

**Michigan Public School Employees' Retirement System**  
A Pension and Other Employee Benefit Trust Fund of the State of Michigan

**Comprehensive Annual Financial Report  
for the Fiscal Year Ended September 30, 2015**



**M P S E R S**

**Prepared by:  
Financial Services  
for  
Office of Retirement Services  
P.O. Box 30171  
Lansing, Michigan 48909-7671  
517-322-5103  
1-800-381-5111**

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# INTRODUCTORY SECTION

Certificate of Achievement  
Public Pension Standards Award  
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Organization Chart

# ***INTRODUCTORY SECTION***

## **Certificate of Achievement**



Government Finance Officers Association

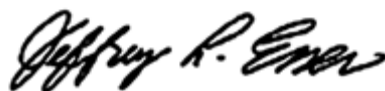
### **Certificate of Achievement for Excellence in Financial Reporting**

Presented to

### **Michigan Public School Employees' Retirement System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**September 30, 2014**



Executive Director/CEO

**Public Pension Standards Award**



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2015***

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 black ink, reading 'Alan H. Winkle'. The signature is written in a cursive, flowing style.

Alan H. Winkle  
Program Administrator

# INTRODUCTORY SECTION

## Letter of Transmittal

Michigan Public School Employees'  
Retirement System  
P.O. Box 30171  
Lansing, Michigan 48909-7671  
Telephone 517- 322-5103  
Outside Lansing 1-800-381-5111

### STATE OF MICHIGAN

RICK SNYDER, Governor

## DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET

December 30, 2015

The Honorable Rick Snyder  
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 comprehensive annual financial report of the Michigan Public School Employees' Retirement System (System) for fiscal year 2015.

### INTRODUCTION TO REPORT

The System was established by legislation under Public Act 136 of 1945, 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 of this report. The purpose of the System is to provide benefits for all public school employees. The services performed by ORS staff provide benefits to members.

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

# INTRODUCTORY SECTION

## **Letter of Transmittal (continued)**

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.

Statute requires that an annual actuarial valuation be conducted. The purpose of the valuation is to evaluate the mortality, service, compensation and other financial experience of the System and to recommend employer-funding rates for the subsequent year. The annual actuarial valuation was completed by Gabriel Roeder Smith & Company for the fiscal year ended September 30, 2014. Actuarial certification and supporting statistics are included in the Actuarial Section of 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**

In accordance with Public Act 300 of 1980, on October 31, 1980, the Public School Employees' Chapter I Retirement Fund merged with the Public School Employees' Chapter II Retirement Fund to establish the Public School Employees' Retirement System. Public Acts 136 of 1945 and 259 of 1974, respectively, created the two original funds. A twelve-member board governs administrative policy.

Employee contributions, employer contributions, and investment earnings provide financing for the System. Under Public Act 91 of 1985, employees may contribute additional amounts into a "member investment plan." Public Act 75 of 2010 established a new Pension Plus Plan which provides all individuals hired on or after July 1, 2010, with a combined Defined Benefit and Defined Contribution benefit structure.

## **ECONOMIC CONDITIONS AND OUTLOOK**

Despite challenging economic times, the System continues to show steady performance over the long-term.

### ***Investments***

The State Treasurer 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 return rate. The investment activity for the year produced a total rate of return on the portfolio of 2.6% for the Pension Plan and 2.5% for the Other Postemployment Benefits (OPEB) Plan. For the last five years, the System has experienced an annualized rate of return of 10.0% for the Pension 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 the System is

# INTRODUCTORY SECTION

## Letter of Transmittal (continued)

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 were \$39.6 billion and \$66.1 billion, respectively, resulting in a funded ratio of 59.9% at September 30, 2014. A historical perspective of funding levels for the Pension Plan is presented on the Schedule of Funding Progress in the Statistical Section of this report.

Postemployment Benefits - Prefunding for postemployment benefits began in fiscal year 2013. As of September 30, 2014, the actuarial value of the assets and actuarial accrued liability for postemployment benefits were \$3.0 billion and \$14.2 billion, respectively, resulting in a funded ratio of 21.1%. GASB Statement No. 43 (implemented in fiscal year 2007) does not require retroactive application of the reporting changes. Therefore, only nine valuation years are presented on the Schedule of Funding Progress in the Required Supplementary Information of the Financial Section in this report.

### **MAJOR GOALS ACCOMPLISHED**

We Moved! - During June and July, ORS relocated from the General Office Building to the newly renovated Stevens T. Mason Building in the Capitol Complex, downtown Lansing. Staff, vendors and the DTMB Move Team coordinated to make the move efficient, low-stress, and with minimal interruption of service for our customers.

ORS Launches Twitter and YouTube Channel - The next steps in the social media plan for ORS included the launch of the @MichiganORS Twitter account and the ORS YouTube channel. @MichiganORS has now passed 1,000 followers and the YouTube channel now hosts seven videos with over 5,000 views.

Business Process Reengineering (BPR) Deployed - The Business Process Reengineering (BPR) project went live on Monday, September 14. BPR deployed enhancements to the Employer Reporting website, which is how reporting units submit their retirement reports to ORS. The enhancements will save hours of work for DTMB Financial Services and ORS staff, reporting units and our members. The enhancements include a Defined Contribution (DC) component that brings DC records into our retirement database and transfers member’s contributions to Voya Financial® sooner. In addition to the DC components, reporting units have an automated notification system and tools to help them report and make accurate and on-time payments.

miAccount Surpasses 400,000 Registered Users - ORS recently surpassed the milestone of 400,000 registered miAccount users. miAccount is our online portal that connects members with their retirement account information and also allows members to update their personal information.

Address Processes Upgraded - Upgrades were made to systems to allow up to three addresses for members (instead of one). The physical address will be where the member permanently resides including the county that the member resides in based on the member’s zip code. The mailing address will be where the member wants their mail sent to, which includes a PO Box, or their “snowbird” address for the winter months. The legal address will store the address of a member’s power of attorney (POA), guardian, or conservator.

Insurance Billing Auto-Allocation Implemented - An automated batch process was implemented in January 2015 to automatically allocate insurance bills to the appropriate receivable. This eliminates ORS’s need for manual processing of all insurance payments deposited by Financial Services. Instead, ORS now only works those payments identified on an exception report. On the first run, over 1,400 payments were automatically allocated.



# INTRODUCTORY SECTION

## Letter of Transmittal (continued)

MPERS Celebrates 100 Years - This year the Michigan Public School Employees' Retirement System (MPERS) turned 100 years old. Public Act 174 of 1915 established the Michigan Teachers' Retirement Law. It became MPERS in 1945, and the Detroit Public School Employees' Retirement System began participating in 1980.

ORS Helps Public School Employers with GASB 68 Compliance - In July, ORS rolled out a comprehensive guide to complying with new regulations from the Governmental Accounting Standards Board (GASB), known as GASB Statement No. 68. Although all retirement systems must comply, the rules for cost-sharing multiple-employer systems like the MPERS are uniquely challenging and substantial. Informational presentations were made at Michigan School Business Officials and the Michigan Association of Certified Public Accountants conferences throughout the state. The conferences provided participants with in-depth reporting recommendations and background on GASB's new standards.

Educating Reporting Units on Changes Due to GASB 68 - The GASB has established new accounting and financial reporting standards that require, for the first time, that the net pension liability is reported in financial statements for governments across the country, including the participating employers in the MPERS effective for reporting unit's fiscal year ending on June 30, 2015. ORS staff has provided information and tools to reporting units on how this change affects them. This communication will continue as changes are phased in.

New Hire Retirement Plan Election Materials Improved - New public school employees have an important decision to make: they have 75 days from their first payroll date to decide if they want to stay in the Pension Plus retirement plan or switch to the Defined Contribution plan. In an effort to help these new employees make informed, educated choices, ORS worked with Voya Financial® to revamp the election materials. These materials include a New Hire Retirement Plan Election brochure and a corresponding eBook available at [www.PickMiPlan.org](http://www.PickMiPlan.org). A supply of the brochures was sent to all public school reporting units.

Insurance Communications Improved - ORS undertook an initiative to improve insurance communications with customers. This project included several parts. First, website improvements to the insurance section include clearer, searchable headings, more links to relevant content, new graphics, and better organized information. Second, ORS coordinated with Blue Cross Blue Shield of MI to improve communication on the verification of coverage process. Third, personalized, timely and targeted insurance rate information was mailed out in September, earlier than in past years.

2016-2017 Strategic Initiatives Package - The MPERS Board approved a two-year strategic initiative package that will save MPERS an estimated cost goal of \$50 million over the course of two years. The mission for the strategic initiatives package is to (1) maintain a quality health care plan that is affordable to the members, the schools, and MPERS, (2) measurably improve the quality of care enjoyed by members, and (3) limit the rate of cost growth to the compound rate of inflation and real economic growth. The package implements cost sharing, cost reduction, and cost avoidance strategies to ensure a sustainable plan for the members' future.

MPERS Prescription Drug Plan Implemented the SECURE Program - The MPERS implemented the Safe & Effective Compound Use Reassurance Effort (SECURE) program in April of 2015. This initiative combats and manages the rising cost and utilization of compound drugs. A compound drug is the custom mixing of two or more drugs for an individual. Many ingredients used in compound drugs are not approved by the Food and Drug Administration. The SECURE initiative is estimated to continue to reduce the costs related to compound drugs by 70%. ORS has identified savings associated with this program in FY 2015 to be over \$850,000. This initiative is extremely important as it improves quality and safety for the members, as well as lowered costs to the ORS.

## HONORS

**Public Pension Standards Award** - ORS has recently been awarded the 2015 Public Pension Coordinating Council Standards Award from the Public Pension Coordinating Councils Standards Program (PPCC) for both funding and administration. ORS has received this award every year since 2004. The PPCC Standards reflect expectations for public retirement system management and administration, and serve as a benchmark for all defined benefit public plans to be measured.

# INTRODUCTORY SECTION

## Letter of Transmittal (continued)

**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 2014 Comprehensive Annual Financial Report (CAFR). This marks the 24th consecutive year ORS has received this prestigious award.

### *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 Michigan Public School Employees' Retirement System. Their cooperation contributes significantly to the success of the System.

Sincerely,



David B. Behen, Director  
Department of Technology, Management & Budget



Kerrie Vanden Bosch, Director  
Office of Retirement Services

# INTRODUCTORY SECTION

## Administrative Organization

### **Retirement Board Members\***

Ivy Bailey  
Active Classroom Teacher  
Term Expired March 30, 2012

Scott Koenigsknecht, Chair  
Active Superintendent  
Term Expires March 30, 2017

Mike Engle  
Active Classroom Teacher  
Term Expires March 30, 2017

Timothy Raymer  
Retired Finance/Operations  
Term Expires March 30, 2019

Stephen Epstein  
General Public - Investments  
Term Expires March 30, 2016

Michael Ringuette, Vice Chair  
General Public -  
Actuary/Health Insurance  
Term Expires March 30, 2018

Timothy Nelson  
Community College Trustee  
Term Expires March 30, 2016

Kevin Philipps  
Active Finance/Operations,  
Non-Superintendent  
Term Expires March 30, 2016

Charles Christner  
Retired Teacher  
Term Expires March 30, 2018

Christine Veld  
Retired Non-Certified Support  
Term Expires March 30, 2017

Larry Ward  
Reporting Unit Board of  
Control  
Term Expires March 30, 2016

Brian Whiston  
Ex-officio Member  
Representing State  
Superintendent of Education

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

### **Administrative Organization**

#### **Department of Technology, Management & Budget**

**Office of Retirement Services**  
**P.O. Box 30171**  
**Lansing, Michigan 48909-7671**  
**517-322-5103**  
**1-800-381-5111**

### **Advisors and Consultants**

**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**  
Nick A. Khouri  
State Treasurer  
State of Michigan

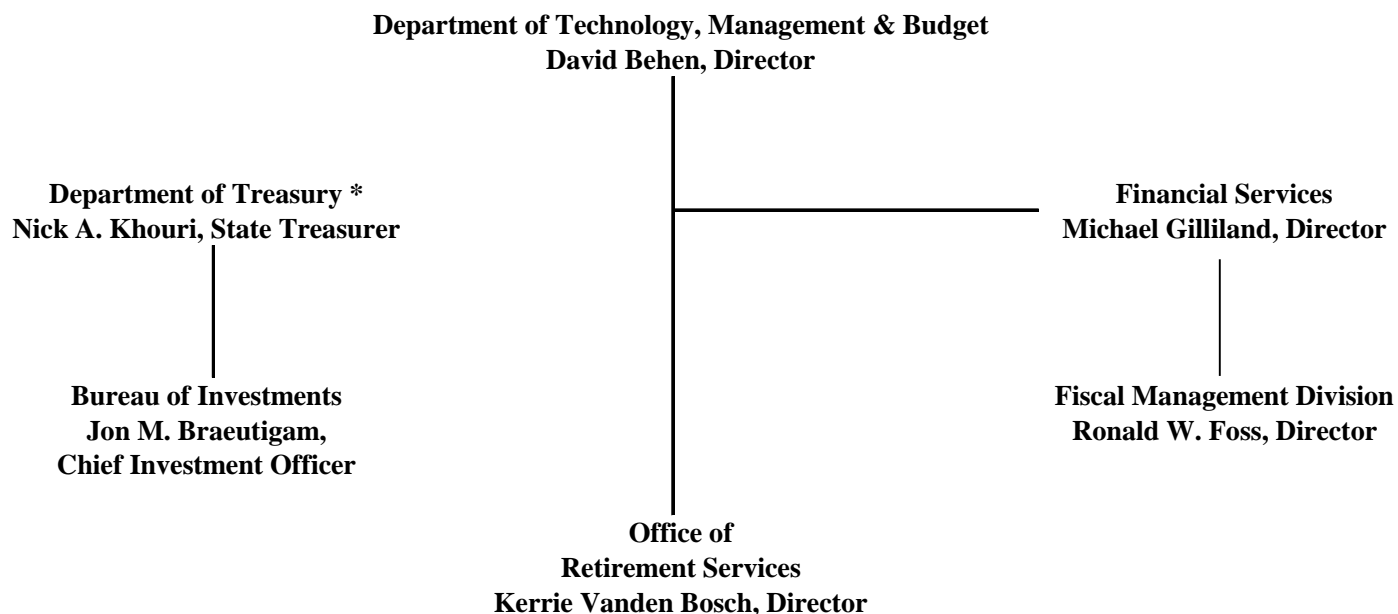
**Legal Advisor**  
Bill Schuette  
Attorney General  
State of Michigan

**Investment Performance  
Measurement**  
State Street Corporation  
State Street Investment Analytics  
Boston, MA

# **INTRODUCTORY SECTION**

## **Administrative Organization (continued)**

### **Organization Chart**



**\*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 and Schedule of Investment Commissions, for information regarding the investment fees and commissions paid as well as investment professionals utilized by the System.**

# 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



Doug A. Ringler, CPA, CIA  
Auditor General

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

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

Mr. Scott Koenigsknecht, Chair  
Michigan Public School Employees' Retirement System Board  
and  
Mr. David B. Behen, Director  
Department of Technology, Management, and Budget  
and  
Ms. Kerrie L. Vanden Bosch, Director  
Office of Retirement Services

Dear Mr. Koenigsknecht, Mr. Behen, and Ms. Vanden Bosch:

**Report on the Financial Statements**

We have audited the accompanying financial statements of the Michigan Public School Employees' Retirement System as of and for the fiscal year ended September 30, 2015 and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

***Management's Responsibility for the Financial Statements***

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

***Auditor's Responsibility***

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

***Opinion***

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the fiduciary net position of the Michigan Public School Employees' Retirement System as of September 30, 2015 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.

Mr. Scott Koenigsknecht, Chair  
Mr. David B. Behen, Director  
Ms. Kerrie L. Vanden Bosch, Director  
Page 2

### ***Other Matters***

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 16 through 19 and the schedule of funding progress - other postemployment benefit plan, schedule of changes in net pension liability, schedule of net pension liability, schedules of contributions, schedule of investment returns, and related note on pages 46 through 50 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to 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. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

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 and the introductory, investment, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supporting schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such 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.

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

#### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we will also issue a report 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 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 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.

Sincerely,



Doug Ringler  
Auditor General  
December 30, 2015

# FINANCIAL SECTION

## Management's Discussion and Analysis

Our discussion and analysis of the Michigan Public School Employees' Retirement System's (System) financial performance provides an overview of the System's financial activities for the fiscal year ended September 30, 2015. Please read it in conjunction with the transmittal letter in the Introductory Section on page 6 and the basic financial statements, which follow this discussion.

### FINANCIAL HIGHLIGHTS

- System assets exceeded liabilities at the close of fiscal year 2015 by \$46.5 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 \$4.7 billion, which are comprised primarily of contributions of \$3.7 billion and investment gains of \$1.0 billion.
- Deductions increased over the prior year from \$5.2 billion to \$5.5 billion or 5.8%. This increase is the result of increased pension and OPEB benefit payments, contribution refunds, and administrative expenses.

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

This Comprehensive Annual Financial Report (CAFR) 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 Net Pension Liability (page 48), Schedule of Funding Progress – Other Postemployment Benefit Plan (page 46), and Schedules of Contributions (pages 48-49) to determine whether the System is becoming financially stronger or weaker.



# FINANCIAL SECTION

## Management's Discussion and Analysis (continued)

### FINANCIAL ANALYSIS

System total assets as of September 30, 2015, were \$49.4 billion and were mostly comprised of cash, investments, and contributions due from employers. Total assets decreased \$1.4 billion or 2.7% between fiscal years 2014 and 2015, due primarily to lower net investment gains.

Total liabilities as of September 30, 2015, were \$3.0 billion and were comprised of warrants outstanding, accounts payable, unearned revenue, and obligations under securities lending. Total liabilities decreased \$0.5 billion or 15.6% between fiscal years 2014 and 2015 primarily due to decreased obligations under securities lending.

System assets exceeded its liabilities at the close of fiscal year 2015 by \$46.5 billion. Total fiduciary net position restricted for pension and OPEB decreased \$0.8 billion or 1.8% from the previous year, primarily due to net investment gains.

### Plan Fiduciary Net Position (in thousands)

	<u>2015</u>	<u>2014</u>	<u>Increase (Decrease)</u>
<b>Assets</b>			
Equity in			
common cash	\$ 163,640	\$ 246,675	(33.7) %
Receivables	410,520	370,268	10.9
Investments	46,140,381	47,060,268	(2.0)
Securities			
lending collateral	2,720,434	3,149,098	(13.6)
<b>Total Assets</b>	<u>49,434,974</u>	<u>50,826,309</u>	<u>(2.7)</u>
<b>Liabilities</b>			
Warrants outstanding	630	605	4.1
Unearned revenue	3,153	2,590	21.8
Accounts payable and			
other accrued liabilities	245,499	256,791	(4.4)
Obligations under			
securities lending	2,720,029	3,258,914	(16.5)
<b>Total Liabilities</b>	<u>2,969,311</u>	<u>3,518,899</u>	<u>(15.6)</u>
<b>Net Position Restricted for</b>			
<b>    Pension Benefits and OPEB</b>	<u>\$ 46,465,663</u>	<u>\$ 47,307,410</u>	<u>(1.8) %</u>

# **FINANCIAL SECTION**

## **Management's Discussion and Analysis (continued)**

### **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 2015 totaled approximately \$4.7 billion.

Total additions for fiscal year 2015 decreased approximately \$5.2 billion or 52.7% from those of fiscal year 2014 due primarily to decreased net investment income. Total contributions increased between fiscal years 2014 and 2015 by \$317.8 million or 9.4%, while net investment income decreased \$5.6 billion or 84.9%. The Investment Section of this report reviews the results of investment activity for fiscal year 2015.

### **DEDUCTIONS FROM PLAN FIDUCIARY NET POSITION**

The primary expenses of the System include the payment of pension benefits to members and beneficiaries, payment for health, dental and vision benefits, refund of contributions, and the cost of administering the System. Total deductions for fiscal year 2015 were \$5.5 billion, an increase of 5.8% over fiscal year 2014 deductions.

The health, dental and vision care expenses during the year increased by \$31.7 million or 4.7%, from \$669.2 million to \$700.9 million. The payment of pension benefits increased by \$142.6 million or 3.2% between fiscal years 2014 and 2015. In fiscal year 2015, the increase in pension benefit expenses resulted from an increase in retirees (3,139) and an increase in benefit payments to retirees. Administrative expenses increased by \$20.6 million or 13.1% between fiscal years 2014 and 2015, primarily due to increased health administrative fees. Refunds and transfers to other systems increased by \$108.1 million or 373.9% between fiscal years 2014 and 2015, due to a refund of overpaid university employer contributions.

# FINANCIAL SECTION

## Management's Discussion and Analysis (continued)

### Changes in Plan Fiduciary Net Position (in thousands)

	<u>2015</u>	<u>2014</u>	<u>Increase (Decrease)</u>
<b>Additions</b>			
Member contributions	\$ 777,353	\$ 796,288	(2.4) %
Employer contributions	2,937,029	2,600,407	12.9
Other governmental contributions	213	138	54.3
Net investment income (loss)	989,727	6,543,513	(84.9)
Miscellaneous income	646	2,793	(76.9)
<b>Total additions</b>	<u>4,704,969</u>	<u>9,943,138</u>	<u>(52.7)</u>
<b>Deductions</b>			
Pension benefits	4,530,916	4,388,329	3.2
Health care benefits	700,904	669,240	4.7
Refunds and transfers to other systems	136,998	28,910	373.9
Administrative and other expenses	177,898	157,335	13.1
<b>Total deductions</b>	<u>5,546,716</u>	<u>5,243,813</u>	<u>5.8</u>
<b>Net Increase (Decrease) in Net Position</b>	(841,747)	4,699,325	(117.9)
<b>Net Position Restricted for Pension Benefits and OPEB:</b>			
<b>Beginning of Year</b>	<u>47,307,410</u>	<u>42,608,084</u>	<u>11.0</u>
<b>End of Year</b>	<u>\$ 46,465,663</u>	<u>\$ 47,307,410</u>	<u>(1.8) %</u>

### RETIREMENT SYSTEM AS A WHOLE

The System's overall Fiduciary Net Position experienced a decrease in fiscal year 2015. The System's rate of return for the Pension Plan's investments decreased an overall 13.0% from a 15.6% return in fiscal year 2014 to a 2.6% return during fiscal year 2015. The System's rate of return for the OPEB Plan's investments decreased an overall 12.9% from a 15.4% return in fiscal year 2014 to a 2.5% return during fiscal year 2015. 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, P.O. Box 30171, Lansing, MI 48909-7671.

# FINANCIAL SECTION

## Statement of Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position

As of September 30, 2015 (in thousands)

	Pension Plan	OPEB Plan	Total
<b>Assets:</b>			
Equity in common cash	\$ 111,196	\$ 52,443	\$ 163,640
Receivables:			
Amounts due from members	2,722		2,722
Amounts due from employers	180,228	19,668	199,896
Amounts due from other		77,922	77,922
Amounts due from employer long term	67,526		67,526
Amounts due from other long term		56,768	56,768
Interest and dividends	5,294	391	5,684
Total receivables	255,770	154,749	410,520
Investments:			
Short term investment pools	1,678,301	673,164	2,351,465
Fixed income pools	5,145,832	438,623	5,584,455
Domestic equity pools	11,785,255	1,007,428	12,792,682
Real estate and infrastructure pools	4,265,411	364,613	4,630,024
Private equity pools	7,113,518	607,867	7,721,385
International equity pools	5,823,675	497,714	6,321,390
Absolute return pools	6,208,387	530,593	6,738,980
Total investments	42,020,379	4,120,002	46,140,381
Securities lending collateral	2,509,398	211,036	2,720,434
<b>Total assets</b>	<b>44,896,743</b>	<b>4,538,231</b>	<b>49,434,974</b>
<b>Liabilities:</b>			
Warrants outstanding	627	2	630
Unearned revenue	3,153		3,153
Accounts payable and other accrued liabilities	1,577	243,922	245,499
Obligations under securities lending	2,509,025	211,004	2,720,029
<b>Total liabilities</b>	<b>2,514,382</b>	<b>454,928</b>	<b>2,969,311</b>
<b>Net Position Restricted for Pension Benefits and OPEB:</b>	<b>\$ 42,382,361</b>	<b>\$ 4,083,302</b>	<b>\$ 46,465,663</b>

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

# FINANCIAL SECTION

## Statement of Changes in Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position

For Fiscal Year Ended September 30, 2015 (in thousands)

	Pension Plan	OPEB Plan	Total
<b>Additions:</b>			
Contributions:			
Member contributions	\$ 395,722	\$ 381,631	\$ 777,353
Employer contributions:			
Colleges, universities and federal	165,740	86,203	251,943
School districts and other	1,801,870	883,216	2,685,086
Other governmental contributions		213	213
Total contributions	2,363,333	1,351,262	3,714,595
Investment income (loss):			
Net increase (decrease) in fair value of investments	79,836	(12,759)	67,077
Interest, dividends, and other	933,155	70,650	1,003,805
Investment expenses:			
Real estate operating expenses	(871)	(68)	(939)
Other investment expenses	(126,785)	(9,647)	(136,432)
Securities lending activities:			
Securities lending income	73,370	5,692	79,062
Securities lending expenses	(21,043)	(1,804)	(22,846)
Net investment income (loss)	937,663	52,064	989,727
Miscellaneous income	480	166	646
<b>Total additions</b>	<b>3,301,476</b>	<b>1,403,493</b>	<b>4,704,969</b>
<b>Deductions:</b>			
Benefits paid to plan members and beneficiaries:			
Retirement benefits	4,530,915	1	4,530,916
Health benefits		617,492	617,492
Dental/vision benefits		83,411	83,411
Refunds of contributions	136,901	96	136,997
Transfers to other systems	1		1
Administrative and other expenses	24,487	153,411	177,898
<b>Total deductions</b>	<b>4,692,304</b>	<b>854,411</b>	<b>5,546,716</b>
<b>Net Increase (Decrease) in Net Position</b>	<b>(1,390,828)</b>	<b>549,081</b>	<b>(841,747)</b>
<b>Net Position Restricted for Pension Benefits and OPEB:</b>			
<b>Beginning of Year</b>	<b>43,773,189</b>	<b>3,534,221</b>	<b>47,307,410</b>
<b>End of Year</b>	<b>\$ 42,382,361</b>	<b>\$ 4,083,302</b>	<b>\$ 46,465,663</b>

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

# **FINANCIAL SECTION**

## **Notes to Basic Financial Statements September 30, 2015**

### **NOTE 1 - PLAN DESCRIPTION**

#### **ORGANIZATION**

The Michigan Public School Employees' Retirement System (System) is a cost-sharing, multiple employer, state-wide, defined benefit public employee retirement plan governed by the State of Michigan (State) originally created under Public Act 136 of 1945, recodified and currently operating under the provisions of Public Act 300 of 1980, as amended. Section 25 of this act establishes the board's authority to promulgate or amend the provisions of the System. The board consists of twelve members – eleven appointed by the Governor and the State Superintendent of Instruction, who serves as an ex-officio member. The Governor appointed board members consist of:

- Two active classroom teachers or other certified school personnel.
- One active member or retirant from a non-certified support position.
- One active school system superintendent.
- One active finance or operations (non-superintendent) member.
- One retirant from a classroom teaching position.
- One retirant from a finance or operations management position.
- One administrator or trustee of a community college that is a reporting unit of the System.
- Two from the general public, one with health insurance or actuarial science experience and one with institutional investment experience.
- One elected member of a reporting unit's board of control.

