

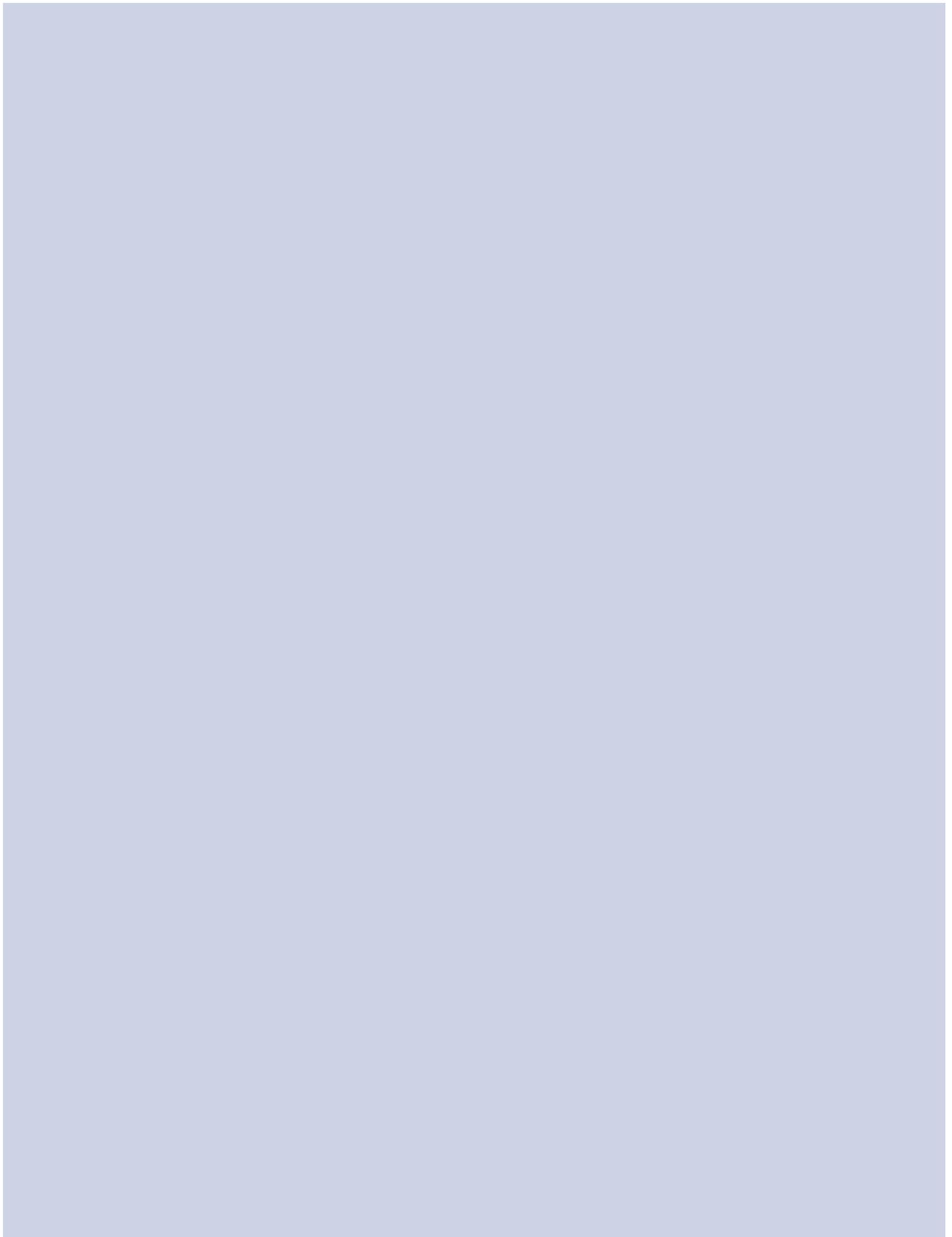


COMPREHENSIVE ANNUAL  
FINANCIAL REPORT  
for the fiscal year ended 12.31.2015  
MERS of MICHIGAN

A bar chart with three white bars of increasing height from left to right, set against a yellow and orange background with a geometric pattern.

