingent liabilities.

FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability (in thousands)

	Fiscal Year				
	2024	2023	2022	2021	2020
Total Pension Liability					
Service cost	\$ 30,213	\$ 28,760	\$ 24,631	\$ 24,718	\$ 25,867
Interest	163,440	158,226	160,628	155,431	152,466
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	26,334	38,965	6,994	25,246	18,204
Changes of assumptions	-	25,724	175,311	26,560	-
Benefit payments, including refunds of member contributions	(173,911)	(161,333)	(155,795)	(155,429)	(149,418)
Net Change in Total Pension Liability	46,076	90,341	211,769	76,526	47,119
Total Pension Liability - Beginning	2,729,410	2,639,070	2,427,301	2,350,775	2,303,656
Total Pension Liability - Ending (a)	\$2,775,487	\$2,729,410	\$2,639,070	\$2,427,301	\$2,350,775
Plan Fiduciary Net Position					
Contributions - employer ¹	\$ 101,725	\$ 192,645	\$ 89,386	\$ 69,152	\$ 79,165
Contributions - member	4,637	4,637	4,383	3,850	4,100
Net investment income	282,546	138,811	(82,877)	401,735	75,047
Miscellaneous income	-	-	-	-	-
Benefit payments, including refunds of member contributions	(173,911)	(161,333)	(155,795)	(155,429)	(149,418)
Administrative expenses	(777)	(756)	(726)	(677)	(633)
Other ²	1	-	-	11,215	-
Net Change in Plan Fiduciary Net Position	214,220	174,004	(145,629)	329,846	8,262
Plan Fiduciary Net Position - Beginning	1,870,891	1,696,887	1,842,516	1,512,670	1,504,408
Plan Fiduciary Net Position - Ending (b)	\$2,085,112	\$1,870,891	\$1,696,887	\$1,842,516	\$1,512,670
Net Pension Liability - Ending (a) - (b)	\$ 690,375	\$ 858,519	\$ 942,182	\$ 584,785	\$ 838,104
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	75.13%	68.55%	64.30%	75.91%	64.35%
Covered Payroll	\$ 141,857	\$ 145,633	\$ 146,298	\$ 131,332	\$ 142,102
Net Pension Liability as a Percentage of Covered Payroll	486.67%	589.51%	644.02%	445.27%	589.79%

¹ Includes a one-time appropriation for fiscal year 2023 in the amount of \$100 million as a result of Public Act 166 of 2022.

² Includes an audit adjustment of \$11,214,503 for fiscal year 2021.

FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

	Fiscal Year (continued)				
	2019	2018	2017	2016	2015
Total Pension Liability					
Service cost	\$ 24,907	\$ 24,094	\$ 20,908	\$ 19,774	\$ 19,952
Interest	150,682	149,156	147,193	143,436	140,575
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	17,082	7,959	18,289	8,440	(6,998)
Changes of assumptions	58,026	106,681	94,280	-	-
Benefit payments, including refunds of member contributions	(144,193)	(137,367)	(130,208)	(119,094)	(115,469)
Net Change in Total Pension Liability	<u>106,504</u>	<u>150,523</u>	<u>150,462</u>	<u>52,556</u>	<u>38,060</u>
Total Pension Liability - Beginning	<u>2,197,152</u>	<u>2,046,629</u>	<u>1,896,167</u>	<u>1,843,611</u>	<u>1,805,551</u>
Total Pension Liability - Ending (a)	<u><u>\$ 2,303,656</u></u>	<u><u>\$ 2,197,152</u></u>	<u><u>\$ 2,046,629</u></u>	<u><u>\$ 1,896,167</u></u>	<u><u>\$ 1,843,611</u></u>
Plan Fiduciary Net Position					
Contributions - employer ¹	\$ 78,510	\$ 84,930	\$ 74,814	\$ 70,505	\$ 70,351
Contributions - member	3,693	3,489	3,142	3,009	2,677
Net investment income	74,725	151,529	165,384	90,811	26,236
Miscellaneous income	-	4	27	10	3
Benefit payments, including refunds of member contributions	(144,193)	(137,367)	(130,208)	(119,094)	(115,469)
Administrative expenses	(725)	(749)	(666)	(575)	(561)
Other ²	-	4	27	10	3
Net Change in Plan Fiduciary Net Position	<u>12,010</u>	<u>101,835</u>	<u>112,492</u>	<u>44,666</u>	<u>(16,762)</u>
Plan Fiduciary Net Position - Beginning	<u>1,492,399</u>	<u>1,390,564</u>	<u>1,278,071</u>	<u>1,233,405</u>	<u>1,250,168</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 1,504,408</u></u>	<u><u>\$ 1,492,399</u></u>	<u><u>\$ 1,390,564</u></u>	<u><u>\$ 1,278,071</u></u>	<u><u>\$ 1,233,405</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 799,248</u></u>	<u><u>\$ 704,753</u></u>	<u><u>\$ 656,066</u></u>	<u><u>\$ 618,096</u></u>	<u><u>\$ 610,206</u></u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	65.31%	67.92%	67.94%	67.40%	66.90%
Covered Payroll	\$ 139,660	\$ 134,177	\$ 125,085	\$ 118,060	\$ 114,278
Net Pension Liability as a Percentage of Covered Payroll	572.28%	525.24%	524.50%	523.55%	533.97%

FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net OPEB Liability (in thousands)

	Fiscal Year			
	2024	2023	2022	2021
Total OPEB Liability				
Service cost	\$ 9,374	\$ 9,768	\$ 9,421	\$ 10,031
Interest	45,874	49,130	50,932	53,337
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	(16,087)	(94,151)	(44,409)	(59,439)
Changes of assumptions	12,989	20,091	65,832	(5,789)
Benefit payments, including refunds of member contributions	(38,071)	(35,376)	(32,673)	(32,704)
Net Change in Total OPEB Liability	<u>14,079</u>	<u>(50,538)</u>	<u>49,102</u>	<u>(34,564)</u>
Total OPEB Liability - Beginning	<u>748,340</u>	<u>798,878</u>	<u>749,776</u>	<u>784,340</u>
Total OPEB Liability - Ending (a)	<u><u>\$ 762,419</u></u>	<u><u>\$ 748,340</u></u>	<u><u>\$ 798,878</u></u>	<u><u>\$ 749,776</u></u>
Plan Fiduciary Net Position				
Contributions - employer	\$ 45,615	\$ 45,978	\$ 50,743	\$ 48,792
Contributions - member	-	-	-	-
Net investment income	63,504	30,133	(18,070)	73,989
Miscellaneous income	-	-	-	-
Benefit payments, including refunds of member contributions	(38,071)	(35,376)	(32,673)	(32,704)
Administrative expenses	(197)	(185)	(168)	(135)
Other	133	733	82	7,839
Net Change in Plan Fiduciary Net Position	<u>70,984</u>	<u>41,283</u>	<u>(87)</u>	<u>97,782</u>
Plan Fiduciary Net Position - Beginning¹	<u>414,097</u>	<u>372,814</u>	<u>372,901</u>	<u>275,119</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 485,081</u></u>	<u><u>\$ 414,097</u></u>	<u><u>\$ 372,814</u></u>	<u><u>\$ 372,901</u></u>
Net OPEB Liability - Ending (a) - (b)	<u><u>\$ 277,338</u></u>	<u><u>\$ 334,243</u></u>	<u><u>\$ 426,064</u></u>	<u><u>\$ 376,875</u></u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	63.62%	55.34%	46.67%	49.73%
Covered Payroll	\$ 141,857	\$ 145,633	\$ 146,298	\$ 131,332
Net OPEB Liability as a Percentage of Covered Payroll	195.51%	299.51%	291.23%	286.96%

¹ Includes an \$8.4 million restatement of beginning net position for the OPEB plan in fiscal year 2021 to account for additional contributions due to the System from employer.

² This schedule is required to show information for ten years; additional years will be displayed as they become available.

FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

	Fiscal Year (continued)			
	2020	2019	2018	2017
Total OPEB Liability				
Service cost	\$ 10,064	\$ 8,706	\$ 9,173	\$ 9,855
Interest	54,744	53,114	57,650	55,607
Changes of benefit terms	-	-	25	-
Differences between expected and actual experience	(103,332)	(67,257)	(71,325)	(4,142)
Changes of assumptions	48,652	68,549	26,627	-
Benefit payments, including refunds of member contributions	(28,308)	(30,028)	(33,583)	(33,904)
Net Change in Total OPEB Liability	(18,180)	33,084	(11,432)	27,416
Total OPEB Liability - Beginning	802,520	769,435	780,868	753,452
Total OPEB Liability - Ending (a)	\$ 784,340	\$ 802,520	\$ 769,435	\$ 780,868
Plan Fiduciary Net Position				
Contributions - employer	\$ 58,303	\$ 60,395	\$ 56,779	\$ 51,886
Contributions - member	-	-	-	-
Net investment income	12,677	10,782	17,222	16,063
Miscellaneous income	-	-	-	-
Benefit payments, including refunds of member contributions	(28,308)	(30,028)	(33,583)	(33,904)
Administrative expenses	(116)	(80)	(87)	(100)
Other	445	39	10	15
Net Change in Plan Fiduciary Net Position	43,001	41,108	40,340	33,961
Plan Fiduciary Net Position - Beginning¹	232,118	191,010	150,670	116,709
Plan Fiduciary Net Position - Ending (b)	\$ 275,119	\$ 232,118	\$ 191,010	\$ 150,670
Net OPEB Liability - Ending (a) - (b)	\$ 509,220	\$ 570,401	\$ 578,424	\$ 630,197
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	35.08%	28.92%	24.82%	19.30%
Covered Payroll	\$ 142,102	\$ 139,660	\$ 134,177	\$ 125,085
Net OPEB Liability as a Percentage of Covered Payroll	358.35%	408.42%	431.09%	503.81%

FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

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FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF CONTRIBUTIONS

PENSION BENEFITS

(in thousands)

Fiscal Year Ended Sept. 30	Actuarially Determined Contribution (ADC)	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2015 ²	\$ 63,271	\$ 70,351	\$ (7,080)	\$ 114,278	61.6 %
2016	70,858	70,505	353	118,060	59.7
2017	72,632	74,814	(2,182)	125,085	59.8
2018	78,531	84,930	(6,399)	134,177	63.3
2019	77,400	78,510	(1,110)	139,660	56.2
2020	78,929	79,165	(235)	142,102	55.7
2021	81,078	69,152	11,926	131,332	52.7
2022	88,349	89,386	(1,037)	146,298	61.1
2023 ¹	94,276	192,645	(98,370)	145,633	132.3
2024	103,121	101,725	1,396	141,857	71.7

¹ Includes a one-time appropriation for fiscal year 2023 in the amount of \$100 million as a result of Public Act 166 of 2022.

² Revised actuarial assumptions.

OTHER POSTEMPLOYMENT BENEFITS

(in thousands)

Fiscal Year Ended Sept. 30	Actuarially Determined Contribution (ADC)	Actual Employer Contribution ²	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2015 ¹	\$ 47,674	\$ 47,722	\$ (48)	\$ 114,278	41.8 %
2016	50,857	47,348	3,509	118,060	40.1
2017	52,301	51,886	415	125,085	41.5
2018	58,368	56,779	1,589	134,177	42.3
2019	59,785	60,395	(610)	139,660	43.2
2020	53,928	58,303	(4,375)	142,102	41.0
2021	54,198	48,792	5,405	131,332	37.2
2022	52,130	50,743	1,387	146,298	34.7
2023	46,925	45,978	947	145,633	31.7
2024	45,004	45,615	(611)	141,857	32.2

¹ Revised actuarial assumptions.

² Years 2015 through 2017 include Other Governmental Contributions.

FINANCIAL SECTION

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF INVESTMENT RETURNS

PENSION BENEFITS

Fiscal Year	Annual Return¹	
2015	1.92	%
2016	7.00	
2017	13.22	
2018	11.08	
2019	5.11	
2020	5.28	
2021	27.25	
2022	(4.26)	
2023	8.24	
2024	15.47	

¹ Annual money-weighted rate of return, net of investment expenses.

OTHER POSTEMPLOYMENT BENEFITS

Fiscal Year²	Annual Return¹	
2017	13.26	%
2018	10.83	
2019	6.01	
2020	5.19	
2021	26.10	
2022	(2.86)	
2023	11.48	
2024	15.10	

¹ Annual money-weighted rate of return, net of investment expenses.

² This schedule is required to show information for ten years; additional years will be displayed as they become available.

FINANCIAL SECTION

NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

NOTE A – DESCRIPTION

Ten-year historical trend information designed to provide information about the System's progress made in accumulating sufficient assets to pay benefits when due is presented in the preceding schedules. Other ten-year historical trend information related to the System is presented in the Statistical and Actuarial Sections of the report. This information is presented to enable the reader to assess the progress made by the System in accumulating sufficient assets to pay pension and other postemployment benefits as they become due.

The comparability of trend information is affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, accounting policies, and other changes. Those changes usually affect trends in contribution requirements and in ratios that use the pension and other postemployment benefit obligations as a factor.

The Schedules of Contributions are presented to show the responsibility of the Employer in meeting the actuarial requirements to maintain the System on a sound financial basis.

The Schedules of Changes in Net Pension Liability and OPEB Liability, Schedules of Contributions, and Schedules of Investment Returns are schedules that are required in implementing GASB Statement No. 67 for pension and No. 74 for OPEB. These schedules are required to show information for ten years; additional years will be displayed as they become available. The Schedules of Changes in the Net Pension and Net OPEB Liabilities represent, in actuarial terms, the accrued liability less the fair value of assets. The Schedules of Contributions is a comparison of the employer's contributions to the actuarially determined contributions. The Schedule of Investment Returns represents a money-weighted rate of return that expresses investment performance, net of pension and OPEB plan investment expense, adjusted for the changing amounts actually invested.

The actuarially determined contributions presented in the Schedule of Contributions for pension and OPEB are calculated as of September 30, three years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the fiscal year 2024 contributions reported in that schedule.

FINANCIAL SECTION

NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

Methods and Assumptions Used to Determine Contributions for Fiscal Year 2024:

Pension and OPEB

Valuation Date	September 30, 2021
Actuarial Cost Method	Entry Age, Normal
Amortization Method	Level percent of payroll, closed period
Remaining Amortization Period	15 Years as of October 1, 2023, ending September 30, 2038
Price Inflation	2.25%
Projected Salary Increases	3.27% - 87.75%, including wage inflation at 2.75%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility conditions.

Mortality

Retirees	RP-2014 Male and Female Healthy Annuitant Mortality Tables scaled by 93% for males and 99% for females and adjusted for mortality improvements using projection scale MP-2017 from 2006.
Active	RP-2014 Male and Female Employee Mortality Tables scaled by 100% for males and 100% for females and adjusted for mortality improvements using projection scale MP-2017 from 2006.
Disabled Retirees	RP-2014 Male and Female Disabled Annuitant Mortality Tables scaled by 100% for males and 100% for females and adjusted for mortality improvements using projection scale MP-2017 from 2006.