The System's pension plan was established by the State to provide retirement, survivor and disability benefits to public school employees. In addition, the System's health plan provides all retirees with the option of receiving health, prescription drug, dental and vision coverage under the Michigan Public School Employees' Retirement Act. There are 680 participating employers. A list of employers is provided in the Statistical Section. The System is a qualified pension trust fund under section 401(a) of the Internal Revenue Code. By statute, employees of K-12 public school districts, public school academies, district libraries, tax-supported community colleges and seven universities may be members. The seven universities are: Eastern Michigan, Central Michigan, Northern Michigan, Western Michigan, Ferris State, Michigan Technological and Lake Superior State. Employees, who first become employed by one of the seven universities on or after January 1, 1996, become members of an alternative plan.

The System's financial statements are included as a pension and other employee benefit trust fund in the State of Michigan Comprehensive Annual Financial Report.

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

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### MEMBERSHIP

At September 30, 2015, the System's membership consisted of the following:

Inactive plan members or their beneficiaries currently receiving benefits:	
Regular benefits	184,496
Survivor benefits	16,960
Disability benefits	<u>6,195</u>
<b>Total</b>	<u>207,651</u>
 Inactive plan members entitled to but not yet receiving benefits:	
	<u>17,445</u>
 Active plan members:	
Vested	106,671
Non-vested	<u>104,303</u>
<b>Total</b>	<u>210,974</u>
 <b>Total plan members</b>	<u><u>436,070</u></u>

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

#### **Health, Dental and Vision Plan**

Eligible participants	204,974
Participants receiving benefits:	
Health	149,741
Dental/Vision	162,505

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### BENEFIT PROVISIONS - PENSION

#### *Introduction*

Benefit provisions of the defined benefit pension plan are established by State statute, which may be amended. Public Act 300 of 1980, as amended, establishes eligibility and benefit provisions for the defined benefit (DB) pension plan. Retirement benefits for DB plan members are determined by final average compensation and years of service. DB members are eligible to receive a monthly benefit when they meet certain age and service requirements. The System also provides disability and survivor benefits to DB plan members.

A DB member or Pension Plus plan member who leaves Michigan public school employment may request a refund of his or her member contributions to the retirement system account. A refund cancels a former member's rights to future benefits. However, returning members who previously received a refund of their contributions may reinstate their service through repayment of the refund upon satisfaction of certain requirements.

#### *Pension Reform 2010*

On May 19, 2010, the Governor signed Public Act 75 of 2010 into law. As a result, any member of the Michigan Public School Employees' Retirement System (MPERS) who became a member of MPERS after June 30, 2010 is a Pension Plus member. Pension Plus is a hybrid plan that contains a pension component with an employee contribution (graded, up to 6.4% of salary) and a flexible and transferable defined contribution (DC) tax-deferred investment account that earns an employer match of 50% (up to 1% of salary) on employee contributions. Retirement benefits for Pension Plus members are determined by final average compensation and years of service. Disability and survivor benefits are available to Pension Plus members.

#### *Pension Reform 2012*

On September 4, 2012, the Governor signed Public Act 300 of 2012 into law. The legislation grants all active members who first became a member before July 1, 2010 and who earned service credit in the 12 months ending September 3, 2012, or were on an approved professional services or military leave of absence on September 3, 2012, a voluntary election regarding their pension. Any changes to a member's pension are effective as of the member's *transition date*, which is defined as the first day of the pay period that begins on or after February 1, 2013.

Under the reform, members voluntarily chose to increase, maintain, or stop their contributions to the pension fund.

Option 1 members voluntarily elected to increase their contributions to the pension fund as noted below, and retain the 1.5% pension factor in their pension formula. The increased contribution would begin as of their transition date and continue until they terminate public school employment.

- Basic Plan members: 4% contribution
- Member Investment Plan (MIP)-Fixed, MIP-Graded, and MIP-Plus members: a flat 7% contribution

Option 2 members voluntarily elected to increase their contribution to the pension fund as stated in Option 1 and retain the 1.5% pension factor in their pension formula. The increased contribution would begin as of their transition date and continue until they reach 30 years of service. If and when they reach 30 years of service, their contribution rates will return to the previous level in place as of the day before their transition date (0% for Basic Plan members, 3.9% for MIP-Fixed, up to 4.3% for MIP-Graded, or up to 6.4% for MIP-Plus). The pension formula for any service thereafter would include a 1.25% pension factor.

Option 3 members voluntarily elected not to increase their contribution to the pension fund and maintain their current level of contribution to the pension fund. The pension formula for their years of service as of the day before their transition date will include a 1.5% pension factor. The pension formula for any service thereafter will include a 1.25% pension factor.



# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

Option 4 members voluntarily elected to no longer contribute to the pension fund and therefore are switched to the Defined Contribution plan for future service as of their transition date. As a DC participant they receive a 4% employer contribution to a tax-deferred 401(k) account and can choose to contribute up to the maximum amounts permitted by the IRS to a 457 account. They vest in employer contributions and related earnings in their 401(k) account based on the following schedule: 50% at 2 years, 75% at 3 years, and 100% at 4 years of service. They are 100% vested in any personal contributions and related earnings in their 457 account. Upon retirement, if they meet age and service requirements (including their *total* years of service), they would also receive a pension (calculated based on years of service and Final Average Compensation as of the day before their transition date and a 1.5% pension factor).

Members who did not make an election before the deadline defaulted to Option 3 as described above. Deferred or nonvested public school employees on September 3, 2012, who return to public school employment on or after September 4, 2012, will be considered as if they had elected Option 3 above. Returning members who made the retirement plan election will retain whichever option they chose.

Employees who first work on or after September 4, 2012, choose between two retirement plans: the Pension Plus plan described above and a Defined Contribution (DC) plan that provides a 50% employer match (up to 3% of salary) on employee contributions. New employees are automatically enrolled as members in the Pension Plus plan as of their date of hire. They have 75 days from the last day of their first pay period, as reported to ORS, to elect to opt out of the Pension Plus plan and become a qualified participant in the DC plan; if no election is made they will remain in the Pension Plus plan. If they elect to opt out of the Pension Plus plan, their participation in the DC plan will be retroactive to their date of hire.

### ***Regular Retirement***

The pension benefit for DB and Pension Plus plan members is based on a member's years of credited service (employment) and final average compensation (FAC). The FAC is calculated based on the member's highest total wages earned during a specific period of consecutive calendar months divided by the service credit accrued during that same time period. For a MIP member, who became a member of MPSERS prior to July 1, 2010, the averaging period is 36 consecutive months. For a Pension Plus member, who became a member of MPSERS after June 30, 2010, the averaging period is 60 consecutive months. For a Basic Plan member, this period is the 60 consecutive months yielding the highest total wages. The annual pension is paid monthly for the lifetime of a retiree. The calculation of a member's pension is determined by their pension election under PA 300 of 2012 and is shown below:

Option 1:  $FAC \times \text{total years of service} \times 1.5\%$

Option 2:  $FAC \times 30 \text{ years of service} \times 1.5\% + FAC \times \text{years of service beyond 30} \times 1.25\%$

Option 3:  $FAC \times \text{years of service as of transition date} \times 1.5\% + FAC \times \text{years of service after transition date} \times 1.25\%$

Option 4:  $FAC \text{ as of transition date} \times \text{years of service as of transition date} \times 1.5\%$

A MIP member who became a member of MPSERS prior to July 1, 2010 may retire at:

1. age 46 with 30 or more years of credited service; or
2. age 60 with 10 or more years of credited service; or
3. age 60 with 5 years of credited service provided the member has worked through his or her 60th birthday and has credited service in each of the five school fiscal years immediately preceding the retirement effective date.

A Pension Plus member who became a member of MPSERS after June 30, 2010 may retire at age 60 with 10 or more years of credited service.

A Basic Plan member may retire at:

1. age 55 with 30 or more years of credited service; or
2. age 60 with 10 or more years of credited service.

There is no mandatory retirement age.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### ***Early Retirement***

A MIP or Basic member may retire with an early permanently reduced pension:

1. after completing at least 15 but less than 30 years of credited service; and
2. after attaining age 55; and
3. with credited service in each of the 5 school years immediately preceding the pension effective date.

The early pension is computed in the same manner as a regular pension, but is permanently reduced 0.5% for each full and partial month between the pension effective date and the date the member will attain age 60.

### ***Deferred Retirement***

If a member terminates employment before attaining the age qualification, but after accruing 10 or more years of credited service, the member becomes a deferred member and is eligible for a pension at the time the age qualification is attained.

### ***Non-Duty Disability Benefit***

Any member with 10 or more years of credited service who becomes totally and permanently disabled due to any non-duty related cause and who has not met the age requirement for a regular pension is eligible for a non-duty disability pension computed in the same manner as an age and service pension, upon recommendation from the member's personal physician and the Retirement Board physician and the approval of the Retirement Board. An Annual Certification of Disability is conducted each January. Upon prior approval, total disability benefits plus authorized outside earnings are limited to 100% of final average compensation (increased by two percent for each year retired; first year 100%, next year 102%, etc.).

### ***Duty Disability Benefit***

Any member who becomes totally and permanently disabled as a result of a duty-related cause, who has not met the age and service requirement for a regular pension, and who is in receipt of weekly workers' compensation is eligible for a duty disability pension computed in the same manner as an age and service pension (but based upon a minimum of 10 years of service) upon recommendation from the member's personal physician and the Retirement Board physician and the approval of the Retirement Board. An Annual Certification of Disability is conducted each January. Upon prior approval, total disability benefits plus authorized outside earnings are limited to 100% of final average compensation (increased by two percent for each year retired; first year 100%, next year 102%, etc.).

### ***Forms of Payment***

The election of a pension option is made at the time of application. Once a member has retired, the option choice is irrevocable. The pension effective date is the first of the calendar month following the date the member has satisfied the age and service requirements, has terminated public school employment and has the completed application forms on file with the System for a period of 15 days. A retroactive pension can be paid for no more than 12 calendar months. Thus, delay in filing the application can result in a loss of some retroactive pension benefits. An applicant may select only one of the following options.

**Straight Life Pension** - The Straight Life Pension pays the largest level pension a retiree can receive during his or her lifetime and stops with the month of a retiree's death. There are no monthly benefits for a beneficiary. The pension benefit is computed with no beneficiary rights. If the retiree made contributions while an employee and has not received the total accumulated contributions before death, a refund of the balance of the contributions is made to the beneficiary of record. If the retiree did not make any contributions, there will not be payments to any beneficiaries.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

Survivor Options - Under the Survivor Options, 100% Survivor Pension, 100% Equated, 75% Survivor Pension, 75% Equated, 50% Survivor Pension and 50% Equated, the reduction is an actuarial determination dependent upon the combined life expectancies of a retiree and a beneficiary, and varies from case to case. A beneficiary may only be a spouse, brother, sister, parent or child (including an adopted child) of a retiring member. If the beneficiary pre-deceases a retiree, the pension will revert to either the Straight Life or Straight Life Equated amount (“pop-up” provision). If, however, a retiree was single at the time of retirement and subsequently married, the retiree can request to nominate a new spouse if they elected the straight life option at retirement. Also, if a retiree was married at the time of retirement and has since been widowed and remarried, the retiree can request to nominate a new spouse as a pension beneficiary as long as they elected a survivor option for the spouse at the time of retirement.

100% Survivor Pension - pays a reduced pension to a retiree. The month after a retiree’s death, the same amount will be paid to a designated beneficiary for the remainder of his or her lifetime.

75% Survivor Pension - pays a reduced pension to a retiree. The month after a retiree’s death, 75% of the pension amount will be paid to a designated beneficiary for the remainder of his or her lifetime.

50% Survivor Pension - pays a reduced pension to a retiree. The month after a retiree’s death, 50% of the pension amount will be paid to a designated beneficiary for the remainder of his or her lifetime.

Equated Plan – For MIP and Basic members, the Equated Plan may be combined with the Straight Life, 100% Survivor, 75% Survivor, or 50% Survivor Pension by any member under age 61, except a disability applicant. The Equated Plan provides a higher pension every month until age 62, at which time the monthly pension is permanently decreased to a lower amount than the Straight Life, 100%, 75%, or 50% Survivor alone would provide.

The intent of the Equated Plan is for the retiree’s pension to decrease at age 62 by approximately the same amount as that person’s Social Security benefit will provide. The System pension until age 62 should be about the same as the combined System pension and Social Security after age 62.

The projected Social Security pension the retiring member obtains from the Social Security Administration and furnishes to the System is used in the Equated Plan calculation. The actual Social Security pension may vary from the estimate.

NOTE: The reduction in the pension at age 62 pertains to the Equated Plan only and affects only the retiree. A beneficiary under 100% Equated, 75% Equated or 50% Equated will receive the 100%, 75%, or 50% Survivor amount the month following the retiree’s death as if the Equated Plan had not been chosen. A beneficiary does not participate in the Equated Plan.

### ***Survivor Benefit***

A non-duty survivor pension is available if a MIP member has 10 years of credited service or, if age 60 or older, with five years of credited service; the date they became a MIP member does not matter. The Basic Plan provides a survivor pension with 15 years of credited service or, if age 60 or older, with 10 years of credited service. The Pension Plus plan provides for a survivor pension with 10 years of credited service. An active member may nominate as a survivor beneficiary a spouse, child(ren) (including adopted child(ren)), brother, sister, or parent. If other than the spouse is nominated and a spouse exists, the spouse must waive this benefit. If no beneficiary has been nominated, the beneficiary is automatically the spouse; or, if there is no spouse, unmarried children under age 18 share the benefit equally until age 18. The benefit is computed as a regular pension but reduced in accordance with a 100% survivor pension factor. The pension begins the first of the month following the member’s death. In the event of the death of a deferred member, the System begins payment to the nominated beneficiary at the time the member would have attained the minimum age qualification.

A duty survivor pension is payable if weekly Workers’ Compensation is being paid to the eligible beneficiary due to the member’s death. A spouse receives the benefit (based on a minimum of 10 years of service credit) reduced in accordance with a 100% survivor pension factor. If there is no spouse, unmarried children under age 18 share the benefit equally until age 18; if there is no spouse or child(ren), a disabled and dependent parent is eligible.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### ***Post Retirement Adjustments***

A retiree who became a MIP member prior to July 1, 2010, receives an annual post-retirement non-compounded increase of three percent of the initial pension in the October following twelve months of retirement. Basic Plan members do not receive an annual post-retirement increase, but are eligible to receive a supplemental payment in those years when investment earnings exceed actuarial assumptions. Pension Plus members do not receive an annual post-retirement increase.

On January 1, 1990, pre-October 1, 1981 retirees received an increase that ranged from 1% to 22% dependent upon the pension effective date. On October 1, 1990, the base pension of all retirees with an effective pension date of January 1, 1987, or earlier was increased to include all prior post-retirement adjustments.

On January 1, 1986, all recipients through calendar year 1985 received a permanent 8% increase that established the 1986 base pension. In addition, each October, retirees with a pension effective date of January 1, 1987, or earlier receive a fixed increase equal to 3% of the base pension. Both increases are deducted from the distribution of excess investment income, if any. Beginning in 1983, eligible recipients receive an annual distribution of excess investment income, if any.

### ***Member Contributions***

Mandatory member contributions were phased out between 1974 and 1977, with the plan remaining noncontributory until January 1, 1987, when the Member Investment Plan (MIP) was enacted. MIP members enrolled prior to January 1, 1990, contribute at a permanently fixed rate of 3.9% of gross wages. The MIP contribution rate was 4.0% from January 1, 1987, the effective date of the MIP, until January 1, 1990, when it was reduced to 3.9%. Members first hired between January 1, 1990 and June 30, 2008, and returning members who did not work between January 1, 1987, through December 31, 1989, contribute at the following graduated permanently fixed contribution rates: 3% of the first \$5,000; 3.6% of \$5,001 through \$15,000; 4.3% of all wages over \$15,000. Members first hired July 1, 2008, or later including Pension Plus Plan members, contribute at the following graduated permanently fixed contribution rates: 3% of the first \$5,000; 3.6% of \$5,001 through \$15,000; 6.4% of all wages over \$15,000.

For a limited period ending December 31, 1992, an active Basic Plan member could enroll in the MIP by paying the contributions that would have been made had enrollment occurred initially on January 1, 1987, or on the date of hire, plus interest. MIP contributions at the rate of 3.9% of gross wages begin at enrollment. Actuarial rate of interest is posted to member accounts on July 1st on all MIP monies on deposit for 12 months. If a member leaves public school service and no pension is payable, the member's accumulated contributions plus interest, if any, are refundable.

Under Public Act 300 of 2012, eligible members voluntarily chose between increasing, maintaining, or stopping their contributions to the pension fund as of the transition date. Their options are described in detail under *Pension Reform 2012* beginning on page 24. Members who elected to increase their level of contribution contribute 4% (Basic Plan) or 7% (MIP); by doing so they maintain a 1.5% pension factor in their pension formula. Members who elected to maintain their level of contribution will receive a 1.25% pension factor in their pension formula for their years of service as of their transition date. Their contribution rates are described above. Members who elected to stop their contributions became participants in the Defined Contribution plan as of their transition date.

### ***Employer Contributions***

Each school district or reporting entity is required to contribute the full actuarial funding contribution amount to fund pension benefits.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### BENEFIT PROVISIONS – OTHER POSTEMPLOYMENT

#### *Introduction*

Benefit provisions of the postemployment healthcare plan are established by State statute, which may be amended. Public Act 300 of 1980, as amended, establishes eligibility and benefit provisions. Retirees have the option of health coverage, which, through 2012, was funded on a cash disbursement basis. Beginning fiscal year 2013, it is funded on a prefunded basis. The System has contracted to provide the comprehensive group medical, prescription drug, dental and vision coverage for retirees and beneficiaries. A subsidized portion of the premium is paid by the System with the balance deducted from the monthly pension of each retiree health care recipient. For members who first worked before July 1, 2008, (Basic, MIP-Fixed, and MIP-Graded plan members) the subsidy is the maximum allowed by statute. To limit future liabilities of Other Postemployment Benefits, members who first worked on or after July 1, 2008, (MIP-Plus plan members) have a graded premium subsidy based on career length where they accrue credit towards their insurance premiums in retirement, not to exceed the maximum allowable by statute. Public Act 300 of 2012 sets the maximum subsidy at 80% beginning January 1, 2013; 90% for those Medicare eligible and enrolled in the insurances as of that date.

Public Act 75 of 2010 requires each actively employed member of MPSERS after June 30, 2010, to annually contribute 3% of their compensation to offset employer contributions for health care benefits of current retirees.

Dependents are eligible for health care coverage if they meet the dependency requirements set forth in Public Act 300 of 1980, as amended.

The number of participants and other relevant financial information are as follows:

	<u>2015</u>
<b>Health, Dental and Vision Plan</b>	
Eligible participants	204,974
Participants receiving benefits:	
Health	149,741
Dental/Vision	162,505
Expenses for the year (in thousands)	\$ 854,410
Employer payroll contribution rates	2.2 - 11.42%

Applications for enrollment after retirement are accepted anytime during the year, with coverage effective six months following the receipt of the application.

#### *Retiree Healthcare Reform of 2012*

Public Act 300 of 2012 granted all active members of the Michigan Public School Employees Retirement System, who earned service credit in the 12 months ending September 3, 2012, or were on an approved professional services or military leave of absence on September 3, 2012, a voluntary election regarding their retirement healthcare. Any changes to a member's healthcare benefit are effective as of the member's *transition date*, which is defined as the first day of the pay period that begins on or after February 1, 2013.

Under Public Act 300 of 2012, members were given the choice between continuing the 3% contribution to retiree healthcare and keeping the premium subsidy benefit described above, or choosing not to pay the 3% contribution and instead opting out of the subsidy benefit and becoming a participant in the Personal Healthcare Fund (PHF), a portable, tax-deferred fund that can be used to pay healthcare expenses in retirement. Participants in the PHF are automatically enrolled in a 2% employee contribution into their 457 account as of their transition date, earning them a 2% employer match into a 401(k) account. Members who selected this option stop paying the 3% contribution to retiree healthcare as of the day before their transition date, and their prior contributions were deposited into their 401(k) account.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

Members who did not make an election before the deadline retain the premium subsidy benefit and continue making the 3% contribution toward retiree healthcare. Deferred or nonvested members on September 3, 2012 who are rehired on or after September 4, 2012, will contribute 3% to retiree healthcare and will retain the premium subsidy benefit. Returning members who made the retirement healthcare election will retain whichever option they chose.

Those who elected to retain the premium subsidy continue to annually contribute 3% of compensation into the health care funding account. A member or former member age 60 or older, who made the 3% healthcare contributions but who does not meet eligibility requirements may request a refund of their contributions. Similarly, if a retiree dies before the total value of the insurance subsidy paid equals the total value of the contributions the member made, and there are no eligible dependents, the beneficiary may request a refund of unused funds. Refunds of member contributions to the healthcare funding account are issued as a supplemental benefit paid out over a 60 month period.

1. Retirees with at least 21 years of service, who terminate employment after October 31, 1980, with vested deferred benefits, are eligible for subsidized employer paid health benefit coverage.
2. A delayed subsidy applies to retirees who became a member of the retirement system before July 1, 2008 and who purchased service credit on or after July 1, 2008. Such individuals are eligible for premium subsidy benefits at age 60 or when they would have been eligible to retire without having made a service purchase, whichever comes first. They may enroll in the insurances earlier, but are responsible for the full premium until the premium subsidy begins.

Under Public Act 300 of 2012, the state no longer offers an insurance premium subsidy in retirement for public school employees who first work on or after September 4, 2012. Instead, all new employees will be placed into the Personal Healthcare Fund where they will have support saving for retirement healthcare costs in the following ways:

- They will be automatically enrolled in a 2% employee contribution into a 457 account as of their date of hire, earning them a 2% employer match into a 401(k) account.
- They will 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 \$2,000 for participants who are at least 60 years of age at termination or \$1,000 for participants who are less than 60 years of age at termination.

Participants in the Personal Healthcare Fund, who become disabled for any reason, are not eligible for any employer funded health insurance premium subsidy. If a PHF participant suffers a non-duty related death, his or her health benefit dependents are not eligible to participate in any employer funded health insurance premium subsidy. If a PHF participant suffers a duty death, the state will pay the maximum health premium allowed by statute for the surviving spouse and health benefit dependents. The spouses' insurance subsidy may continue until his or her death, the dependents' subsidy may continue until their eligibility ends (through marriage, age, or other event). Upon eligibility for a duty death benefit, the 2% employer matching contributions and related earnings in the member's 401(k) are forfeited and the state will pay for the subsidy payments. The beneficiaries receive the member's personal contributions and related earnings in the member's 457 account.

## 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.

GASB Statement No. 67, which was adopted during the year ended September 30, 2014, addresses accounting and financial reporting requirements for pension plans. The requirements for GASB Statement No. 67 require changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The implementation of GASB Statement No. 67 did not significantly impact

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

the accounting for accounts receivable and investment balances. The total pension liability, determined in accordance with GASB Statement No. 67, is presented in Note 4 and in the Required Supplementary Information on page 47.