Transparency,  
Trends, and Fiscal  
Responsibility







Municipal Employees' Retirement System

1134 Municipal Way  
Lansing, MI 48917  
800.767.MERS (6377)  
[www.mersofmich.com](http://www.mersofmich.com)

# COMPREHENSIVE ANNUAL FINANCIAL REPORT

for the fiscal year ended 12.31.2015

## MERS of MICHIGAN

Chris DeRose — Chief Executive Officer  
Leon E. Hank — Chief Financial Officer

## INTRODUCTORY SECTION

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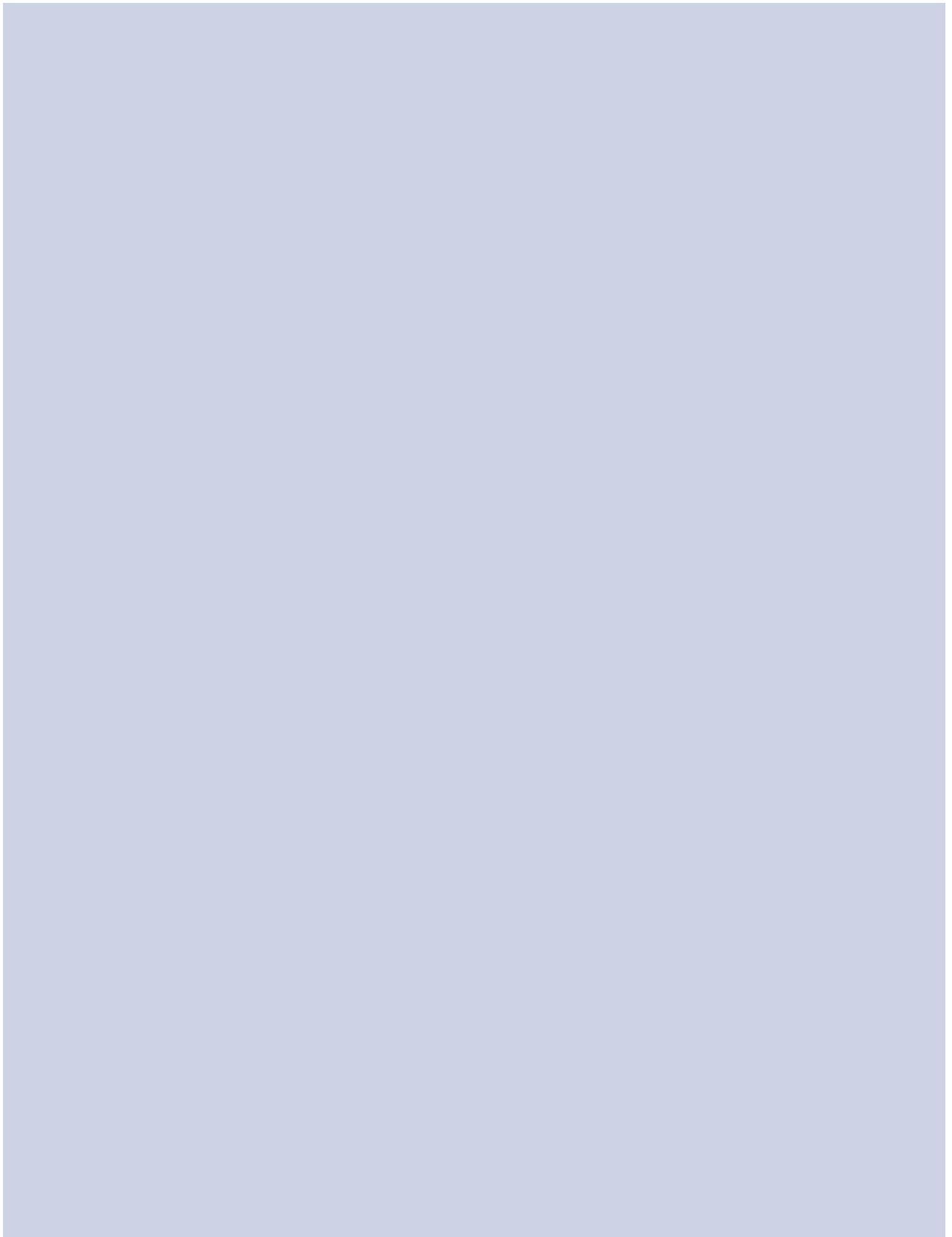
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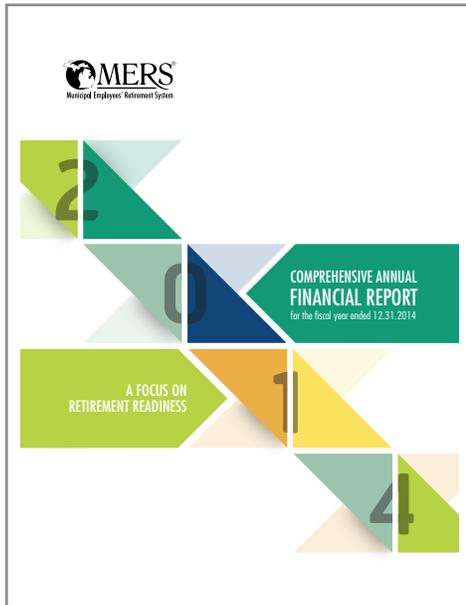
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SECTION 1  
**INTRODUCTION**



## 2015 ACHIEVEMENTS



### Certificate of Achievement for Excellence in Financial Reporting

MERS received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for the December 31, 2014, Comprehensive Annual Financial Report. This marks the 27th consecutive year MERS has received this honor.



### Public Pension Standards Award

MERS also received the Public Pension Coordinating Council (PPCC), Public Pension Standards Award in 2015, in recognition of meeting the professional standards for plan design and administration as set forth in the Public Pension Standards. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).



## INTRODUCTION

2015 comprehensive annual financial report

Municipal Employees' Retirement System



### Letter of Transmittal, May 6, 2016

#### Dear Board Members:

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) for the Municipal Employees' Retirement System (MERS) of Michigan for the fiscal year ending December 31, 2015.

In 2015 MERS embarked on several major efforts to strengthen our system for both the short and long-term. As part of our fiduciary responsibility, due diligence, and fiscal best practices, MERS and our actuarial firm completed a comprehensive Experience Study for the Defined Benefit and Defined Benefit portion of the Hybrid Plan. We perform this study every five years to compare actual experience of the plan with the actuarial assumptions to ensure each municipality's plan assets are sufficient to provide for the benefits that are expected to be paid. With this study, we have implemented systemic changes that will significantly strengthen our plans over the next two decades.

Each year we continue to make improvements to the annual actuarial valuations and last year was no different. We added five-year budget projection scenarios and provided customers with information related to the new GASB 68 requirements. In addition we provided our customers with ongoing education, resources, and support to help prepare them for these changes.

This year we also completed enhancements to both the myMERS and Employer Portal. The new look and features were a direct result of ideas and suggestions our customers provided, including improved navigation, added security and additional financial resources for participants, and enhanced reporting features for employers.

In 2015 MERS launched our first retirement readiness reports to over 23,000 active Defined Benefit participants. These free comprehensive personalized reports show participants how their MERS plan(s) will work together with Social Security to provide

retirement income. Participants can then go online to enter in other retirement and personal information and personalize goals to receive a full retirement picture.

#### MERS Profile

MERS is a statutory public corporation that serves members across the state of Michigan. We are one of the largest, most established, and successful shared services stories in Michigan, providing administration, investment expertise, fiduciary responsibility, and oversight for benefit plans. This allows local governments to focus on core services, leaving day-to-day administration to us. Services include: plan governance, on-staff auditor, legal counsel, actuarial services, financial management, information technology support, legislative advocacy, administration of benefits, and investments.

MERS offers a full range of customizable plans and services. We work in partnership with our members to develop the plan that best meets their unique needs. We listen to our members and regularly add new, updated products and tools, such as new options to help manage unfunded liability and enhancements to the Defined Contribution Plan. The MERS Retirement Board (Board) serves as the fiduciary of the funds and has oversight responsibilities.

#### Report Structure and Contents

Section 38.1536 of the Michigan Compiled Laws requires the Board to prepare this annual report in accordance with U.S. Generally Accepted Accounting Principles (GAAP). The financial information shown throughout this report meets that requirement. The MERS management team, under the oversight of the Board, is responsible for the preparation, integrity, and fairness of the financial statements and other information presented in this report. As a part of our financial statement process, we have identified necessary internal controls and have them in place to ensure that transactions are authorized, assets

safeguarded, and all supporting records are properly retained and managed. The cost of a control should not exceed the benefits to be derived, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements. We have an internal auditor on staff to help ensure we meet high standards for internal control.