Pension

Asset Valuation Method	5 year smoothed fair value
Investment Rate of Return	
- Non-Hybrid Plan	6.15%, net of investment expenses
- Hybrid Plan	6.15%, net of investment expenses

OPEB

Asset Valuation Method	5 year smoothed fair value
Investment Rate of Return	6.25%, net of investment expenses
Healthcare Cost Trend Rates	
Medical and Prescription	
Pre-65	7.50% Year 1 Graded to 3.50% Year 15; 3.00% Year 120
Post-65	6.25% Year 1 Graded to 3.50% Year 15; 3.00% Year 120
Dental/Vision	3.50% all years; 3.00% Year 120

Aging Factors	Based on the 2013 SOA "Health Care Costs – From Birth to Death".
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Notes	Some of the assumptions used to develop the 2024 Total Pension Liability (TPL) and the 2024 Total OPEB Liability (TOL) may be different than the assumptions shown above. The assumptions used to develop the TPL are described in Note 4 (page 30) of this report and the assumptions used to develop the TOL are described in Note 5 (page 33) of this report.
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FINANCIAL SECTION

SUPPORTING SCHEDULES

SUMMARY SCHEDULE OF PENSION PLAN ADMINISTRATIVE AND OTHER EXPENSES

For Fiscal Year Ended September 30, 2024

(in thousands)

Personnel Services:

Staff Salaries	\$ 213
Staff Retirement and Social Security	113
Staff Other Fringe Benefits	43
Total	370

Professional Services:

Accounting	23
Actuarial	92
Attorney General	30
Audit	78
Medical	8
Total	231

Building and Equipment:

Building Rentals	11
Total	11

Miscellaneous:

Postage, Telephone, and Other	17
Printing	1
Technological Support	148
Total	166

Total Administrative and Other Expenses	\$ 777
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FINANCIAL SECTION

SUPPORTING SCHEDULES

SUMMARY SCHEDULE OF OPEB PLAN ADMINISTRATIVE AND OTHER EXPENSES

For Fiscal Year Ended September 30, 2024

(in thousands)

Personnel Services:

Staff Salaries	\$ 62
Staff Retirement and Social Security	33
Other Staff Fringe Benefits	13
Total	108

Professional Services:

Accounting	5
Actuarial	20
Attorney General	7
Audit	17
Medical	2
Total	51

Building and Equipment:

Building Rentals	2
Total	2

Miscellaneous:

Postage, Telephone, and Other	3
Technological Support	33
Health Fees	557
Vision Fees	4
Dental Fees	92
Total	689

Total Administrative and Other Expenses	\$ 850
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FINANCIAL SECTION

SUPPORTING SCHEDULES

SCHEDULE OF INVESTMENT EXPENSES

For Fiscal Year Ended September 30, 2024
(in thousands)

Securities Lending Expenses	\$	4,146
Other Investment Expenses ¹		
ORS-Investment Expenses ²		390
Custody Fees		55
Management Fees		9,430
Research Fees		<u>302</u>
Total Investment Expenses	\$	<u>14,322</u>

¹ Refer to the Investment Section for fees paid to investment professionals.

² Does not exclude Treasury Civil Service fees recorded as a pass through in the Schedule of Investment Fee - State Treasurer. As of September 30, 2024, fees totaled \$6,727.

SCHEDULE OF PAYMENTS FOR PROFESSIONAL SERVICES

For Fiscal Year Ended September 30, 2024
(in thousands)

Accounting	\$	28
Actuary		113
Attorney General		36
Independent Auditors		95
Medical		<u>9</u>
Total Payments	\$	<u>282</u>

FINANCIAL SECTION

SUPPORTING SCHEDULES

DETAIL OF CHANGES IN PLAN FIDUCIARY NET POSITION

(Pension and Other Postemployment Benefits)

For the Fiscal Year Ended September 30, 2024
(in thousands)

	Employee Contributions	Employee Contributions Pension Plus	Employer Contributions	Employer Contributions Pension Plus
Additions:				
Contributions:				
Member contributions	\$ 619	\$ 4,018	\$ -	\$ -
Employer contributions	-	-	88,327	13,342
Other governmental contributions	-	-	-	-
Total contributions	619	4,018	88,327	13,342
Investment income (loss):				
Net increase (decrease) in fair value of investments	-	-	-	-
Interest, dividends, and other	-	-	-	-
Investment expenses:				
Other investment expenses	-	-	-	-
Securities lending activities:				
Securities lending income	-	-	-	-
Securities lending expenses	-	-	-	-
Net investment income (loss)	-	-	-	-
Non-operating revenue	-	-	-	-
Miscellaneous income	-	-	-	-
Total additions	619	4,018	88,327	13,342
Deductions:				
Benefits paid to plan members and beneficiaries:				
Retirement benefits	-	-	-	-
Health benefits	-	-	-	-
Dental/vision benefits	-	-	-	-
Refund of contributions	22	79	-	-
Administrative and other expenses	-	-	-	-
Total deductions	22	79	-	-
Net Increase (Decrease) before other changes	597	3,939	88,327	13,342
Other Changes in Net Position:				
Interest allocation	260	782	-	2,628
Transfers upon retirement	(1,612)	-	-	-
Transfers of employer shares	-	-	(116,094)	(61)
Transfers of employee shares	-	-	-	-
Transfers of investment income	-	-	-	-
Total other changes in net position	(1,352)	782	(116,094)	2,567
Net Increase (Decrease) in Net Position	(755)	4,722	(27,767)	15,910
Net Position Restricted for Pension Benefits and OPEB:				
Beginning of Year - restated	12,332	22,499	(198,334)	55,215
End of Year	\$ 11,577	\$ 27,220	\$ (226,101)	\$ 71,125

FINANCIAL SECTION

SUPPORTING SCHEDULES

	Retired Benefit Payments	Retired Benefit Payments Pension Plus	Undistributed Investment Income	OPEB	Total
Additions:					
Contributions:					
Member contributions	\$ -	\$ -	\$ -	\$ -	\$ 4,637
Employer contributions	55	-	-	45,615	147,340
Other governmental contributions	-	-	-	8,487	8,487
Total contributions	55	-	-	54,102	160,464
Investment income (loss):					
Net increase (decrease) in fair value of investments	-	-	248,966	55,656	304,622
Interest, dividends, and other	-	-	41,701	9,679	51,380
Investment expenses:					
Other investment expenses	-	-	(8,304)	(1,871)	(10,176)
Securities lending activities:					
Securities lending income	-	-	3,557	812	4,370
Securities lending expenses	-	-	(3,374)	(771)	(4,146)
Net investment income (loss)	-	-	282,546	63,504	346,050
Nonoperating revenue	-	-	-	-	-
Miscellaneous income	1	-	-	133	134
Total additions	56	-	282,546	117,739	506,648
Deductions:					
Benefits paid to plan members and beneficiaries:					
Retirement benefits	173,745	65	-	-	173,810
Health benefits	-	-	-	42,879	42,879
Dental/vision benefits	-	-	-	3,026	3,026
Refund of contributions	-	-	-	-	101
Administrative and other expenses	-	-	777	850	1,627
Total deductions	173,745	65	777	46,755	221,444
Net Increase (Decrease) before other changes	(173,689)	(65)	281,769	70,984	285,204
Other Changes in Net Position:					
Interest allocation	103,912	29	(107,613)	-	-
Transfers upon retirement	1,612	-	-	-	-
Transfers of employer shares	116,094	61	-	-	-
Transfers of employee shares	-	-	-	-	-
Transfers of investment income	-	-	-	-	-
Total other changes in net position	221,619	90	(107,613)	-	-
Net Increase (Decrease) in Net Position	47,930	25	174,156	70,984	285,204
Net Position Restricted for Pension Benefits and OPEB:					
Beginning of Year - Restated	1,832,670	615	145,895	414,097	2,284,988
End of Year	\$ 1,880,600	\$ 639	\$ 320,051	\$ 485,081	\$ 2,570,193

FINANCIAL SECTION

SUPPORTING SCHEDULES

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INVESTMENT SECTION

**Prepared by Michigan Department of Treasury, Bureau of Investments
Jon M. Braeutigam, Chief Investment Officer**

Report on Investment Activity
Rate of Return on Investments
Largest Assets Held
Schedule of Investment Fees
Schedule of Investment Commissions
Investment Summary

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

INTRODUCTION

The State of Michigan Investment Board (Board) was created by Executive Order 2018-10 (Order) and serves as the investment fiduciary over the assets of the Michigan State Police Retirement System (System). The Board is responsible for investing the System's assets in accordance with the duties and powers enumerated in the Order and State law. Pursuant to powers provided in the Order, the Board duly authorized and delegated duties to the Department of Treasury's Bureau of Investments (BOI) to invest, prudently manage, and oversee the assets of the System and to take certain other actions that support the BOI's mandate in this regard. In furtherance of these duties, the BOI delivers quarterly investment activity reports to the Board that detail the investments, goals, and objectives of the System.

The Board is comprised of five members: three (3) public members appointed by the Governor and two (2) ex-officio members. The public members serve four (4) year terms and are limited to two (2) such terms. The State Treasurer, as the chair of the Board, and the State Budget Director are the ex-officio members. As of September 30, 2024, members of the Board were as follows: Rachael Eubanks (chair, ex-officio member), Jennifer Flood (ex-officio member), Reginald G. Sanders, CFA, CAIA (public member), Dina L. Richard, CPA (public member), and Denise Ilitch (public member). The public members serve without pay but may receive reasonable reimbursement for actual and necessary travel and other expenses to attend official Board meetings.

INVESTMENT POLICY & GOALS

The Board's Investment Policy Statement states that it and the BOI will operate in accordance with Public Employee Retirement System Investment Act (Act No. 314 of 1965) and within standard investment practices of the prudent person. This includes being authorized to invest in government obligations, corporate obligations, various short-term obligations, corporate (domestic and international) stocks, private equity interests, mutual funds, real estate interests, and other investments subject to specific parameters. Above all, System's assets are to be invested in a fiduciary capacity for the sole and exclusive benefit of the members of the System.

The System's Proxy Voting Policy sets forth directives on various issues as the holder of publicly traded securities, including but not limited to: boards of directors, corporate governance, social issues, and various corporate actions. All proxies are reviewed and voted by the System's proxy voting agency in accordance with the System's policy.

The primary function of the System is to provide retirement, survivor and disability benefits along with health and other postemployment benefits to its members. The Board is investment fiduciary and custodian of the System's investments pursuant to the Order and other State law. The goals of the System are:

- Maintain sufficient liquidity to pay benefits
- Meet or exceed the actuarial assumption over the long term
- Perform in the top half of the public plan universe over the long term
- Diversify assets to reduce risk
- Exceed individual asset class benchmarks over the long term

The strategy for achieving these goals is supported by investing the assets of the System according to a five-year asset allocation model. The System currently invests in eight different asset classes, which provides for a well-diversified portfolio.

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

ASSET ALLOCATION

(Excludes Collateral on Loaned Securities)

Investment Category	As of 9/30/24	Five-Year
	Actual	Target
Domestic Equity Pools	21.4 %	25.0 %
International Equity Pools	14.3	15.0
Private Equity Pools	21.2	16.0
Real Estate and Infrastructure Pools	8.9	10.0
Fixed Income Pools	10.2	13.0
Absolute Return Pools	10.0	9.0
Real Return and Opportunistic Pools	9.4	10.0
Short-Term Investment Pools	4.6	2.0
TOTAL	100.0 %	100.0 %

INVESTMENT AUTHORITY

Pursuant to State law (Executive Order 2018-10, which in part transferred to the Board the powers enumerated in (i) Section 91 of Act No. 380 of the Public Acts of 1965, as amended, and (ii) Section 12c of Act No. 314 of 1965), the Board is the investment fiduciary for the systems, which is comprised of the State sponsored defined benefit retirement systems: Michigan Public School Employees' Retirement System, State Employees' Retirement System, Michigan State Police Retirement System, Michigan Judges' Retirement System, and the Michigan Military Retirement Provisions. The State Treasurer, State of Michigan, is custodian and ex officio treasurer of the retirement system for the Legislators, State of Michigan (Section 47 of Act No. 261 of the Public Acts of 1957, as amended).

Act No. 314 of the Public Acts of 1965, as amended, authorizes the investment of assets of public employee retirement systems or plans created and established by the State or any political subdivision.

INVESTMENT RESULTS

TOTAL PORTFOLIO RESULTS

For the fiscal year ended September 30, 2024, the total System's rate of return was 15.5% for the Pension Plan and 15.5% for the OPEB Plan as compiled by State Street Investment Analytics. Annualized rates of return for the Pension Plan for the three, five, and ten year periods ending September 30, 2024 were: 6.0%, 9.7%, and 8.7% respectively.

Investment return calculations are prepared using a Time-Weighted rate of return.

DOMESTIC EQUITY POOLS

The objective for investments made in domestic equities is to meet or exceed the total return of the S&P Composite 1500 index for one, three, and five-year periods and a market cycle.

For active management strategies, the objective is to earn returns that exceed the most relevant S&P Index, adjusting for market capitalization and style, for one, three, and five-year periods and a market cycle. Another objective is to rank above median in a universe of managers possessing a similar market cap and style characteristics.

The pools are invested primarily in equities or equity-related securities of U.S. companies through internal and externally managed strategies. The goal is to build a portfolio of strategies that will provide excess returns relative to the S&P Composite 1500 index while providing a prudent measure of tracking error to the index. At times a portion of these pools may be invested in exchange traded funds (ETFs) and fixed-income short-term securities with maturities of less than one year.

The pools invest in equities and equity related securities that are listed on U.S. national securities exchanges, including American Depositary Receipts (ADRs). They may also invest in stocks that are traded over-the-counter. The pools diversify their investments by allocating their equity strategies with consideration of the capitalization weightings of the S&P Composite 1500 Index.

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

The following summarizes the weightings of the pools as of September 30, 2024:

Active	34.8 %
Passive	65.2
Total	<u>100.0 %</u>

Large-Cap	78.0 %
Multi-Cap	17.6
Mid-Cap	3.5
Small-Cap	0.9
Total	<u>100.0 %</u>

The System's Domestic Equity Pools' total rate of return was 40.4% for the Pension plan and 40.5% for the OPEB plan for fiscal year 2024. This compared with 35.5% for the S&P Composite 1500 Index.

At the close of fiscal year 2024, the Domestic Equity Pools represented 21.4% of total investments. The following summarizes the System's 2.3% ownership share of the Domestic Equity Pools at September 30, 2024:

Domestic Equity Pools (in thousands)

Short-Term Pooled Investments	\$ 24,176
Equities	518,842
Settlement Principal Payable	(238)
Settlement Proceeds Receivable	365
Accrued Dividends	402
Total	<u>\$ 543,547</u>

INTERNATIONAL EQUITY POOLS

The objective for investments made in International Equity Pools is to meet or exceed the total return of the MSCI ACWI ex USA Index for one, three, and five-year periods and a market cycle.

For active management strategies, the objective is to earn returns that exceed the most relevant MSCI Index, adjusting for market capitalization, style and geography for one, three, and five-year periods and a market cycle. Another objective is to rank above median in a universe of managers possessing a similar market capitalization, style and geography characteristics.

Active exposure is invested primarily in equities or equity-related securities of non-U.S. companies through externally managed strategies.

The pools diversify their investments by allocating their equity strategies with consideration of the economic development status weightings of the MSCI ACWI ex USA Index.

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

The following summarizes the weightings of the pools as of September 30, 2024:

Active	65.6 %
Passive	34.4
Total	<u>100.0 %</u>

Developed	98.0 %
Emerging	2.0
Total	<u>100.0 %</u>

The System's International Equity Pools' total rate of return was 26.3% for the Pension and OPEB Plans for fiscal year 2024. This compared with 25.4% for the MSCI ACWI ex USA Index.

At the close of fiscal year 2024, the International Equity Pools represented 14.3% of total investments. The following summarizes the System's 2.3% ownership share of the International Equity Pools at September 30, 2024:

International Equity Pools (in thousands)

Short-Term Pooled Investments	\$ 10,710
Equities	307,227
Fixed Income Securities	36,635
Fair Value of Equity Contracts	8,467
Accrued Dividends and Interest	237
Total	<u>\$ 363,276</u>

PRIVATE EQUITY POOLS

The Private Equity Pools' objective is to meet or exceed the benchmark for all private equity investments over long time periods. The benchmark is the S&P 500 Index plus 300 basis points net of fees, lagged by three months over three, five, seven and ten-year periods and a market cycle.