### ***Reserves***

Reserve for Employee Contributions - 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 amounts transferred to the Reserve for Employer Contributions representing unclaimed funds. Members no longer contribute to this reserve except to purchase eligible service credit or repay previously refunded contributions. At September 30, 2015, the balance in this reserve was \$1.5 billion.

Reserve for Pension Plus Employee Contributions - This reserve represents active member contributions and interest less amounts transferred to the Reserve for Pension Plus Retired Benefit Payments for regular retirement, amounts refunded to terminated members, and amounts transferred to the Reserve for Pension Plus Employer Contributions representing unclaimed funds. This reserve was established under the provisions of Public Act 75 of 2010. At September 30, 2015, the balance in this reserve was \$95.1 million.

Reserve for Member Investment Plan - This reserve represents MIP contributions and interest less refunds and transfers to the Reserve for Retired Benefit Payments. At September 30, 2015, the balance in this reserve was \$5.3 billion.

Reserve for Employer Contributions - This reserve represents all reporting unit contributions, except payments for health benefits. Interest from the Reserve for Undistributed Investment Income reserve is credited annually. Amounts are transferred annually to the Reserve for Retired Benefit Payments to bring the balance of that reserve into balance with the actuarial present value of retirement allowances. At September 30, 2015, the balance in this reserve was (\$24.9) billion.

Reserve for Pension Plus Employer Contributions - This reserve represents all reporting unit contributions for Pension Plus members, except payments for health benefits. Interest from the Reserve for Undistributed Investment Income reserve is credited annually at a rate of 7%. Amounts are transferred annually to the Reserve for Retired Pension Plus Benefit Payments to bring the balance of that reserve into balance with the actuarial present value of retirement allowances. This reserve was established under the provisions of Public Act 75 of 2010. At September 30, 2015, the balance in this reserve was \$69.8 million.

Reserve for Retired Benefit Payments - This reserve represents payments of future retirement benefits to current retirees. At retirement, a member's accumulated contributions plus interest are transferred into this reserve. Monthly benefits, which are paid to the retiree, reduce this reserve. At the end of each fiscal year, an amount, determined by an annual actuarial valuation, is transferred from the Reserve for Employer Contributions to bring the balance of this reserve into balance with the actuarial present value of retirement allowances. At September 30, 2015, the balance in this reserve was \$48.3 billion.

Reserve for Retired Pension Plus Benefit Payments - This reserve represents payments of future retirement benefits to current Pension Plus retirees. At retirement, a member's accumulated contributions plus interest are transferred into this reserve. Monthly benefits, which are paid to the retiree, reduce this reserve. At the end of each fiscal year, an amount, determined by an annual actuarial valuation, is transferred from the Reserve for Pension Plus Employer Contributions to bring the balance of this reserve into balance with the actuarial present value of retirement allowances. This reserve was established under the provisions of Public Act 75 of 2010. Currently, there are no participants qualified to retire under this program. At September 30, 2015, the balance in this reserve was \$0.

Reserve for Undistributed Investment Income - This reserve represents all investment earnings. Interest is transferred annually to the other reserves. Administrative expenses of the System are paid from the Reserve for Administrative Expenses, which is credited with amounts from the Reserve for Undistributed Investment Income to cover the expenses. For ease of reporting and understanding, the two reserves are presented as one reserve in the supporting schedules. Public Act 143 of 1997 established a stabilization subaccount within the Reserve for Undistributed Investment Income

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

to which any over funding is credited. As of September 30, 2015, the balance in the subaccount was zero. At September 30, 2015, the balance in this reserve was \$12.0 billion.

Reserve for Health (OPEB) Related Benefits - This reserve is credited with employee and employer contributions for retirees' health, dental, and vision benefits. Starting in fiscal year 2013, 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 2015, federal funding for Medicare Part D and Employer Group Waiver Plan (EGWP) was paid directly to a third party vendor. The third party vendor uses the EGWP funding for any claims submitted and bills the system for any remaining claims outstanding. Premiums for health, dental and vision benefits are paid from this reserve. At September 30, 2015, the balance in this reserve was \$4.1 billion.

### ***Reporting Entity***

The System is a pension and other employee benefit trust fund of the State. As such, the System is considered part of the State and is included in the State's Comprehensive Annual Financial Report as a pension and other employee benefit trust fund. 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.

### ***Fair Value of Investments***

Plan investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. The fair value of private investments is based on the net asset value reported in the financial statements of the respective investment entity. The net asset value is determined in accordance with governing documents of the investment entity, and is subject to an independent annual audit. Securities purchased with cash collateral under securities lending activities are recorded at estimated fair value. Other investments not having an established market are recorded at estimated fair value.

### ***Investment Income***

Dividend and interest income is 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 (continued)

### *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 Post-employment Benefit Plan Fiduciary Net Position. Such assets are depreciated on a straight-line basis over 10 years. As of September 30, 1998, all capitalized equipment was fully depreciated. No additional equipment has been capitalized for the System since that date.

### *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.

	<u>2015</u> (in thousands)
Building Rentals	\$ 883
Technological Support	10,432
Attorney General	418
Investment Services	13,821
Personnel Services	9,696

Cash - At September 30, 2015, the System had \$163.6 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 (Losses) from these activities amounted to (\$16.9) thousand for the year ended September 30, 2015.

## NOTE 3 - CONTRIBUTIONS AND FUNDED STATUS

### *Contributions*

The majority of the members currently participate on a contributory basis. Reporting units are required by Public Act 300 of 1980, as amended, to contribute amounts necessary to finance the coverage of members 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 portion of this cost allocated to the current valuation year is called the normal cost. The remainder is called the actuarial accrued liability. Normal cost is funded on a current basis. For retirement and OPEB benefits, the unfunded (overfunded) actuarial accrued liability as of the September 30, 2015 valuation will be amortized over a 21 year period for the 2015 fiscal year. The schedule below summarizes pension contribution rates in effect for fiscal year 2015.

### Pension Contribution Rates

<u>Benefit Structure</u>	<u>Member</u>	<u>Employer</u>
Basic	0.0 - 4.0 %	22.52 - 23.07 %
Member Investment Plan	3.0 - 7.0	22.52 - 23.07
Pension Plus	3.0 - 6.4	21.99
Defined Contribution	0.0	17.72 - 18.76

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

Actual employer contributions for other postemployment benefits (OPEB) were \$969.4 million for fiscal year 2015. The fiscal year 2015 annual covered payroll is not yet available. Required employer contributions based on previous year actuarial valuations for OPEB included:

1. \$37.3 million for fiscal year 2015 for the normal cost of OPEB representing 0.5% of annual covered payroll for fiscal year 2014.
2. \$937.7 million for fiscal year 2015 for amortization of unfunded actuarial accrued liability representing 11.5% (before reconciliation, if any) of annual covered payroll for fiscal year 2014.

The System may reconcile with actuarial requirements annually. If the system reconciles in a year, any funding excess or deficiency for pension benefits is smoothed over a maximum of 5 years, with at least one-fifth (20%) of the funding excess or deficiency included in the subsequent year's contribution. This payment is not recognized as a payable or receivable in the accounting records. If the System does not reconcile in a year, any funding excess or deficiency for pension benefits is accounted for in subsequent required contributions over the remaining amortization period. For fiscal year 2015, the System did not reconcile.

In May 1996, the Internal Revenue Service issued a private letter ruling allowing the System's members to purchase service credit and repay refunds using tax-deferred (pre-tax) dollars. The program was implemented in fiscal year 1998, and payments began in fiscal year 1999.

The program allows members to purchase service credit and repay refunds on a tax-deferred basis. Members sign an irrevocable agreement that identifies the contract duration, monthly payment, total contract amount and years of service credit being purchased. The duration of the contract can range from 1 to 20 years. The amounts are withheld from members' paychecks and are treated as employer pick-up contributions pursuant to Internal Revenue Code Section 414(h). At September 30, 2015, there were 13,725 agreements. The agreements were discounted using the assumed actuarial rate of return of 8% for September 30, 2015. The average remaining length of a contract was approximately 5.8 years for 2015. The short-term receivable was \$24.9 million and the discounted long-term receivable was \$67.5 million at September 30, 2015.

### ***Funded Status – Other Postemployment Benefits***

Participating employers are required to contribute at an actuarially determined rate for OPEB. For fiscal year 2014, the actuarial accrued liability (AAL) for OPEB was \$14.2 billion, and the actuarial value of assets was \$3.0 billion, resulting in an unfunded actuarial accrued liability (UAAL) of \$11.2 billion and a funded ratio of 21.1%. The covered payroll (annual payroll of active employees covered by the plan) was \$8.2 billion, and the ratio of the UAAL to the covered payroll was 136.9%.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### 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 market 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	\$	67,355,988
Plan Fiduciary Net Position		42,382,361
Net Pension Liability	\$	24,973,627
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		62.92%
Net Pension Liability as a percentage of Covered Payroll		296.36%
Total Covered Payroll	\$	8,426,755

#### *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, 2015, are summarized in the following table:

#### **Asset Allocation**

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long Term Expected Real Rate of Return*</u>
Domestic Equity Pools	28.0 %	5.9 %
Alternative Investment Pools	18.0	9.2
International Equity	16.0	7.2
Fixed Income Pools	10.5	0.9
Real Estate and Infrastructure Pools	10.0	4.3
Absolute Return Pools	15.5	6.0
Short Term Investment Pools	2.0	0.0
<b>TOTAL</b>	<b>100.0 %</b>	

\* Long term rates of return are net of administrative expenses and 2.1% inflation.

#### *Rate of Return*

For the fiscal year ended September 30, 2015, the annual money-weighted rate of return on pension plan investment, net of pension plan investment expense, was (.02)%. The money weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### *Discount Rate*

A discount rate of 8.0% was used to measure the total pension liability (7.0% for the Pension Plus Plan). This discount rate was based on the long term expected rate of return on pension plan investments of 8.0% (7.0% for the Pension Plus Plan). The projection of cash flows used to determine this discount rate assumed that 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, the following presents the plan's net pension liability, in thousands, calculated using a discount rate of 8.0% (7.0% for the Pension Plus Plan), 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:

<b>1% Decrease</b> <b>7.0% / 6.0%</b>	<b>Current Discount</b> <b>Rate Assumption</b> <b>8% / 7.0%</b>	<b>1% Increase</b> <b>9.0% / 8.0%</b>
\$32,133,813	\$24,973,627	\$18,935,384

### *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, 2015, is based on the results of an actuarial valuation date of September 30, 2014, and rolled-forward using generally accepted actuarial procedures.

### *Actuarial Valuations and Assumptions*

Actuarial valuations for both the pension and 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 annual required contributions (ARC) are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

The Schedule of Funding Progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information about whether the actuarial value of plan assets for the OPEB plan is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The Schedules of Contributions in Required Supplementary Information present trend information about the amounts contributed to the plan by employers in comparison to the ARC, an amount that is actuarially determined in accordance with the parameters of GASB Statement No. 67 for pension contributions and GASB Statement No. 43 for OPEB contributions.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

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.

The information presented in the required supplementary schedules 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	9/30/2014
Actuarial Cost Method	Entry Age, Normal
Amortization Method - OPEB	Level Percent of Payroll, Closed
Remaining Amortization Period - OPEB	22 years <sup>1</sup>
Asset Valuation Method - OPEB	Market
Actuarial Assumptions:	
Wage Inflation Rate	3.5%
Investment Rate of Return - Pension	
- MIP and Basic Plans	8.0%
- Pension Plus Plan	7.0%
Investment Rate of Return - OPEB	8.0%
Projected Salary Increases	3.5 - 12.3%, including wage inflation at 3.5%
Cost-of-Living Pension Adjustments	3% Annual Non-Compounded for MIP Members
Healthcare Cost Trend Rate	7.5% Year 1 graded to 3.5% Year 12
Mortality - Pension and OPEB	RP-2000 Combined Healthy Life Mortality Table, adjusted for mortality improvements to 2020 using projection scale AA (for men, 140% of the table rates for ages 0-79, 133% of the table rates for ages 80-84, and 121.8% of the table rates for ages over 84 were used and for women, 96% of the table rates were used).
Other Assumptions OPEB only: <sup>2</sup>	
Opt Out Assumption	21% of eligible participants hired before 7/1/2008 and 30% of those hired after 6/30/2008 are assumed to opt out of the retiree health plan
Survivor Coverage	80% of male retirees and 67% of female retirees are assumed to have coverage continuing after the retiree's death
Coverage Election at Retirement	75% of male and 60% of female future retirees are assumed to elect coverage for 1 or more dependents

**Notes:** Assumption changes as a result of an experience study for the periods 2007 through 2012 have been adopted by the System for use in the annual pension valuations beginning with the September 30, 2014 valuation.

<sup>1</sup> Based on the provisions of GASB Statement Nos. 43 and 45 when the actuarial accrued liability for the OPEB plan is underfunded or overfunded, the difference should be amortized over a period not to exceed thirty years for the fiscal periods beginning on or after June 15, 2006.

<sup>2</sup> Applies to individuals hired before September 4, 2012.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### NOTE 5 - INVESTMENTS

#### *Investment Authority*

Under Public Act 380 of 1965, as amended, the authority for the purchase and the sale of investments resides with the State Treasurer. 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 pension fund 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*

The State Treasurer employs the use of derivatives in the investment of the pension and other employee benefit trust funds (the trust funds).

Derivatives are used in managing the trust fund portfolios, but uses do not include speculation or leverage of investments. Less than 12% of the total trust funds' portfolio has been invested from time to time in future contracts, swap agreements, structured notes, option and forward contracts. State investment statutes limit total derivative 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 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 exposure limitation.

The derivative fair values are reported on the Statement of Pension Plan and Other Postemployment Benefit Plan Fiduciary Net Position as of September 30, 2015, in their respective investment pool's fair value. Derivative 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, 2015, 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".

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

Derivative Investment Table as of September 30, 2015 (in millions):

Investment and Investment Type	Percentage of Fair Value	Notional Value	Investments At Fair Value	Net Increase (Decrease) in Fair Value	Investment Income	Fair Value Subject to Credit Risk
U.S. Treasury Bond Future Contracts						
Fixed Income Investments	0.0%	\$ 6.8		\$ (0.4)		
Option Contracts						
Equity Investments	0.0%	170.8	\$ 0.5	(3.8)		
Swap Agreements						
International Equity Investments	1.8%	1,033.9	852.9	(45.9)	\$ (2.6)	\$ 27.3
Swap Agreements						
Equity Investments	0.0%	1,126.4	(22.6)	(48.8)	16.0	

To diversify the trust funds' portfolio, the State Treasurer has entered into international swap agreements with investment grade counterparties, which are tied to stock market indices in forty-two foreign countries. Generally, one quarter or less of the notional amount tied to foreign stock market indices is usually hedged against foreign currency fluctuations. The swap agreements provide that the System will pay quarterly over the term of the swap agreements, interest indexed to the three month London Inter-Bank Offer Rate (LIBOR), adjusted for an interest rate spread, on the notional amount stated in the agreements. International equity swap agreement maturity dates range from October 2015 to September 2016. The U.S. Domestic LIBOR based floating rate notes and 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. The book value represents the cost of the notes and other investments. The current value represents the current value of the 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. The combined swap structure generally realizes gains and losses on a rolling basis.

Domestic Equity Pool swap agreements provide that the System will pay interest quarterly or annually over the term of the swap agreements, interest indexed to the LIBOR, adjusted for an interest rate spread, on the notional amount stated in the agreements. Domestic equity swap agreement maturity dates range from October 2015 to July 2016. Domestic equity swaps value is a combination of the value of the swap agreements and the value of short-term investments. Book value represents the cost of short-term and equity investments. Current value represents the fair value of the short-term investments and the change in the value of the underlying indices from the inception of the swap agreements. Domestic equity swaps' increase (decrease) primarily reflects the net changes in the domestic indices and short-term investments.

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.

The State Treasurer traded U. S. Treasury bond future contracts to manage duration and yield curve exposure.

To provide downside protection and enhance current income, the State Treasurer traded covered equity options on single securities for the Equity Investment pools. Put options are used to protect against large negative moves in single

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

stocks, as well as, to express interest in a security that is trading well below its intrinsic value. Call options have been used to achieve current income on single equity securities that are trading near their intrinsic value.

### *Securities Lending*

State statutes allow the System to participate in securities lending transactions, and the System has, by way of an Agreement, authorized Credit Suisse, the agent bank, to lend the System's securities to broker-dealers and banks pursuant to a form of loan agreement.

During the fiscal year, the agent bank lent, at the direction of the State Treasurer, the System's securities and received cash (United States) as collateral. The types of securities lent were equity, and fixed income, which includes government and corporate bonds and notes. Borrowers were required to deliver collateral for each loan equal to (i) in case of loaned securities denominated in United States dollars or whose primary trading market was located in the United States or sovereign debt issued by foreign governments, 102% of the fair value of the loaned securities; and (ii) in the case of loaned securities not denominated in United States dollars or whose primary trading market was not located in the United States, 105% of the fair value of the loaned securities.

The agent bank agreed to indemnify the System by purchasing replacement securities, or returning cash collateral in the event borrower failed to return the loaned security or pay distributions thereon, due to the borrower's insolvency.

Under Master Securities Lending Agreements between the System and each borrower, the System and the borrowers have the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested in assets held in a collateral account dedicated to the System. As of September 30, 2015, such assets had an average weighted maturity to next reset of 2.8 years and an average weighted maturity of 12.0 years. Because the loans are terminable at will, their duration did not generally match the duration of the investments made with cash collateral. On September 30, 2015, the System had no credit risk exposure to borrowers. The cash received for securities on loan for the System as of September 30, 2015 was \$2,720,029,308. The fair value of assets held in the dedicated collateral account at the custodian for the System as of September 30, 2015 was \$2,720,433,773. The carrying amount, which is the fair value, of securities on loan for the System as of September 30, 2015, was \$2,675,304,323.

### *Risk*

In accordance with GASB Statement No. 40, 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 the foreign currency risk are discussed in the following paragraphs. Amounts represent the prorata 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 – Prime commercial paper investments must be rated A-1 or P-1 at the time of purchase as rated by two national rating services as specified in Public Act 314. Borrowers must have at least \$400.0 million in commercial paper outstanding, and the State Treasurer may not invest in more than 10% of the borrower's outstanding debt. The investments are further limited to \$200.0 million in any borrower, unless the borrower has an A-1+ rating in which case the investment is not to exceed \$300.0 million.
- 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 State Treasurer's Investment Policy Statement for the System. Public Act 314 defines investment grade as investments in the top four major grades, rated by two national rating services. At September 30, 2015, 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 (continued)

### Rated Debt Investments (in thousands) As of September 30, 2015

Investment Type	Fair Value	S&P	Fair Value	Moody's
<b>Short Term</b>	\$ 1,995,509	A-1	\$ 1,995,509	P-1
<b>Government Securities</b>				
U.S. Agencies - Sponsored	-	AAA	129,719	Aaa
	129,719	AA	-	Aa
<b>Corporate Bonds &amp; Notes</b>				
	103,025	AAA	165,634	Aaa
	307,040	AA	185,755	Aa
	1,234,784	A	1,046,475	A
	1,151,072	BBB	1,424,171	Baa
	302,529	BB	327,754	Ba
	354,516	B	405,047	B
	97,593	CCC	116,758	Caa
	10,484	CC	52,761	Ca
	84	C	2,259	C
	40,198	D	-	D
	448,183	NR	322,895	NR
<b>International *</b>				
	135,202	AA	158,393	Aa
	311,875	A	280,926	A
	197,128	BBB	247,481	Baa
	80,496	NR	37,901	NR
<b>Securities Lending Collateral</b>				
<b>Short Term</b>				
	74,319	AAA	228,594	Aaa
	231,411	AA	77,137	Aa
	-	BB	2,334,681	Ba
	80,022	CCC	80,022	Caa
	2,334,681	NR	-	NR
<b>Total</b>	<u>\$ 9,619,871</u>		<u>\$ 9,619,871</u>	

NR - not rated

\* International Investment types consist of domestic floating rate note used as part of a Swap strategy.

**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:

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

- The counterparty or
- The counterparty's trust department or agent but not in the government name.

The State Treasurer does not have a policy for custodial credit risk. However, the State's custodial bank had a credit rating of A+ at September 30, 2015. As of September 30, 2015, no securities were exposed to custodial credit risk.

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, 2015, there were no investments in any single issuer that accounted for more than 5% of the System's assets. The System held one investment that exceeded the 5% cap in obligations of any one issuer. The System is aware of the breach and in accordance with MCL 38.1133(3)(g), is developing a prudent plan for reallocating assets to comply with the prescribed limitation.

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 State Treasurer'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, 2015, the fair value of the System's prime commercial paper was \$1,995.5 million with the weighted average maturity of 12 days.

The State Treasurer 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.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### Debt Securities (in thousands) As of September 30, 2015

	<u>Fair Value</u>	<u>Effective Duration in Years</u>
<b>Government</b>		
U. S. Treasury	\$ 1,398,047	3.9
U. S. Agencies - Backed	373,399	5.1
U. S. Agencies - Sponsored	129,719	2.1
<b>Corporate</b>	4,049,510	4.6
<b>International*</b>		
Corporate	<u>724,701</u>	0.2
<b>Total</b>	<u>\$ 6,675,376</u>	

Debt securities are exclusive of securities lending collateral.

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

**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 State Treasurer 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, 2015, the total amount of foreign investment subject to foreign currency risk was \$7,348.6 million, which amounted to 15.9% of total investments (exclusive of securities lending collateral) of the System.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

Foreign Currency Risk  
(in thousands)  
As of September 30, 2015

Region	Country	Currency	Private Equity, Real Estate, & Infrastructure Fair Value in U.S. \$	Equity Fair Value in U.S. \$	Fixed Income Fair Value in U.S. \$	International & Absolute Return Fair Value in U.S. \$ *
<b><u>AMERICA</u></b>	Canada	Dollar		\$ 2,791		\$ (1,906)
	Mexico	Peso			\$ 110,053	4,222
<b><u>CARIBBEAN</u></b>	Cayman Islands	Dollar		17,495		33,346
<b><u>EUROPE</u></b>	European Union	Euro	\$ 544,996	13,379		37,431
	Switzerland	Franc		2,162		9,909
	Sweden	Krona		366		8,077
	Denmark	Krone				3,207
	Norway	Krone		317		
	U.K.	Sterling	10,509	59,533		17,831
<b><u>PACIFIC</u></b>	Australia	Dollar				(2,022)
	China	Renminbi	43,540			
	Hong Kong	Dollar	47,099	(4)		(8,162)
	Japan	Yen				(8,658)
	New Zealand	Dollar				(803)
	Philippines	Peso			51,705	
	Singapore	Dollar				6,758
	South Korea	Won				3,427
<b><u>AFRICA</u></b>	South Africa	Rand		474		
	Liberia	Dollar		967		
<b><u>OTHER</u></b>	Various		989,609	97,526	159,606	5,093,861
	Total		\$ 1,635,753	\$ 195,006	\$ 321,364	\$ 5,196,518

\* International includes derivatives whose market value exposure to foreign currency risk is the net amount of unrealized gains and unrealized losses. Maturity dates on these investments range from October 2015 through September 2016 with an average maturity of .6 years.

# FINANCIAL SECTION

## Notes to Basic Financial Statements (continued)

### NOTE 6 - COMMITMENTS AND CONTINGENCIES

Under the Administrative Procedures Act, members may appeal a decision made by the 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.

#### *Pending Litigation*

Michigan Supreme Court No. 145924

Three cases have been consolidated and are pending in the Michigan Court of Appeals following the Michigan Supreme Court's remand instructions. Plaintiffs are contesting the 3% contribution required by MCL 38.1343e, as enacted by 2010 PA 75, to be made by members of the Michigan Public School Employees' Retirement System. Plaintiffs allege that the underlying retiree healthcare contribution is unconstitutional on grounds that it allegedly violates the contracts, takings, and substantive due process clauses of the State and United States Constitutions. The trial court ruled in Plaintiffs' favor and entered a preliminary injunction requiring that the Plaintiffs' contributions not be applied toward the funding of retiree healthcare, but instead to be placed in an interest bearing account. The trial court ruling was affirmed by the Michigan Court of Appeals (COA). On application for leave to the Michigan Supreme Court (MSC), the MSC ordered that the COA's decision be vacated and that the constitutionality of PA 75 be reexamined in light of the enactment of 2012 PA 300 and MSC's April 2015 decision regarding the same. The 3% contribution collected under PA 75, which continues to be held in escrow, totals approximately \$552 million (including interest).

# FINANCIAL SECTION

## Required Supplementary Information

### Schedule of Funding Progress – Other Postemployment Benefit Plan

Expressing the actuarial value of assets as a percentage of the actuarial accrued liability provides one indication of the OPEB Plan's funding status. Analysis of this percentage over time indicates whether the Plan is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the Plan. Trends in unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded or overfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the Plan.