Section 38.1536 also requires the Board to arrange for an annual audit of the MERS financial statements. Plante Moran, MERS external auditor, conducted an independent audit of the financial statements in accordance with Generally Accepted Auditing Standards. This audit is described in the Independent Auditor's Report in the Financial Section following this letter. MERS' management provides the external auditors with unrestricted access to records and staff. This external audit is conducted annually to ensure the sufficiency of the internal controls and that our financial statements are fairly stated.

This CAFR is divided into five sections: Introduction, Financial, Investment, Actuarial, and Statistical. The Introductory Section outlines the System's achievements and structure; the Financial Section contains the Management's Discussion and Analysis (MD&A), which is the MERS management team's narrative and overview of the financial statements. This Transmittal Letter is designed to supplement and complement the MD&A. The two documents should be read together to get a thorough overview of MERS' financial condition. The Investment Section reports investment activities and performance information; the Actuarial Section contains the actuarial assumptions and methods as well as the actuary's certification letter. The Statistical Section provides various schedules on member data and 10-year trends.

### **Financial Summary**

For 2015, MERS placed in the top half for performance of investment returns for the last ten-year period, according to the State Street Universe of Public Funds. Our portfolio performed as expected during a downturn in the world financial markets, positioning us to experience better results than many of our peers. Our return for 2015 was a negative

1.02% (after investment expenses). More information regarding our investment management performance is found in the Investments Section.

Our cost levels today are at a level they were in 2009, when we were 38% smaller in asset size. Across the country, there are few public pension systems that have had this magnitude of success recently in reducing and flattening their costs. To our members, this continued growth and cost reductions allow us to put more of their retirement assets to work for them while providing more efficient customer service.

One measure of a defined benefit retirement system's financial health is the percentage of its actuarial liabilities owed that is covered by its available actuarial assets. Using this ratio, most MERS' municipalities are well funded and many are very well funded. During the most recent MERS' actuarial valuation, as of December 31, 2014, 462 municipal governments in MERS were funded at 70% or higher (equaling 65% of all municipal governments in MERS). Included in that statistic are 88 municipal governments (12% of all municipal governments in MERS) that were fully funded at a ratio of 100% or higher. There were 115 municipalities (16% of all MERS municipalities) with funding ratios below 60%. MERS is working closely with these municipalities to improve and strengthen the financial condition of their plans.

We continue to partner with all municipalities in helping them set fiscal goals and discussing options, to find the programs and provisions that best fit the municipality's unique needs. In 2015, 97 divisions increased cost sharing to employees, 52 divisions adopted a lower defined benefit for new hires, and 16 divisions adopted Bridged Benefits prospectively. These efforts helped strengthen the financial condition of all these plans. The Defined Benefit Plan received additional employer contributions of \$182 million to help increase funding levels, and new municipalities joining the plan brought in an extra \$142 million.

### **Growth Summary**

The Institutional Programs, which include the MERS Retiree Health Funding Vehicle and Investment

## INTRODUCTION

2015 comprehensive annual financial report

Services Program, experienced excellent growth in 2015. These programs were created specifically for municipalities interested in gaining access to MERS' professional investment services, while maintaining administration of their plan. Through these programs, municipalities receive a team of experts that invest and manage the assets, are responsible for manager selection, and monitor the strategic and tactical asset allocation. Nine new municipalities with almost \$93 million joined this year, bringing total participation to 157 municipalities with assets over \$701 million.

Our participant directed accounts include the MERS Defined Contribution Plan (including the DC portion of the Hybrid Plan), 457 Supplemental Retirement Program, and Health Care Savings Program. In 2015, these products also experienced growth as the number of municipalities offering these products increased by 107 bringing in almost \$42 million in new assets.

In addition our Defined Benefit Program brought in four new municipalities and three new divisions, with assets over \$142 million.

### Best Practices

For the last three years, MERS has prepared to help local governments implement Governmental Accounting Standards Board Statement No. 68 (GASB 68) for the first time. This new reporting rule changes the way government entities account for and report their defined benefit plan costs and liabilities. We updated our information technology systems, prepared detailed implementation manuals, and provided other tools and data to help our customers comply with the new standard. We also arranged with our outside audit firm to conduct a Service Operating Controls (SOC-1) review so that key data is ready for our customers to use and share with their own auditors, avoiding higher costs for additional audit work. As we publish this CAFR, many of our customers with June 30 fiscal years are just publishing their first CAFRs with the GASB 68 data included.

In 2015, MERS completed its second 2015 SOC-1 audit. For the first time, it includes all of MERS operations and including all our participant directed accounts and institutional funds.

We continually strive to sustain our standards at the highest level to ensure stability as a leader among our peers. We are honored that for the 27th consecutive year, the Government Finance Officers Association (GFOA) awarded MERS its Certificate of Achievement for Excellence in Financial Reporting award for our 2014 CAFR.

The MERS Summary Annual Financial Report (a reader-friendly, condensed version of the CAFR) is an easy-to-understand financial summary of our operations. We also received the GFOA award for this report.

A complete copy of the CAFR is provided to the Governor, the members of both the State House and Senate, and the Office of the State Treasurer, as required by law. The CAFR and Summary Report are available on our website, [www.mersofmich.com](http://www.mersofmich.com).

### Acknowledgements

We are very grateful to our Board members for your time and dedication, which makes it possible for MERS to be successful for our employers, members and retirees. Your conscientious oversight and diligence of our well-run system is greatly appreciated.

On behalf of all MERS' members, thank you for your dedication to public service.

We also express our deep gratitude to the entire MERS' staff for their hard work and dedication to ensure the successful operation of MERS. Our staff uses innovation, skill and a commitment to service every day to ensure the security of a retirement plan for all our members.

Keeping MERS running as a strong organization also requires outstanding organizations and advisors who work in partnership with MERS to ensure our continued success. We also thank these talented firms and individuals for their work on our members' behalf.