Private Equity Investments are investments in the private equity market, primarily through limited partnerships. The following summarizes the weightings of the pools as of September 30, 2024:

Buyout Funds	44.6 %
Fund of Funds	31.8
Venture Capital Funds	12.1
Special Situation Funds	5.6
Liquidation Portfolio	5.9
Total	<u>100.0 %</u>

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

The Private Equity Pools had a return of 4.4% for the Pension and OPEB Plans for the fiscal year ended September 30, 2024, versus the benchmark of 28.2%. At the close of fiscal year 2024, the Private Equity Pools represented 21.2% of total investments. The following summarizes the System's 2.3% ownership share of the Private Equity Pools at September 30, 2024:

Private Equity Pools	
(in thousands)	
Short-Term Pooled Investments	\$ 633
Equites	537,721
Accrued Interest	3
Settlement Proceeds Receivable	1
Total	\$ 538,358

REAL ESTATE AND INFRASTRUCTURE POOLS

The objective of the Real Estate and Infrastructure Pools is to provide diversification and favorable risk adjusted returns primarily through income and appreciation of investments. Investments are typically held through investment entities, such as limited partnerships or limited liability companies, established for the specific purpose of owning, leasing, managing, financing, or developing real estate and infrastructure related investments.

The Real Estate and Infrastructure Pools diversify its holdings by:

- **Geography** – The pools are invested globally and are diversified geographically so that it is not concentrated in a limited number of markets or geographic areas.
- **Size and Value** – The pools diversify its holdings by size so that it is not concentrated in a limited number of large investments.
- **Investment Type** – The pools are diversified by investment type as summarized below.

Multi-family apartments	32.6 %
Commercial office buildings	7.1
Hotel	9.1
Infrastructure	9.6
Industrial warehouse buildings	26.2
Single family	4.3
Retail shopping centers	3
Land	1
REIT's	6.2
Short-term investments	0.9
Total	100.0 %

The Real Estate and Infrastructure Pools generated a return of 1.4% for the Pension and OPEB Plans for fiscal year 2024. The Real Estate and Infrastructure Pools compare performance with two benchmark returns from the National Council of Real Estate Investment Fiduciaries (NCREIF): the NCREIF Property Index (less 130 basis points) was (4.7)% and the NCREIF Fund Index - Open-End Diversified Core Equity (NFI-ODCE) was (8.0)%.

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

At the close of fiscal year 2024, the Real Estate and Infrastructure Pools represented 8.9% of total investments. The following summarizes the System's 2.3% ownership share of the Real Estate and Infrastructure Pools at September 30, 2024:

Real Estate and Infrastructure Pools (in thousands)

Real Estate Equities	\$ 202,758
Infrastructure Equities	22,586
Total	\$ 225,344

FIXED INCOME POOLS

The objective for investments made in the Fixed Income Pools is to meet or exceed the Bloomberg U.S. Aggregate Bond Index over one, three, and five-year periods and market cycles. Another objective is to rank above median in a nationally recognized universe of managers possessing a similar duration and credit exposure. For Fixed Income sub-strategies, the objective return is to meet or exceed the most relevant Bloomberg benchmark index.

The pools invest in fixed income and related securities in a diversified portfolio of investment grade corporate issues, mortgage-backed and asset-backed securities, U.S. Treasuries, Agencies, government sponsored enterprises and government guaranteed mortgages. The pools diversify its investments by allocating its strategies with consideration of credit risk. The goal is to build a portfolio of strategies that will provide excess returns relative to the blended benchmark while providing minimal tracking error to the index. At times a portion of the pools may be invested in exchange traded funds (ETFs) and fixed-income short-term securities with maturities of less than one year.

The System's Fixed Income Pools' total rate of return was 13.2% for the Pension and OPEB Plans for fiscal year 2024. This compared with 11.6% for the Bloomberg U.S. Aggregate Bond Index.

At the close of fiscal year 2024, the Fixed Income Pools represented 10.2% of total investments. The following summarizes the System's 2.3% ownership share of the Fixed Income Pools at September 30, 2024:

Fixed Income Pools (in thousands)

Short-Term Pooled Investments	\$ 1,593
Fixed Income Securities	257,846
Accrued Interest	751
Total	\$ 260,190

ABSOLUTE RETURN POOL

The primary investment objective of the Absolute Return Pool is to generate a rate of return that meets or exceeds T-bills by 400 basis points net of fees over a market cycle. Another objective is to exceed the appropriate HFRI Fund of Funds Conservative Index median net of fees over one, three, and five-year periods and a market cycle.

The Absolute Return Pool's rate of return for the fiscal year was 11.6% for the Pension and OPEB Plans versus the benchmark's 6.5%. At the close of fiscal year 2024, the Absolute Return Pool represented 10.0% of total investments. The following summarizes the System's 2.3% ownership share of the Absolute Return Pool at September 30, 2024:

Absolute Return Pools (in thousands)

Equities	\$ 253,156
Total	\$ 253,156

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

REAL RETURN AND OPPORTUNISTIC POOLS

The primary investment objective of the Real Return and Opportunistic Pool is to generate a rate of return that meets or exceeds the increase in the Consumer Price Index (CPI) by at least four percent (4%) annually net of fees over one, three, and five-year periods and a market cycle. Opportunistic investments are targeted to earn a return that exceeds the current actuarial assumed rate of return, with the overall Real Return and Opportunistic Pools' benchmark an equal blend between the two benchmarks. If a peer universe is available, the objective is to rank above median in a nationally recognized universe of managers possessing a similar style.

The Real Return and Opportunistic Pools' rate for the fiscal year was 8.2% for the Pension and OPEB Plans versus the benchmark's 6.8%.

At the close of fiscal year 2024, the Real Return and Opportunistic Pools represented 9.4% of total investments. The following summarizes the System's 2.3% ownership share of the Real Return and Opportunistic Pools at September 30, 2024.

Real Return and Opportunistic Pools (in thousands)

Equities	\$ 239,439
Total	\$ 239,439

SHORT-TERM INVESTMENT POOLS

The objective of the Short-Term Investment Pools is to closely match the return performance of its benchmark, the 30 day Treasury bill. The System's Short-Term Investment Pools' rate of return for the fiscal year was 5.7% for the Pension Plan and 5.9% for the OPEB Plan versus the benchmark's 5.6%.

Potential areas of investment are:

- Obligations of the United States or its agencies
- Banker's acceptances, commercial accounts, certificates of deposit or depository receipts
- Repurchase agreements for the purchase of securities issued by the US government or its agencies
- Commercial paper rated at the time of purchase within the two highest classifications established by not less than two national rating services as determined by the State Treasurer
- Short duration investment grade corporate issues

At the close of fiscal year 2024, the Short-Term Investment Pools represented 4.6% of total investments. The following summarizes the System's ownership share of the Short-Term Investment Pools at September 30, 2024:

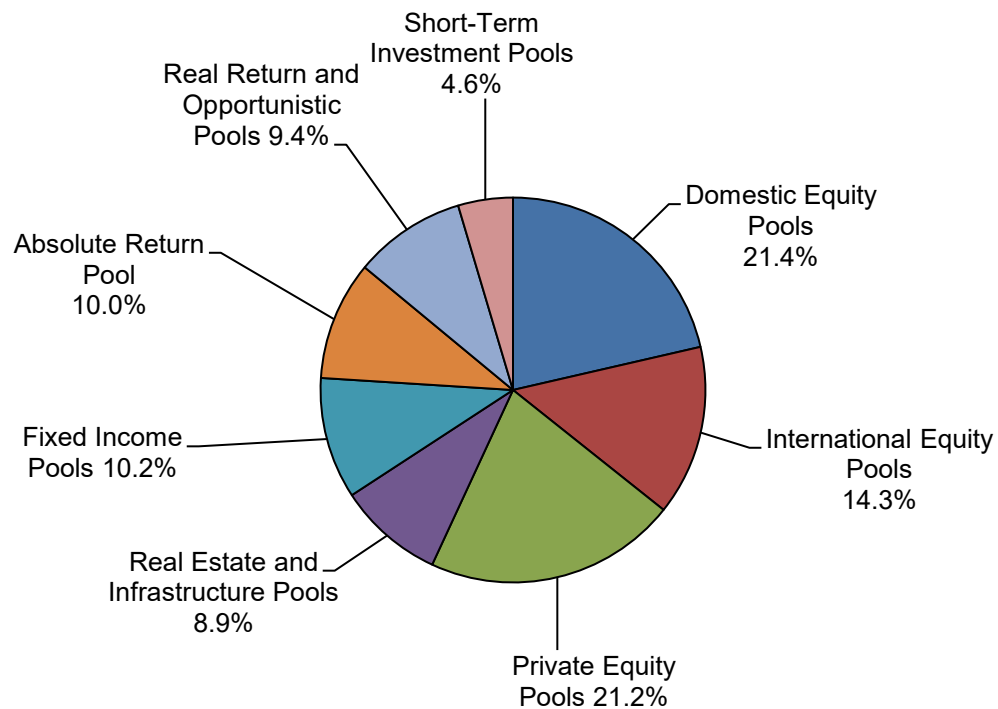
Short-Term Investment Pools (in thousands)

Short-Term Pooled Investments	\$ 98,944
Fixed Income Securities	18,287
Accrued Interest	461
Total	\$ 117,692

INVESTMENT SECTION

REPORT ON INVESTMENT ACTIVITY

Asset Allocation – Security Type Only



INVESTMENT SECTION

RATE OF RETURN ON INVESTMENTS

PENSION PLAN INVESTMENT RESULTS

For the Period Ending September 30, 2024

Investment Category	Current Year	Annualized Rate of Return ¹		
		3 Years	5 Years	10 Years
Total Portfolio	15.5 %	6.0 %	9.7 %	8.7 %
Domestic Equity Pools	40.4	10.7	14.8	12.7
S&P Composite 1500 Index	35.5	11.5	15.6	13.1
International Equity Pools	26.3	3.5	8.1	6.0
International Blended Benchmark ²	25.4	4.1	7.6	5.2
Private Equity Pools	4.4	3.9	12.8	12.0
Private Equity Benchmark ³	28.2	13.3	18.5	16.2
Real Estate and Infrastructure Pools	1.4	8.8	6.2	7.7
NCREIF Property Blended Index ⁴	(4.7)	(0.4)	1.9	4.5
Fixed Income Pools	13.2	0.6	1.8	3.2
Bloomberg US Aggregate Bond Index	11.6	(1.4)	0.3	1.8
Absolute Return Pools	11.6	7.7	8.2	5.9
HFRI Fund of Funds Conservative Aggregate Index	6.5	3.7	5.0	3.6
Real Return and Opportunistic Pools	8.2	7.9	10.6	9.9
Real Return and Opportunistic Benchmark ⁵	6.8	8.0	7.7	7.4
Short-Term Investment Pools	5.7	3.9	2.7	1.9
30 Day Treasury Bill	5.6	3.6	2.3	1.6

¹ Calculations used a time-weighted rate of return based on the market rate of return in accordance with industry standards. Excludes income and investment gains and losses from securities lending.

² As of 7/1/14, index is MSCI ACWI ex USA Net. History 10/1/10 to 6/30/14 is MSCI ACWI ex USA Gross. History 1/1/10 to 9/30/10 is S&P Developed BMI-EPAC Net 75/25. History prior to 1/1/10 is S&P Developed BMI-EPAC Net 50/50.

³ Index is blend of S&P 500 plus 300 bps with a 3 month lag.

⁴ As of 10/1/05, index is NCREIF less 130 bp. History prior to 10/1/05 reflects NCREIF less 75 bp.

⁵ As of 12/1/18 Real Return Benchmark is CPI + 400 bps net. Opportunistic is current Actuarial Rate of Return. History prior to 12/1/18 reflects 50% (CPI +5%) and 50% (actuarial rate 8%).

INVESTMENT SECTION

RATE OF RETURN ON INVESTMENTS

OPEB INVESTMENT RESULTS

For the Period Ending September 30, 2024

Investment Category	Current Year	Annualized Rate of Return ¹		
		3 Years	5 Years	10 Years
Total Portfolio	15.5 %	6.0 %	9.6 %	8.6 %
Domestic Equity Pools	40.5	10.9	15.0	12.7
S&P Composite 1500 Index	35.5	11.5	15.6	13.1
International Equity Pools	26.3	3.5	8.1	6.0
International Blended Benchmark ²	25.4	4.1	7.6	5.2
Private Equity Pools	4.4	3.9	12.8	12.0
Private Equity Blended Benchmark ³	28.2	13.3	18.5	16.2
Real Estate and Infrastructure Pools	1.4	8.8	6.2	7.7
NCREIF Property Blended Index ⁴	(4.7)	(0.4)	1.9	4.5
Fixed Income Pools	13.2	0.6	1.8	3.2
Bloomberg US Aggregate Bond Index	11.6	(1.4)	0.3	1.8
Absolute Return Pools	11.6	7.7	8.2	5.9
HFRI Fund of Fund Conservative Aggregate Index	6.5	3.7	5.0	3.6
Real Return and Opportunistic Pools	8.2	7.9	10.6	9.9
Real Return and Opportunistic Benchmark ⁵	6.8	8.0	7.7	7.4
Short-Term Investment Pools	5.9	3.8	2.6	1.9
30 Day Treasury Bill	5.6	3.6	2.3	1.6

¹ Calculations used a time-weighted rate of return based on the market rate of return in accordance with industry standards. Excludes income and investment gains and losses from securities lending.

² As of 7/1/14, index is MSCI ACWI ex USA Net. History 10/1/10 to 6/30/14 is MSCI ACWI ex USA Gross. History 1/1/10 to 9/30/10 is S&P Developed BMI-EPAC Net 75/25. History prior to 1/1/10 is S&P Developed BMI-EPAC Net 50/50.

³ Index is blend of S&P 500 plus 300 bps with a 3 month lag.

⁴ As of 10/1/05, index is NCREIF less 130 bp. History prior to 10/1/05 reflects NCREIF less 75 bp.

⁵ As of 12/1/18 Real Return Benchmark is CPI + 400 bps net. Opportunistic is current Actuarial Rate of Return. History prior to 12/1/18 reflects 50% (CPI + 5%) and 50% (actuarial rate 8%)

INVESTMENT SECTION

LARGEST ASSETS HELD

LARGEST STOCK HOLDINGS

(By Fair Value)
September 30, 2024

Rank	Shares	Stocks	Fair Value
1	224,328	Nvidia Corp.	\$ 27,242,351
2	60,739	Microsoft Corp.	26,136,053
3	111,181	Apple Inc.	25,905,066
4	76,894	Amazon.com Inc.	14,327,740
5	21,610	Meta Platforms Inc. Class A	12,370,513
6	460,758	AT&T Inc.	10,136,673
7	51,793	Alphabet Inc. CL A	8,589,815
8	42,018	Broadcom Inc.	7,248,095
9	7,152	Eli Lilly & Co.	6,336,386
10	37,281	Alphabet Inc. CL C	6,233,068

The System's assets are commingled in various pooled accounts. Amounts, par value and number of shares represent the System's pro-rata share based on its ownership of the investment pools.