#### Other Postemployment Benefits (\$ 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)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2006	\$ 630	\$ 25,387	\$ 24,757	2.5 %	\$ 9,806	252.5 %
2007	776	25,733	24,957	3.0	9,851	253.3
2008	832	26,811	25,979	3.1	9,958	260.9
2009	713	28,295	27,582	2.5	9,884	279.1
2010	999	28,627	27,627	3.5	8,845	312.4
2011	1,156	27,046	25,890	4.3	9,156	282.8
2012	<sup>1</sup> 1,348	14,788	13,440	9.1	8,649	155.4
2013	2,041	14,534	12,493	14.0	8,273	151.0
2014	<sup>2</sup> 2,982	14,161	11,180	21.1	8,167	136.9

<sup>1</sup> Revised investment rate of return from 4% to 8% due to prefunding.

<sup>2</sup> Revised actuarial assumptions and/or methods.

# FINANCIAL SECTION

## Required Supplementary Information (continued)

### Schedule of Changes in Net Pension Liability (in thousands)

	Fiscal Year	
	2014	2015
<b>Total Pension Liability</b>		
Service Cost	\$ 738,574	\$ 674,943
Interest	4,959,187	5,137,527
Changes of benefit terms		
Differences between expected and actual experience		(75,932)
Changes of assumptions	1,054,479	
Benefit payments, including refunds of member contributions	(4,417,169)	(4,555,349)
<b>Net Change in Total Pension Liability</b>	<u>2,335,070</u>	<u>1,181,189</u>
<b>Total Pension Liability - Beginning</b>	<u>63,839,728</u>	<u>66,174,798</u>
<b>Total Pension Liability - Ending (a)</b>	<u><u>\$ 66,174,798</u></u>	<u><u>\$ 67,355,988</u></u>
<b>Plan Fiduciary Net Position</b>		
Contributions - Employer	\$ 1,600,375	\$ 1,967,611
Contributions - Member	405,444	395,722
Net Investment Income	6,192,711	938,143
Benefit payments, including refunds of member contributions	(4,417,169)	(4,555,349)
Administrative and Other Expenses	(23,711)	(24,487)
Other <sup>1</sup>		(112,468)
<b>Net Change in Plan Fiduciary Net Position</b>	<u>3,757,649</u>	<u>(1,390,828)</u>
<b>Plan Fiduciary Net Position - Beginning</b>	<u>40,015,540</u>	<u>43,773,189</u>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u><u>\$ 43,773,189</u></u>	<u><u>\$ 42,382,361</u></u>
<b>Net Pension Liability - Ending (a) - (b)</b>	<u><u>\$ 22,401,609</u></u>	<u><u>\$ 24,973,627</u></u>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	66.15%	62.92%
<b>Covered Employee Payroll</b>	\$ 8,895,091	\$ 8,426,755
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	251.84%	296.36%

<sup>1</sup> University employer contribution refund.

# FINANCIAL SECTION

## Required Supplementary Information (continued)

### Schedule of Net Pension Liability (in thousands)

Fiscal Year Ended Sept. 30	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as % of Total Pension Liability	Covered Payroll	Net Pension Liability as % of Covered Payroll
2014	\$66,174,798	\$ 43,773,189	\$ 22,401,609	66.15%	\$8,895,091	251.84%
2015	67,355,988	42,382,361	24,973,627	62.92	8,426,755	296.36

### Schedules of Contributions

#### Pension Benefits (in thousands)

Fiscal Year Ended Sept. 30	Annual Required Contribution (ARC) <sup>1</sup>	Actual Employer Contribution <sup>2</sup>	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2006	\$ 1,161,843	\$ 995,932	\$ 165,911	\$ 9,806,452	10.2 %
2007	919,561 <sup>3</sup>	835,366	84,195	9,851,471	8.5
2008	904,409 <sup>3</sup>	999,375	(94,966)	9,958,132	10.0
2009	989,150	1,000,375	(11,225)	9,883,674	10.1
2010	1,182,164	1,001,252	180,912	8,845,019	11.3
2011	1,418,355	1,156,061	262,294	9,155,691	12.6
2012	1,744,512	1,454,439	290,073	8,649,029	16.8
2013	1,931,894	1,364,136	567,758	8,225,140	16.6
2014	2,117,097	1,600,375	516,722	8,895,091	18.0
2015	2,184,029	1,967,611	216,418	8,426,755	23.4

<sup>1</sup> The ARC has been recalculated for all years presented in order to reflect only the employer's share of the annual required contributions and current assumptions.

<sup>2</sup> Differences between the ARC and the actual contributions are the result of a timing difference between when the actuarial valuation is completed and the contributions are made. In addition, for fiscal year 2006, a transfer from the stabilization sub-account in the amount of \$54.2 million was made to intentionally stabilize the contribution rates. The sub-account has no balance or activity since 2006.

<sup>3</sup> Pursuant to Public Act 15 of 2007, the System's assets were revalued to their actual market value as of September 30, 2006. The five-year smoothing began again in fiscal year 2008.



# FINANCIAL SECTION

## Required Supplementary Information (continued)

### Schedules of Contributions (continued)

Other Postemployment Benefits (in thousands)					
<b>Fiscal Year Ended Sept. 30</b>	<b>Annual Required Contribution (ARC)</b>	<b>Actual Employer Contributions<sup>2</sup></b>	<b>Other Governmental Contributions</b>	<b>Percentage Contributed</b>	
2007	\$ 2,497,158	\$ 671,680	\$ 63	26.9 %	
2008	2,425,677	649,571	102	26.8	
2009	2,501,980	705,464	55	28.2	
2010	2,363,039	675,117	39,980	30.3	
2011	2,149,489	794,840	163,949	44.6	
2012	2,038,873	795,595	17,406	39.9	
2013 <sup>1</sup>	1,466,840	973,003	9	66.3	
2014	944,571	1,000,032	138	105.9	
2015	974,957	969,419	213	99.5	

<sup>1</sup> Revised investment rate of return from 4% to 8% due to prefunding.

<sup>2</sup> Differences between the ARC and the actual contributions are the result of a timing difference between when the actuarial valuation is completed and the contributions are made.

### Schedule of Investment Returns

<b>Fiscal Year</b>	<b>Annual Return<sup>1</sup></b>
2014	12.58%
2015	(0.02)

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

# 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. Because this is the ninth year the System is reporting other postemployment benefits in accordance with GASB Statement No. 43, only nine years of historical trend information is provided.

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 Schedule of Funding Progress and Schedules of Contributions are reported as historical trend information. The Schedule of Funding Progress is presented to measure the progress being made to accumulate sufficient assets to pay benefits when due. 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 Schedule of Changes in Net Pension Liability, Schedule of Net Pension Liability, Schedule of Contributions, and Schedule of Investment Returns are schedules that are required in implementing GASB Statement No. 67. These schedules are required to show information for ten years, additional years will be displayed as it becomes available. The two schedules of the Net Pension Liability represents in actuarial terms, the accrued liability less the market value of assets. The Schedule 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 plan investment expense, adjusted for the changing amounts actually invested.

The information presented in the Schedule of Contributions was used in the actuarial valuation for purposes of determining actuarially determined contribution rate. Additional information as of the latest actuarial valuation for the pension plan follows.

#### Valuation:

Actuarially determined contribution amounts as of September 30 each year, which is two years and one day prior to the beginning of the fiscal year in which contributions are reported.

#### Methods and Assumptions Used to Determine Contributions for Fiscal Year 2015:

Actuarial Cost Method	Entry Age, Normal
Amortization Method	Level Percent of Payroll, Closed
Remaining Amortization Period	24 Years (attributable to non-window unfunded actuarial accrued liability) and 8 Years (attributable to window unfunded actuarial accrued liability).
Asset Valuation Method	5-Year Smoothed Market
Inflation	2.5%
Salary Increases	3.5% Wage Inflation
Investment Rate of Return	
(net of investment and administrative expenses)	
- MIP and Basic Plans	8.0%
- Pension Plus Plan	7.0%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility conditions.
Mortality	RP-2000 Combined Healthy Life Mortality Table, adjusted for mortality improvements to 2020 using projection scale AA (for men, 140% of the table rates for ages 0-79, 133% of the table rates for ages 80-84, and 121.8% of the table rates for ages over 84 were used and for women, 96% of the table rates were used).

# ***FINANCIAL SECTION***

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# FINANCIAL SECTION

## Supporting Schedules

**Summary Schedule of  
Pension Plan Administrative and Other Expenses  
For Fiscal Year Ended September 30, 2015  
(in thousands)**

**Personnel Services:**

Staff Salaries	\$ 1,580
Retirement and Social Security	4,316
Other Fringe Benefits	1,443
<b>Total</b>	<u>7,339</u>

**Professional Services:**

Accounting	1,495
Actuarial	502
Attorney General	418
Audit	211
Consulting	69
Medical	365
<b>Total</b>	<u>3,059</u>

**Building and Equipment:**

Building Rentals	883
Equipment Purchase, Maintenance, and Rentals	410
<b>Total</b>	<u>1,293</u>

**Miscellaneous:**

Travel and Board Meetings	45
Office Supplies	54
Postage, Telephone, and Other	1,977
Printing	289
Technological Support	10,432
<b>Total</b>	<u>12,796</u>

<b>Total Administrative and Other Expenses</b>	<u><u>\$ 24,487</u></u>
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**Summary Schedule of  
OPEB Plan Administrative and Other Expenses  
For Fiscal Year Ended September 30, 2015  
(in thousands)**

Staff Salaries	\$ 2,357
Health Fees	146,197
Dental Fees	4,195
Vision Fees	662
<b>Total Administrative and Other Expenses</b>	<u><u>\$ 153,411</u></u>

**Supporting Schedules (continued)**

**Schedule of Investment Expenses**  
**For Fiscal Year Ended September 30, 2015**  
(in thousands)

Real Estate Operating Expenses	\$ 939
Securities Lending Expenses	22,846
Other Investment Expenses <sup>1</sup>	
ORS-Investment Expenses <sup>2</sup>	13,821
Custody Fees	1,000
Management Fees	118,618
Research Fees	2,993
	<hr/>
<b>Total Investment Expenses</b>	<b><u><u>\$ 160,217</u></u></b>

<sup>1</sup> Refer to the Investment Section for fees paid to investment professionals

<sup>2</sup> Does not exclude Treasury Civil Service fees recorded as a pass through in the Schedule of Investment Fees - State Treasurer. As of September 30, 2015, fees totaled \$184,128.

**Schedule of Payments for Professional Services**  
**For Fiscal Year Ended September 30, 2015**  
(in thousands)

Accounting	\$ 1,495
Actuary	502
Attorney General	418
Independent Auditors	211
Consulting	69
Medical Advisor	365
	<hr/>
<b>Total Payments</b>	<b><u><u>\$ 3,059</u></u></b>

# FINANCIAL SECTION

## Supporting Schedules (continued)

Detail of Changes in Plan Fiduciary Net Position (Pension and Other Postemployment Benefits)  
For the Fiscal Year Ended September 30, 2015 (in thousands)

	Employee Contributions	Employee Contributions Pension Plus	Member Investment Plan	Employer Contributions
<b>Additions:</b>				
Contributions:				
Member contributions	\$ 27,189	\$ 30,577	\$ 337,957	
Employer contributions:				
Colleges, universities and federal				\$ 163,612
School districts and other				1,793,646
Other governmental contributions				
Total contributions	27,189	30,577	337,957	1,957,258
Investment income (loss):				
Net increase (decrease) in fair value of investments				
Interest, dividends, and other				
Investment expenses:				
Real estate operating expenses				
Other investment expenses				
Securities lending activities:				
Securities lending income				
Securities lending expenses				
Net investment income (loss)	-	-	-	-
Transfers from other systems				
Miscellaneous income				
<b>Total additions</b>	27,189	30,577	337,957	1,957,258
<b>Deductions:</b>				
Benefits paid to plan members and beneficiaries:				
Retirement benefits				
Health benefits				
Dental/vision benefits				
Refund of contributions	2,719	975	20,722	112,468
Transfers to other systems	1			
Administrative and other expenses				
<b>Total deductions</b>	2,720	975	20,722	112,468
<b>Net Increase (Decrease) before other changes</b>	24,469	29,602	317,234	1,844,790
<b>Other Changes in Net Position:</b>				
Interest allocation	66,998	5,965	505,163	
Transfers upon retirement	(82,948)		(260,486)	
Transfers of employer shares				(960,173)
<b>Total other changes in net position</b>	(15,951)	5,965	244,676	(960,173)
<b>Net Increase (Decrease) in Net Position</b>	8,518	35,567	561,911	884,617
<b>Net Position Restricted for Pension Benefits and OPEB:</b>				
Beginning of Year	1,531,219	59,486	4,746,766	(25,807,404)
End of Year	\$ 1,539,737	\$ 95,053	\$ 5,308,677	\$ (24,922,787)

# FINANCIAL SECTION

## Supporting Schedules (continued)

Employer Contributions Pension Plus	Retired Benefit Payments	Retired Benefit Payments Pension Plus	Undistributed Investment Income	OPEB	Total
				\$ 381,631	\$ 777,353
\$ 2,128				86,203	251,943
8,225				883,216	2,685,086
				213	213
10,352	-	-	-	1,351,262	3,714,595
			\$ 79,836	(12,759)	67,077
			933,155	70,650	1,003,805
			(871)	(68)	(939)
			(126,785)	(9,647)	(136,432)
			73,370	5,692	79,062
			(21,043)	(1,804)	(22,846)
-	-	-	937,663	52,064	989,727
					-
	\$ 480			166	646
10,352	480	-	937,663	1,403,493	4,704,969
	4,530,915			1	4,530,916
				617,492	617,492
				83,411	83,411
	17			96	136,997
				1	1
			24,487	153,411	177,898
-	4,530,932	-	24,487	854,411	5,546,716
10,352	(4,530,452)	-	913,175	549,081	(841,747)
3,887	6,955,308		(7,537,320)		
	343,435				
	960,173				
3,887	8,258,916	-	(7,537,320)	-	-
14,240	3,728,464	-	(6,624,144)	549,081	(841,747)
55,533	44,585,308		18,602,281	3,534,221	47,307,410
\$ 69,773	\$ 48,313,771	\$ -	\$ 11,978,137	\$ 4,083,302	\$ 46,465,663

# ***FINANCIAL SECTION***

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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  
Asset Allocation  
Investment Results  
List of Largest Stock Holdings  
List of Largest Bond Holdings  
Schedule of Investment Fees  
Schedule of Investment Commissions  
Investment Summary

# INVESTMENT SECTION

## Report on Investment Activity

### INTRODUCTION

The State Treasurer reports investment activity quarterly to the Investment Advisory Committee (Committee), which reviews the investments, goals, and objectives of the retirement funds and may submit recommendations regarding them to the State Treasurer. The Investment Advisory Committee may also, by a majority vote, direct the State Treasurer to dispose of any holdings that, in the Committee's judgment, are not suitable for the funds involved, and may, by unanimous vote, direct the State Treasurer to make specific investments.

The Investment Advisory Committee was created by Act 380 of the Public Acts of 1965. The three public members of the five-member committee are appointed by the Governor with the advice and consent of the Senate for three-year terms. The Director of the Department of Licensing and Regulatory Affairs and the Director of the Department of Technology, Management and Budget are ex-officio members. As of September 30, 2015, members of the Committee were as follows: James B. Nicholson (public member), L. Erik Lundberg, CFA (public member), Reginald G. Sanders, CFA, CAIA (public member), Mike Zimmer (ex-officio member), and David Behen (ex-officio member). The public members serve without pay, but may be paid actual and necessary travel and other expenses.

### INVESTMENT POLICY & GOALS

Investment policy states that the fiduciary will operate within standard investment practices of the prudent person and in accordance with Public Employee Retirement System Investment Act 314 of 1965. The fiduciary is 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, trust fund assets are to be invested for the exclusive benefit of the members of the System, in a fiduciary capacity.

The System's Proxy Voting Policy sets forth directives on various issues including: Boards of Directors, corporate governance, social issues, corporate restructurings and defenses. All proxies are reviewed and voted 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 State Treasurer is the sole investment fiduciary and custodian of the System's investments pursuant to State law. The goals of the System are:

1. Maintain sufficient liquidity to pay benefits.
2. Meet or exceed the actuarial assumption over the long term.
3. Perform in the top half of the public plan universe over the long term
4. Diversify assets to preserve capital and avoid large losses.
5. Exceed individual asset class benchmarks over the long term.

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

# INVESTMENT SECTION

## Report on Investment Activity (continued)

### Asset Allocation (Excludes Collateral on Loaned Securities)

<u>Investment Category</u>	<u>As of 9/30/15 Actual %</u>	<u>Five-Year Target %</u>
Domestic Equity Pools	27.6 %	28.0 %
International Equity Pools	13.7	16.0
Private Equity Pools	16.7	18.0
Real Estate and Infrastructure Pools	10.0	10.0
Fixed Income Pools	12.1	10.5
Absolute Return Pools	14.5	15.5
Short Term Investment Pools	<u>5.4</u>	<u>2.0</u>
<b>TOTAL</b>	<b><u>100.0 %</u></b>	<b><u>100.0 %</u></b>

### INVESTMENT AUTHORITY

Pursuant to State Law (Section 91 of Act No. 380 of the Public Acts of 1965, as amended, and Section 12c of Act No. 314 of 1965, as amended), the State Treasurer, State of Michigan, is the investment fiduciary for the following four State sponsored retirement systems: Michigan Public School Employees' Retirement System, Michigan State Employees' Retirement System, Michigan State Police Retirement System, and Michigan Judges' Retirement System.

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, 2015, the total System's rate of return was 2.6% for the Pension Plan and 2.5% 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, 2015 were: 10.1%, 10.0%, and 6.7% respectively.

In the five years leading up to September 2014, the U.S. stock market had more than doubled in value. However, for fiscal year 2015, the market paused. The U.S. stock market returns were slightly negative, returning -0.3% including dividends. Returns in foreign stocks were worse, losing 11.7% in value. However, as interest rates fell, the price of bonds rose. The U.S. 10-year Treasury rate dropped to 2.0%, down from 2.5% the year before. Due to Federal Reserve policies, short-term investment returns continued to yield negligible returns.

The value of the U.S. dollar rose significantly over fiscal year 2015. On a trade-weighted basis, the dollar increased in value by more than 14%. Related to the dollar's strength, commodity prices across the board fell as well. The price of a barrel of crude oil, for example, fell by 50% to end September 2015 at around \$45 per barrel.

Despite the cool returns in the capital markets, the U.S. economy is doing fairly well. By the end of the fiscal year, real GDP was growing at a 2.7% year-over-year rate, and while partially due to the fall in commodity prices, headline inflation is virtually non-existent. The national unemployment rate is at 5.1%, its lowest level in over seven years.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

The Federal Reserve Board has held down short-term interest rate to near zero for over six and a half years. At its September 2015 meeting, the Fed again voted to keep rates at these levels. However, it appears that the aggressive Fed policies that have been put in place may be slowly coming to an end. Barring a significant economic set-back, most Fed prognosticators expect the Fed to begin gradually increasing short-term rates to a more normal policy in the coming twelve months.

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 1500 Super Composite 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 (or the most relevant Russell Index), adjusting for market capitalization and style, for one, three, and five-year periods and a market cycle. Rank above median in a universe of managers possessing a similar market cap and style characteristics.

For index, or passive return strategies, the objective is to return within 20 basis points of the S&P 500 Index, 50 basis points for the S&P 400 mid-cap, and 60 basis points for the S&P 600 small-cap over one, three, and five-year periods and a market cycle.

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 1500 while providing minimal 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 1500 Index.

The following summarizes the weightings of the pools as of September 30, 2015:

Active	57.3 %
Passive	42.7
<b>Total</b>	<b><u>100.0</u> %</b>

Large Cap	65.3 %
Multi Cap	25.0
Mid Cap	7.2
Small Cap	2.5
<b>Total</b>	<b><u>100.0</u> %</b>

The System's Domestic Equity pools total rate of return was -0.8% for the Pension and OPEB Plans for fiscal year 2015. This compared with -0.3% for the S&P 1500 Index.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

At the close of fiscal year 2015, the Domestic Equity pools represented 27.6% of total investments. The following summarizes the System's 77.3% ownership share of the Domestic Equity pools at September 30, 2015:

### Domestic Equity Pools (in thousands)

Short Term Pooled Investments	\$ 54,061
Equities	12,758,034
Market Value of Equity Contracts	(37,493)
Settlement Principal Payable	(17,497)
Settlement Proceeds Receivable	17,243
Accrued Dividends	18,334
<b>Total</b>	<b><u>\$ 12,792,682</u></b>

### *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-US Net 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 (or the most relevant Russell Index), adjusting for market capitalization, style and geography for one, three, and five-year periods and a market cycle. Rank above median in a universe of managers possessing a similar market capitalization, style and geography characteristics.

For index, or passive return strategies, the objective is to return within 250 basis points of the S&P/Citigroup BMI-EPAC Index with 25% of the currency hedged for one, three, and five-year periods and a market cycle. Return within 400 basis points of the MSCI Emerging Markets Index, for one, three, and five-year periods and a market cycle.

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

Passive exposure to International Equity returns is achieved primarily by investing in a combination of fixed income LIBOR notes, short-term fixed income investments, and equity swap agreements on foreign stock indices in developed markets. Interest on the dedicated notes and short-term fixed income investments is exchanged for international stock returns, and the total notional amount of the swap agreements is invested in the approximate proportions of the S&P Broad Market Index (BMI) Europe and Pacific Composite (EPAC) country weightings in related indices. Use of swap agreements for a core position began in 1993, an American Depositary Receipts (ADR) and index-related security portfolio was added in June of 1999 to increase portfolio management flexibility, and a multiple country fund portfolio with smaller capitalization stocks was added in September of 2002 to improve exposure to the smallest companies in the BMI index. Use of futures as an investment to hedge cash flows and balances began in December of 2008, and this use is expected to continue in the future. The combined Swap agreements, notes and short-term investments together continue to perform like a stock index fund that realizes all gains and losses on a rolling three year basis.

The pools diversify their investments by allocating their equity strategies with consideration of the economic development status weightings of the S&P/Citigroup BMI -World ex-US Index.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

The following summarizes the weightings of the pool as of September 30, 2015:

Active	47.2 %
Passive	52.8
<b>Total</b>	<b><u>100.0 %</u></b>

Developed	82.0 %
Emerging	18.0
<b>Total</b>	<b><u>100.0 %</u></b>

The System's International Equity pools total rate of return was -8.7% for the Pension and OPEB Plans for fiscal year 2015. This compared with -12.2% for the MSCI ACWI Ex US Net.

At the close of fiscal year 2015, the International Equity pools represented 13.7% of total investments. The following summarizes the System's 76.9% ownership share of the International Equity Pools at September 30, 2015:

### International Equity Pools (in thousands)

Short Term Pooled Investments	\$ 196,698
Equities	5,449,489
Fixed Income Securities	724,701
Market Value of Equity Contracts	(48,420)
Settlement Principal Payable	(2,869)
Accrued Dividends and Interest	1,791
<b>Total</b>	<b><u>\$ 6,321,390</u></b>

### 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 a blend of the S&P 500 Index plus 300 basis points and the 10 Year Yield plus 300 basis points using ending weights of equity and fixed income holdings within the portfolio.

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, 2015:

Buyout Funds	55.5 %
Special Situation Funds	19.2
Venture Capital Funds	15.7
Fund of Funds	5.3
Liquidation Portfolio	2.7
Mezzanine Funds	1.6
<b>Total</b>	<b><u>100.0 %</u></b>

The Private Equity pools had a return of 11.7% for the Pension and OPEB Plans for the fiscal year ended September 30, 2015, versus the benchmark of 10.6%.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

At the close of fiscal year 2015, the Private Equity pools represented 16.7% of total investments. The following summarizes the System's 78.1% ownership share of the Private Equity pools at September 30, 2015:

### Private Equity Pools (in thousands)

Short Term Pooled Investments	\$ 104,682
Equities	7,608,199
Long Term Obligations	5,000
Settlement Proceeds Receivable	3,168
Accrued Interest	336
<b>Total</b>	<b><u>\$ 7,721,385</u></b>

### 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	30.9 %
Hotel	15.2
Commercial office buildings	15.2
Infrastructure	9.8
Industrial warehouse buildings	5.5
Retail shopping centers	6.5
For Rent Homes	6.7
For Sale Homes	5.7
Land	2.2
Short Term Investments	2.3
<b>Total</b>	<b><u>100.0 %</u></b>

The Real Estate and Infrastructure pools generated a return of 11.1% for the Pension and OPEB Plans for fiscal year 2015. The two benchmark returns from the National Council of Real Estate Investment Fiduciaries: the National Property Blended Index (less 130 basis points) was 12.0% and the Open-End Diversified Core Equity Index was 13.9%.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

At the close of fiscal year 2015, the Real Estate and Infrastructure pools represented 10.0% of total investments. The following summarizes the System's 77.2% ownership share of the Real Estate and Infrastructure pools at September 30, 2015:

### Real Estate and Infrastructure Pools

(in thousands)

Short Term Pooled Investments	\$ 107,655
Real Estate Equities	4,072,721
Infrastructure Equities	449,648
<b>Total</b>	<b><u>\$ 4,630,024</u></b>

### Fixed Income Pools

The objective for investments made in the Fixed Income pools is to meet or exceed the Barclays Aggregate Bond Index over one, three, and five-year periods and market cycles. Rank above median in a nationally recognized universe of managers possessing a similar style.

For Fixed Income sub-strategies, the objective return is to meet or exceed the most relevant Barclays benchmark index.