Respectfully submitted,

*Chris DeRose*

Chief Executive Officer

*Leon E. Hank, CPA*

Chief Financial Officer

## Letter from the Chairperson, May 6, 2016

### Dear MERS Members:

On behalf of the MERS Retirement Board, it is my pleasure to present the Comprehensive Annual Financial Report (CAFR) of the Municipal Employees' Retirement System of Michigan. This is the 70th year MERS has provided professional retirement services to municipal members across the state of Michigan. Included in this year's report is all of the required financial information regarding the System for the fiscal year ending December 31, 2015.

MERS is governed by an elected board that operates without compensation and is committed to accountability and transparency. This governance ensures MERS continues to grow in financial strength as well as providing superior value to members. We have implemented the second year of our three-year Strategic Plan. I am pleased to highlight just a few of the many accomplishments MERS made during this second year of our strategic plan under the leadership of Chris DeRose, our Chief Executive Officer.

We continue to grow in the number of employers and members we serve. This last year, the number of Michigan local governments joining MERS increased by 14 to 841 total, our highest number in our history. Our total assets now stand at \$9.2 billion and our focus on managing and reducing our costs where possible, continues to be outstanding. I am very proud that we contained our growth in administrative costs again in 2015, even with our growth in employers and members. In fact, our operating costs remain at the levels they were in 2009; allowing MERS to grow 60% bigger in asset size over the last six years, at reduced costs to our customers.

We are actively partnering with our membership to listen to their unique needs. Again, this year, our CEO and staff crisscrossed the state, to hear from our customers from Dundee to Ironwood. As a result of those discussions, we have planned and prioritized our actions and our work projects based on feedback received. We continue to focus on providing more information and resources to assist our members with managing their unfunded liabilities, enhancing online account access, and providing educational resources to assist employees in preparing for retirement.

Readying Michigan for retirement will be no small feat. However, I know our staff will continue to work diligently with our members to find the appropriate solutions. All of this speaks to the competency of our staff and their passion for excellence in all we do for you, our members.

In closing, I would like to take this opportunity to thank the members of the Board and the staff for their unwavering commitment to expertise and professionalism. It is my pleasure to serve as your MERS Chairperson, and like all of you, I am proud to have played a role in serving all MERS employers and our members.

Sincerely,

**Michael Brown, Chairperson**  
MERS Board of Trustees

## INTRODUCTION

2015 comprehensive annual financial report

## RETIREMENT BOARD AND CHIEF EXECUTIVE OFFICER



Back row from left to right: Philip LaJoy, Amy Deford, James R. Wiersma, Chris DeRose, John Ogden, Randy Girard  
Front row from left to right: Michael Brown, Lori Newberg, Sally Dreves, Michael Gilmore

Officer Members: Michael Brown – Chairperson, Barry County; Randy Girard, Charter Township of Marquette; Philip LaJoy, Canton Township

Employee Members: Sally Dreves, Grand Traverse County; Lori Newberg, Ingham County; Amy Deford, Saginaw County

Expert Members: Michael Gilmore, Delta Dental, Okemos; James R. Wiersma, Haworth, Holland

Retiree Member: John Ogden, City of Port Huron

## MERS OFFICERS



From left to right:

Debra Peake, Chief Employee and Retiree Services Officer

Carrie Lombardo, Chief Marketing and Employer Services Officer

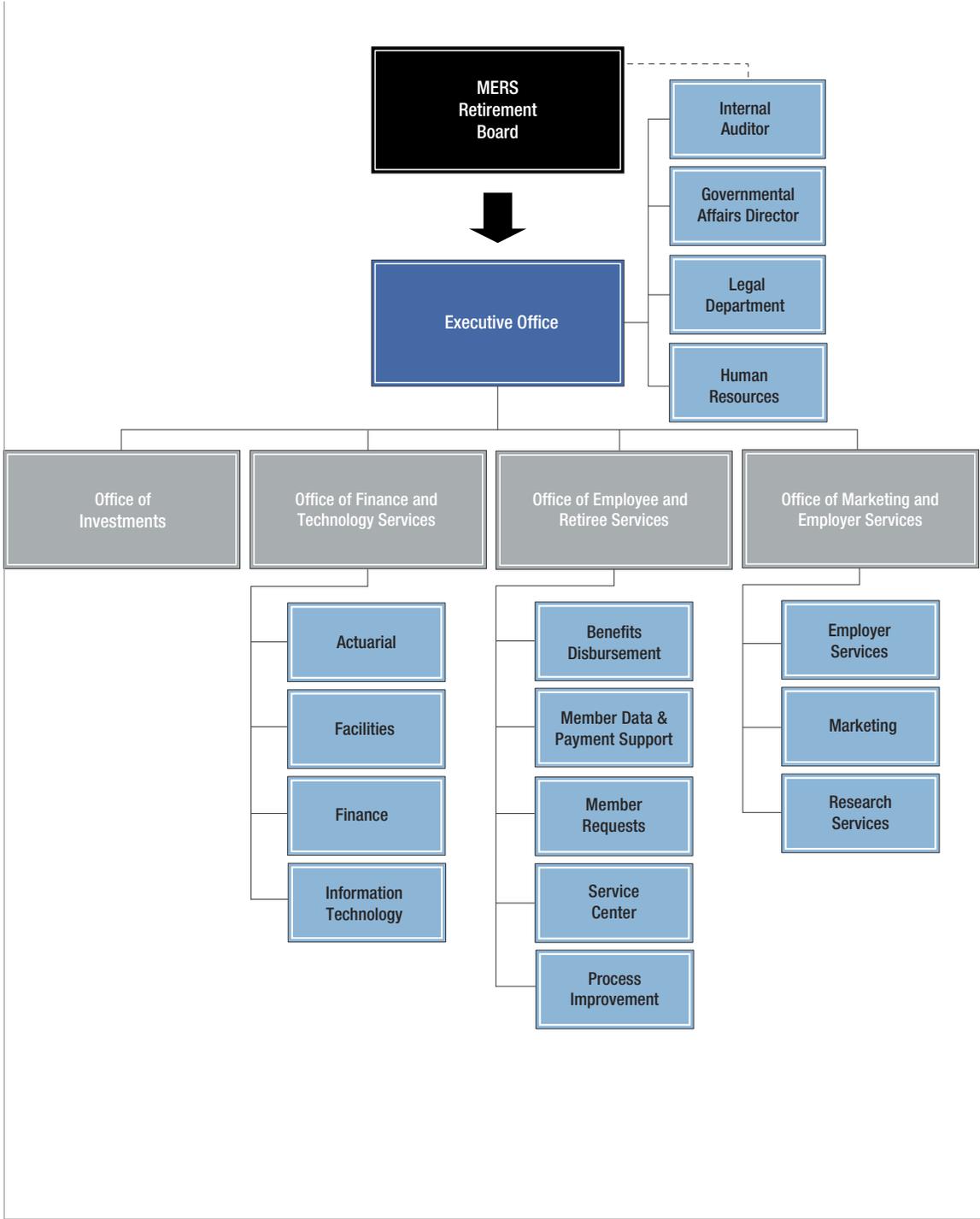
Chris DeRose, Chief Executive Officer

Leon Hank, Chief Financial Officer

Jeb Burns, Chief Investment Officer

# MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN

Organizational Structure – 2015



## INTRODUCTION

2015 comprehensive annual financial report

## OUTSIDE PROFESSIONAL SERVICES

### Professional Consultants

#### Actuaries

CBIZ Benefits & Insurance  
Services, Inc  
Cheiron, Inc.

#### Auditors

Plante & Moran PLLC

#### Banking

Commerce Bank  
JP Morgan Chase  
Northern Trust  
State Street Bank

#### Business Consulting

Analysts International Corporation  
Byrum Fisk Communications LLC  
Orion Development Group

#### Human Resource Advisors

Gallagher Benefit Services, Inc.

#### Investment Custodian and Security Lending Agent

State Street Bank and Trust Company

#### Investment Consultants

Gavekal Capital  
Ned Davis Research  
Informa Investment Solutions  
Bloomberg Finance L.P.

#### Legal Counsel

Elizabeth Schwartz  
Ice Miller, LLP  
Jackson Walker LLP  
Johnson Rosati  
Miller, Canfield, Paddock and Stone,  
P.L.C.

#### Legislative Consultants

Karoub Associates  
Michigan Legislative Consultants

#### Medical Advisor

Consulting Physicians

#### Systems Implementation and Maintenance

Epicor Software Corporation  
Innovative Communications, Inc.  
Maner Costerisan  
Optima Consulting LLC  
Rapid7 LLC  
Tegrit Software Ventures, Inc.  
Total Solutions, Inc.

#### Third-Party Administrator

Alerus Retirement Solutions

### Investment Managers

Acadian Asset Management  
BlackRock Investment Management  
Cargill, Inc  
Connor, Clark, & Lunn Investment  
Management  
Consilium Capital Management  
C.S. McKee Investment Management  
Downriver Capital Management  
Driehaus Capital Management  
EAM Investors  
Electrum  
ElmTree Funds  
First International Advisors  
Frontier Market Asset Management  
Grosvenor Private Markets  
Hancock Natural Resource Group  
Hellman, Jordan Management  
Company  
Irving Magee Investment Management  
Janus Capital Management  
Kennedy Capital Management  
LMCG Investments  
MC Credit Partners  
Mellon Capital Management  
Mesirow Financial  
Morgan Dempsey Capital  
Management  
Mountain Pacific Advisors

Napier Park Global Capital  
Oak Street Real Estate Capital  
Oberland Capital  
Orchard Global Asset Management  
Parametric  
Polunin Capital Partners  
Punch & Associates  
Seizert Capital Partners  
TCW Group  
Terra Partners  
The Townsend Group  
Wellington Management Company  
William Blair  
Wood Creek Capital Management

## **INTRODUCTION**

2015 comprehensive annual financial report

## INTRODUCTION

2015 comprehensive annual financial report

## ACKNOWLEDGEMENTS

The MERS Comprehensive Annual Financial Report (CAFR) for the year ended December 31, 2015, was prepared by the Office of Finance and Technology Services. Special thanks to the individuals who contributed significant amounts of time and energy to help complete this report.

### Office of Finance and Technology Services

Betsy Waldofsky, Finance Director  
Carrie Barton, Office Administrator  
Courtney Allen, Accountant  
Danielle Williams, Accountant  
Luke Huelskamp, Senior Finance Manager  
Ryan Ruby, Actuarial Analyst

### Office of Investments

Claudia Konieczny, Investment Compliance and Operations Analyst  
Ed Mikolay, Senior Investment Officer and Portfolio Manager  
Jamie Carlstedt, Investment Intern  
Julian Ramirez, Investment Analyst  
Lori Smith, Office Administrator  
Mike Schrauben, Investment Officer and Portfolio Manager  
Mike Charette, Senior Investment Officer and Portfolio Manager  
Peter Wujkowski, Investment Officer and Portfolio Manager  
Paul VanGilder, Investment Analyst  
Tyler Stoner, Investment Intern