LARGEST BOND HOLDINGS

(By Fair Value)
September 30, 2024

Rank	Par Amount	Bonds & Notes	Fair Value
1	7,099,847	US TREASURY N/B 4.375% 05/15/2034	\$ 7,435,980
2	7,279,380	US TREASURY N/B 4.25% 08/15/2054	7,432,929
3	8,932,397	US TREASURY N/B 2.875% 05/15/2052	6,995,532
4	6,919,102	US TREASURY N/B 0.25% 05/31/2025	6,740,516
5	7,698,924	FNMA TBA 30 YR 2 Single Family Mortgage	6,373,557
6	5,905,809	FNMA TBA 30 YR 6.5 Single Family Mortgage	6,085,489
7	5,811,847	FNMA TBA 30 YR 5.5 Single Family Mortgage	5,879,145
8	5,189,326	US TREASURY N/B 4.5% 03/31/2026	5,244,058
9	6,303,467	US TREASURY N/B 3.0% 08/15/2052	5,065,673
10	4,612,735	US TREASURY N/B 4.25% 12/31/2025	4,633,636

Largest Bond Holdings are exclusive of securities lending collateral.

The System's assets are commingled in various pooled accounts. Amounts, par value and number of shares represent the System's pro-rata share based on its ownership of the investment pools.

INVESTMENT SECTION

SCHEDULE OF INVESTMENT FEES

Fiscal Year Ended September 30, 2024

The State of Michigan Investment Board (Board) is the investment fiduciary and custodian of the System's funds pursuant to State law. Outside advisors are utilized to augment the State of Michigan's internal staff. 68.8% of the total investment portfolio is managed by fully discretionary outside advisors. The Michigan Department of Treasury's cost of operations applicable to the System for the fiscal year amounted to \$475 thousand or six basis points (0.06)% of the fair value of the Assets under Management of the Board.

	Assets under Management (in thousands)	Fees (in thousands)	Basis Points*
Investment Managers' Fees:			
State of Michigan	\$ 792,566	\$ 475	6.0
Outside Advisors for			
Fixed Income	155,018	365	23.5
Absolute Return	253,156	1,219	48.2
Real Return and Opportunistic	239,439	1,012	42.3
International Equity	283,088	620	21.9
Domestic Equity	54,032	119	22.0
Private Equity	538,358	4,347	80.7
Real Estate and Infrastructure	225,344	1,747	77.5
Total	\$ 2,541,001	\$ 9,904	
Other Investment Services Fees:			
Assets in Custody	\$ 2,524,808	\$ 356	
Securities Lending Collateral	77,054	39	

* Private Equity partnership agreements that define the management fees, the asset management fees range from 0 to 250 basis points of the committed capital. For Real Estate/Infrastructure, the asset management fees range from 12 to 150 basis points. For Absolute Return and Real Return and Opportunistic, the asset management fees range from 0 to 200 basis points. These fees, in most cases, are netted against income.

INVESTMENT SECTION

SCHEDULE OF INVESTMENT COMMISSIONS

Fiscal Year Ended September 30, 2024

	Actual Commissions Paid ¹	Actual Number of Shares Traded ¹	Average Commission Per Share	Estimated Trade Costs Per Share	Estimated Research Costs Per Share	Estimated Trade Costs	Estimated Research Costs
Investment Brokerage Firms:							
Banc of America Securities LLC	\$ 9	1,104	\$ 0.01	\$ 0.01	\$ -	\$ 11	\$ -
Broadcort	4	353	0.01	0.01	-	4	1
BTIG LLC	11,646	906,602	0.01	0.01	-	4,533	-
Capital Institutional Services Inc.	4,311	862,194	0.01	0.01	-	8,622	-
Citigroup Global Markets Inc.	2	331	0.01	0.01	-	4	-
Cowen & Company LLC	2,361	118,072	0.02	0.01	0.01	1,180	1,180
Drexel Hamilton LLC	420	84,072	-	0.01	-	841	-
J. P. Morgan Securities Inc.	4,962	248,846	0.02	0.01	0.01	2,488	2,488
Jefferies & Company	31	4,085	0.01	0.01	-	40	-
Merrill Lynch, Pierce, Fenner & Smith Inc.	492	21,079	0.02	0.01	0.01	210	210
Mischler Financial Group Inc.	398	19,876	0.02	0.01	0.01	199	199
MKM Partners LLC	8,104	468,762	0.02	0.01	0.01	4,687	4,687
Morgan Stanley & Co. Inc.	34	4,551	0.01	0.01	-	45	-
National Financial	12	1,560	0.01	0.01	-	16	-
Raymond James and Associates Inc.	625	24,999	0.03	0.01	0.02	250	295
RBC Capital Markets	41	5,465	0.01	0.01	-	55	-
Roberts & Ryan Inv.	697	34,823	0.02	0.01	0.01	348	348
Wayne & Company	13,158	2,523,913	0.01	0.01	-	12,620	-
Glen Eagle Wealth	131	13,018	0.01	0.01	-	131	-
Total	\$ 47,438	5,343,705	\$ 0.01 ²	\$ 0.01	\$ -	\$ 36,284	\$ 9,408

¹ Commissions are included in purchase and sale prices of investments. The commissions and shares represent the System's pro-rata share based on ownership of commission and share transactions in the investment pools.

² The average commission per share for all brokerage firms.

INVESTMENT SECTION

INVESTMENT SUMMARY

Fiscal Year Ended September 30, 2024

	Fair Value ¹	Percent of Total Fair Value	Investment & Interest Income ²	Percent of Total Investment & Interest Income
Fixed Income Pools	\$ 260,190,284	10.2 %	\$ 28,281,545	7.9 %
Domestic Equity Pools	543,546,858	21.4	163,145,527	45.9
Real Estate and Infrastructure Pools	225,343,767	8.9	4,987,427	1.4
Private Equity Pools	538,357,930	21.2	27,371,229	7.7
International Equities Pool	363,275,658	14.3	76,761,097	21.6
Absolute Return Pools	253,155,819	10.0	27,865,199	7.8
Real Return and Opportunistic Pools	239,438,565	9.4	20,665,993	5.8
Short-Term Investment Pools ³	117,692,047	4.6	6,923,846	1.9
Total	\$ 2,541,000,928	100.0 %	\$ 356,001,863	100.0 %

¹ Fair value excludes \$77,054,429 in securities lending collateral for fiscal year 2024.

² Total Investment & Interest Income excludes net security lending income of \$223,688 for securities lending collateral.

³ Short-term investment Pools' fair value includes \$16,193,309 of equity in common cash.

INVESTMENT SECTION

INVESTMENT SUMMARY

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ACTUARIAL SECTION

Actuary's Certification
Summary of Actuarial Assumptions and Methods
Schedules of Active Member Valuation Data
Prioritized Solvency Test
Analysis of System Experience - Pension
Analysis of System Experience - OPEB
Summary of Plan Provisions
Schedules of Funding Progress

ACTUARIAL SECTION

ACTUARY'S CERTIFICATION



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October 18, 2024

Ms. Michelle Lange, Director
Department of Technology, Management and Budget
and
The Retirement Board
Michigan State Police Retirement System
P.O. Box 30171
Lansing, Michigan 48909

Ladies and Gentlemen:

The basic financial objective of the Michigan State Police Retirement System (SPRS) is to establish and receive contributions which, when combined with present assets and future investment return, will be sufficient to meet the financial obligations of the System to present and future benefit recipients. The progress towards meeting these financial objectives is illustrated in the Schedules of Funding Progress and the Schedules of Employer Contributions.

We performed actuarial funding valuations and issued actuarial funding reports for the SPRS pension and retiree health (i.e., OPEB) plans as of September 30, 2023. The purpose of the September 30, 2023 annual actuarial valuations was to determine the contribution requirements for the fiscal year ending September 30, 2026, to measure the System's funding progress, and to provide actuarial information in connection with applicable Governmental Accounting Standards Board statements. The valuations should not be relied upon for any other purpose. The valuation process develops employer contributions that are sufficient to fund the System's normal cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund any unfunded accrued liabilities over a reasonable period. The valuation was completed based upon population data, asset data and plan provisions in effect on September 30, 2023.

In addition to the funding valuation reports, separate reports are issued to provide financial reporting information for SPRS in accordance with Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 (pension benefits) and Nos. 74 and 75 (retiree health benefits, or OPEB). Reports containing the actuarial results of the financial reporting valuations are produced annually after the publication of this letter. The GASB Statement Nos. 67, 68, 74 and 75 financial reporting valuations are based upon a measurement date of September 30, 2024.

The valuations were based upon information provided by the System's administrative staff concerning System benefit provisions, financial transactions, and individual members, terminated members, retirees and beneficiaries. We checked the data for internal and year to year consistency, but did not audit the data. As a result, we do not assume responsibility for the accuracy or completeness of the data provided by the System's administrative staff. The actuary summarizes and tabulates population data in order to analyze long term trends. The System's auditor audits the actuarial data annually

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ACTUARIAL SECTION

ACTUARY'S CERTIFICATION

Ms. Michelle Lange
October 18, 2024
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Annual actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rate of investment return, eligibility for the various classes of benefits and longevity among retired lives. These assumptions are adopted by the Board and the Department after considering the advice of the actuary and other professionals. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution requirements as needed.

The following schedules in the Financial Section, the Actuarial Section, and the Statistical Section of the Annual Comprehensive Financial Report (ACFR) were prepared by the Department of Financial Services based upon certain information presented in the previously mentioned funding and financial reporting valuation reports:

Financial Section

- Note 1 – Table of System's Membership
- Note 4 – Net Pension Liability; Summary of Actuarial Assumptions and Methods
- Note 5 – Net OPEB Liability; Summary of Actuarial Assumptions and Methods
- Note A – Methods and Assumptions Used to Determine Contributions for Fiscal Year 2024
- Schedules of Changes in the Net Pension Liability (NPL) and the Net OPEB Liability and Related Ratios
- Schedules of Contributions Multiyear
- Sensitivity of the NPL to Changes in the Discount Rate
- Sensitivity of the Net OPEB Liability to Changes in the Discount Rate
- Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate Assumption

Actuarial Section

- Summary of Actuarial Assumptions and Methods used in the September 30, 2023 Pension Funding Valuation
- Percent of Eligible Active Members Retiring Within Next Year
- Separation from Active Employment Before Age and Service Retirement, Disability and Individual Pay Increase Assumptions
- Schedule of Active Member Pension Valuation Data
- Schedule of Changes in the Retirement Rolls
- Prioritized Solvency Tests
- Analyses of System Experience
- Schedule of Active Member OPEB Valuation Data
- Schedule of Changes in OPEB Rolls
- Schedules of Funding Progress

Statistical Section

- Schedule of Retired Members by Type of Retirement and Type of Pension Benefit
- Schedule of Retired Members by Type of Health Benefit
- Schedules of Average Benefit Payments – Pension, Medical/Rx, Dental, and Vision



ACTUARIAL SECTION

ACTUARY'S CERTIFICATION

Ms. Michelle Lange
October 18, 2024
Page 3

The September 30, 2023 funding valuations and the September 30, 2024 financing reporting valuations were based upon assumptions that were recommended in connection with a study of System experience covering the period from October 1, 2017 through September 30, 2022. Future actuarial measurements may differ significantly from those presented in the annual valuations due to such factors as experience differing from that anticipated by actuarial assumptions, or changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of the assignment, we did not perform an analysis of the potential range of future measurements.

The signing actuaries are independent of the plan sponsor.

The actuarial valuations of SPRS were performed by qualified actuaries in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with applicable State statutes. The assumptions and methods used for funding and financial reporting purposes are in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Louise M. Gates and Mita D. Drazilov 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 herein. It is our opinion that the calculated employer contribution meets the financial objective of the Retirement System.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Louise M. Gates, ASA, FCA, MAAA



Mita D. Drazilov, ASA, FCA, MAAA



ACTUARIAL SECTION

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

1. The investment return rate used in the pension valuation of the Non-Hybrid and Hybrid plans was 6.15% per year net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. Considering a wage inflation assumption of 2.75%, this 6.15% investment return rate translates into an assumed real rate of return of 3.40% over wage inflation. Adopted 2021.
2. The healthy life retiree mortality tables used in evaluating allowances to be paid were the PubS-2010 Male and Female Retiree Mortality Tables scaled by 89% for males and 99% for females adjusted for mortality improvements using projection scale MP-2021 from 2010. Adopted 2023.
3. Sample probabilities of retirement with an age and service allowance are shown in Schedule 1 on the next page. Adopted 2023.
4. Sample probabilities of withdrawal from service and individual pay increase assumptions (adopted 2023) and sample probabilities of disability (adopted 2014), are shown in Schedule 2 on the next page.
5. Total active member payroll is assumed to increase 2.75% per year. This represents the portion of the individual pay increase assumptions attributable to inflation. In effect, this assumes no change in the number of active members. Adopted 2018.
6. An individual entry age normal actuarial cost method of valuation was used in determining actuarial liabilities and normal cost. Adopted 1996. Non-Hybrid Plan initial unfunded actuarial accrued liabilities (UAAL) are amortized over a closed 13-year period ending September 30, 2038, and UAAL resulting from actuarial gains and losses and assumption changes are amortized over closed 15-year periods. Adopted 2023. Hybrid Plan initial UAAL are amortized over an open 20-year period. Non-Hybrid and Hybrid Plan UAAL layers are amortized using level percent-of-payroll amortization.
7. The Department of Technology, Management & Budget approved the use of market value of assets as of September 30, 2006 for actuarial valuation purposes. For investment gains and losses that occur after that date, a 5-year smoothing technique will be used. Specifically, the excess (shortfall) of actual investment income (including interest, dividends, realized and unrealized gains or losses) over the imputed income at the valuation interest rate is considered the gain (loss), which is spread over five years. Adopted 2007.
8. The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.
9. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA). The assumptions used in the actuarial valuations were adopted by the System's Board and the Department of Technology, Management and Budget after consulting with the State Treasurer and the actuary.
10. A 5-year experience investigation, covering the period from October 1, 2018 through September 30, 2022, was completed in 2023. The purpose of the study was to analyze the actual experience of the System versus that anticipated by actuarial assumptions then in use.
11. Gabriel, Roeder, Smith & Company was awarded the actuarial and consulting services contract beginning October 4, 2006.

ACTUARIAL SECTION

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

SCHEDULE 1

PERCENT OF ELIGIBLE ACTIVE MEMBERS RETIRING WITHIN NEXT YEAR¹ RETIREMENT AFTER 25 OR MORE YEARS OF SERVICE (NON PENSION PLUS PLAN)

Service	% Retiring
25	70%
26	60
27-39	35
40 and over	100

RETIREMENT AT OR AFTER AGE 50 WITH 10 YEARS OF SERVICE (NON PENSION PLUS PLAN) OR AFTER AGE 55 WITH 25 YEARS OF SERVICE (PENSION PLUS PLAN), OR AFTER AGE 60 WITH 10 YEARS OF SERVICE (PENSION PLUS PLAN)

Age	% Retiring
50	20%
51	20
52-53	25
54	30
55	35
56-59	30
60-64	50
65 and over	100

¹ Of those Non Pension Plus Plan members assumed to retire with 25 or more years of service, based on the percentages above, 70% are assumed to elect the DROP and 30% are assumed to retire without the DROP.