The pools are invested primarily in fixed income 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 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 pools invest in fixed income and related securities in a diversified portfolio of investment grade corporate issues, treasuries, agencies, government sponsored enterprises and government guaranteed mortgages. The pools diversify its investments by allocating its strategies with consideration of credit risk.

The System's Fixed Income pools total rate of return was 3.1% for fiscal year 2015. This compared with 2.9% for the Barclays Aggregate Bond benchmark.

At the close of fiscal year 2015, the Fixed Income pools represented 12.1% of total investments. The following summarizes the System's 76.6% ownership share of the Fixed Income pools at September 30, 2015:

### Fixed Income Pools

(in thousands)

Short Term Pooled Investments	\$ 81,658
Fixed Income Securities	5,475,673
Accrued interest	27,124
<b>Total</b>	<b><u>\$ 5,584,455</u></b>



# INVESTMENT SECTION

## Report on Investment Activity (continued)

### *Absolute Return Pools*

The Absolute Return Pools consist of the Absolute Return Strategies Pool and the Real Return and Opportunistic Investment Pool.

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

The Absolute Return Strategies pool rate of return for the fiscal year was 2.4% versus the benchmark's 1.9%.

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 CPI by at least five percent (5%) annually net of fees over one, three, and five-year periods and a market cycle. If a peer universe is available, rank above median in a nationally recognized universe of managers possessing a similar style.

For sub-strategies targeting a commodities index, the objective is to generate a rate of return that meets or exceeds the Dow Jones-AIG Total Return Commodities Index over one, three, and five year periods and a market cycle. Rank above median in a nationally recognized universe of managers possessing a similar style.

The Real Return and Opportunistic Investments pool rate of return for the fiscal year was 7.3% for the Pension and OPEB Plans versus the benchmark's 6.5%.

At the close of fiscal year 2015, the Absolute Return Pools represented 14.5% of total investments. The following summarizes the System's 77.2% ownership share of the Absolute Return Pools at September 30, 2015:

### **Absolute Return Pools (in thousands)**

Short Term Pooled investments	\$ 223,516
Equities	6,435,792
Long Term Obligations	77,503
Accrued Interest and Dividends	2,169
<b>Total</b>	<b><u>\$ 6,738,980</u></b>

### *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 Short Term Investment pools return for the fiscal year was 0.5% for the Pension Plan and 0.4% for the OPEB plan versus the benchmark's 0.0%.

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.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

At the close of fiscal year 2015, the Short Term Investment pools represented 5.4% of total investments. The following summarizes the System's 90.8% ownership share of the Short Term Investment pools at September 30, 2015:

### Short Term Investment Pools (in thousands)

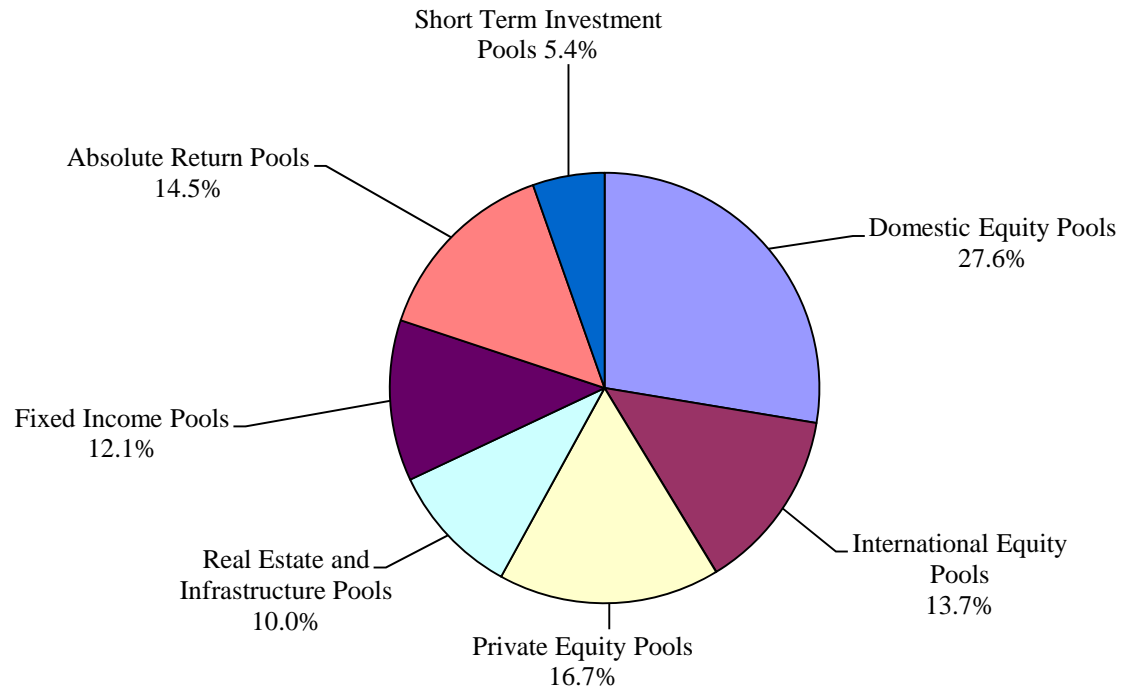
Short Term Pooled Investments	\$ 1,216,064
Healthcare Contribution*	552,751
Fixed Income Securities	744,877
Accrued interest	<u>1,412</u>
<b>Total</b>	<b><u><u>\$ 2,515,104</u></u></b>

\*PA 75 of 2010 required each actively employed member of MPSERS to contribute toward health care benefits. Amounts contributed to this account until September 3, 2012 are held and invested separately.

# INVESTMENT SECTION

## Report on Investment Activity (continued)

### Asset Allocation – Security Type Only



# INVESTMENT SECTION

## Report on Investment Activity (continued)

### Pension Plan Investment Results for the Period Ending September 30, 2015

Investment Category	Current Year	Annualized Rate of Return <sup>1</sup>		
		3 Years	5 Years	10 Years
Total Portfolio	2.6 %	10.1 %	10.0 %	6.7 %
Domestic Equity Pools	(0.8)	13.3	13.2	7.1
S&P 1500 Index	(0.3)	12.5	13.3	7.0
International Equity Pools	(8.7)	4.0	3.5	2.7
International Blended Benchmark <sup>2</sup>	(12.2)	2.6	2.2	1.8
Private Equity Pools	11.7	17.2	16.8	13.4
Private Equity Blended Benchmark <sup>3</sup>	10.6	20.4	20.3	11.9
Real Estate and Infrastructure Pools	11.1	12.7	12.4	5.7
NCREIF Property Blended Index <sup>4</sup>	12.0	10.5	11.1	6.6
Fixed Income Pools	3.1	2.5	3.6	5.4
Barclays Aggregate Bond	2.9	1.7	3.1	4.6
Absolute Return Pools				
Total Absolute Return	2.4	7.2	5.7	
HFRI Fund of Funds Cons 1 month lag	1.9	4.9	3.4	
Total Real Return and Opportunistic	7.3	12.5	10.1	
Real Return and Opportunistic Benchmark <sup>5</sup>	6.5	7.0	7.4	
Short Term Investment Pools	0.5	0.4	0.3	1.3
30 Day Treasury Bill	0.0	0.0	0.1	1.2

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-US Net. History 10/1/10 to 6/30/14 is MSCI ACWI Ex-US 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 As of 1/1/07, index is blend of S&P 500 plus 300 bps and 10 year yield plus 300 bps based on ending weights.

History prior to 1/1/07 is S&P500 plus 300 bps.

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

5 Benchmark is 50% (CPI + 5%) and 50% (actuarial rate 8%).

# INVESTMENT SECTION

## Report on Investment Activity (continued)

### OPEB Investment Results for the Period Ending September 30, 2015

Investment Category	Current Year	Annualized Rate of Return <sup>1</sup>	
		3 Years	
Total Portfolio	2.5 %	9.9 %	
Domestic Equity Pools	(0.8)	13.3	
S&P 1500 Index	(0.3)	12.5	
International Equity Pools	(8.7)	4.0	
International Blended Benchmark <sup>2</sup>	(12.2)	2.6	
Private Equity Pools	11.7	17.2	
Private Equity Blended Benchmark <sup>3</sup>	10.6	20.4	
Real Estate and Infrastructure Pools	11.1	12.6	
NCREIF Property Blended Index <sup>4</sup>	12.0	10.5	
Fixed Income Pools	3.1	2.5	
Barclays Aggregate Bond	2.9	1.7	
Absolute Return Pools			
Total Absolute Return	2.4	7.2	
HFRI Fund of Funds Cons 1 month lag	1.9	4.9	
Total Real Return and Opportunistic	7.3	12.5	
Real Return and Opportunistic Benchmark <sup>5</sup>	6.5	7.0	
Short Term Investment Pools	0.4	0.3	
30 Day Treasury Bill	0.0	0.0	

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-US Net. History 10/1/10 to 6/30/14 is MSCI ACWI Ex-US 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 As of 1/1/07, index is blend of S&P 500 plus 300 bps and 10 year yield plus 300 bps based on ending weights.

History prior to 1/1/07 is S&P500 plus 300 bps.

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

5 Benchmark is 50% (CPI + 5%) and 50% (actuarial rate 8%).

# INVESTMENT SECTION

## Largest Assets Held<sup>1</sup>

### Largest Stock Holdings (By Market Value) September 30, 2015

Rank	Shares	Stocks	Market Value
1	4,426,255	Apple Inc	\$ 488,215,969
2	5,390,501	Wells Fargo & Co	276,802,246
3	4,673,266	Aflac Inc	271,656,937
4	2,476,580	Gilead Sciences Inc	243,175,411
5	2,672,511	Union Pacific Corp	236,276,680
6	1,675,342	Home Depot Inc	193,485,282
7	4,281,964	Verizon Communications Inc	186,308,261
8	4,076,280	Microsoft Corp	180,416,172
9	2,856,588	JP Morgan Chase & Co	174,166,145
10	255,699	Google Inc	163,230,388

### Largest Bond Holdings (By Market Value)<sup>2</sup> September 30, 2015

Rank	Par Amount	Bonds & Notes	Market Value
1	\$ 150,947,535	US Treasury N/B 1.625% Due 07-31-2019	\$ 153,537,945
2	131,920,405	US Treasury N/B 2.125% Due 05-15-2025	132,714,038
3	96,761,240	US Treasury N/B 2.125% Due 06-30-2022	99,281,096
4	81,445,214	US Treasury N/B 2.000% Due 08-15-2025	81,014,694
5	77,408,992	US Treasury N/B 1.625% Due 06-30-2019	78,776,732
6	77,408,992	US Treasury N/B 1.000% Due 09-15-2017	77,954,261
7	77,408,992	US Treasury N/B 0.875% Due 10-15-2017	77,729,543
8	77,288,587	Barclays Bank PLC 1.005% FRN Due 01-22-2019	77,235,412
9	59,130,794	TSY Infl IX N/B 0.125% Due 04-15-2019	58,929,099
10	48,691,810	Suntrust Banks Inc. 0.9941% FRN Due 04-29-2019	47,963,185

1 A complete list of holdings is available from the Michigan Department of Treasury.

2 Largest Bond Holdings are exclusive of securities lending collateral.

The System's investments 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

The State Treasurer is the investment fiduciary and custodian of the System's funds pursuant to State law. Outside advisors are utilized to augment the State Treasurer's internal staff. 62.49% 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 \$14,005 thousand or eight and one tenth basis points (.081%) of the fair value of the Assets under Management of the State Treasurer.

Act 380 of the Public Acts of 1965 created an Investment Advisory Committee (Committee) comprised of the directors of the Department of Licensing and Regulatory Affairs and the Department of Technology, Management & Budget, or their duly authorized representatives, and three public members appointed by the Governor with the advice and consent of the Senate. The public members serve without pay, but may be paid actual and necessary travel and other expenses. The Committee meets quarterly to review investments, goals and objectives and may submit recommendations to the State Treasurer. The Committee may also, by a majority vote, direct the State Treasurer to dispose of any holding which, in the Committee's judgment, is not suitable for the fund involved, and may by unanimous vote direct the State Treasurer to make specific investments.

### Schedule of Investment Fees

#### Investment Managers' Fees:

	Assets under Management (in thousands)	Fees (in thousands)	Basis Points*
State Treasurer	\$ 17,366,853	\$ 14,005	8.1
Outside Advisors for			
Fixed Income	1,966,632	7,096	36.1
Absolute Return	6,715,534	13,774	20.5
International Equity	5,135,847	10,846	21.1
Domestic Equity	2,767,745	7,494	27.1
Private Equity	7,721,385	55,897	72.4
Real Estate and Infrastructure	4,630,024	23,511	50.8
<b>Total</b>	<b>\$ 46,304,020</b>	<b>\$ 132,623</b>	

#### Other Investment Services Fees:

Assets in Custody	\$ 45,587,630	\$ 3,993
Securities on Loan	2,675,304	7,391

\* Private Equity partnership agreements that define the management fees, the asset management fees range from 75 basis points on remaining assets under management to 250 basis points of the committed capital. For Real Estate/Infrastructure, the asset management fees range from 40 to 200 basis points. For Absolute Return, 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, 2015							
	Actual Commissions Paid <sup>1</sup>	Actual Number of Shares Traded <sup>1</sup>	Average Commission Per Share	Estimated Trade Costs Per Share	Estimated Research Costs Per Share	Estimated Trade Costs	Estimated Research Costs
<b>Investment Brokerage Firms:</b>							
Banc Of America Securities LLC	\$ 30,962	839,456	\$ 0.04	\$ 0.01	\$ 0.03	\$ 8,395	\$ 25,184
BNY Convergenx Execution Solutions LLC	29,746	1,487,300	0.02	0.01	0.01	14,873	14,873
BTIG LLC	1,224,615	112,435,015	0.01	0.01		1,124,350	
Capital Institutional Services Inc.	154,404	9,430,246	0.02	0.01	0.01	94,302	94,302
Citigroup Global Markets Inc.	54,846	2,742,279	0.02	0.01	0.01	27,423	27,423
Cowen & Company LLC	179,321	8,966,074	0.02	0.01	0.01	89,661	89,661
Credit Suisse Securities LLC	459,764	24,114,500	0.02	0.01	0.01	241,145	241,145
Deutsche Bank - Alex Brown	1,496	49,809	0.03	0.01	0.02	498	996
Drexel Hamilton	78,153	10,949,263	0.01	0.01		109,493	
J. P. Morgan Securities Inc.	269,872	33,118,138	0.01	0.01		331,181	
Mischler Financial Group Inc.	115,931	5,796,540	0.02	0.01	0.01	57,966	57,966
Morgan Stanley & Co. Inc.	430,593	21,476,033	0.02	0.01	0.01	214,760	214,760
OTA LLC	144,560	4,955,709	0.03	0.01	0.02	49,557	99,113
Piper Jaffray & Co.	5,338	533,854	0.01	0.01		5,338	
Stifel, Nicolaus & Co. Inc.	12,925	323,224	0.04	0.01	0.03	3,232	9,697
UBS Securities LLC	1,981	49,520	0.04	0.01	0.03	495	1,485
Total	\$ 3,194,507	237,266,960	\$ 0.02 <sup>2</sup>	\$ 0.01	\$ 0.01	\$ 2,372,669	\$ 876,605

<sup>1</sup> 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.

<sup>2</sup> The average commission per share for all brokerage firms.



# INVESTMENT SECTION

## Investment Summary

Fiscal Year Ended September 30, 2015

	<u>Market Value</u> <sup>1</sup>	<u>Percent of Total Market Value</u>	<u>Investment &amp; Interest Income</u> <sup>2</sup>	<u>Percent of Total Investment &amp; Interest Income</u>
Fixed Income Pools	\$ 5,584,455,359	12.1 %	\$ 162,824,595	16.9 %
Domestic Equity Pools	12,792,682,226	27.6	(52,531,667)	(5.5)
Real Estate and Infrastructure Pools	4,630,024,171	10.0	464,821,628	48.4
Private Equity Pools	7,721,384,769	16.7	783,016,151	81.5
International Equity Pools	6,321,389,506	13.7	(610,908,847)	(63.6)
Absolute Return Pools	6,738,980,233	14.5	208,763,584	21.7
Short Term Investment Pools	<u>2,515,104,364</u> <sup>3</sup>	<u>5.4</u>	<u>4,677,381</u>	<u>0.6</u>
<b>Total</b>	<u><u>\$ 46,304,020,628</u></u>	<u><u>100.0 %</u></u>	<u><u>\$ 960,662,825</u></u>	<u><u>100.0 %</u></u>

<sup>1</sup> Market value excludes \$2,720,433,773 in securities lending collateral for fiscal year 2015.

<sup>2</sup> Total Investment & Interest Income excludes net security lending income of \$56,215,651 and unrealized gain of \$110,219,695 for securities lending collateral.

<sup>3</sup> Short term investment pools market value includes \$163,639,793 of equity in common cash.

# ***INVESTMENT SECTION***

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# ACTUARIAL SECTION

Actuary's Certification  
Summary of Actuarial Assumptions and Methods  
Schedules of Active Member Valuation Data  
Schedules of Changes in the Retirement Rolls  
Prioritized Solvency Test  
Analysis of System Experience  
Summary of Plan Provisions

# ACTUARIAL SECTION

## Actuary's Certification



Gabriel Roeder Smith & Company  
Consultants & Actuaries

One Towne Square  
Suite 800  
Southfield, MI 48076-3723

248.799.9000 phone  
248.799.9020 fax  
www.gabrielroeder.com

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October 23, 2015

Mr. David Behen, Director  
Department of Technology, Management and Budget  
and  
The Retirement Board  
Michigan Public School Employees' Retirement System  
P.O. Box 30171  
Lansing, Michigan 48909

Ladies and Gentlemen:

The basic financial objective of the Michigan Public School Employees' Retirement System (MPERS) 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 toward meeting these financial objectives is illustrated in the Schedules of Funding Progress and the Schedules of Employer Contributions.

We performed actuarial valuations and issued actuarial reports for MPERS as of September 30, 2014. The purpose of the September 30, 2014 annual actuarial valuations was to determine the annual required contributions for the fiscal year ending September 30, 2017, 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, 2014.

The valuation was 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 otherwise 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 external auditor audits the actuarial data annually.

Annual actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rate of investment return and payroll growth, 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. The assumptions and the methods comply with the disclosure requirements of the applicable GASB Statements. 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.

## Actuary's Certification (continued)

Mr. David Behen  
October 23, 2015  
Page 2

Our firm provided the following supporting schedules for use in the Comprehensive Annual Financial Report:

### Financial Section

- Note 1 - Table of System's Membership
- Note 3 - Summary of Actuarial Assumptions
- Schedules of Funding Progress
- Schedules of Employer Contributions (Annual Required Contribution)

### Actuarial Section

- Summary of Actuarial Assumptions and Methods
- Percent of Eligible Active Members Retiring Within Next Year
- Separation from Active Employment Before Age and Service Retirement and Individual Pay Increase Assumptions
- Schedule of Active Member Pension Valuation Data
- Schedule of Changes in the Retirement Rolls
- Prioritized Solvency Tests
- Schedule of Active Member OPEB Valuation Data
- Schedule of Changes in the OPEB Rolls
- Analysis of System Experience

### Statistical Section

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

The September 30, 2014 valuations were based upon assumptions that were recommended in connection with a study of System experience covering the period from October 1, 2007 through September 30, 2012. 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 assumption/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.

Gabriel Roeder Smith & Company

# ***ACTUARIAL SECTION***

## **Actuary's Certification (continued)**

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The signing actuaries are independent of the plan sponsor.

The actuarial valuations of MPERS as of September 30, 2014 were performed by qualified actuaries in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with applicable State statutes. Mita Drazilov and Louise Gates 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,



Mita D Drazilov, ASA, MAAA



Louise M. Gates ASA, MAAA

Gabriel Roeder Smith & Company

## **Summary of Actuarial Assumptions and Methods**

1. The investment return rate used in the valuations of the MIP and Basic Pension plans was 8% per year (7% for the Pension Plus plan) net of expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. Considering other financial assumptions, this investment return rate translates to an assumed long-term real rate of return of 4.5% (3.5% for the Pension Plus plan). Adopted 2004 (2010 for the Pension Plus plan).
2. The healthy life mortality table used in evaluating allowances to be paid was the RP-2000 Combined Healthy Mortality Table adjusted for improvements to 2025 using projection scale BB. Adopted 2014.
3. Sample probabilities of regular, unreduced retirement are shown in Schedule 1 on the next page. Adopted 2014.
4. Sample probabilities of withdrawal from service and disability, together with individual pay increase assumptions, are shown in Schedule 2 on the next page of this report. Adopted 2014.
5. Total active member payroll is assumed to increase 3.5% 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 2004.
6. An individual entry age actuarial cost method of valuation was used in determining age and service and deferred retirement actuarial liabilities and normal cost. Adopted 1975. Unfunded actuarial accrued liabilities are financed over a declining 40-year period beginning October 1, 1996. Adopted 1996.
7. The Department of Technology, Management & Budget approved the use of fair value of assets as of September 30, 2006, for 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 & Budget after consulting with the actuary.
10. A 5-year experience investigation, covering the period from October 1, 2007, through September 30, 2012, was completed in 2014. The purpose of the study was to analyze the actual experience of the System versus that anticipated by actuarial assumptions then in use. Adopted 2014.
11. Gabriel Roeder Smith and Co. was awarded the actuarial and consulting services contract beginning October 4, 2006.

# ACTUARIAL SECTION

## Summary of Actuarial Assumptions and Methods (continued)

### SCHEDULE 1

#### Percent of Eligible Active Members Retiring Within Next Year

Retirement Ages	Basic		MIP <sup>1</sup> and Pension Plus		Years of Service	MIP <sup>2</sup>	
	Teachers	Non-Teachers	Teachers	Non-Teachers		Teachers	Non-Teachers
55	25 %	30 %			30	25%	25 %
58	16	22			32	25	25
61	20	21	20 %	19 %	34	19	23
64	23	24	22	21	36	21	26
67	24	28	22	20	38	23	29
70	21	25	15	18	40	30	33
71	21	25	15	18	42	30	33
72	21	25	15	18	44	30	33
73	21	25	15	18	46	30	33
74	21	25	15	18	48	30	33
75 and over	100	100	100	100	50 and over	100	100

<sup>1</sup> Applies to MIP members with fewer than 30 years of service

<sup>2</sup> Applies to MIP members with 30 or more years of service.

### SCHEDULE 2

#### Separation From Active Employment Before Age & Service Retirement & Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Withdrawing Within Next Year				Percent Becoming Disabled Within Next Year	Percent Increase in Pay During Next Year
		Pay More than \$20,000		Pay Less than \$20,000			
		Teachers	Non-Teachers	Teachers	Non-Teachers		
All	0	21.00 %	35.00 %	40.00 %	40.00 %		
	1	11.00	14.00	28.00	26.00		
	2	7.00	8.20	21.00	17.00		
	3	6.00	6.80	20.00	14.00		
	4	5.00	5.70	19.00	12.00		
25	5 & Over	3.00	4.76	18.00	12.00	.01 %	12.30 %
35	"	2.22	3.40	16.20	10.40	.02	6.80
45	"	1.32	2.20	12.80	7.40	.10	4.80
55	"	1.20	2.00	12.00	6.00	.26	3.70
60	"	1.20	2.00	12.00	6.00	.36	3.50



# ACTUARIAL SECTION

## Actuarial Valuation Data

### Schedule of Active Member Pension Valuation Data

<u>Valuation Date Sept. 30</u>	<u>Number</u>	<u>Reported Annual Payroll*</u>	<u>Average Annual Pay</u>	<u>Increase (Decrease)</u>	<u>Average Age</u>	<u>Average Service</u>
2005	316,151	\$ 10,205,972	\$ 32,282	0.0 %	43.7	9.7
2006	308,233	9,806,452	31,815	(1.4)	44.1	9.9
2007	295,984	9,851,471	33,284	4.6	44.5	10.3
2008	278,642	9,958,132	35,738	7.4	44.9	10.8
2009	268,208	9,883,674	36,851	3.1	45.4	11.4
2010	242,568	8,845,019	36,464	(1.1)	45.2	11.1
2011	236,660	9,155,691	38,687	6.1	45.3	11.3
2012	223,769	8,649,029	38,652	(0.1)	45.7	11.9
2013	212,525	8,225,140	38,702	0.1	46.0	12.3
2014	199,674	7,943,922	39,784	2.8	46.1	12.7

\* In thousands of dollars.

### Schedule of Active Member OPEB Valuation Data

<u>Valuation Date Sept. 30</u>	<u>Number</u>	<u>Reported Annual Payroll*</u>	<u>Average Annual Pay</u>	<u>Increase (Decrease)</u>	<u>Average Age</u>	<u>Average Service</u>
2012	223,769	\$ 8,649,029	\$ 38,652		45.7	11.9
2013	214,906	8,273,017	38,496	(0.4) %	46.0	12.3
2014	191,551	7,618,224	39,771	3.3	45.7	12.6

\* In thousands of dollars.