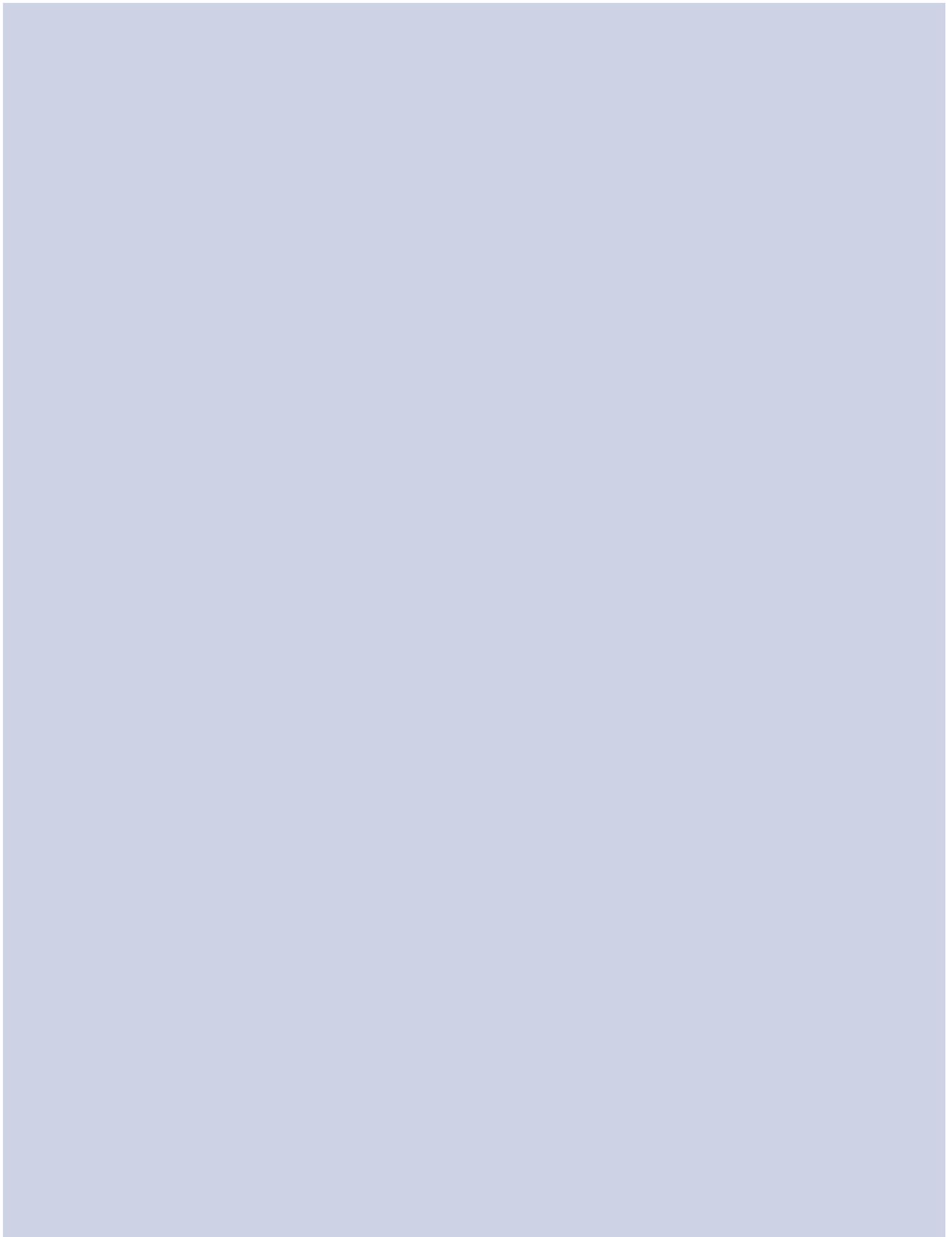
### Office of Marketing and Employer Services

Betsy Schaeffer, Digital Print and Mail Services Supervisor  
James Scofield, Design Coordinator  
Janie Olivarez, Office Administrator  
Jennifer Mausolf, Marketing Director  
Meredith Brandenburger, Design and Social Media Coordinator  
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SECTION 2  
**FINANCIAL**



## INDEPENDENT AUDITOR'S REPORT



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***To the Retirement Board  
Municipal Employees' Retirement System of Michigan***

***Report on the Financial Statements***

We have audited the accompanying financial statements of Municipal Employees' Retirement System of Michigan (MERS) as of and for the year ended December 31, 2015 and the related notes to the financial statements, which collectively comprise MERS' 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 basic financial statements referred to above present fairly, in all material respects, the plan net position of Municipal Employees' Retirement System of Michigan as of December 31, 2015 and the changes in plan net position for the year then ended, in accordance with accounting principles generally accepted in the United States of America.



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### ***To the Retirement Board Municipal Employees' Retirement System of Michigan***

#### ***Emphasis of Matter***

As explained in Note 4, the financial statements include investments valued at approximately \$4 billion (43 percent of net position) at December 31, 2015, whose fair values have been estimated by management in the absence of readily determinable market values. Management's estimates are based on information primarily provided by fund managers, general partners, etc. Our opinion is not modified with respect to this matter.

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

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule of investment returns, schedule of employer contributions, and the schedule of changes in the net pension liability be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to 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 opinions on the financial statements that collectively comprise Municipal Employees' Retirement System of Michigan's basic financial statements. The schedule of administrative expenses, schedule of investment expenses, and schedule of payments for consultants and introductory, investments, actuarial, and statistical sections are presented for the purpose of additional analysis and are not a required part of the basic financial statements.

The schedule of administrative expenses, schedule of investment expenses, and schedule of payments for consultants are the responsibility of management and were derived from and relates 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 schedule of administrative expenses, schedule of investment expenses, and schedule of payments for consultants are fairly stated in all material respects in relation to the basic financial statements as a whole.

The introductory, investments, 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.

***To the Retirement Board  
Municipal Employees' Retirement System of Michigan***

***Report on Summarized Comparative Information***

We have previously audited Municipal Employees' Retirement System of Michigan's December 31, 2014, financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated May 5, 2015. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2014 is consistent, in all material respects, with the audited financial statements from which it has been derived.

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

In accordance with Government Auditing Standards, we have also issued our report dated April 26, 2016, on our consideration of Municipal Employees' Retirement System of Michigan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the 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 Municipal Employees' Retirement System of Michigan's internal control over financial reporting and compliance.

April 26, 2016

*Plante & Moran, PLLC*

## MANAGEMENT'S DISCUSSION AND ANALYSIS

This narrative overview and analysis of Municipal Employees Retirement System (MERS) financial condition for the year ended December 31, 2015, is presented in conjunction with the Chief Executive Officer and Chief Financial Officer's Letter of Transmittal. The Financial Section is comprised of the Independent Auditor's Report, Management's Discussion and Analysis, two basic financial statements with explanatory notes, three required supplementary schedules with explanatory notes, and three supplementary expense schedules.