SCHEDULE 2

SEPARATION FROM ACTIVE EMPLOYMENT BEFORE AGE & SERVICE RETIREMENT, DISABILITY & INDIVIDUAL PAY INCREASE ASSUMPTIONS

Sample Ages	Completed Years of Service	Percent of Active Members Withdrawing Within Next Year (Men and Women)	Percent of Active Members Becoming Disabled Within Next Year		Percent Increase In Pay During Next Year
			Duty	Non-duty	
All	0	20.00 %			82.75 %
	1	8.00			22.75
20	2 & Over	2.00	0.20 %	0.00 %	9.25
25		2.00	0.20	0.00	9.25
30		1.50	0.20	0.03	6.65
35		1.50	0.20	0.06	5.15
40		0.40	0.20	0.15	4.45
45		0.40	0.20	0.33	4.25
50		0.30	0.20	0.57	4.25
55		0.30	0.20	0.81	4.25
60 & Over	"	0.30	0.20	1.14	3.65

ACTUARIAL SECTION

SCHEDULES OF ACTIVE MEMBER VALUATION DATA

SCHEDULE OF ACTIVE MEMBER PENSION VALUATION DATA*

Valuation Date Sept. 30	Number	Reported Annual Payroll	Average Annual Pay	Increase (Decrease)	Average Age	Average Service
2014	1,603	\$ 112,453,562	\$ 70,152	(3.2) %	38.8	12.3
2015	1,516	112,122,615	73,960	5.4	39.0	12.7
2016	1,688	119,044,254	70,524	(4.6)	38.0	11.8
2017	1,777	129,874,976	73,087	3.6	37.9	11.8
2018	1,787	136,695,537	76,494	4.7	37.6	11.6
2019	1,844	141,282,963	76,618	0.2	37.0	11.0
2020	1,748	138,423,695	79,190	3.4	36.4	10.3
2021	1,756	133,928,013	76,269	(3.7)	35.9	9.7
2022	1,701	140,446,182	82,567	8.3	36.0	9.8
2023	1,653	138,707,208	83,912	1.6	35.3	9.2

*Excludes DROP program participants who are actively employed in the valuation date.

SCHEDULE OF ACTIVE MEMBER OPEB VALUATION DATA

Valuation Date Sept. 30	Number	Reported Annual Payroll	Average Annual Pay	Increase (Decrease)	Average Age	Average Service
2014	1,603	\$ 112,453,562	\$ 70,152	(3.2) %	38.8	12.3
2015	1,516	112,122,615	73,960	5.4	39.0	12.7
2016	1,688	119,044,254	70,524	(4.6)	38.0	11.8
2017	1,777	129,874,976	73,087	3.6	37.9	11.8
2018	1,787	136,695,537	76,494	4.7	37.6	11.6
2019	1,844	141,282,963	76,618	0.2	37.0	11.0
2020	1,748	138,423,695	79,190	3.4	36.4	10.3
2021	1,756	133,928,013	76,269	(3.7)	35.9	9.7
2022	1,701	140,446,182	82,567	8.3	36.0	9.8
2023	1,653	138,707,208	83,912	1.6	35.3	9.2

ACTUARIAL SECTION

SCHEDULES OF ACTIVE MEMBER VALUATION DATA

SCHEDULE OF CHANGES IN RETIREMENT ROLLS

Year Ended Sept. 30	Added to Rolls		Removed from Rolls		Rolls – End of Year		Average Annual Allowances	Increase in Annual Allowances
	No.	Annual Allowances*	No.	Annual Allowances*	No.	Annual Allowances*		
2014	95	\$ 4,797	85	\$ 2,340	2,963	\$ 108,212	\$ 36,521	2.3 %
2015	95	4,801	71	1,718	2,987	111,295	37,260	2.8
2016	104	5,471	73	2,023	3,018	114,743	38,019	3.1
2017	112	6,143	68	1,848	3,062	119,038	38,876	3.7
2018	133	7,474	78	2,496	3,117	124,016	39,787	4.2
2019	144	8,541	87	2,830	3,174	129,728	40,872	4.6
2020	175	10,153	92	3,308	3,257	136,572	41,932	5.3
2021	160	9,032	93	3,103	3,324	142,501	42,870	4.3
2022	135	7,969	98	3,611	3,361	146,859	43,695	3.1
2023	129	8,681	84	2,912	3,406	152,628	44,812	3.9

* In thousands of dollars.

SCHEDULE OF CHANGES IN THE OPEB ROLLS

Year Ended Sept. 30	Added to Rolls		Removed from Rolls		Rolls – End of Year		Average Annual Allowances	Increase in Annual Allowances
	No.	Annual Allowances*	No.	Annual Allowances*	No.	Annual Allowances*		
2014	80	\$ 1,043	79	\$ 1,476	2,654	\$ 32,504	\$ 12,247	(1.3) %
2015	72	1,023	60	1,502	2,666	32,025	12,012	(1.5)
2016	89	4,223	64	1,241	2,691	35,007	13,009	9.3
2017	103	4,175	60	1,407	2,734	37,774	13,817	7.9
2018	123	2,010	70	1,832	2,787	37,953	13,618	0.5
2019	128	2,283	85	2,098	2,830	38,138	13,467	0.5
2020	159	4,032	89	2,629	2,900	39,541	13,635	3.7
2021	142	2,700	83	2,009	2,959	40,232	13,596	1.7
2022	116	1,851	97	2,122	2,978	39,961	13,419	(0.7)
2023	120	2,141	75	1,692	3,023	40,410	13,367	1.1

* In thousands of dollars.

Notes:

No. refers to number of retiree health contracts.

Annual allowances added to rolls includes increases due to medical inflation and contract changes.

Annual allowances removed from rolls includes decreases due to contract changes.

ACTUARIAL SECTION

PRIORITIZED SOLVENCY TEST

The System's funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due, the ultimate test of financial soundness. Testing for level contribution rates is the long-term solvency test.

A prioritized solvency test is another means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: (1) active member contributions on deposit; (2) the liabilities for future benefits to present retired lives; and (3) the liabilities for service already rendered by active and inactive members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) are normally partially covered by the remainder of present assets. Generally, if the System has been using level-cost financing, the funded portion of liability 3 will increase over time. Liability 3 being fully funded is not necessarily a by-product of level percent of payroll funding methods.

The schedules that follow illustrate the history of the liabilities of the System and are indicative of the System's policy of following the discipline of level percent of payroll financing.

PENSION BENEFITS

(in thousands)

Valuation Date	Actuarial Accrued Liability (AAL)			Valuation Assets	Portion of AAL Covered by Assets			
	(1)	(2)	(3)		(1)	(2)	(3)	(4) ³
Sept. 30	Active Member Contributions	Retirants and Beneficiaries	Active and Inactive Members (Employer Financed Portion) ²					
2014	\$ 3,589	\$ 1,187,229	\$ 573,236	\$ 1,133,323	100.0 %	95.2 %	- %	64.2%
2014 ¹	3,589	1,213,209	583,108	1,133,323	100.0	93.1	-	63.0
2015	5,971	1,233,879	611,576	1,197,222	100.0	96.6	-	64.7
2016	8,762	1,277,584	626,754	1,272,575	100.0	98.9	-	66.5
2016 ¹	8,762	1,332,226	666,516	1,272,575	100.0	94.9	-	63.4
2017	11,971	1,373,293	668,770	1,342,953	100.0	96.9	-	65.4
2017 ¹	11,971	1,427,196	707,655	1,397,866	100.0	97.1	-	65.1
2018	14,855	1,478,168	701,362	1,461,697	100.0	97.9	-	66.6
2018 ¹	14,855	1,535,688	720,614	1,499,321	100.0	96.7	-	66.0
2019	17,917	1,597,106	705,679	1,519,978	100.0	94.1	-	65.5
2020	20,836	1,678,958	674,619	1,545,272	100.0	90.9	-	65.1
2021	23,751	1,743,299	645,146	1,627,856	100.0	92.1	-	67.5
2021 ¹	23,751	1,851,370	734,130	1,752,172	100.0	93.4	-	67.2
2022	27,088	1,888,674	760,015	1,780,094	100.0	92.9	-	66.5
2023	30,043	1,943,558	759,368	1,916,341	100.0	97.1	-	70.1
2023 ¹	30,043	1,943,762	780,415	1,916,341	100.0	97.1	-	69.6

¹ Revised actuarial assumptions and/or methods.

² Includes DROP members

³ Percent funded on a total valuation asset and total actuarial liability basis.

ACTUARIAL SECTION

PRIORITIZED SOLVENCY TEST

OTHER POSTEMPLOYMENT BENEFITS

(in thousands)

Valuation Date Sept. 30	Actuarial Accrued Liability (AAL)			Valuation Assets	Portion of AAL Covered by Assets			
	(1)	(2)	(3)		(1)	(2)	(3)	(4) ³
	Active Member Contributions	Retirants and Beneficiaries	Active and Inactive Members (Employer Financed Portion) ²					
2014	\$ -	\$ 415,077	\$ 222,276	\$ 77,664	- %	18.7 %	- %	12.2 %
2015	-	431,891	243,697	94,770	-	21.9	-	14.0
2016	-	476,889	276,563	116,709	-	24.5	-	15.5
2017	-	523,813	195,210	150,670	-	28.8	-	21.0
2017 ¹	-	528,767	198,261	150,670	-	28.5	-	20.7
2018	-	536,250	191,417	186,909	-	34.9	-	25.7
2018 ¹	-	573,741	203,524	191,219	-	33.3	-	24.6
2019	-	553,567	206,031	235,042	-	42.5	-	30.9
2020	-	555,345	174,119	280,969	-	50.6	-	38.5
2021	-	564,031	151,661	334,295	-	59.3	-	46.7
2021 ¹	-	609,911	170,237	371,901	-	61.0	-	47.7
2022	-	572,053	155,442	405,565	-	70.9	-	55.7
2023	-	611,671	122,867	435,173	-	71.1	-	59.3
2023 ¹	-	626,660	124,821	435,173	-	69.4	-	57.9

¹ Revised actuarial assumptions and/or methods.

² Includes DROP members.

³ Percent funded on a total valuation asset and total actuarial liability basis.

ACTUARIAL SECTION

ANALYSIS OF SYSTEM EXPERIENCE – PENSION

GAINS/(LOSSES) IN ACCRUED LIABILITIES

During Year Ended September 30, 2023

Resulting from Differences Between Assumed Experience & Actual Experience

<u>Type of Activity</u>	<u>Gain/(Loss)</u>
1. Retirements. (including disability retirement). If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, a loss.	\$ (4,064,448)
2. Withdrawal From Employment. (including death-in-service). If more liabilities are released by withdrawals and deaths than assumed, there is a gain. If smaller releases, a loss.	1,863,694
3. Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(18,699,387)
4. Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss.	(9,504,598)
5. Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	(7,152,995)
6. Rehires. Rehires into the System will generally result in an actuarial loss	-
7. Other. Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	(1,052,719)
8. Composite Gain (or Loss) During Year.	<u>\$ (38,610,453)</u>

ACTUARIAL SECTION

ANALYSIS OF SYSTEM EXPERIENCE – OPEB

GAINS/(LOSSES) IN ACCRUED LIABILITIES

During Year Ended September 30, 2023

Resulting from Differences Between Assumed Experience & Actual Experience

<u>Type of Activity</u>	<u>Gain/(Loss)</u>
1. Premiums. Gains and losses resulting from actual premiums in valuation year versus that assumed from prior valuation.	\$ 11,044,646
2. Investment Income. If there is greater investment income than assumed, there is a gain. If less income, a loss.	(7,237,920)
3. Demographic and Other. Gains and losses resulting from demographic experience, data adjustments, timing of financial transactions, etc.	2,062,793
4. Composite Gain (or Loss) During Year.	<u>\$ 5,869,519</u>

ACTUARIAL SECTION

SUMMARY OF PLAN PROVISIONS

Our actuarial valuation of the System as of September 30, 2023, is based on the present provisions of the Michigan State Police Retirement Act (Public Act 182 of 1986, as amended).

REGULAR RETIREMENT

(No reduction factor for age)

- **Eligibility** – 25 years of credited service with no age requirement; or age 50 with 10 years credited service.

For members hired on or after June 10, 2012 – Defined Benefit Portion (DB Portion): Age 55 with 25 years credited Service; or age 60 with 10 years credited service. Deferred Compensation Portion (DC Portion): 50% vested in employer contributions after 2 years; 75% after 3 years and 100% after 4 years.

- **Annual Amount** – If member has 25 or more years of credited service, 60% of final average compensation; if member has less than 25 years of credited service, total credited service times 2% of final average compensation.

For members hired on or after June 10, 2012 – DB Portion: Total credited service times 2% of final average compensation, up to 25 years of service. Benefit multiplier declines by 0.4% for each year after 25 years of service until reaching 0% after 30 years of service. DC Portion: 401(k) balance – while working employer contributions equal 50% of employee contributions up to 1% of pay maximum match.

- **Final Average Compensation** – Average of 2 final years.

For members hired on or after June 10, 2012 – Average of 5 final years of compensation excluding overtime.

EARLY RETIREMENT

- **Eligibility** – None.

DEFERRED RETIREMENT

(Vested benefit)

- **Eligibility** – 10 years of credited service. Benefit commences at age 50. For members hired on or after June 10, 2012 – 10 years of credited service. Benefit commences at age 60.
- **Annual Amount** – Regular retirement benefit based on service and final average compensation at time of termination.

For members hired on or after June 10, 2012 – Regular DB retirement benefit is based on credited service and final average compensation at termination.

- **Optional forms of Payment** – As provided in the collective bargaining agreement, for System members hired after July 1, 2006, the normal form of payment is a straight life annuity. These individuals may elect one of the following optional forms of payment at the time of retirement:

- 100% Joint and survivor annuity with pop-up
- 75% Joint and survivor annuity with pop-up
- 50% Joint and survivor annuity with pop-up

The option forms of payment are actuarially equivalent to the straight life annuity. Option factors are based upon the following: (1) investment return assumption of 6.75%, (2) valuation mortality assumptions for healthy retirees, (3) unisex percent of 90% and (4) calculation year of 2021. The pop-up provision and any applicable COLA are reflected in the factors.

DUTY DISABILITY RETIREMENT

- **Eligibility** – No age or service requirement; in receipt of workers' disability compensation.
- **Annual Amount** – 60% of final average compensation, disability benefit plus workers' compensation benefit, if any, shall not exceed 100% of final average compensation.

ACTUARIAL SECTION

SUMMARY OF PLAN PROVISIONS

For members hired on or after June 10, 2012 – 60% of final average compensation following the survivor nomination. Disability benefit plus workers' compensation benefit, if any, shall not exceed 100% of final average compensation. The retirement allowance will be offset by the actuarially determined value of the employer funded portion plus the associated investment growth of the employer funded portion of the participant's defined contribution account balance.

NONDUTY DISABILITY RETIREMENT

- **Eligibility** – 10 years of credited service.
- **Annual Amount** – 2.4% of final average compensation times years of credited service, to a maximum of 60% of final average compensation.

For members hired on or after June 10, 2012 – 2.4% of final average compensation times years of credited service, not to exceed 25 years of service, plus any reduction due to a survivor nomination. The retirement allowance will be offset by the actuarially determined value of the employer funded portion plus the associated investment growth of the employer funded portion of the participant's defined contribution account balance.

DUTY DEATH BEFORE RETIREMENT

- **Eligibility** – No age or service requirement.
- **Annual Amount** – 60% of final average compensation is payable to surviving spouse; additional \$1,200 per year for each child under 18 is also payable; If no surviving spouse, children under 18 share in 60% benefit until attainment of age 18. If no spouse or children, dependent parents are eligible for 60% benefit (plus \$1,200 per dependent sibling under 18). Retirement benefit plus workers' compensation, if any, shall not exceed 100% of final average compensation.

For members hired on or after June 10, 2012 – 60% of final average compensation is payable to surviving spouse. If no surviving spouse, children under 18 share in 60% benefit until attainment of age 18. Retirement benefit plus workers' compensation, if any, shall not exceed 100% of final average compensation. The retirement allowance will be offset by the actuarially determined value of the employer funded portion plus the associated investment growth of the employer funded portion of the participant's defined contribution account balance.

- **Lump Sum Payment** – A \$1,500 funeral benefit is also payable.

NONDUTY DEATH BEFORE RETIREMENT

- **Eligibility** – 10 years of credited service.
- **Annual Amount** – 2.4% of final average compensation times years of credited service, to a maximum of 60% of final average compensation, payable to surviving spouse; If no surviving spouse, children under 18 share in benefit until attainment of age 18.