# ACTUARIAL SECTION

## Actuarial Valuation Data (continued)

### Schedule of Changes in the Retirement Rolls

Year Ended Sept. 30	Added to Rolls		Removed from Rolls		Rolls-End of Year		Increase in Annual Allowances	Average Annual Allowances
	No.	Annual Allowances*	No.	Annual Allowances*	No.	Annual Allowances*		
2005	10,165	\$ 249,907	3,837	\$ 36,843	151,706	\$ 2,644,700	8.8 %	\$ 17,433
2006	9,853	248,852	4,396	65,092	157,163	2,828,460	6.9	17,997
2007	9,704	247,807	4,023	63,192	162,844	3,013,075	6.5	18,503
2008	9,091	234,047	4,670	75,861	167,265	3,171,261	5.3	18,960
2009	8,817	239,774	4,160	74,870	171,922	3,336,165	5.2	19,405
2010	19,946	553,900	4,146	75,310	187,722	3,814,755	14.3	20,321
2011	9,533	256,356	4,820	83,884	192,435	3,987,227	4.5	20,720
2012	9,007	236,023	4,781	89,032	196,661	4,134,218	3.7	21,022
2013	9,182	244,937	4,891	89,874	200,952	4,289,281	3.8	21,345
2014	8,852	241,473	5,292	99,689	204,512	4,431,065	3.3	21,667

\* 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		Increase in Annual Allowances	Average Annual Allowances
	No.	Annual Allowances*	No.	Annual Allowances*	No.	Annual Allowances*		
2011					154,589	\$ 979,578		
2012	7,263	\$ 73,106	4,401	\$ 74,841	157,451	977,843	(0.2) %	\$ 6,210
2013	6,996	59,203	4,695	156,890	159,752	880,156	(10.0)	5,510
2014	6,634	57,331	5,042	88,058	161,344	849,429	(3.5)	5,265

\* 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.

## 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 millions)												
Valuation Date Sept. 30	Actuarial Accrued Liability (AAL)			Valuation Assets	Portion of AAL Covered by Assets							
	(1)	(2)	(3)		(1)	(2)	(3)	(4) <sup>1</sup>				
	Active Member Contributions	Retirants and Beneficiaries	Active and Inactive Members (Employer Financed Portion)									
2005	\$	3,898	\$	28,047	\$	16,261	\$	38,211	100 %	100 %	38.5 %	79.3 %
2006		4,082		29,505		15,549		39,893	100	100	40.6	81.2
2006 <sup>2</sup>		4,082		29,505		15,549		42,995	100	100	60.5	87.5
2007		4,376		31,254		15,477		45,335	100	100	62.7	88.7
2008		5,168		32,723		15,664		45,677	100	100	49.7	85.3
2008 <sup>3</sup>		5,168		32,723		16,717		45,677	100	100	46.6	83.6
2009		5,449		34,159		17,077		44,703	100	100	29.8	78.9
2010		5,055		38,315		15,173		43,294	100	99.8	0.0	74.0
2010 <sup>2</sup>		5,055		38,589		16,233		43,294	100	99.1	0.0	72.3
2010 <sup>3</sup>		5,055		39,639		16,233		43,294	100	96.5	0.0	71.1
2011		5,217		41,043		17,167		41,038	100	87.3	0.0	64.7
2012		5,296		42,076		16,909		38,450	100	78.8	0.0	59.8
2012 <sup>2</sup>		5,296		42,076		15,905		38,450	100	78.8	0.0	60.8
2012 <sup>3</sup>		5,296		42,076		15,344		38,450	100	78.8	0.0	61.3
2013		4,909		43,198		15,733		38,044	100	76.7	0.0	59.6
2014		5,225		44,126		15,699		39,626	100	78.0	0.0	60.9
2014 <sup>2</sup>		5,225		45,545		15,335		39,626	100	75.5	0.0	59.9

<sup>1</sup> Percents funded on a total valuation asset and total actuarial accrued liability basis.

<sup>2</sup> Revised asset valuation method.

<sup>3</sup> Revised benefit provisions.

# ACTUARIAL SECTION

## Prioritized Solvency Test (continued)

### Other Postemployment Benefits (\$ in millions)

Valuation Date	Actuarial Accrued Liability (AAL)			Valuation Assets	Portion of AAL Covered by Assets			
	(1)	(2)	(3)					
	Active Member Contributions	Retirants and Beneficiaries	Active and Inactive Members (Employer Financed Portion)		(1)	(2)	(3)	(4) <sup>1</sup>
Sept. 30								
2007	\$ -	\$ 13,977	\$ 11,755	\$ 776	0.0 %	5.6 %	0.0 %	3.0 %
2008	-	14,553	12,258	832	0.0	5.7	0.0	3.1
2009	-	13,805	14,490	713	0.0	5.2	0.0	2.5
2010	-	15,591	13,036	999	0.0	6.4	0.0	3.5
2011	-	14,496	12,550	1,156	0.0	8.0	0.0	4.3
2012 <sup>2</sup>	-	8,848	5,940	1,348	0.0	15.2	0.0	9.1
2013	691	8,766	5,077	2,041	100	15.4	0.0	14.0
2014 <sup>2</sup>	874	8,829	4,458	2,982	100	23.9	0.0	21.1

<sup>1</sup> Percents funded on a total valuation asset and total actuarial accrued liability basis.

<sup>2</sup> Revised actuarial assumptions and/or methods.

# ACTUARIAL SECTION

## Analysis of System Experience

### Gains/(Losses) in Accrued Liabilities During Year Ended September 30, 2014 Resulting from Differences Between Assumed Experience & Actual Experience

<u>Type of Activity</u>	<u>Gain/(Loss)</u>
1. <b>Retirements (including Disability Retirement).</b> 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.	\$ 40,620,470
2. <b>Withdrawal From Employment</b> (including death-in-service). If more liabilities are released by withdrawals and deaths than assumed, there is a gain. If smaller releases, a loss.	(53,631,194)
3. <b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	333,053,520
4. <b>Investment Income.</b> If there is greater investment income than assumed, there is a gain. If less income, a loss.	1,047,357,998
5. <b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(183,786,338)
6. <b>New entrants/Rehires.</b> New entrants into the System will generally result in an actuarial loss.	(12,860,026)
7. <b>Other.</b> Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	<u>(87,119,200)</u>
8. <b>Composite Gain (or Loss) During Year</b>	<u><u>\$ 1,083,635,230</u></u>

# ACTUARIAL SECTION

## Summary of Plan Provisions

Our actuarial valuation of the System as of September 30, 2014, is based on the present provisions of the Michigan Public School Employees' Retirement Act (Public Act 300 of 1980, as amended).

### ***Regular Retirement (no reduction factor for age)***

Eligibility - Age 55 with 30 years credited service; or age 60 with 10 years credited service. For Member Investment Plan (MIP) members, any age with 30 years credited service; or age 60 with 10 years credited service; or age 60 with 5 years of credited service provided member worked through 60th birthday and has credited service in each of the last 5 years. For Pension Plus (PPP) members, age 60 with 10 years of credited service.

Mandatory Retirement Age - None.

Transition Date - February 1, 2013

Annual Amount - Total credited service as of the Transition Date times 1.5% of final average compensation,

### **Plus**

An amount determined by the member's election of Option 1, 2, 3, or 4 described below.

Option 1 - Credited Service after the Transition Date times 1.5% times FAC

Option 2 - Credited Service after the Transition Date (until total service reaches 30 years) times 1.5% times FAC, PLUS Credited Service after the Transition Date and over 30 years times 1.25% times FAC.

Option 3 - Credited Service after the Transition Date times 1.25% times FAC.

Option 4 - None (Member will receive benefit through a Defined Contribution plan).

Final Average Compensation - Average of highest 60 consecutive months (36 months for MIP members). FAC is calculated as of the last day worked unless the member elected option 4, in which case the FAC is calculated at the Transition Date.

### ***Early Retirement (age reduction factor used)***

Eligibility - Age 55 with 15 or more years credited service and earned credited service in each of the last 5 years. PPP members are not eligible for early retirements.

Annual Amount - Regular retirement benefit, reduced by 0.5% for each month by which the commencement age is less than 60.

### ***Deferred Retirement (vested benefit)***

Eligibility - 10 years of credited service. Benefit commences at the time age qualification is met.

Annual Amount - Regular retirement benefit based on service and final average compensation at time of termination.

### ***Duty Disability Retirement***

Eligibility - No age or service requirement; in receipt of workers' disability compensation.

Annual Amount - Computed as regular retirement benefit with minimum benefit based on 10 years credited service. Additional limitation such that disability benefits plus authorized outside earnings limited to 100% of final average compensation (increased by 2% each year retired).

## **Summary of Plan Provisions (continued)**

### ***Non-Duty Disability Retirement***

Eligibility - 10 years of credited service.

Annual Amount - Computed as regular retirement benefit based on credited service and final average compensation at time of disability. Additional limitation such that disability benefits plus authorized outside earnings limited to 100% of final average compensation (increased by 2% each year retired).

### ***Duty Death Before Retirement***

Eligibility - No age or service requirement. Beneficiary is in receipt of workers' compensation. Also applies to "duty disability" retirees during first three years of disability.

Annual Amount - Spouse benefit computed as regular retirement benefit with minimum benefit based on ten years of credited service, reduced for 100% joint and survivor election. If no surviving spouse, children under 18 share in benefit; if no spouse or children, a disabled and dependent parent is eligible.

### ***Non-Duty Death Before Retirement***

Eligibility - For Basic members, 15 years of credited service, or age 60 and 10 years of credited service. For MIP members, 10 years of credited service, or age 60 and 5 years of credited service. For PPP members, 10 years of credited service, or age 60 and 10 years of credited service.

Annual Amount - Computed as regular retirement benefit, reduced in accordance with a 100% joint and survivor election, with payments commencing first of month following death. For the beneficiary of a deferred member, benefit commences at the time a member would have attained the minimum age qualification.

### ***Post-Retirement Cost-of-Living Adjustments***

One-time upward adjustments have been made in 1972, 1974, 1976 and 1977 for members retired on or after July 1, 1956, and prior to July 1, 1976, who were eligible for Social Security benefits. For members who retired prior to July 1, 1956, and not eligible for Social Security benefits based upon membership service, the minimum base pension was increased in 1965, 1971, 1972, 1974 and 1981, and in 1976 and 1977 one-time upward adjustments were made.

Beginning in 1983, eligible recipients received an annual distribution of investment earnings in excess of 8% (supplemental payment). On January 1, 1986, all members who retired prior to January 1, 1986, were given a permanent 8% increase. On January 1, 1990, a one-time upward adjustment for members who retired prior to October 1, 1981, was made.

Currently members receive annual increases based on the following schedule:

Retired before January 1, 1987 - Greater of Supplemental payment or automatic 3% increase.

Retired on or after January 1, 1987 under MIP - Automatic 3% increase only.

Retired on or after January 1, 1987 not under MIP - Supplemental payment only.

Retired under PPP - No increases.

# **ACTUARIAL SECTION**

## **Summary of Plan Provisions (continued)**

### ***Post-Retirement Health Benefits***

Members hired before July 1, 2008 are eligible for 80% System paid Master Health Plan and Dental and Vision coverage for themselves and their dependents. However, those retirees Medicare eligible at January 1, 2013 receive 90% System paid coverage.

Members hired before July 1, 2008 who retired from deferred vested status with less than 30 years of service, who terminate employment after October 31, 1980 with vested deferred benefits, are eligible for partially System paid health benefit coverage (no payment if less than 21 years of service, 10% of maximum employer payment for each year of service over 20 up to 80% for 28 or more years of service).

Members hired after June 30, 2008, but before September 4, 2012, are eligible for 80% System paid Master Health Plan and Dental and Vision coverage for themselves and their dependents, but the premium subsidy is graded based on career length as described below:

- a. Member is age 60 or older at retirement
  - If member has 10 or more years of total service, the System pays 30% of the monthly premium for the first 10 years of total service, plus 4% times next 13 years of total service, to a maximum of 80% of the monthly premium if 22.5 years of total service or more.
  - If a member has fewer than 10 years of total service, there is no System paid coverage.
- b. Member is under age 60 at retirement
  - If member has 25 years of actual service, the System pays 80% of the monthly premium.
  - If the member has under 25 years of actual service, upon attainment of age 60 the member may apply for System paid coverage (as described by the schedule above in a.).

Dependents are eligible for 80% System paid employer health benefits (partial payments for dependents of deferred vested members who had 21 or more years of service and dependents of members hired on or after July 1, 2008, as per the above schedule).

Members hired on or after September 4, 2012 will become participants of the Personal Healthcare Fund (PHF) and will not be eligible for insurance premium subsidy in retirement. For members hired on or after September 4, 2012, the maximum insurance subsidy is payable to the surviving spouse and health dependents of members who die as a result of injury or illness resulting from job activities. For all other members hired on or after September 4, 2012, the defined benefit portion of their post-retirement health benefits coverage is limited to a credit to a Health Reimbursement Account at termination if they have at least 10 years of service. The credit will be \$2,000 for participants who are at least age 60 at termination or \$1,000 for participants who are less than age 60 at termination.

Public Act 300 of 2012 granted all members of the Michigan Public School Employees Retirement System, who earned service credit in the 12 months ending September 4, 2012, or were on an approved professional services or military leave of absence on September 4, 2012, a voluntary election regarding their retirement healthcare. Any changes to a member's healthcare benefit are effective as of the member's transition date, which is defined as the first day of the pay period that begins on or after February 1, 2013.

Under Public Act 300 of 2012, members were given the choice between i. and ii. below:

- i. Maintaining eligibility for the premium subsidy described above, and contributing 3% of their compensation while still working, or
- ii. Entering the PHF.

Members not making an election will default into the premium subsidy arrangement.



## **Summary of Plan Provisions (continued)**

If a member who elected the subsidy terminates prior to becoming eligible for the subsidy, dies before the total value of the subsidy received equals the total value of contributions made, or retires and declines coverage, the member or beneficiary may request a refund of unused funds. Refunds of member contributions to the healthcare funding account are issued as a supplemental pension benefit (payable at age 60 and payable from the pension plan) paid out over a 60 month period.

A delayed subsidy applies to retirees who became a member of the retirement system before July 1, 2008 and who purchased service credit on or after July 1, 2008. Such individuals are eligible for premium subsidy benefits at age 60 or when they would have been eligible to retire without having made a service purchase, whichever comes first. They may enroll in the insurances earlier, but are responsible for the full premium until the premium subsidy begins.

### ***Member Contributions before Transition Date (February 1, 2013)***

Basic Participants – None.

MIP Participants hired before January 1, 1990 - 3.9% of pay.

MIP Participants hired on or after January 1, 1990 and before July 1, 2008 - 3.0% of first \$5,000 of pay, plus 3.6% of next \$10,000 of pay, plus 4.3% pay in excess of \$15,000.

MIP and PPP Participants hired on or after July 1, 2008 - 3.0% of first \$5,000 of pay, plus 3.6% of next \$10,000 of pay, plus 6.4% pay in excess of \$15,000.

### ***Member Contributions on or after Transition Date (February 1, 2013)***

Basic and MIP Members – Contributions depend on member election of Option 1, 2, or 3. Members electing Option 4 will not contribute to the Plan.

Option 1 – Basic Members – 4%  
All MIP members – 7%

Option 2 – Contributions as in Option 1 until member reaches 30 years of service. At 30 years of service, contribution reverts to pre-transition date level.

Option 3 – Post transition date contribution is the same as the pre-transition date contribution.

PPP Members – 3% of first \$5,000 of pay, plus 3.6% of next \$10,000 of pay, plus 6.4% of pay in excess of \$15,000.

### ***Member Contributions Attributable to the Retiree Health Plans***

Under Public Act 300 of 2012, members were given the choice between i. and ii. Below:

- i. Maintaining eligibility for premium subsidy retiree medical coverage, and contributing 3% of their compensation while still working, or
- ii. Entering the Personal Healthcare Fund (PHF)

Members not making an election defaulted into the premium subsidy arrangement.

If a member who elected the subsidy terminates prior to becoming eligible for the subsidy, dies before the total value of the subsidy received equals the total value of contributions made, or retires and declines coverage, the member or beneficiary may request a refund of unused funds. Refunds of member contributions to the healthcare funding account are issued as a supplemental pension benefit (payable at age 60 and payable from the pension plan) paid out over a 60 month period.

# ***ACTUARIAL SECTION***

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# STATISTICAL SECTION

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 Funding Progress – Pension Plan  
Schedule of Other Postemployment Benefits  
Schedules of Average Benefit Payments  
Schedule of Principal Participating Employers  
Ten Year History of Membership  
Schedule of Participating Employers

# STATISTICAL SECTION

This part of the System's comprehensive annual 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.

## Contents

### *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 OPEB 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 Benefit
- Schedule of Retired Members by Type of Other Postemployment Benefits
- Schedule of Funding Progress – Pension Plan
- Schedule of Other Postemployment Benefits
- Schedule of Average Benefit Payments - Pension
- Schedule of Average Benefit Payments - Health
- Schedule of Average Benefit Payments - Dental/Vision
- Schedule of Principal Participating Employers
- Ten Year History of Membership
- Schedule of Participating Employers

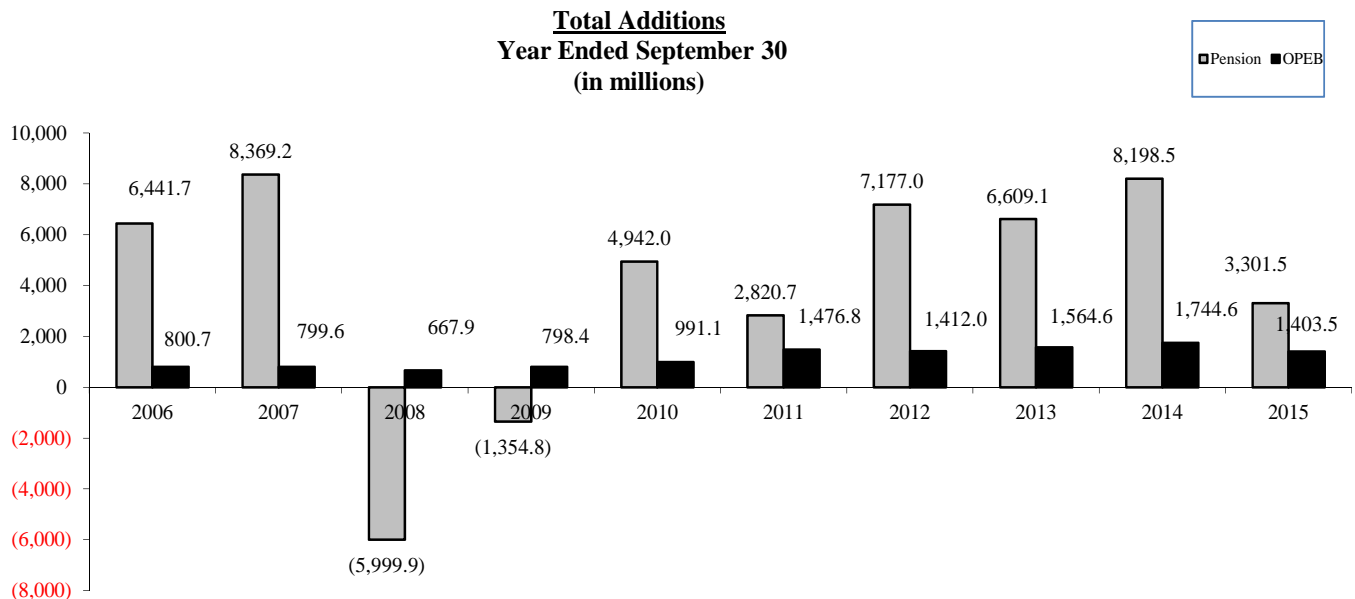
# STATISTICAL SECTION

## 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 Covered Payroll		
2006	\$ 518,599,720	\$ 995,932,425	10.15 %	\$ 4,927,180,143	\$ 6,441,712,288
2007	356,761,212	835,366,382	8.48	7,177,120,534	8,369,248,128
2008	399,256,616	999,374,879	10.04	(7,398,546,831)	(5,999,915,336)
2009	357,249,466	1,000,375,355	10.12	(2,712,414,549)	(1,354,789,728)
2010	377,748,755	1,001,251,673	11.32	3,563,042,464	4,942,042,892
2011	332,209,134	1,156,060,903	12.62	1,332,452,213	2,820,722,250
2012	335,470,879	1,454,438,907	16.82	5,387,076,055	7,176,985,841
2013	385,007,587	1,364,136,462	16.58	4,859,919,060	6,609,063,109
2014	405,443,771	1,600,375,132	19.60	6,192,710,861	8,198,529,764
2015	395,722,292	1,967,610,696	N/A	938,143,040	3,301,476,028

## 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 Covered Payroll		
2006	\$ 71,813,553	\$ 686,929,558	7.00 %	\$ 41,974,561	\$ 800,717,672
2007	77,206,778	671,680,400	6.85	50,740,885	799,628,063
2008	78,088,861	649,571,071	6.52	(59,710,277)	667,949,655
2009	77,034,085	705,464,357	7.14	15,917,554	798,415,996
2010	125,160,304	675,117,153	7.63	190,860,064	991,137,521
2011	384,978,107	794,839,611	8.68	297,025,962	1,476,843,680
2012	387,566,872	795,595,368	9.20	228,838,969	1,412,001,209
2013	394,839,047	973,002,719	11.76	196,731,989	1,564,573,755
2014	390,844,206	1,000,031,808	12.24	353,732,646	1,744,608,660
2015	381,630,848	969,418,632	N/A	52,443,410	1,403,492,890



# STATISTICAL SECTION

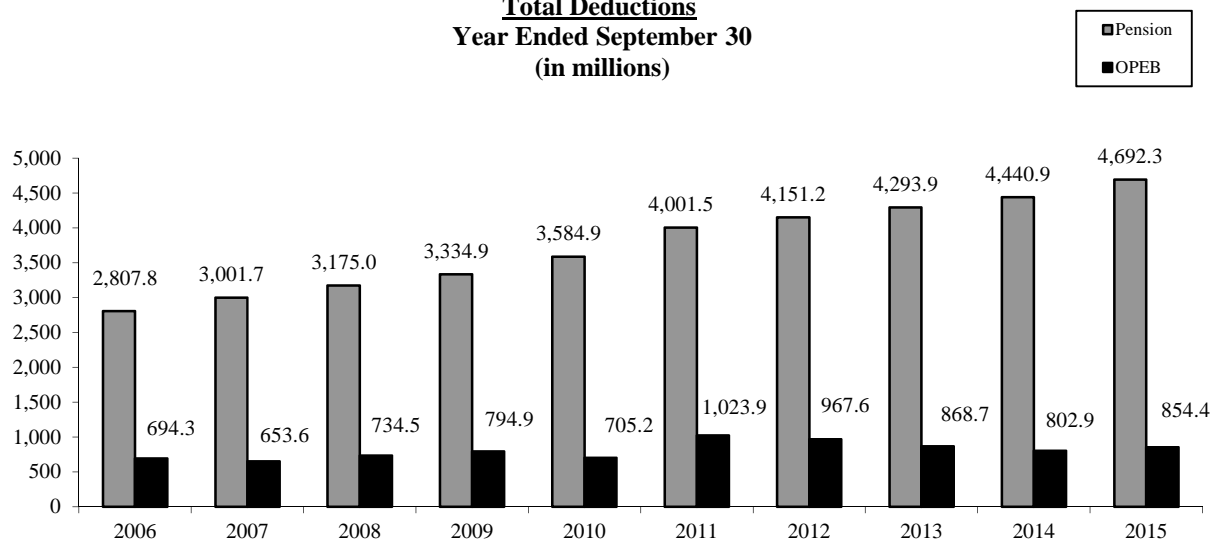
## Schedule of Pension Plan Deductions by Type Last Ten Years

Fiscal Year Ended Sept. 30	Benefit Payments	Refunds and Transfers	Administrative and Other Expenses	Total
2006	\$ 2,761,292,217	\$ 24,026,881	\$ 22,501,098	\$ 2,807,820,196
2007	2,944,920,179	32,247,524	24,489,202	3,001,656,905
2008	3,117,434,847	32,803,284	24,740,628	3,174,978,759
2009	3,278,118,116	33,958,382	22,793,011	3,334,869,509
2010	3,525,020,341	33,923,570	26,000,699	3,584,944,610
2011	3,942,027,101	36,591,206	22,926,393	4,001,544,700
2012	4,082,242,506	31,865,139	37,119,630	4,151,227,275
2013	4,238,482,066	30,451,235	25,002,153	4,293,935,454
2014	4,388,328,517	28,840,650	23,711,249	4,440,880,415
2015	4,530,914,738	136,902,057	24,487,325	4,692,304,120

## Schedule of OPEB Plan Deductions by Type Last Ten Years

Fiscal Year Ended Sept. 30	Benefit Payments	Refunds and Transfers	Administrative and Other Expenses	Total
2006	\$ 634,811,847	\$ 42,370	\$ 59,459,690	\$ 694,313,907
2007	590,226,465	30,580	63,315,419	653,572,464
2008	666,380,643	41,786	68,078,508	734,500,937
2009	726,235,152	63,247	68,551,804	794,850,203
2010	650,677,457	52,545	54,431,010	705,161,012
2011	910,023,134	39,133	113,790,777	1,023,853,044
2012	785,896,356	2,461,527	179,259,224	967,617,107
2013	711,578,683	9,177,658	147,972,842	868,729,183
2014	669,240,164	68,930	133,623,320	802,932,413
2015	700,904,663	95,860	153,410,971	854,411,494