## FINANCIAL HIGHLIGHTS

The following financial highlights occurred during the year ended December 31, 2015:

- Total fiduciary net position for the Defined Benefit Plan, Defined Contribution Plan, Health Care Savings Program, Retiree Health Funding Vehicle, 457 Program, and Investment Services Program decreased by 1% during 2015. MERS finished the year with \$9.2 billion in net fiduciary position primarily due to an investment loss for the year.
- Defined Benefit investment returns saw a slight loss of 1.02% net of investment expenses for the year. The 30-year return of 8.35%, however, is above the target of MERS' expected investment rate of return of 7.75%.
- MERS reduced its Defined Benefit investment return assumption from 8.0% to 7.75%. This had the effect of increasing pension liabilities and costs for employers.
- Contribution revenue increased by 10% from \$829 million in 2014 to \$910 million in 2015. A majority of this increase was from bringing in new assets and Defined Benefit municipalities contributing extra voluntary contributions.
- Total annual retirement benefits and distributions paid to retirees and beneficiaries increased \$32 million to a total of \$817 million.
- Administrative expenses remained level in 2015 at \$19 million while MERS grew significantly and brought in 150 new municipal programs. MERS has continued to keep costs down due to the growth of our pool and stronger ongoing cost-control measures.
- Investment expenses totaled \$21 million. Most of this is related to investment manager fees and performance bonus achievements by managers during the year. Commercial banking expenses continued to decline because of negotiations for lower costs and more use of internal investment management.
- MERS' most recent actuarial valuation dated December 31, 2014, showed 462 of MERS' 713 Defined Benefit municipalities are funded 70% or better, with 88 municipalities over 100% funded.
- The difference between MERS' actuarial and market value assets widened in 2015, as the actuarial calculation is 114% of the market value of assets. Total Defined Benefit Plan actuarial assets and market value of assets were valued at \$9.0 billion and \$7.9 billion respectively at December 31, 2015.

## Basic Financial Statements

This Management's Discussion and Analysis is an introduction to MERS basic financial reporting statements:

1. Statement of Fiduciary Net Position
2. Statement of Changes in Fiduciary Net Position
3. Notes to Basic Financial Statements

The "Statement of Fiduciary Net Position" and "Statement of Changes in Fiduciary Net Position" provide the current financial condition of each MERS product.

The "Comparison Statement of Fiduciary Net Position" and "Comparison Statement of Changes in Fiduciary Net Position" provide a comparative summary of the financial condition of the plan as a whole with the prior year results.

## Required Supplemental Information

1. Schedule of Investment Returns
2. Schedule of Employer Contributions
3. Schedule of Changes in Net Pension Liability and Related Ratios

## Supplementary Expense Schedules

1. Schedule of Administrative Expenses
2. Schedule of Investment Expenses
3. Schedule of Payments to Consultants

The expense schedules summarize all expenses associated with administering all MERS' programs.

## Comparison Statement of Fiduciary Net Position (Dollars in Thousands)

	2015	2014	Increase (Decrease) Amount	Increase (Decrease) Percent
<b>Assets</b>				
Cash and Short-Term Investments	\$ 24,594	\$ 8,889	\$ 15,705	177%
Receivables	391,249	930,399	(539,150)	(58%)
Interfund Receivables	69	905	(836)	(92%)
Loans	5,005	4,396	609	14%
Investments, at fair value	9,133,777	9,255,942	(122,165)	(1%)
Invested Securities Lending Collateral	773,608	931,640	(158,032)	(17%)
Other Assets/Prepays	2,108	579	1,529	264%
Net Capital Assets	14,339	13,732	607	4%
<b>Total Assets</b>	<b>10,344,749</b>	<b>11,146,482</b>	<b>(801,733)</b>	<b>(7%)</b>
<b>Deferred Outflow of Resources</b>				
Outflows Related to Pension	2,424	-	2,424	100%
<b>Liabilities</b>				
Purchase of Investments	329,126	846,492	(517,366)	(61%)
Securities Lending Collateral	774,753	932,575	(157,822)	(17%)
Administrative/Investment Costs/Reserves	14,041	10,737	3,304	31%
Interfund Payables	69	905	(836)	(92%)
<b>Total Liabilities</b>	<b>1,117,989</b>	<b>1,790,709</b>	<b>(672,720)</b>	<b>(38%)</b>
<b>Deferred Inflow of Resources</b>			-	0%
<b>Net Position Restricted for Pension and Health Benefits and Investment Accounts Held for Others</b>	<b>\$ 9,229,184</b>	<b>\$ 9,355,773</b>	<b>\$ (126,589)</b>	<b>(1%)</b>

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**Comparison Statement of Changes in Fiduciary Net Position** (Dollars in Thousands)

	2015	2014	Increase (Decrease) Amount	Increase (Decrease) Percent
<b>Additions</b>				
Contributions	\$ 909,983	\$ 829,125	\$ 80,858	10%
Investment Net Income (Loss) Investing Activities	(166,023)	558,337	(724,360)	(129%)
Investment Net Income-Securities Lending	4,037	6,318	(2,281)	(36%)
Miscellaneous Income	2,380	1,801	579	32%
<b>Total Additions</b>	<b>750,377</b>	<b>1,395,581</b>	<b>(645,204)</b>	<b>(46%)</b>
<b>Deductions</b>				
Benefits/Transfers and Withdrawals	857,335	784,649	72,686	9%
Forfeitures and Miscellaneous	355	487	(132)	(27%)
Administrative Expense	19,276	19,433	(157)	(1%)
<b>Total Deductions</b>	<b>876,966</b>	<b>804,569</b>	<b>72,397</b>	<b>9%</b>
Net Increase/Decrease	(126,589)	591,012	(717,601)	(121%)
Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others Balance Beginning of Year	9,355,773	8,764,761	591,012	7%
<b>Balance End of Year</b>	<b>\$ 9,229,184</b>	<b>\$ 9,355,773</b>	<b>(126,589)</b>	<b>(1%)</b>

### Analysis of Fiduciary Net Position

The fiduciary net position decreased by more than \$100 million over the previous fiscal year primarily due to investment losses of \$163 million.

MERS receivables consist chiefly of investment and employer contribution billings that settle in early 2016. Investment receivables are the bulk of the receivables for securities that were purchased in late 2015 and then cleared in the new year.

Employer and employee contributions increased in 2015 due to new municipalities joining MERS, employers increasing extra voluntary contributions to help their funding goals and employee and employer contributions increased due to changes in their actuarial calculated rates.

MERS had capital assets, net of accumulated depreciation, of \$14.3 million. Of the total, \$6.9 million is comprised of software and computer servers needed to run the pension administration and financial programs, and \$6.7 million is comprised of buildings and land.

MERS has no long-term liabilities. The bulk of MERS' liabilities at year-end are related to investment purchases that did not settle until early in 2016, accrued administrative and investment expenses, and securities' lending collateral.