For members hired on or after June 10, 2012 – Calculated by years of service (up to the first 25 years) times 2.4% of final average compensation. The retirement allowance will be offset by the actuarially determined value of the employer funded portion plus the associated investment growth of the employer funded portion of the participant's defined contribution account balance. If no surviving spouse, children under 18 share in benefit until attainment of age 18.

DEATH AFTER RETIREMENT

The retired member's benefit continues to the surviving spouse. If no surviving spouse, children under 18 share in the continued benefit until attainment of age 18.

For plan members hired after July 1, 2006, surviving spouse benefits are available (100%, 75%, or 50% continuation) but the retired member's benefit is actuarially reduced for this surviving spouse coverage.

ACTUARIAL SECTION

SUMMARY OF PLAN PROVISIONS

DROP PROGRAM PROVISIONS

- **DROP Eligibility** – Any age with 25 years of service. Pension Plus members hired on or after June 10, 2012, are not eligible for the DROP.
- **Maximum Years of DROP** – 6 years.
- **Retirement Benefit** – Monthly benefit frozen at date of DROP election.
- **DROP Account - Amount credited** – 100% of the participant's Retirement Benefit if stay full six years (for all 6 years); 90% if stay 5 years; 80% if stay 4 years; 70% if stay 3 years; 60% if stay 2 years; 50% if stay 1 year; 30% if stay less than 1 year.
- **Interest Credit Rate** – 3% annually.
- **COLA** – No COLA adjustment on Retirement Benefit until the end of the DROP period.
- **Benefit Options** – At termination of DROP participation and commencement of retirement, options are lump sum of DROP account, partial lump sum, or maintain funds in account.

POSTRETIREMENT COST-OF-LIVING ADJUSTMENTS

All members retiring (or leaving employment with vested benefits), and their survivors, are eligible for automatic 2% annual (non-compounded) benefit increases, with a maximum annual increase of \$500.

For members hired on or after June 10, 2012 – None.

POSTRETIREMENT HEALTHCARE BENEFITS

Persons in receipt of retirement allowances (including members who did not retire directly from the System, but come from a vested deferred status), and their dependents, are eligible for 95% State-paid health insurance coverage and 90% State-paid dental and vision insurance.

MEMBER CONTRIBUTIONS

- **Non Pension Plus Members** – Command Officers currently participate on a noncontributory basis. Effective October 1, 2012, troopers and sergeants hired before June 10, 2012 began contributing 1% of their compensation. Effective October 1, 2013 troopers and sergeants hired before June 10, 2012 began contributing 2% of their compensation.
- **Pension Plus Members** – Troopers hired on or after June 10, 2012 contribute 4% of their compensation. These contributions are for the pension component of their plan. For the DC Portion, troopers can choose how much to contribute to their DC plan.

ACTUARIAL SECTION

SCHEDULES OF FUNDING PROGRESS

SCHEDULE OF FUNDING PROGRESS – PENSION PLAN

(in millions)

Valuation Date Sept. 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded (Overfunded) Accrued Liability (UAAL) (b-a)	Funded Ratio (a/b)	Active Payroll (c)	UAAL as a % of Active Payroll ((b-a)/c)
2014	\$ 1,133.3	\$ 1,764.1	\$ 630.7	64.2 %	\$ 112.5	560.9 %
2014 ¹	1,133.3	1,799.9	666.6	63.0	112.5	592.8
2015	1,197.2	1,851.4	654.2	64.7	112.1	583.5
2016	1,272.6	1,913.1	640.5	66.5	119.0	538.1
2016 ¹	1,272.6	2,007.5	734.9	63.4	119.0	617.4
2017	1,343.0	2,054.0	711.1	65.4	129.9	547.5
2017 ¹	1,397.9	2,146.8	749.0	65.1	129.9	576.7
2018	1,461.7	2,194.4	732.7	66.6	136.7	536.0
2018 ¹	1,499.3	2,271.1	771.8	66.0	136.7	564.6
2019	1,520.0	2,320.7	800.7	65.5	141.3	566.8
2020	1,545.3	2,374.4	829.1	65.1	138.4	599.0
2021	1,627.9	2,412.2	784.3	67.5	133.9	585.6
2021 ¹	1,752.2	2,609.3	857.1	67.2	133.9	640.0
2022	1,780.1	2,675.8	895.7	66.5	140.4	637.7
2023	1,916.3	2,733.0	816.7	70.1	138.7	588.7
2023 ¹	1,916.3	2,754.2	837.9	69.6	138.7	604.1

¹ Revised actuarial assumptions and/or methods
Source: Gabriel, Roeder, Smith & Co.

SCHEDULE OF FUNDING PROGRESS – OPEB PLAN

(in millions)

Valuation Date Sept. 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded (Overfunded) Accrued Liability (UAAL) (b-a)	Funded Ratio (a/b)	Active Payroll (c)	UAAL as a % of Active Payroll ((b-a)/c)
2014	\$ 77.7	\$ 637.4	\$ 559.7	12.2 %	\$ 112.5	497.7 %
2015	94.8	675.6	580.8	14.0	112.1	518.0
2016 ¹	116.7	735.5	636.7	15.5	119.0	534.8
2017	150.7	719.0	568.3	21.0	129.9	437.6
2017 ¹	150.7	727.0	576.4	20.7	129.9	443.8
2018	186.9	727.7	540.8	25.7	136.7	395.6
2018 ¹	191.2	777.3	586.0	24.6	136.7	428.7
2019	235.0	759.6	524.6	30.9	141.3	371.3
2020	281.0	729.5	448.5	38.5	138.4	324.0
2021	334.3	715.6	381.3	46.7	138.4	248.8
2021 ¹	371.9	780.1	408.2	47.7	133.9	304.8
2022	405.6	727.5	321.9	55.7	140.4	229.2
2023	435.2	734.5	299.3	59.3	138.7	215.8
2023 ¹	435.2	751.5	316.3	57.9	138.7	228.0

¹ Revised actuarial assumptions and/or methods
Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

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Schedules of Additions by Source
Schedules of Deductions by Type
Schedules of Changes in Fiduciary Net Position
Schedules of Benefits and Refunds by Type
Schedules of Retired Members by Type of Benefit
Schedule of Other Postemployment Benefits
Schedules of Average Benefit Payments
Ten Year History of Membership

STATISTICAL SECTION

CONTENTS

This part of the System's annual comprehensive financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the System's overall financial health.

FINANCIAL TRENDS

These schedules contain trend information to help the reader understand how the System's financial performance and fiscal health has changed over time. The schedules are presented for the last ten fiscal years. Schedules included are:

- Schedule of Pension Plan Additions by Source
- Schedule of OPEB Plan Additions by Source
- Schedule of Pension Plan Deductions by Type
- Schedule of OPEB Plan Deductions by Type
- Schedule of Changes in Fiduciary Net Position – Pension Plan
- Schedule of Changes in Fiduciary Net Position – OPEB Plan
- Schedule of Pension Benefit and Refunds by Type
- Schedule of Other Postemployment Benefits and Refunds by Type

OPERATING INFORMATION

These schedules contain contextual information to assist the reader's understanding of how the System's financial information relates to the combination of participating members and the benefits it provides. Schedules are presented for the last ten fiscal years, except where noted. Schedules included are:

- Schedule of Retired Members by Type of Pension Benefits
- Schedule of Retired Members by Type of Other Postemployment Benefits
- Schedule of Other Postemployment Benefits
- Schedule of Average Benefit Payments – Pension
- Schedule of Average Benefit Payments – Health
- Schedule of Average Benefit Payments – Dental
- Schedule of Average Benefit Payments – Vision
- Ten Year History of Membership

STATISTICAL SECTION

SCHEDULES OF ADDITIONS BY SOURCE

SCHEDULE OF PENSION PLAN ADDITIONS BY SOURCE

Last Ten Years

Fiscal Year Ended Sept. 30	Member Contributions	Employer Contributions		Net Investment & Other Income	Total
		Dollars	% of Annual Reported Payroll		
2015	\$ 2,677,458	\$ 70,351,036	62.7 %	\$ 26,239,211	\$ 99,267,706
2016	3,009,482	70,505,268	59.2	90,820,874	164,335,623
2017	3,141,638	74,813,976	57.6	165,410,872	243,366,486
2018	3,488,721	84,929,848	62.1	151,532,099	239,950,668
2019	3,692,827	78,509,525	55.6	74,725,467	156,927,819
2020	4,100,153	79,164,587	58.9	75,047,512	158,312,252
2021	3,850,277	69,151,812	51.6	401,734,848	474,736,937
2022	4,382,869	89,386,107	63.6	(82,876,595)	10,892,381
2023	4,637,149	192,645,335	N/A	138,811,300	336,093,784
2024	4,637,216	101,724,575	N/A	282,546,969	388,908,760

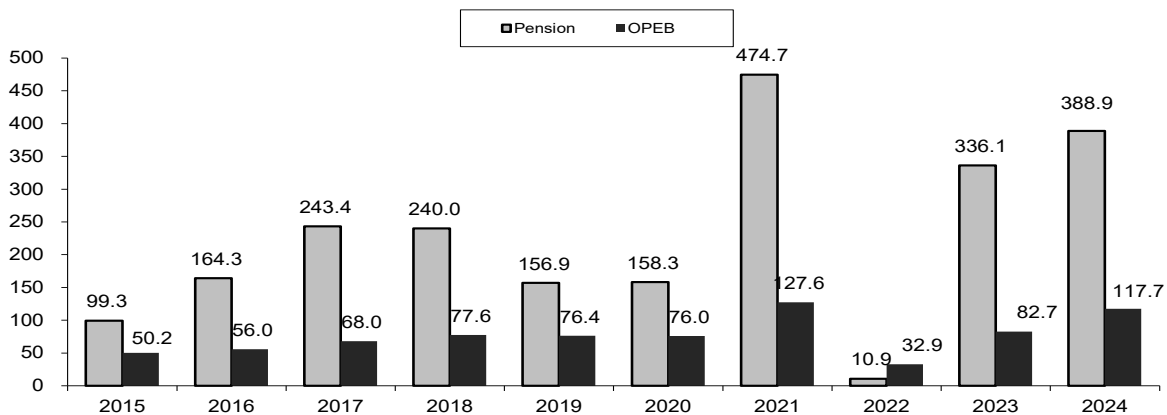
SCHEDULE OF OPEB PLAN ADDITIONS BY SOURCE

Last Ten Years

Fiscal Year Ended Sept. 30	Member Contributions	Employer Contributions		Net Investment & Other Income	Total
		Dollars	% of Annual Reported Payroll		
2015	\$ 1,129,645	\$ 45,848,019	40.9 %	\$ 3,208,549	\$ 50,186,213
2016	1,160,562	45,156,857	37.9	9,691,585	56,009,004
2017	237	49,416,721	38.0	18,547,599	67,964,557
2018	-	56,779,248	41.5	20,777,421	77,556,669
2019	-	60,395,448	42.7	16,037,846	76,433,294
2020	-	62,879,463	45.4	13,122,555	76,002,018
2021	-	48,792,323	36.4	78,856,095	127,648,418
2022	-	50,742,729	36.1	(17,892,103)	32,850,626
2023	-	45,977,902	N/A	36,763,536	82,741,438
2024	-	45,615,181	N/A	72,124,010	117,739,191

TOTAL ADDITIONS

Year Ended September 30
(in millions)



STATISTICAL SECTION

SCHEDULES OF DEDUCTIONS BY TYPE

SCHEDULE OF PENSION PLAN DEDUCTIONS BY TYPE

Last Ten Years

Fiscal Year Ended Sept. 30	Benefit Payments	Refunds and Transfers	Administrative and Other Expenses	Total
2015	\$ 115,466,146	\$ 2,935	\$ 561,121	\$ 116,030,202
2016	119,081,074	13,299	575,135	119,669,508
2017	130,203,073	5,196	665,820	130,874,089
2018	137,366,603	-	749,004	138,115,607
2019	144,170,669	22,767	724,858	144,918,294
2020	149,407,174	10,619	632,699	150,050,491
2021	155,315,322	113,255	677,179	156,105,756
2022	155,375,321	419,449	726,215	156,520,985
2023	161,157,318	176,073	756,165	162,089,556
2024	173,810,107	101,380	777,178	174,688,666

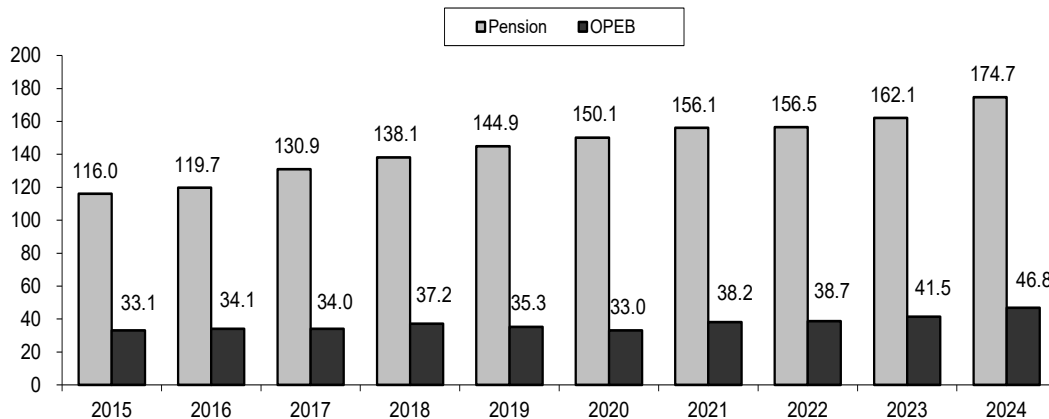
SCHEDULE OF OPEB PLAN DEDUCTIONS BY TYPE

Last Ten Years

Fiscal Year Ended Sept. 30	Benefit Payments	Refunds and Transfers	Uncollectable Accounts	Administrative and Other Expenses	Total
2015	\$ 31,696,743	\$ -	\$ -	\$ 1,383,518	\$ 33,080,261
2016	32,667,947	-	-	1,402,293	34,070,241
2017	32,657,938	-	-	1,345,546	34,003,484
2018	35,803,966	62	-	1,412,564	37,216,592
2019	33,803,356	-	-	1,521,697	35,325,053
2020	32,045,934	-	-	955,331	33,001,266
2021	36,701,237	-	744,787	800,445	38,246,469
2022	37,603,061	-	95,921	972,033	38,671,015
2023	40,602,978	-	-	855,269	41,458,247
2024	45,904,767	-	-	850,301	46,755,067

TOTAL DEDUCTIONS

Year Ended September 30
(in millions)



STATISTICAL SECTION

SCHEDULES OF DEDUCTIONS BY TYPE

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STATISTICAL SECTION

SCHEDULES OF CHANGES IN FIDUCIARY NET POSITION

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION – PENSION PLAN

Last Ten Years
(in thousands)

	Fiscal Year				
	2015	2016	2017	2018	2019
Member contributions	\$ 2,677	\$ 3,009	\$ 3,142	\$ 3,489	\$ 3,693
Employer contributions	70,351	70,505	74,814	84,930	78,510
Net investment income	26,236	90,811	165,384	151,529	74,725
Miscellaneous income	3	10	27	4	-
Total Additions	<u>99,268</u>	<u>164,336</u>	<u>243,366</u>	<u>239,951</u>	<u>156,928</u>
Pension benefits	115,466	119,081	130,203	137,367	144,171
Refunds of contributions	3	13	5	-	23
Administrative and other expenses	561	575	666	749	725
Total Deductions	<u>116,030</u>	<u>119,670</u>	<u>130,875</u>	<u>138,116</u>	<u>144,918</u>
Changes in net position	<u>\$ (16,762)</u>	<u>\$ 44,666</u>	<u>\$ 112,492</u>	<u>\$ 101,835</u>	<u>\$ 12,010</u>