### Total Deductions Year Ended September 30 (in millions)



# STATISTICAL SECTION

## Schedule of Changes in Fiduciary Net Position - Pension Plan

### Last Ten Years

(in thousands)

	Fiscal Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Member contributions	\$ 518,600	\$ 356,761	\$ 399,257	\$ 357,249	\$ 377,749	\$ 332,209	\$ 335,471	\$ 385,008	\$ 405,444	\$ 395,722
Employer contributions	995,932	835,366	999,375	1,000,375	1,001,252	1,156,061	1,454,439	1,364,136	1,600,375	1,967,611
Net investment income	4,926,708	7,174,561	(7,399,527)	(2,712,841)	3,562,452	1,331,744	5,386,497	4,858,563	6,190,449	937,663
Transfer from other systems	3	6	83	15	16	5				
Miscellaneous income	469	2,553	897	412	574	704	579	1,356	2,262	480
<b>Total Additions</b>	<b>6,441,712</b>	<b>8,369,247</b>	<b>(5,999,915)</b>	<b>(1,354,790)</b>	<b>4,942,042</b>	<b>2,820,722</b>	<b>7,176,986</b>	<b>6,609,063</b>	<b>8,198,530</b>	<b>3,301,476</b>
Pension benefits	2,761,292	2,944,920	3,117,435	3,278,118	3,525,020	3,942,027	4,082,243	4,238,482	4,388,329	4,530,915
Refunds of contributions	23,904	32,142	32,613	33,865	33,873	36,591	31,865	30,450	28,841	136,901
Transfer to other systems	123	106	190	93	50	2		1		1
Administrative and Other Expenses	22,501	24,489	24,741	22,793	26,001	22,926	37,120	25,002	23,711	24,487
<b>Total Deductions</b>	<b>2,807,820</b>	<b>3,001,657</b>	<b>3,174,979</b>	<b>3,334,869</b>	<b>3,584,944</b>	<b>4,001,546</b>	<b>4,151,228</b>	<b>4,293,935</b>	<b>4,440,880</b>	<b>4,692,304</b>
<b>Changes in net position</b>	<b>\$ 3,633,892</b>	<b>\$ 5,367,590</b>	<b>\$ (9,174,894)</b>	<b>\$ (4,689,659)</b>	<b>\$ 1,357,099</b>	<b>\$ (1,180,823)</b>	<b>\$ 3,025,758</b>	<b>\$ 2,315,128</b>	<b>\$ 3,757,650</b>	<b>\$ (1,390,828)</b>

## Schedule of Changes in Fiduciary Net Position - OPEB Plan

### Last Ten Years

(in thousands)

	Fiscal Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Member contributions	\$ 71,814	\$ 77,207	\$ 78,089	\$ 77,034	\$ 125,160	\$ 384,978	\$ 387,567	\$ 394,839	\$ 390,844	\$ 381,631
Employer contributions	686,929	671,680	649,571	705,465	675,117	794,840	795,595	973,003	1,000,032	969,419
Other governmental contributions	65	63	102	55	39,980	163,949	17,406	9	138	213
Net investment income	41,910	50,417	(60,190)	15,706	150,686	132,993	210,642	196,646	353,064	52,064
Miscellaneous income		261	378	156	195	85	790	77	531	166
<b>Total Additions</b>	<b>800,718</b>	<b>799,628</b>	<b>667,950</b>	<b>798,416</b>	<b>991,138</b>	<b>1,476,844</b>	<b>1,412,001</b>	<b>1,564,574</b>	<b>1,744,609</b>	<b>1,403,493</b>
Health care benefits	634,812	590,226	666,381	726,235	650,677	910,023	785,896	711,579	669,240	700,904
Refunds of contributions	42	31	42	63	53	39	2,462	1,095	68	96
Transfers to other systems								8,083	1	
Uncollectible receivables							37,551			
Administrative and Other Expenses	59,460	63,315	68,078	68,552	54,431	113,791	141,708	147,973	133,623	153,411
<b>Total Deductions</b>	<b>694,314</b>	<b>653,572</b>	<b>734,501</b>	<b>794,850</b>	<b>705,161</b>	<b>1,023,853</b>	<b>967,617</b>	<b>868,729</b>	<b>802,932</b>	<b>854,411</b>
<b>Changes in net position</b>	<b>\$ 106,404</b>	<b>\$ 146,056</b>	<b>\$ (66,551)</b>	<b>\$ 3,566</b>	<b>\$ 285,977</b>	<b>\$ 452,991</b>	<b>\$ 444,384</b>	<b>\$ 695,845</b>	<b>\$ 941,676</b>	<b>\$ 549,081</b>

# STATISTICAL SECTION

## Schedule of Pension Benefits and Refunds by Type Last Ten Years

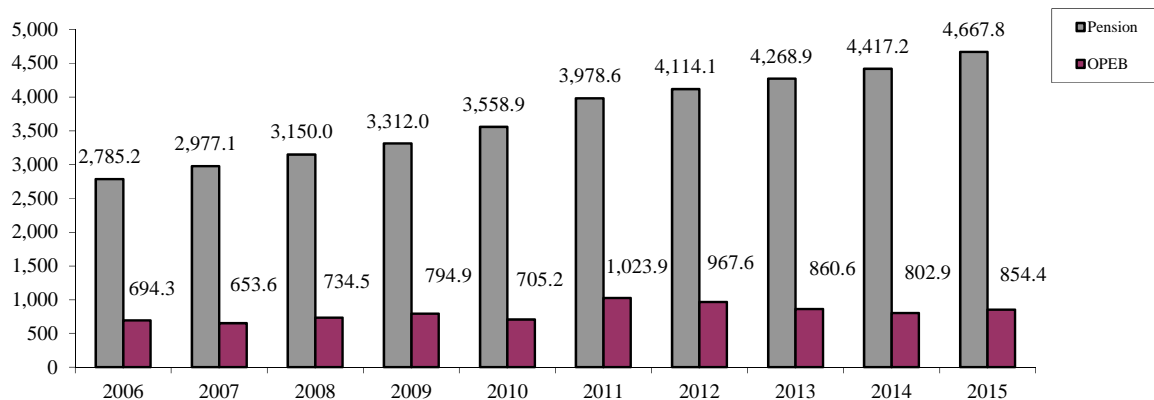
Fiscal Year Ended Sept. 30	Regular Benefits*	Disability Benefits	Survivor Benefits	Refunds		Retired Benefits	Total
				Employer	Employee		
2006	\$ 2,573,912,214	\$ 52,500,929	\$ 134,879,074	\$ 474,347	\$ 23,422,647	\$ 6,828	\$ 2,785,196,039
2007	2,717,579,495	53,505,192	173,835,492	580,684	31,547,480	13,788	2,977,062,131
2008	2,876,064,246	54,989,520	186,381,081	672,583	31,917,227	23,117	3,150,047,774
2009	3,022,567,501	56,243,731	199,306,884	383,851	33,469,331	11,792	3,311,983,090
2010	3,254,752,971	58,015,212	212,252,158	507,347	33,364,256	1,755	3,558,893,699
2011	3,655,588,461	60,232,300	226,200,505	1,311,729	35,249,374	29,934	3,978,612,303
2012	3,779,064,349	62,414,881	240,763,276	98,202	31,720,355	46,582	4,114,107,645
2013	3,919,541,949	65,421,037	253,519,080	96,131	30,340,582	13,507	4,268,932,286
2014	4,052,801,025	68,329,595	267,197,897	459,114	28,380,803	732	4,417,169,166
2015	4,179,445,527	70,240,170	281,229,041	112,468,242	24,416,139	17,016	4,667,816,135

\*Includes prior post retirement adjustments

## Schedule of OPEB Benefits and Refunds by Type Last Ten Years

Fiscal Year Ended Sept. 30	Health Benefits	Dental/Vision Benefits	Administrative Expenses	OPEB Refunds	Total
2006	\$ 565,261,409	\$ 69,550,438	\$ 59,459,690	\$ 42,370	\$ 694,313,907
2007	521,420,684	68,805,781	63,315,419	30,580	653,572,464
2008	588,064,545	78,316,098	68,078,508	41,786	734,500,937
2009	644,811,396	81,423,756	68,551,804	63,247	794,850,203
2010	566,550,299	84,127,158	54,431,010	52,545	705,161,012
2011	815,311,950	94,711,184	113,790,777	39,133	1,023,853,044
2012	690,268,502	95,627,854	179,259,224	2,461,527	967,617,107
2013	612,955,516	98,623,167	147,972,842	1,095,145	860,646,670
2014	582,398,966	86,841,198	133,623,320	68,141	802,931,624
2015	617,493,539	83,411,124	153,410,971	95,860	854,411,494

### Total Benefit Deductions Year Ended September 30 (in millions)





# STATISTICAL SECTION

## Schedule of Retired Members by Type of Pension Benefit September 30, 2014

Amount of Monthly Pension Benefit	Number of Retirees	Type of Retirement *						Selected Option**				
		1	2	3	4	5	6	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt.1E 2E,3E,4E
\$ 1 - 200	12,719	11,126	1,077	77	304	3	132	6,846	2,994	1,793	205	881
201 - 400	22,280	19,106	1,409	123	1,301	2	339	12,165	4,644	3,764	497	1,210
401 - 600	17,232	14,355	1,182	100	1,230	1	364	8,988	3,587	3,182	476	999
601 - 800	13,304	11,030	861	63	979	1	370	6,748	2,670	2,560	481	845
801 - 1000	11,022	9,058	802	45	774	1	342	5,264	2,289	2,217	443	809
1001 - 1200	9,524	7,867	825	18	540		274	4,221	2,033	1,962	425	883
1201 - 1400	8,584	7,007	844	16	465		252	3,693	1,777	1,665	434	1,015
1401 - 1600	8,140	6,820	751	12	331		226	3,271	1,674	1,595	403	1,197
1601 - 1800	7,820	6,687	655	4	285		189	2,951	1,584	1,433	449	1,403
1801 - 2000	7,959	6,962	557	5	258	1	176	2,902	1,676	1,429	462	1,490
over 2000	85,928	81,471	3,077	9	590	2	779	37,514	16,480	17,503	6,657	7,774
Totals	204,512	181,489	12,040	472	7,057	11	3,443	94,563	41,408	39,103	10,932	18,506

\* Type of Retirement

- 1 - Normal retirement for age & service
- 2 - Survivor payment - normal retirement
- 3 - Duty disability retirement (including survivors)
- 4 - Non-duty disability retirement (including survivors)
- 5 - Survivor payment - duty death in service
- 6 - Survivor payment - non-duty death in service

\*\*Selected Option

- Opt. 1 - Straight life allowance
- Opt. 2 - 100% survivor option
- Opt. 3 - 50% survivor option
- Opt. 4 - 75% survivor option
- Opt. 1E, 2E, 3E, 4E - Equated retirement plans

Source: Gabriel Roeder Smith & Co.

## Schedule of Retired Members by Type of Other Postemployment Benefits September 30, 2014

Amount of Monthly Pension Benefit	Number of Retirees	Type of Other Postemployment Benefits	
		Health	Dental/Vision
\$ 1 - 200	12,719	5,745	6,920
201 - 400	22,280	11,589	13,609
401 - 600	17,232	10,432	11,956
601 - 800	13,304	8,834	9,951
801 - 1,000	11,022	7,754	8,564
1,001 - 1,200	9,524	6,988	7,607
1,201 - 1,400	8,584	6,490	7,032
1,401 - 1,600	8,140	6,371	6,805
1,601 - 1,800	7,820	6,178	6,618
1,801 - 2,000	7,959	6,442	6,865
Over 2,000	85,928	71,650	74,989
Totals	204,512	148,473	160,916

Source: Gabriel Roeder Smith & Co.

# STATISTICAL SECTION

## Schedule of Funding Progress - Pension Plan

Last Ten Years

Valuation Date Sept 30	Actuarial Value of Assets (a)	Pension Benefits (\$ in millions)					UAAL as a % of Covered Payroll ((b-a)/c)
		Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded (Overfunded) Accrued Liability (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)		
2005	\$ 38,211	\$ 48,206	\$ 9,995	79.3 %	\$ 10,206	97.9 %	
2006	39,893	49,136	9,243	81.2	9,806	94.3	
2006	<sup>2</sup> 42,995	49,136	6,141	87.5	9,806	62.6	
2007	45,335	51,107	5,771	88.7	9,851	58.6	
2008	45,677	53,555	7,878	85.3	9,958	79.1	
2008	<sup>3</sup> 45,677	54,608	8,931	83.6	9,958	89.7	
2009	44,703	56,685	11,982	78.9	9,884	121.2	
2010	43,294	58,543	15,250	74.0	8,845	172.4	
2010	<sup>1</sup> 43,294	59,877	16,583	72.3	8,845	187.5	
2010	<sup>3</sup> 43,294	60,927	17,633	71.1	8,845	199.4	
2011	41,038	63,427	22,389	64.7	9,156	244.5	
2012	38,450	62,716	24,266	61.3	8,649	280.6	
2013	38,044	63,840	25,796	59.6	8,273	311.8	
2014	39,626	65,050	25,424	60.9	8,167	311.3	
2014	<sup>1</sup> 39,626	66,105	26,479	59.9	8,167	324.2	

<sup>1</sup> Revised actuarial assumptions

<sup>2</sup> Revised asset valuation method

<sup>3</sup> Revised benefit provisions

Source: Gabriel Roeder Smith & Co.

## **Schedule of Other Postemployment Benefits** **For Year Ended September 30, 2015**

<b>Claims</b>	
Health insurance	\$ 431,098,922
Vision insurance	5,056,899
Dental insurance	<u>76,664,545</u>
<b>Total Claims</b>	<u>512,820,366</u>
<b>Estimated Claims Liability</b>	
Health insurance	186,393,506
Vision insurance	221,653
Dental insurance	<u>1,468,027</u>
<b>Total Estimated Claims Liability</b>	<u>188,083,186</u>
<b>Administrative Fees</b>	
Staff Salaries	2,356,859
Health insurance	146,197,278
Vision insurance	662,302
Dental insurance	<u>4,194,532</u>
<b>Total Administrative Fees</b>	<u>153,410,971</u>
<b>Subtotal</b>	854,314,523
Refunds	95,860
Retirement benefits	<u>1,111</u>
<b>Grand Total</b>	<u><u>\$ 854,411,494</u></u>

# STATISTICAL SECTION

## Schedule of Average Benefit Payments - Pension

### 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 10/1/04 to 9/30/05								
Average Monthly Benefit	\$ 583	\$ 170	\$ 298	\$ 540	\$ 887	\$ 1,346	\$ 2,374	\$ 1,453
Average Final Average Salary	1,542	16,607	16,719	22,539	28,288	34,036	50,418	35,938
Number of Active Retirants	1,396	4,601	17,884	22,502	21,321	16,548	67,454	151,706
Period 10/1/05 to 9/30/06								
Average Monthly Benefit	\$ 388	\$ 176	\$ 308	\$ 557	\$ 912	\$ 1,381	\$ 2,419	\$ 1,500
Average Final Average Salary	8,395	17,286	17,447	23,464	29,324	35,216	53,049	38,048
Number of Active Retirants	406	4,921	18,378	23,204	21,814	17,107	71,333	157,163
Period 10/1/06 to 9/30/07								
Average Monthly Benefit	\$ 643	\$ 186	\$ 318	\$ 574	\$ 938	\$ 1,419	\$ 2,481	\$ 1,542
Average Final Average Salary	18,219	18,069	18,125	24,255	30,284	36,138	54,189	39,069
Number of Active Retirants	540	5,266	19,007	23,933	22,390	17,478	74,230	162,844
Period 10/1/07 to 9/30/08								
Average Monthly Benefit	\$ 1,112	\$ 194	\$ 328	\$ 591	\$ 966	\$ 1,457	\$ 2,537	\$ 1,580
Average Final Average Salary	30,583	18,574	18,753	25,023	31,222	37,076	55,184	39,973
Number of Active Retirants	1,199	5,586	19,514	24,309	22,791	17,673	76,193	167,265
Period 10/1/08 to 9/30/09								
Average Monthly Benefit	\$ 1,095	\$ 201	\$ 337	\$ 606	\$ 994	\$ 1,494	\$ 2,590	\$ 1,617
Average Final Average Salary	32,482	19,036	19,343	25,731	32,097	37,379	56,113	40,843
Number of Active Retirants	1,515	5,875	19,988	24,746	23,314	17,912	78,572	171,922
Period 10/1/09 to 9/30/10								
Average Monthly Benefit	\$ 1,205	\$ 209	\$ 351	\$ 630	\$ 1,039	\$ 1,561	\$ 2,669	\$ 1,693
Average Final Average Salary	37,222	19,559	20,269	26,822	33,777	40,271	57,785	42,731
Number of Active Retirants	1,909	6,421	20,817	25,838	25,368	20,058	87,311	187,722
Period 10/1/10 to 9/30/11								
Average Monthly Benefit	\$ 1,296	\$ 219	\$ 363	\$ 647	\$ 1,068	\$ 1,602	\$ 2,720	\$ 1,727
Average Final Average Salary	38,093	20,161	21,020	27,580	34,720	41,391	58,505	43,471
Number of Active Retirants	2,389	6,632	21,460	26,403	25,886	20,654	89,011	192,435
Period 10/1/11 to 9/30/12								
Average Monthly Benefit	\$ 1,385	\$ 226	\$ 375	\$ 667	\$ 1,096	\$ 1,639	\$ 2,766	\$ 1,752
Average Final Average Salary	39,388	20,586	21,774	28,601	35,728	42,408	59,109	44,113
Number of Active Retirants	2,941	6,824	22,030	27,276	26,604	21,049	89,937	196,661
Period 10/1/12 to 9/30/13								
Average Monthly Benefit	\$ 1,266	\$ 234	\$ 390	\$ 687	\$ 1,122	\$ 1,671	\$ 2,808	\$ 1,779
Average Final Average Salary	35,857	21,024	22,588	29,490	36,703	43,385	59,676	44,771
Number of Active Retirants	832	7,145	22,991	28,363	27,684	21,754	92,183	200,952
Period 10/1/13 to 9/30/14								
Average Monthly Benefit	\$ 141	\$ 219	\$ 396	\$ 699	\$ 1,139	\$ 1,689	\$ 2,846	\$ 1,806
Average Final Average Salary	10,750	20,617	23,263	30,235	37,612	44,258	60,156	45,423
Number of Active Retirants	200	6,971	23,668	29,017	28,219	22,022	94,415	204,512

Source: Gabriel Roeder Smith & Co.

# STATISTICAL SECTION

## 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 10/1/04 to 9/30/05								
Average Monthly Benefit	\$ 114	\$ 188	\$ 337	\$ 587	\$ 937	\$ 1,678	\$ 2,505	\$ 1,592
Average Final Average Salary	14,348	16,926	17,732	23,228	28,848	40,434	51,670	38,192
Number of Active Retirants	200	3,602	10,994	15,777	16,341	20,508	48,162	115,584
Period 10/1/05 to 9/30/06								
Average Monthly Benefit	\$ 174	\$ 190	\$ 341	\$ 593	\$ 952	\$ 1,684	\$ 2,493	\$ 1,606
Average Final Average Salary	17,201	17,372	18,411	24,056	29,679	40,967	52,919	39,334
Number of Active Retirants	217	3,710	10,952	15,987	16,465	20,803	50,401	118,535
Period 10/1/06 to 9/30/07								
Average Monthly Benefit	\$ 583	\$ 198	\$ 354	\$ 611	\$ 981	\$ 1,718	\$ 2,562	\$ 1,663
Average Final Average Salary	27,114	18,084	19,129	24,906	30,751	41,666	54,256	40,602
Number of Active Retirants	284	3,857	10,787	16,158	16,680	20,990	52,577	121,333
Period 10/1/07 to 9/30/08								
Average Monthly Benefit	\$ 1,270	\$ 207	\$ 365	\$ 631	\$ 1,012	\$ 1,752	\$ 2,626	\$ 1,714
Average Final Average Salary	37,614	18,738	19,794	25,836	31,743	42,336	55,404	41,714
Number of Active Retirants	803	4,009	10,668	16,237	16,871	21,095	54,214	123,897
Period 10/1/08 to 9/30/09								
Average Monthly Benefit	\$ 1,230	\$ 216	\$ 376	\$ 647	\$ 1,039	\$ 1,782	\$ 2,683	\$ 1,757
Average Final Average Salary	38,012	19,252	20,328	26,525	32,575	42,936	56,446	42,631
Number of Active Retirants	1,053	4,212	10,757	16,602	17,376	21,419	56,377	127,796
Period 10/1/09 to 9/30/10								
Average Monthly Benefit	\$ 1,318	\$ 227	\$ 395	\$ 673	\$ 1,087	\$ 1,825	\$ 2,767	\$ 1,841
Average Final Average Salary	39,573	19,994	21,582	27,699	34,383	44,302	58,280	44,642
Number of Active Retirants	1,423	4,527	11,064	17,419	19,071	23,284	63,983	140,771
Period 10/1/10 to 9/30/11								
Average Monthly Benefit	\$ 1,407	\$ 238	\$ 412	\$ 693	\$ 1,119	\$ 1,860	\$ 2,825	\$ 1,890
Average Final Average Salary	40,812	20,557	22,546	28,618	35,375	45,063	59,127	45,605
Number of Active Retirants	1,810	4,551	10,939	17,498	19,279	23,591	65,246	142,914
Period 10/1/11 to 9/30/12								
Average Monthly Benefit	\$ 1,476	\$ 247	\$ 430	\$ 716	\$ 1,149	\$ 1,898	\$ 2,875	\$ 1,925
Average Final Average Salary	41,556	21,162	23,562	29,744	36,497	45,793	59,805	46,394
Number of Active Retirants	2,248	4,625	11,007	17,996	19,835	23,855	66,308	145,874
Period 10/1/12 to 9/30/13								
Average Monthly Benefit	\$ 1,430	\$ 257	\$ 452	\$ 738	\$ 1,178	\$ 1,931	\$ 2,921	\$ 1,968
Average Final Average Salary	41,834	21,668	24,615	30,728	37,590	46,550	60,458	47,289
Number of Active Retirants	534	4,677	11,071	18,375	20,387	24,342	67,874	147,260
Period 10/1/13 to 9/30/14								
Average Monthly Benefit	\$ 137	\$ 242	\$ 459	\$ 750	\$ 1,201	\$ 1,964	\$ 2,965	\$ 2,009
Average Final Average Salary	19,937	21,414	25,426	31,541	38,682	47,376	61,032	48,129
Number of Active Retirants	180	4,477	10,953	18,562	20,546	24,482	69,273	148,473

Source: Gabriel Roeder Smith & Co. - for all periods except 10/1/04 to 9/30/05

# STATISTICAL SECTION

## Schedule of Average Benefit Payments - Dental/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 10/1/04 to 9/30/05								
Average Monthly Benefit	\$ 121	\$ 188	\$ 336	\$ 582	\$ 933	\$ 1,685	\$ 2,503	\$ 1,581
Average Final Average Salary	14,741	16,957	17,768	23,221	28,858	40,661	51,804	38,138
Number of Active Retirants	228	3,858	11,858	16,959	17,352	21,664	50,334	122,253
Period 10/1/05 to 9/30/06								
Average Monthly Benefit	\$ 178	\$ 190	\$ 340	\$ 588	\$ 947	\$ 1,691	\$ 2,489	\$ 1,592
Average Final Average Salary	17,087	17,378	18,437	24,041	29,696	41,171	53,026	39,231
Number of Active Retirants	247	4,009	11,884	17,278	17,576	22,022	52,736	125,752
Period 10/1/06 to 9/30/07								
Average Monthly Benefit	\$ 584	\$ 198	\$ 352	\$ 607	\$ 974	\$ 1,721	\$ 2,556	\$ 1,643
Average Final Average Salary	27,200	18,134	19,143	24,868	30,674	41,746	54,309	40,374
Number of Active Retirants	319	4,221	11,947	17,648	17,942	22,362	55,166	129,605
Period 10/1/07 to 9/30/08								
Average Monthly Benefit	\$ 1,234	\$ 206	\$ 363	\$ 624	\$ 1,003	\$ 1,752	\$ 2,618	\$ 1,689
Average Final Average Salary	37,093	18,709	19,789	25,686	31,584	42,341	55,394	41,375
Number of Active Retirants	865	4,416	11,957	17,817	18,222	22,524	56,927	132,728
Period 10/1/08 to 9/30/09								
Average Monthly Benefit	\$ 1,194	\$ 215	\$ 372	\$ 639	\$ 1,027	\$ 1,779	\$ 2,673	\$ 1,726
Average Final Average Salary	37,407	19,216	20,292	26,357	32,340	42,861	56,379	42,185
Number of Active Retirants	1,143	4,665	12,170	18,337	18,816	22,872	59,118	137,121
Period 10/1/09 to 9/30/10								
Average Monthly Benefit	\$ 1,281	\$ 225	\$ 389	\$ 662	\$ 1,072	\$ 1,816	\$ 2,754	\$ 1,804
Average Final Average Salary	38,901	19,894	21,438	27,429	34,054	44,112	58,156	44,062
Number of Active Retirants	1,526	5,047	12,555	19,237	20,621	24,738	66,628	150,352
Period 10/1/10 to 9/30/11								
Average Monthly Benefit	\$ 1,373	\$ 236	\$ 405	\$ 681	\$ 1,103	\$ 1,850	\$ 2,809	\$ 1,846
Average Final Average Salary	40,098	20,552	22,297	28,253	35,020	44,819	58,936	44,916
Number of Active Retirants	1,943	5,143	12,672	19,538	21,050	25,226	68,305	153,877
Period 10/1/11 to 9/30/12								
Average Monthly Benefit	\$ 1,449	\$ 244	\$ 421	\$ 703	\$ 1,131	\$ 1,887	\$ 2,858	\$ 1,879
Average Final Average Salary	40,959	21,086	23,246	29,330	36,063	45,532	59,582	45,648
Number of Active Retirants	2,407	5,217	12,781	20,098	21,642	25,426	69,194	156,765
Period 10/1/12 to 9/30/13								
Average Monthly Benefit	\$ 1,350	\$ 253	\$ 441	\$ 724	\$ 1,159	\$ 1,918	\$ 2,904	\$ 1,917
Average Final Average Salary	40,355	21,515	24,190	30,282	37,083	46,244	60,205	46,448
Number of Active Retirants	597	5,363	13,021	20,696	22,399	26,065	71,011	159,152
Period 10/1/13 to 9/30/14								
Average Monthly Benefit	\$ 136	\$ 238	\$ 449	\$ 737	\$ 1,181	\$ 1,948	\$ 2,948	\$ 1,955
Average Final Average Salary	20,147	21,195	24,997	31,104	38,155	47,009	60,778	47,262
Number of Active Retirants	220	5,161	12,983	20,960	22,660	26,333	72,599	160,916