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION – OPEB PLAN

Last Ten Years
(in thousands)

	Fiscal Year				
	2015	2016	2017	2018	2019
Member contributions	\$ 1,130	\$ 1,161	\$ -	\$ -	\$ -
Employer contributions	45,848	45,157	49,417	56,779	60,395
Other governmental contributions	1,874	2,191	2,469	3,546	5,218
Net investment income	1,326	7,396	16,063	17,222	10,782
Other non-operating revenue	-	-	-	-	-
Miscellaneous income	9	104	15	10	39
Total Additions	<u>50,186</u>	<u>56,009</u>	<u>67,965</u>	<u>77,557</u>	<u>76,433</u>
Health benefits	31,697	32,668	32,658	35,804	33,803
Refunds of contributions	-	-	-	-	-
Transfers to other systems	-	-	-	-	-
Uncollectable accounts	-	-	-	-	-
Administrative and other expenses	1,384	1,402	1,346	1,413	1,522
Total Deductions	<u>33,081</u>	<u>34,070</u>	<u>34,004</u>	<u>37,217</u>	<u>35,325</u>
Changes in net position	<u>\$ 17,106</u>	<u>\$ 21,939</u>	<u>\$ 33,961</u>	<u>\$ 40,340</u>	<u>\$ 41,108</u>

STATISTICAL SECTION

SCHEDULES OF CHANGES IN FIDUCIARY NET POSITION

	Fiscal Year (continued)				
	2020	2021	2022	2023	2024
Member contributions	\$ 4,100	\$ 3,850	\$ 4,383	\$ 4,637	\$ 4,637
Employer contributions	79,165	69,152	89,386	192,645	101,725
Net investment income	75,047	401,735	(82,877)	138,811	282,546
Miscellaneous income	-	-	-	-	1
Total Additions	<u>158,312</u>	<u>474,737</u>	<u>10,892</u>	<u>336,094</u>	<u>388,909</u>
Pension benefits	149,407	155,315	155,375	161,157	173,810
Refunds of contributions	11	113	419	176	101
Administrative and Other Expenses	633	677	726	756	777
Total Deductions	<u>150,050</u>	<u>156,106</u>	<u>156,521</u>	<u>162,090</u>	<u>174,689</u>
Changes in net position	<u>\$ 8,262</u>	<u>\$ 318,631</u>	<u>\$ (145,629)</u>	<u>\$ 174,004</u>	<u>\$ 214,220</u>

	Fiscal Year (continued)				
	2020	2021	2022	2023	2024
Member contributions	\$ -	\$ -	\$ -	\$ -	\$ -
Employer contributions	58,303	48,792	50,743	45,978	45,615
Other governmental contributions	4,577	4,663	5,733	5,898	8,487
Net investment income	12,677	73,989	(18,070)	30,133	63,504
Transfers from other systems	-	-	-	675	-
Miscellaneous income	445	204	178	57	133
Total Additions	<u>76,002</u>	<u>127,648</u>	<u>38,584</u>	<u>82,741</u>	<u>117,739</u>
Health care benefits	32,046	36,701	37,603	40,603	45,905
Refunds of contributions	-	-	-	-	-
Transfers to other systems	-	-	-	-	-
Uncollectable accounts	-	745	96	-	-
Administrative and Other Expenses	955	800	972	855	850
Total Deductions	<u>33,001</u>	<u>38,246</u>	<u>38,671</u>	<u>41,458</u>	<u>46,755</u>
Changes in net position	<u>\$ 43,001</u>	<u>\$ 89,402</u>	<u>\$ (87)</u>	<u>\$ 41,283</u>	<u>\$ 70,984</u>

STATISTICAL SECTION

SCHEDULES OF BENEFITS AND REFUNDS BY TYPE

SCHEDULE OF PENSION BENEFITS AND REFUNDS BY TYPE

Last Ten Years

Fiscal Year Ended Sept. 30	Regular Benefits	Disability Benefits	Survivor Benefits	DROP Benefits	Refunds		Total
					Employee Contribution	Employer Contribution	
2015	\$ 91,064,812	\$ 6,132,395	\$ 13,654,166	\$ 4,614,773	\$ 2,935	\$ -	\$ 115,469,081
2016	93,379,361	6,344,022	14,299,429	5,058,261	13,299	-	119,094,373
2017	96,616,014	6,588,327	14,692,147	12,306,585	-	5,196	130,208,269
2018	99,907,707	6,923,210	15,247,552	15,288,134	21	(21)	137,366,603
2019	104,630,721	7,186,291	16,476,104	15,877,552	12,317	10,450	144,193,436
2020	108,920,376	7,383,417	17,484,066	15,619,315	10,619	-	149,417,793
2021	115,053,753	7,659,657	18,449,241	14,115,324	113,255	-	155,391,230
2022	117,826,427	7,734,736	19,895,257	9,918,901	419,449	-	155,794,770
2023	121,540,852	7,766,054	20,806,500	11,043,912	176,073	-	161,333,391
2024	126,913,599	7,774,604	21,616,967	17,504,937	101,380	-	173,911,488

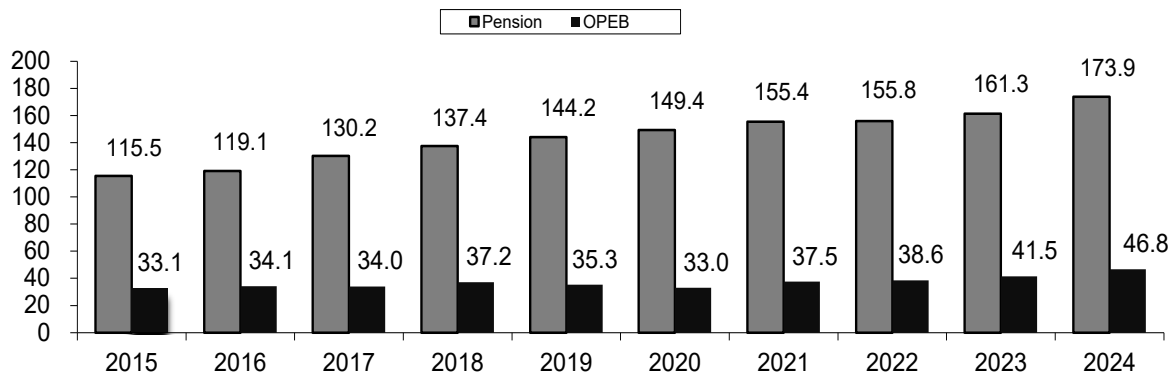
SCHEDULE OF OTHER POSTEMPLOYMENT BENEFITS AND REFUNDS BY TYPE

Last Ten Years

Fiscal Year Ended Sept. 30	Health Benefits	Dental Benefits	Vision Benefits	Administrative Expenses	Health Refunds	Total
2015	\$ 29,110,087	\$ 2,380,425	\$ 206,231	\$ 1,383,518	\$ -	\$ 33,080,261
2016	30,057,236	2,401,978	208,734	1,402,293	-	34,070,241
2017	30,215,360	2,190,542	252,037	1,345,546	-	34,003,485
2018	33,328,845	2,301,342	173,779	1,412,564	62	37,216,592
2019	31,217,702	2,376,406	209,247	1,521,697	-	35,325,053
2020	29,855,744	2,008,336	181,854	955,331	-	33,001,266
2021	34,164,770	2,314,832	221,634	800,445	-	37,501,682
2022	34,932,289	2,443,686	227,086	972,033	-	38,575,094
2023	37,641,696	2,666,396	294,886	855,269	-	41,458,247
2024	42,878,861	2,718,351	307,555	850,301	-	46,755,067

TOTAL BENEFIT DEDUCTIONS

Year Ended September 30
(in millions)



STATISTICAL SECTION

SCHEDULES OF RETIRED MEMBERS BY TYPE OF BENEFIT

SCHEDULE OF RETIRED MEMBERS BY TYPE OF PENSION BENEFITS

September 30, 2023

Amount of Monthly Pension Benefit	Number of Retirees	Type of Retirement *						Option **
		1	2	3	4	5	6	Life
\$ 1 - 400	25	19	-	2	1	3	-	25
401 - 800	106	99	4	1	-	1	1	106
801 - 1,200	112	91	11	4	3	-	3	112
1,201 - 1,600	112	70	19	10	4	8	1	112
1,601 - 2,000	133	58	38	25	7	3	2	133
2,001 - 2,400	153	79	46	12	11	4	1	153
2,401 - 2,800	118	71	29	6	8	1	3	118
2,801 - 3,200	132	74	34	15	7	1	1	132
3,201 - 3,600	309	188	86	21	9	-	5	309
3,601 - 4,000	548	390	107	34	9	3	5	548
Over 4,000	1,658	1,504	101	41	7	2	3	1,658
Totals	3,406	2,643	475	171	66	26	25	3,406

* Type of Retirement

- 1 – Normal retirement for age and service
- 2 – Survivor payment – normal retirement
- 3 – Duty disability retirement (including survivors)
- 4 – Nonduty disability retirement (including survivors)
- 5 – Survivor payment – duty death in service
- 6 – Survivor payment – nonduty death in service

** Selected Option

Life – 100% joint and survivor

Source: Gabriel, Roeder, Smith & Co.

SCHEDULE OF RETIRED MEMBERS BY TYPE OF OTHER POSTEMPLOYMENT BENEFITS

September 30, 2023

Amount of Monthly Pension Benefit	Number of Retirees	Type of Other Postemployment Benefits		
		Health	Dental	Vision
\$ 1 – 400	25	1	1	1
401 – 800	106	27	26	26
801 – 1,200	112	33	33	33
1,201 – 1,600	112	57	60	60
1,601 – 2,000	133	92	95	94
2,001 – 2,400	153	124	121	120
2,401 – 2,800	118	104	105	105
2,801 – 3,200	132	129	129	130
3,201 – 3,600	309	300	302	302
3,601 – 4,000	548	528	530	531
Over 4,000	1,658	1,602	1,609	1,607
Totals	3,406	2,997	3,011	3,009

Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

SCHEDULE OF OTHER POSTEMPLOYMENT BENEFITS

For Year Ended September 30, 2024
(in thousands)

Claims:

Health Insurance	\$	40,280
Vision Insurance		298
Dental Insurance		<u>2,673</u>

Total Claims

43,251

Estimated Claims Liability:

Health Insurance	2,598
Vision Insurance	9
Dental Insurance	<u>45</u>

Total Estimated Claims Liability

2,652

Administrative Fees:

Staff Salaries	62
Staff Retirement and Social Security	33
Staff Other Fringe Benefits	13
Accounting	5
Actuary	20
Attorney General	7
Buildings Rental	2
Independent Auditors	17
Medical	2
Postage, Telephone, and Other	3
Technological Support	33
Health Insurance	557
Vision Insurance	4
Dental Insurance	<u>92</u>

Total Administrative Fees

850

Grand Total

\$ 46,754

STATISTICAL SECTION

SCHEDULES OF AVERAGE BENEFIT PAYMENTS

SCHEDULE OF AVERAGE BENEFIT PAYMENTS – PENSION*

Payment Periods	Last Ten Years								
	Credited Service (Years) as of September 30							Total	
	0-5	5-10	10-15	15-20	20-25	25-30	30+		
Period 10/1/13 to 9/30/14:									
Average Monthly Benefit	\$	1,487	\$ 2,258	\$ 1,423	\$ 1,989	\$ 2,311	\$ 3,211	\$ 3,444	\$ 3,043
Average Final Average Salary		12,794	37,160	39,452	45,375	43,523	57,079	60,468	55,126
Number of Active Retirants		12	33	150	109	122	2,249	288	2,963
Period 10/1/14 to 9/30/15:									
Average Monthly Benefit	\$	1,555	\$ 2,220	\$ 1,467	\$ 2,057	\$ 2,374	\$ 3,276	\$ 3,520	\$ 3,105
Average Final Average Salary		16,277	38,261	40,035	47,567	45,227	58,215	61,447	56,247
Number of Active Retirants		13	34	153	108	125	2,275	279	2,987
Period 10/1/15 to 9/30/16:									
Average Monthly Benefit	\$	1,636	\$ 2,175	\$ 1,466	\$ 2,158	\$ 2,442	\$ 3,354	\$ 3,560	\$ 3,168
Average Final Average Salary		16,277	41,678	40,371	50,193	46,503	59,402	61,608	57,317
Number of Active Retirants		13	37	157	116	126	2,295	274	3,018
Period 10/1/16 to 9/30/17:									
Average Monthly Benefit	\$	1,659	\$ 2,229	\$ 1,496	\$ 2,235	\$ 2,571	\$ 3,424	\$ 3,627	\$ 3,240
Average Final Average Salary		16,277	42,625	40,370	51,448	49,672	60,635	62,457	58,538
Number of Active Retirants		13	36	157	116	131	2,342	267	3,062
Period 10/1/17 to 9/30/18:									
Average Monthly Benefit	\$	1,714	\$ 2,380	\$ 1,519	\$ 2,279	\$ 2,607	\$ 3,502	\$ 3,688	\$ 3,316
Average Final Average Salary		17,588	44,536	40,516	52,014	50,761	62,416	63,080	60,121
Number of Active Retirants		12	33	156	115	136	2,406	259	3,117
Period 10/1/18 to 9/30/19:									
Average Monthly Benefit	\$	1,737	\$ 2,409	\$ 1,547	\$ 2,351	\$ 2,738	\$ 3,603	\$ 3,712	\$ 3,406
Average Final Average Salary		17,588	44,536	42,501	52,783	53,418	64,302	63,165	61,841
Number of Active Retirants		12	33	161	117	133	2,460	258	3,174
Period 10/1/19 to 9/30/20:									
Average Monthly Benefit	\$	1,761	\$ 2,439	\$ 1,547	\$ 2,383	\$ 2,818	\$ 3,702	\$ 3,750	\$ 3,494
Average Final Average Salary		17,588	44,536	43,082	52,931	55,334	66,658	63,249	63,844
Number of Active Retirants		12	33	163	116	136	2,541	256	3,257
Period 10/1/20 to 9/30/21:									
Average Monthly Benefit	\$	1,738	\$ 2,580	\$ 1,575	\$ 2,447	\$ 2,887	\$ 3,787	\$ 3,826	\$ 3,573
Average Final Average Salary		21,384	44,785	45,458	54,283	57,550	68,470	64,318	65,630
Number of Active Retirants		12	31	172	113	144	2,609	243	3,324
Period 10/1/21 to 9/30/22									
Average Monthly Benefit	\$	1,760	\$ 2,611	\$ 1,578	\$ 2,475	\$ 2,987	\$ 3,862	\$ 3,880	\$ 3,641
Average Final Average Salary		21,384	44,785	45,532	54,800	60,181	69,983	65,138	67,035
Number of Active Retirants		12	31	174	115	142	2,649	238	3,361
Period 10/1/22 to 9/30/23									
Average Monthly Benefit	\$	1,814	\$ 2,683	\$ 1,592	\$ 2,503	\$ 3,081	\$ 3,965	\$ 3,920	\$ 3,734
Average Final Average Salary		23,118	46,077	46,658	55,204	61,880	71,872	66,313	68,816
Number of Active Retirants		11	30	178	114	141	2,698	234	3,406

*Average monthly benefits shown are pension benefits.

Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

SCHEDULES OF AVERAGE BENEFIT PAYMENTS

SCHEDULE OF AVERAGE BENEFIT PAYMENTS – HEALTH*

Last Ten Years

Payment Periods		Credited Service (Years) as of September 30							Total
		0-5	5-10	10-15	15-20	20-25	25-30	30 +	
Period 10/1/13 to 9/30/14:									
Average Monthly Benefit	\$	1,454	\$ 2,393	\$ 1,550	\$ 2,077	\$ 3,001	\$ 3,474	\$ 3,645	\$ 3,217
Average Final Average Salary		14,124	35,421	38,186	45,084	47,839	59,214	60,250	54,560
Number of Active Retirants		8	27	115	94	686	1,454	256	2,640
Period 10/1/14 to 9/30/15:									
Average Monthly Benefit	\$	1,546	\$ 2,424	\$ 1,592	\$ 2,153	\$ 3,047	\$ 3,555	\$ 3,728	\$ 3,286
Average Final Average Salary		19,007	35,421	38,841	46,892	48,148	60,432	61,174	55,517
Number of Active Retirants		9	27	117	93	683	1,476	248	2,653
Period 10/1/15 to 9/30/16:									
Average Monthly Benefit	\$	1,653	\$ 2,501	\$ 1,591	\$ 2,234	\$ 3,107	\$ 3,636	\$ 3,775	\$ 3,353
Average Final Average Salary		19,007	36,820	39,558	49,068	48,779	61,782	61,350	56,611
Number of Active Retirants		9	28	122	99	669	1,510	243	2,680
Period 10/1/16 to 9/30/17:									
Average Monthly Benefit	\$	1,676	\$ 2,580	\$ 1,617	\$ 2,295	\$ 3,170	\$ 3,711	\$ 3,854	\$ 3,426
Average Final Average Salary		19,007	37,902	39,682	50,621	49,644	63,152	62,303	57,844
Number of Active Retirants		9	27	122	99	672	1,559	236	2,724
Period 10/1/17 to 9/30/18:									
Average Monthly Benefit	\$	1,750	\$ 2,717	\$ 1,636	\$ 2,361	\$ 3,215	\$ 3,807	\$ 3,909	\$ 3,512
Average Final Average Salary		21,316	40,630	39,834	50,988	50,078	65,257	62,705	59,437
Number of Active Retirants		8	25	123	97	666	1,630	230	2,779
Period 10/1/18 to 9/30/19:									
Average Monthly Benefit	\$	1,774	\$ 2,751	\$ 1,676	\$ 2,433	\$ 3,304	\$ 3,913	\$ 3,943	\$ 3,609
Average Final Average Salary		21,316	40,630	41,025	51,917	51,272	67,360	62,727	61,220
Number of Active Retirants		8	25	124	99	649	1,689	228	2,822
Period 10/1/19 to 9/30/20:									
Average Monthly Benefit	\$	1,798	\$ 2,752	\$ 1,728	\$ 2,471	\$ 3,371	\$ 4,035	\$ 3,993	\$ 3,715
Average Final Average Salary		21,316	39,848	52,002	52,002	2,249	70,087	62,974	63,357
Number of Active Retirants		8	24	97	97	645	1,764	226	2,885
Period 10/1/20 to 9/30/21									
Average Monthly Benefit	\$	1,890	\$ 2,847	\$ 1,709	\$ 2,526	\$ 3,440	\$ 4,130	\$ 4,062	\$ 3,802
Average Final Average Salary		22,894	41,288	43,303	53,174	53,362	71,977	63,813	65,086
Number of Active Retirants		7	23	126	96	647	1,827	216	2,942
Period 10/1/21 to 9/30/22									
Average Monthly Benefit	\$	1,915	\$ 2,881	\$ 1,745	\$ 2,563	\$ 3,534	\$ 4,215	\$ 4,125	\$ 3,885
Average Final Average Salary		22,894	41,288	44,353	54,161	54,880	73,371	64,725	66,504
Number of Active Retirants		7	23	128	97	638	1,851	211	2,955
Period 10/1/22 to 9/30/23									
Average Monthly Benefit	\$	2,025	\$ 2,947	\$ 1,773	\$ 2,574	\$ 3,624	\$ 4,331	\$ 4,188	\$ 3,988
Average Final Average Salary		26,323	42,043	44,995	54,122	56,247	75,449	65,629	68,308
Number of Active Retirants		6	24	128	96	642	1,894	207	2,997

* Average monthly benefits shown are pension benefits.

Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

SCHEDULES OF AVERAGE BENEFIT PAYMENTS

SCHEDULE OF AVERAGE BENEFIT PAYMENTS – DENTAL *

Last Ten Years

Payment Periods	Credited Service (Years) as of September 30							Total
	0-5	5-10	10-15	15-20	20-25	25-30	30+	
Period 10/1/13 to 9/30/14:								
Average Monthly Benefit	\$ 1,454	\$ 2,393	\$ 1,578	\$ 2,078	\$ 3,010	\$ 3,480	\$ 3,653	\$ 3,224
Average Final Average Salary	14,124	35,421	38,870	44,925	48,067	59,324	60,387	54,710
Number of Active Retirants	8	27	116	93	683	1,447	256	2,630
Period 10/1/14 to 9/30/15:								
Average Monthly Benefit	\$ 1,546	\$ 2,424	\$ 1,620	\$ 2,155	\$ 3,053	\$ 3,561	\$ 3,736	\$ 3,293
Average Final Average Salary	19,007	35,421	39,508	46,752	48,316	60,581	61,315	55,675
Number of Active Retirants	9	27	118	92	680	1,470	248	2,644
Period 10/1/15 to 9/30/16:								
Average Monthly Benefit	\$ 1,653	\$ 2,501	\$ 1,622	\$ 2,236	\$ 3,114	\$ 3,642	\$ 3,783	\$ 3,361
Average Final Average Salary	19,007	36,820	40,063	48,958	48,953	61,928	61,494	56,771
Number of Active Retirants	9	28	122	98	666	1,505	243	2,671
Period 10/1/16 to 9/30/17:								
Average Monthly Benefit	\$ 1,676	\$ 2,580	\$ 1,648	\$ 2,297	\$ 3,176	\$ 3,716	\$ 3,862	\$ 3,433
Average Final Average Salary	19,007	37,902	40,186	50,527	49,822	63,270	62,452	57,985
Number of Active Retirants	9	27	122	98	669	1,552	236	2,713
Period 10/1/17 to 9/30/18:								
Average Monthly Benefit	\$ 1,750	\$ 2,717	\$ 1,667	\$ 2,364	\$ 3,220	\$ 3,812	\$ 3,917	\$ 3,518
Average Final Average Salary	21,316	40,630	40,334	50,895	50,224	65,374	62,858	59,579
Number of Active Retirants	8	25	123	96	663	1,627	230	2,772
Period 10/1/18 to 9/30/19								
Average Monthly Benefit	\$ 1,774	\$ 2,751	\$ 1,707	\$ 2,436	\$ 3,308	\$ 3,915	\$ 3,951	\$ 3,614
Average Final Average Salary	21,316	4,063	41,521	51,836	51,388	67,415	62,881	61,312
Number of Active Retirants	8	25	124	98	647	1,685	228	2,815
Period 10/1/19 to 9/30/20								
Average Monthly Benefit	\$ 1,798	\$ 2,752	\$ 1,728	\$ 2,471	\$ 3,371	\$ 4,035	\$ 3,993	\$ 3,715
Average Final Average Salary	21,316	39,848	42,247	52,002	52,249	70,087	62,974	63,357
Number of Active Retirants	8	24	124	97	645	1,764	226	2,888
Period 10/1/20 to 9/30/21								
Average Monthly Benefit	\$ 1,890	\$ 2,847	\$ 1,746	\$ 2,529	\$ 3,441	\$ 4,133	\$ 4,062	\$ 3,805
Average Final Average Salary	22,894	41,288	43,706	53,104	53,388	72,065	63,803	65,141
Number of Active Retirants	7	23	127	95	651	1,827	217	2,947
Period 10/1/21 to 9/30/22								
Average Monthly Benefit	\$ 1,915	\$ 2,881	\$ 1,725	\$ 2,556	\$ 3,534	\$ 4,217	\$ 4,125	\$ 3,884
Average Final Average Salary	22,894	41,288	43,598	53,643	54,837	73,404	64,711	66,443
Number of Active Retirants	7	23	128	97	644	1,852	212	2,963
Period 10/1/22 to 9/30/23								
Average Monthly Benefit	\$ 2,025	\$ 2,947	\$ 1,753	\$ 2,570	\$ 3,620	\$ 4,333	\$ 4,188	\$ 3,987
Average Final Average Salary	26,323	42,043	44,239	53,748	56,131	75,473	65,610	68,237
Number of Active Retirants	6	24	128	97	648	1,900	208	3,011

*Average monthly benefits shown are pension benefits.

Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

SCHEDULES OF AVERAGE BENEFIT PAYMENTS

SCHEDULE OF AVERAGE BENEFIT PAYMENTS – VISION*

Last Ten Years

Payment Periods	Credited Service (Years) as of September 30							Total
	0-5	5-10	10-15	15-20	20-25	25-30	30 +	
Period 10/1/13 to 9/30/14								
Average Monthly Benefit	\$ 1,454	\$ 2,393	\$ 1,580	\$ 2,078	\$ 3,010	\$ 3,483	\$ 3,653	\$ 3,227
Average Final Average Salary	14,124	35,421	39,119	44,925	48,043	59,417	60,387	54,786
Number of Active Retirants	8	27	115	93	683	1,455	256	2,637
Period 10/1/14 to 9/30/15								
Average Monthly Benefit	\$ 1,546	\$ 2,424	\$ 1,621	\$ 2,155	\$ 3,055	\$ 3,564	\$ 3,736	\$ 3,296
Average Final Average Salary	19,007	35,421	39,758	46,752	48,347	60,650	61,315	55,754
Number of Active Retirants	9	27	117	92	679	1,477	248	2,649
Period 10/1/15 to 9/30/16								
Average Monthly Benefit	\$ 1,653	\$ 2,501	\$ 1,623	\$ 2,236	\$ 3,116	\$ 3,645	\$ 3,783	\$ 3,364
Average Final Average Salary	19,007	36,820	40,309	48,958	48,986	62,000	61,494	56,852
Number of Active Retirants	9	28	121	98	665	1,511	243	2,675
Period 10/1/16 to 9/30/17								
Average Monthly Benefit	\$ 1,676	\$ 2,580	\$ 1,650	\$ 2,297	\$ 3,178	\$ 3,719	\$ 3,862	\$ 3,437
Average Final Average Salary	19,007	37,902	40,434	50,527	49,856	63,335	62,452	58,063
Number of Active Retirants	9	27	121	98	668	1,558	236	2,717
Period 10/1/17 to 9/30/18								
Average Monthly Benefit	\$ 1,750	\$ 2,717	\$ 1,668	\$ 2,364	\$ 3,220	\$ 3,813	\$ 3,917	\$ 3,520
Average Final Average Salary	21,316	40,630	40,581	50,895	50,188	65,409	62,858	59,624
Number of Active Retirants	8	25	122	96	661	1,631	230	2,773
Period 10/1/18 to 9/30/19								
Average Monthly Benefit	\$ 1,774	\$ 2,751	\$ 1,707	\$ 2,436	\$ 3,308	\$ 3,917	\$ 3,951	\$ 3,615
Average Final Average Salary	21,316	40,630	41,521	51,836	51,355	67,443	62,881	61,337
Number of Active Retirants	8	25	124	98	645	1,689	228	2,817
Period 10/1/19 to 9/30/20								
Average Monthly Benefit	\$ 1,798	\$ 2,752	\$ 1,728	\$ 2,471	\$ 3,371	\$ 4,035	\$ 3,993	\$ 3,716
Average Final Average Salary	21,316	39,848	42,247	52,002	52,218	70,099	62,974	63,370
Number of Active Retirants	8	24	124	97	643	1,766	226	2,888
Period 10/1/20 to 9/30/21								
Average Monthly Benefit	\$ 1,890	\$ 2,847	\$ 1,746	\$ 2,529	\$ 3,441	\$ 4,133	\$ 4,062	\$ 3,806
Average Final Average Salary	22,894	41,288	43,706	53,104	53,361	72,076	63,803	65,154
Number of Active Retirants	7	23	127	95	649	1,829	217	2,947
Period 10/1/21 to 9/30/22								
Average Monthly Benefit	\$ 1,915	\$ 2,881	\$ 1,725	\$ 2,556	\$ 3,534	\$ 4,216	\$ 4,125	\$ 3,884
Average Final Average Salary	22,894	41,288	43,598	53,643	54,815	73,373	64,711	66,429
Number of Active Retirants	7	23	128	97	642	1,853	212	2,962
Period 10/1/22 to 9/30/23								
Average Monthly Benefit	\$ 2,025	\$ 2,947	\$ 1,753	\$ 2,570	\$ 3,620	\$ 4,332	\$ 4,188	\$ 3,987
Average Final Average Salary	26,323	42,043	44,239	53,748	56,112	75,449	65,610	68,226
Number of Active Retirants	6	24	128	97	646	1,900	208	3,009

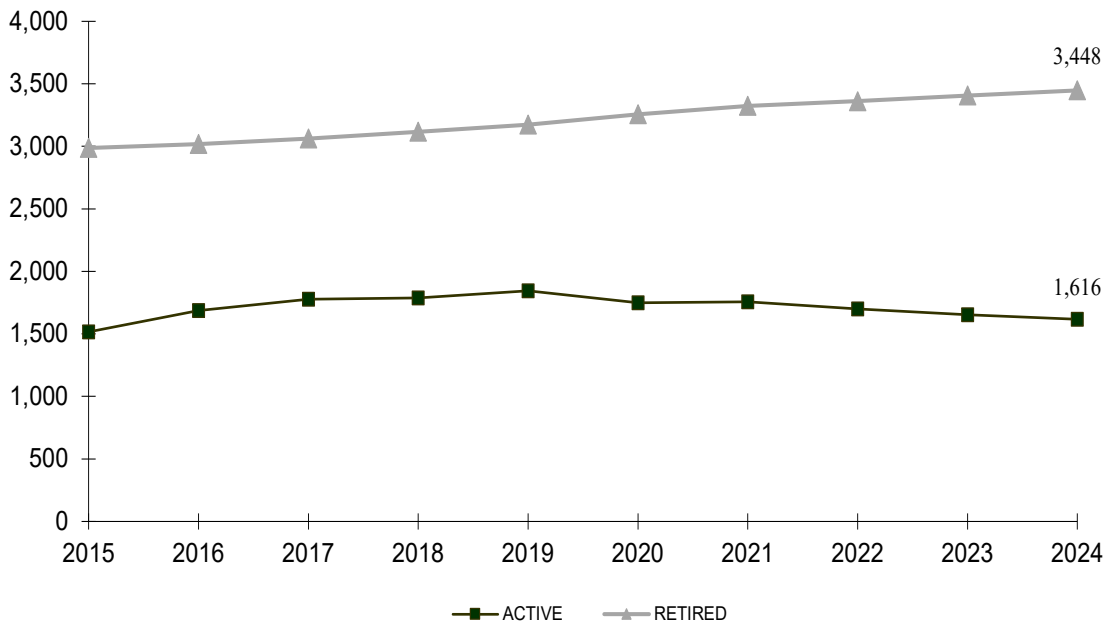
*Average monthly benefits shown are pension benefits

Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

TEN YEAR HISTORY OF MEMBERSHIP

Fiscal Year Ended September 30, 2024



Source: Gabriel, Roeder, Smith & Co.

STATISTICAL SECTION

TEN YEAR HISTORY OF MEMBERSHIP

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ACKNOWLEDGMENTS

ACKNOWLEDGMENTS

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This report may be viewed online at: www.michigan.gov/ors