Source: Gabriel Roeder Smith & Co. - for all periods except 10/1/04 to 9/30/05

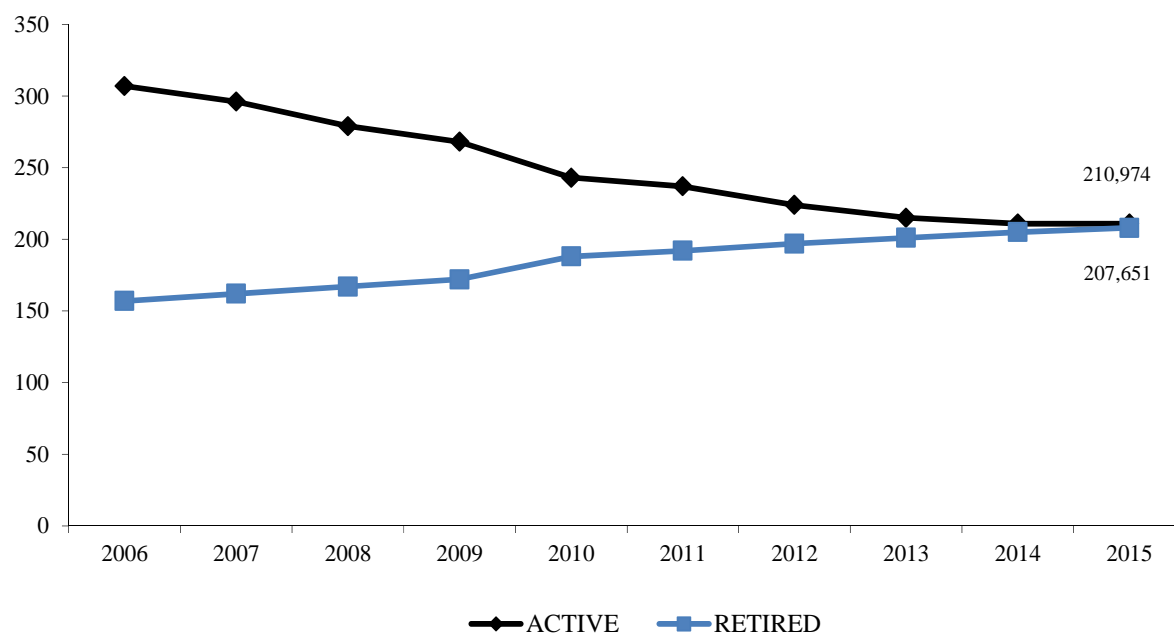
# STATISTICAL SECTION

## Schedule of Principal Participating Employers For Fiscal Years Ending September 30, 2014 and 2005

Participating Employer	2014		2005	
	Employees	Percentage of Total System	Employees	Percentage of Total System
Detroit Public Schools	7,973	3.99 %	22,639	7.16 %
Utica Community Schools	3,280	1.64	5,194	1.64
Grand Rapids Public Schools	3,122	1.56	5,199	1.64
Oakland Community College	2,748	1.38	2,627	0.83
Ann Arbor Public Schools	2,654	1.33	3,960	1.25
Dearborn Public Schools	2,637	1.32	3,469	1.10
Macomb Community College	2,491	1.25	2,380	0.75
Kalamazoo Public Schools	2,308	1.16	2,880	0.91
Plymouth-Canton Community SD	2,305	1.15	2,922	0.92
Lansing Community College	2,118	1.06	2,348	0.74
All other	168,038	84.16	262,533	83.04
Total	199,674	100.00 %	316,151	100.00 %

# STATISTICAL SECTION

## Ten Year History of Membership (In thousands) Fiscal Year Ended September 30



Source: Gabriel Roeder Smith & Co.



# STATISTICAL SECTION

## Schedule of Participating Employers at 9/30/15

### Universities:

Central Michigan University  
Eastern Michigan University  
Ferris State University  
Lake Superior State University  
Michigan Technological University  
Northern Michigan University  
Western Michigan University

### Community Colleges:

Alpena Community College  
Bay De Noc Community College  
Charles S Mott Community College  
Delta College  
Glen Oaks Community College  
Gogebic Community College  
Grand Rapids Community College  
Henry Ford College  
Jackson College  
Kalamazoo Valley Community College  
Kellogg Community College  
Kirtland Community College  
Lake Michigan College  
Lansing Community College  
Macomb Community College  
Mid-Michigan Community College  
Monroe County Community College  
Montcalm Community College  
Muskegon Community College  
North Central Michigan College  
Northwestern Michigan College  
Oakland Community College  
Schoolcraft Community College  
Southwestern Michigan College  
St Clair County Community College  
Washtenaw Community College  
Wayne County Community College  
West Shore Community College

### Intermediate School Districts:

Allegan Area Educational Service Agency  
Alpena-Montmorency-Alcona E. S. D.  
Barry Intermediate School District  
Bay-Arenac Intermediate School District  
Berrien R. E. S. A.  
Branch Intermediate School District  
Calhoun Intermediate School District  
Charlevoix-Emmet Intermediate School District

Cheboygan-Otsego-Presque Isle ESD  
Clare-Gladwin Intermediate School District  
Clinton County R. E. S. A.  
Coo Intermediate School District  
Copper Country Intermediate School District  
Delta-Schoolcraft Intermediate School District  
Dickinson-Iron Intermediate School District  
Eastern U P Intermediate School District  
Eaton Intermediate School District  
Genesee Intermediate School District  
Gogebic-Ontonagon Intermediate School District  
Gratiot-Isabella R. E. S. D.  
Hillsdale Intermediate School District  
Huron Intermediate School District  
Ingham Intermediate School District  
Ionia Intermediate School District  
Iosco R. E. S. A.  
Jackson Intermediate School District  
Kalamazoo R. E. S. A.  
Kent Intermediate School District  
Lapeer Intermediate School District  
Lenawee Intermediate School District  
Lewis Cass Intermediate School District  
Livingston E. S. A.  
Macomb Intermediate School District  
Manistee Intermediate School District  
Marquette-Alger Intermediate School District  
Mecosta-Osceola Intermediate School District  
Menominee Intermediate School District  
Midland County E. S. A.  
Monroe Intermediate School District  
Montcalm Area Intermediate School District  
Muskegon Area Intermediate School District  
Newaygo County R. E. S. A.  
Oakland Intermediate School District  
Ottawa Area Intermediate School District  
Saginaw Intermediate School District  
Sanilac Intermediate School District  
Shiawassee R. E. S. D.  
St. Clair County R. E. S. A.  
St. Joseph Intermediate School District  
Traverse Bay Area Intermediate School District  
Tuscola Intermediate School District  
Van Buren Intermediate School District  
Washtenaw Intermediate School District  
Wayne R. E. S. A.  
West Shore Educational Service District  
Wexford-Missaukee Intermediate School District

# STATISTICAL SECTION

## Schedule of Participating Employers at 9/30/15 (continued)

### **K – 12 School Districts:**

Adams Township School District	Bentley Community Schools
Adams-Sigel #3 School	Benton Harbor Area Schools
Addison Community Schools	Benzie County Central Schools
Adrian Public Schools	Berkley School District
Airport Community Schools	Berrien Springs Public Schools
Akron-Fairgrove Schools	Bessemer Area School District
Alanson Public Schools	Big Bay De Noc School District
Alba Public Schools	Big Burning-Colfax #1f School
Albion Public Schools	Big Jackson School District
Alcona Community Schools	Big Rapids Public Schools
Algonac Community Schools	Birch Run Area Schools
Allegan Public Schools	Birmingham Public Schools
Allen Park Public Schools	Blissfield Community School District
Allendale Public Schools	Bloomfield Hills School District
Alma Public Schools	Bloomington Public Schools
Almont Community Schools	Bois Blanc Pines School District
Alpena Public Schools	Boyne City Public Schools
Anchor Bay School District	Boyne Falls Public Schools
Ann Arbor Public Schools	Brandon School District
Arenac-Eastern High School	Brandywine Public Schools
Armada Area Schools	Breckenridge Community Schools
Arvon Township Schools	Breitung Township Schools
Ashley Community Schools	Bridgeport-Spaulding Comm. School District
Athens Area Schools	Bridgman Public Schools
Atherton Community Schools	Brighton Area Schools
Atlanta Community Schools	Brimley Public Schools
Au Gres-Sims School District	Britton-Deerfield Schools
Autrain-Onota Public Schools	Bronson Community Schools
Avondale School District	Brown City Community Schools
Bad Axe Public Schools	Buchanan Community Schools
Baldwin Community Schools	Buckley Community Schools
Bangor Public Schools	Bullock Creek School District
Bangor Township Schools	Burr Oak Community Schools
Baraga Township Schools	Burt Township School District
Bark River - Harris Schools	Byron Area Schools
Bath Community Schools	Byron Center Public Schools
Battle Creek Public Schools	Cadillac Area Public Schools
Bay City Public Schools	Caledonia Community Schools
Beal City Schools	Calumet Public Schools
Bear Lake School	Camden-Frontier School
Beaver Island Community Schools	Capac Community Schools
Beaverton Rural School District	Carman-Ainsworth Community School District
Bedford Public Schools	Carney-Nadeau Public Schools
Beecher Community School District	Caro Community Schools
Belding Area Schools	Carrollton School District
Bellaire Public Schools	Carson City-Crystal Area Schools
Bellevue Community Schools	Carsonville-Port Sanilac School
Bendle Public Schools	

# STATISTICAL SECTION

## **Schedule of Participating Employers at 9/30/15 (continued)**

### **K - 12 School Districts (continued):**

Caseville Public Schools	Detroit Public Schools
Cass City Public Schools	Dewitt Public Schools
Cassopolis Public Schools	Dexter Community Schools
Cedar Springs Public Schools	Dollar Bay-Tamarack School District
Center Line Public Schools	Dowagiac-Union School District
Central Lake-Antrim County Public Schools	Dryden Community Schools
Central Montcalm Public Schools	Dundee Community Schools
Centreville Public Schools	Durand Area Schools
Charlevoix Public Schools	East China School District
Charlotte Public Schools	East Detroit School District
Chassell Township Schools	East Grand Rapids Public Schools
Cheboygan Area School District	East Jackson Public Schools
Chelsea School District	East Jordan Public Schools
Chesaning-Union Schools	East Lansing Public Schools
Chippewa Hills School District	Eaton Rapids Public Schools
Chippewa Valley Schools	Eau Claire Public Schools
Church School	Eccles-Sigel #4 School
Clare Public Schools	Ecorse Public Schools
Clarenceville School District	Edwardsburg Public Schools
Clarkston Community Schools	Elk Rapids Schools
Clawson City School District	Ellsworth Community Schools
Climax-Scotts Community Schools	Elm River Township Schools
Clinton Community Schools	Engadine Consolidated School District #4
Clintondale Community Schools	Escanaba Area Public Schools
Clio Area School District	Essexville-Hampton Public Schools
Coldwater Community Schools	Evart Public Schools
Coleman Community Schools	Ewen-Trout Creek Consolidated School District
Coloma Community Schools	Fairview Area Schools
Colon Community School	Farmington Public Schools
Columbia School District	Farwell Area Schools
Comstock Park Public Schools	Fennville Public Schools
Comstock Public Schools	Fenton Area Public Schools
Concord Community Schools	Ferndale City School District
Constantine Public Schools	Fitzgerald Public Schools
Coon-Berlin Township School District #3	Flat Rock Community Schools
Coopersville Public Schools	Flint Community Schools
Corunna Public Schools	Flushing Community Schools
Covert Public Schools	Forest Area Schools
Crawford-AuSable School District	Forest Hills Public Schools
Crawford-Excelsior School District #1	Forest Park School District
Crestwood School District	Fowler Public Schools
Croswell-Lexington Schools	Fowlerville Community Schools
Dansville Schools	Frankenmuth School District
Davison Community Schools	Frankfort-Elberta Area Schools
Dearborn Heights School District #7	Fraser Public Schools
Dearborn Public Schools	Freeland Community Schools
Decatur Public Schools	Fremont Public Schools
Deckerville Community School District	Fruitport Community Schools
Delton-Kellogg Schools	Fulton Schools
DeTour Area Schools	Galesburg-Augusta Community School District

# STATISTICAL SECTION

## Schedule of Participating Employers at 9/30/15 (continued)

### **K - 12 School Districts (continued):**

Garden City Public Schools	Holton Public Schools
Gaylord Community Schools	Homer Community Schools
Genesee School District	Hopkins Public Schools
Gibraltar School District	Houghton Lake Community Schools
Gladstone Area Schools	Houghton-Portage Township School District
Gladwin Community Schools	Howell Public Schools
Glen Lake Community Schools	Hudson Area Schools
Glenn-Ganges School District #4	Hudsonville Public Schools
Gobles Public Schools	Huron School District
Godfrey-Lee Public Schools	Huron Valley School District
Godwin Heights Public Schools	Ida Public Schools
Goodrich Area Schools	Imlay City Community Schools
Grand Blanc Community Schools	Inland Lakes Schools
Grand Haven Public Schools	Ionia Public Schools
Grand Ledge Public Schools	Iron Mountain Public Schools
Grand Rapids Public Schools	Ironwood-Gogebic City Area Schools
Grandville Public Schools	Ishpeming Public Schools
Grant Public Schools	Ithaca Public Schools
Grant Township School	Jackson Public Schools
Grass Lake Community Schools	Jefferson Schools
Greenville Public Schools	Jenison Public Schools
Grosse Ile Township Schools	Johannesburg-Lewiston Area Schools
Grosse Pointe Public Schools	Jonesville Community Schools
Gull Lake Community Schools	Kalamazoo Public Schools
Gwinn Area Community Schools	Kaleva Norman Dickson School District
Hale Area Schools	Kalkaska Public Schools
Hamilton Community Schools	Kearsley Community Schools
Hamtramck Public Schools	Kelloggsville Public Schools
Hancock Public Schools	Kenowa Hills Public Schools
Hanover Horton School District	Kent City Community Schools
Harbor Beach Community School District	Kentwood Public Schools
Harbor Springs Public Schools	Kingsley Area Schools
Harper Creek Community Schools	Kingston Community Schools
Harper Woods Public Schools	Kipper School
Harrison Community Schools	L'Anse Public Schools
Hart Public Schools	Laingsburg Community Schools
Hartford Public Schools	Lake City Area Schools
Hartland Consolidated Schools	Lake Fenton Community School District
Haslett Public Schools	Lake Linden-Hubbell Public Schools
Hastings Area School District	Lake Orion Community School #3
Haynor- Easton Township School District #6	Lake Shore Public Schools
Hazel Park Public Schools	Laker Schools
Hemlock Public Schools	Lakeshore Public Schools
Hesperia Community Schools	Lakeview Community Schools
Highland Park School District	Lakeview Public Schools
Hillman Community Schools	Lakeview School District
Hillsdale Community Schools	Lakeville Community Schools
Holland Public Schools	Lakewood School District
Holly Area Schools	Lamphere Public Schools
Holt Public Schools	L'Anse Creuse Public Schools

# STATISTICAL SECTION

## **Schedule of Participating Employers at 9/30/15 (continued)**

### **K - 12 School Districts (continued):**

Lansing Public Schools	Millington Community School District
Lapeer Public Schools	Mio-AuSable Schools
Lawrence Public Schools	Mona Shores School District #29
Lawton Community Schools	Monroe Public Schools
Leland Public Schools	Montabella Community Schools
Les Cheneaux Community Schools	Montague Area Public Schools
Leslie Public Schools	Montrose Community Schools
Lincoln Consolidated Schools	Moran Township School District
Lincoln Park Public Schools	Morenci Area Schools
Linden Community Schools	Morley-Stanwood Community Schools
Litchfield Community Schools	Morrice Area Schools
Livonia Public Schools	Mt Clemens Community Schools
Lowell Area Schools	Mt Morris Consolidated Schools
Ludington Area Schools	Mt Pleasant Public Schools
Mackinaw City Public Schools	Munising Public Schools
Mackinac Island Public Schools	Muskegon City Public Schools
Madison District Public Schools	Muskegon Heights City Public Schools
Madison School District #2	Napoleon Comm. School District
Mancelona Public Schools	Negaunee Public Schools
Manchester Community Schools	New Buffalo Area Schools
Manistee Public Schools	New Haven Community Schools
Manistique Area Schools	New Lothrop Area Public Schools
Manton Consolidated School District	Newaygo Public Schools
Maple Valley Schools	Nice Community Schools
Mar Lee School District	Niles Public Schools
Marcellus Community Schools	North Adams-Jerome Public Schools
Marion Public Schools	North Branch Area Schools
Marlette Community Schools	North Central Area Schools
Marquette Area Public Schools	North Dickinson School
Marshall Public Schools	North Huron Schools
Martin Public Schools	North LeValley School #2
Marysville Public Schools	North Muskegon Public Schools
Mason Co.-Eastern-Custer #5 School District	Northport Public Schools
Mason Consolidated Schools	Northview Public Schools
Mason County Central School District	Northville Public Schools
Mason Public Schools	Northwest School District
Mattawan Consolidated Schools	Norway-Vulcan Area Schools
Mayville Community Schools	Nottawa Community Schools
McBain Rural Agricultural School	Novi Community School District
Melvindale-Northern Allen Park School District	Oak Park School District
Memphis Community Schools	Oakridge Public Schools
Mendon Community School	Okemos Public Schools
Menominee Area Public Schools	Olivet Community Schools
Meridian Public Schools	Onaway Area Community Schools
Merrill Community Schools	Onkama Consolidated Schools
Mesick Consolidated Schools	Onsted Community Schools
Michigan Center School District	Ontonagon Area School District
Mid Peninsula Schools	Orchard View Schools
Midland City Schools	Oscoda Area Schools
Milan Area Schools	Otsego Public Schools

# STATISTICAL SECTION

## Schedule of Participating Employers at 9/30/15 (continued)

### **K - 12 School Districts (continued):**

Ovid-Elsie Area Schools	Rudyard Public Schools
Owendale-Gagetown Area Schools	Saginaw City Schools
Owosso Public Schools	Saginaw Township Community Schools
Oxford Area Community Schools	Saline Area Schools
Parchment School District	Sand Creek Community Schools
Paw Paw Public Schools	Sandusky Community Schools
Peck Community Schools	Saranac Community Schools
Pellston Public Schools	Saugatuck Public Schools
Pennfield Public Schools	Sault Ste Marie Public Schools
Pentwater Public Schools	Schoolcraft Community Schools
Perry Public Schools	Shelby Public Schools
Petoskey Public Schools	Shepherd Public Schools
Pewamo-Westphalia Comm School District	South Haven Public Schools
Pickford Public Schools	South Lake Public Schools
Pinckney Community Schools	South Lyon Community Schools
Pinconning Area Schools	South Redford School District
Pine River Area Schools	Southfield Public Schools
Pittsford Area Schools	Southgate Community School District
Plainwell Community Schools	Sparta Area Schools
Plymouth-Canton Community School District	Spring Lake Public Schools
Pontiac City School District	Springport Public Schools
Port Huron Area Schools	St Charles Community Schools
Portage Public Schools	St Ignace Public Schools
Portland Public Schools	St Johns Public Schools
Posen Consolidated Schools	St Joseph Public Schools
Potterville Public Schools	St Louis Public Schools
Powell Township School District	Standish-Sterling Community School District
Quincy Community Schools	Stanton Township Public Schools
Rapid River Public Schools	Stephenson Area Public Schools
Ravenna Public Schools #24	Stockbridge Community Schools
Reading Community Schools	Strange-Oneida School #3
Redford-Union School District #1	Sturgis Public Schools
Reed City Public School District	Summerfield Schools
Reese Public Schools	Superior Central School District
Reeths-Puffer Schools	Suttons Bay Public Schools
Republic-Michigamme Schools	Swan Valley School District
Richmond Community Schools	Swartz Creek Community Schools
River Rouge Public Schools	Tahquamenon Area School District
River School	Tawas Area Schools
River Valley School District	Taylor School District
Riverside-Hagar School District #6	Tecumseh Public Schools
Riverview Public Schools	Tekonsha Community Schools
Rochester Community Schools	Thornapple-Kellogg School
Rockford Public Schools	Three Rivers Community Schools
Rogers City Area Schools	Traverse City Public Schools
Romeo Community Schools	Trenton Public Schools
Romulus Community Schools	Tri-County Area Schools
Roscommon Area Public Schools	Troy City School District
Roseville Community Schools	Ubyly Community Schools
Royal Oak City School District	Union City Community Schools

# STATISTICAL SECTION

## **Schedule of Participating Employers at 9/30/15 (continued)**

### **K - 12 School Districts (continued):**

Unionville-Sebewaing Area Schools  
Utica Community Schools  
Van Buren Public Schools  
Vanderbilt Area Schools  
Vandercook Lake Public Schools  
Van Dyke Public Schools  
Vassar Public Schools  
Verona Mills School  
Vestaburg Community Schools  
Vicksburg Community Schools  
Wakefield-Marenisco School District  
Waldron Area Schools  
Walkerville Public Schools  
Walled Lake Consolidated Schools  
Warren Consolidated Schools  
Warren Woods Public Schools  
Waterford School District  
Watersmeet Township School District  
Watervliet Public Schools  
Waverly Community Schools  
Wayland Union Schools  
Wayne-Westland Community Schools  
Webberville Community Schools  
Wells Township School #18  
West Bloomfield Schools  
West Branch-Rose City Area Schools  
West Iron County Public Schools  
West Ottawa Public Schools  
Western School District  
Westwood Community Schools  
Westwood Heights Schools  
White Cloud Public Schools  
White Pigeon Community Schools  
Whitefish Township School  
Whiteford Agricultural School  
Whitehall District Schools  
Whitmore Lake Public Schools  
Whittemore-Prescott Area Schools  
Williamston Community Schools  
Wolverine Community Schools  
Wood School District #8, Bangor Township  
Woodhaven-Brownstown School District  
Wyandotte Public Schools  
Wyoming Public Schools  
Yale Public School District  
Ypsilanti Public Schools  
Zeeland Public Schools

### **Public School Academies:**

AGBU Alex & Marie Manoogian School  
Arts Academy in the Woods  
Bay-Arenac Community High School  
Blue Water Middle College Academy  
Central Academy  
Commonwealth Community Development Academy  
Countryside Charter School  
Creative Technologies Academy  
Da Vinci Institute  
Dearborn Academy  
Edison Public School Academy  
El-Hajj Malik El-Shabazz Academy  
Grand Rapids Child Discovery Center  
Greater Heights Academy  
Henry Ford Academy  
Holly Academy  
Honey Creek Community School  
Joseph K. Lumsden Public School Academy  
Macomb Academy  
Martin Luther King, Jr. Public School Academy  
Michigan Math and Science Academy  
Muskegon Heights Public School Academy  
Nah Tah Wahsh Public School Academy  
New Branches School  
North Star Academy  
Outlook Academy  
Presque Isle Academy II  
Relevant Academy of Eaton County  
Summit Academy  
Summit Academy North  
Three Lakes Academy  
Virtual Learning Academy of St. Clair  
Walden Green Day School  
Washtenaw Technical Middle College  
West Village Academy  
Windover High School  
Woodland Park Academy

### **Libraries:**

Ann Arbor District Library  
Bacon Memorial District Library  
Cheboygan Area Public Library  
Flint Public Library  
Grosse Pointe Public Library  
Hackley Public Library  
Kalamazoo Public Library  
Mt Clemens Public Library  
Public Libraries of Saginaw  
Willard District Library

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### Management:

Ronald W. Foss, Director  
Aver Hamilton, Accounting Manager

### Accountants:

Kate Carlin  
Dan Harry  
Alpa Kulkarni  
Erik Simmer  
Paula Webb  
Carol Wheaton

### Technical and Support Staff:

Jamin Schroeder

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The report may be viewed on-line at: [www.michigan.gov/ors](http://www.michigan.gov/ors)