### Investment Activities

The performance of the Defined Benefit Portfolio was favorable when compared to the investment benchmark over the past 30 years. The 2015 net return of -1.02% was below the 7.75% actuarial return assumption target for the year. By comparison

for three, five, ten, and thirty-year periods, the net returns were 6.55%, 6.51%, 5.35%, and 8.35%, respectively. Net investment income (net appreciation in fair value less investment expenses plus securities lending income) decreased \$724 million for the year. A further detailed analysis of investment returns is in the Investments Section.

MERS' investments are managed to control downside risk while maximizing long-term gain potential. This positions the System to limit the impact of adverse market conditions. Portfolio diversification by asset class and style is an important element of investment risk control.

Investment activity is governed by the "prudent person rule." The "prudent person rule" establishes a standard for all fiduciaries that includes anyone who has authority with respect to the System. The "prudent person rule" states that fiduciaries shall discharge their duties solely in the interest of the System's participants and beneficiaries with a degree of diligence, care, and skill that a prudent person would ordinarily exercise under similar circumstances.

The "prudent person rule" permits the Board to establish an investment policy based on certain investment criteria, and allows for the delegation of investment authority to professional investment managers. Investment constraints are outlined, including the appropriate degree of risk. Investment managers are hired to execute the investment policy. They have full discretion for investment decisions within statutory authority, Board policy, and their respective guidelines. A list of investment managers under contract with MERS as of December 31, 2015, is in the Investments Section. A summary of the total System's assets is on page 70.

## Funding Status

A pension plan is well funded when it has sufficient assets invested to meet all expected future obligations to participants. The greater the level of funding — the larger the ratio of assets to actuarial accrued liability. While some municipalities are not fully funded, annual contributions are made at an actuarially determined rate to reach full funding. There is no single all-encompassing test for measuring a retirement system's funding progress and current funded status. However, some common indicators that a retirement system has achieved progress in funding its obligations include: observing the changes over time of the ratio of valuation assets to actuarial accrued liabilities and the pattern of the unfunded actuarial accrued liability as a percentage of active payroll.

The MERS Retirement Board (Board) has adopted a funding methodology for the System to achieve the following major objectives:

- Adequacy;
- Inter-Period Equity (in particular intergenerational equity) and Transparency; and
- Contribution Stability and Governance.

The actuarial method for calculating the accrued liability for all plans is entry age normal with the objective of maintaining employer contributions approximately level as a percentage of member payroll. A detailed discussion of the funding method is in the Actuarial Section.

MERS is an agent multiple-employer retirement system that pools assets of the participating

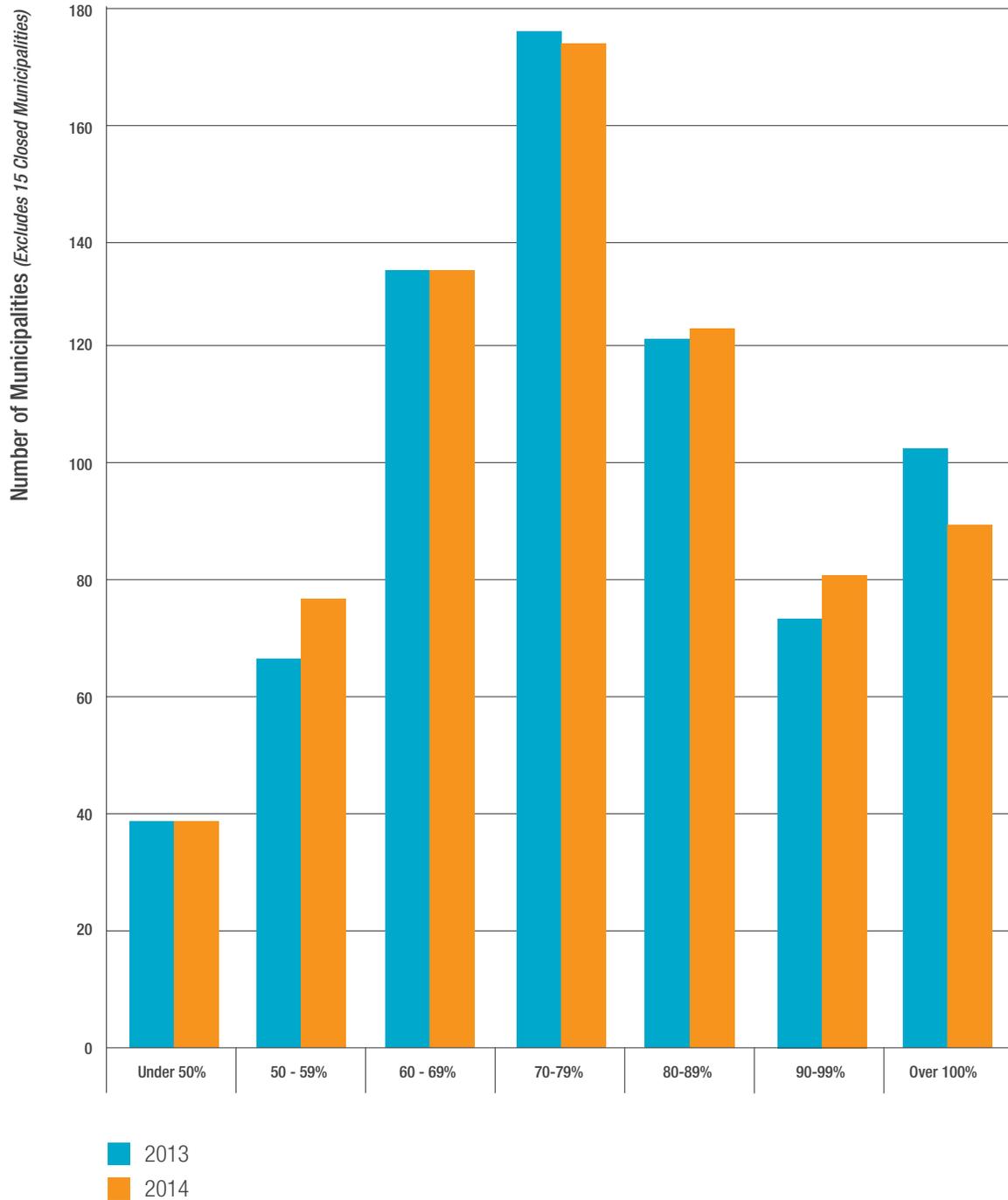
employers for investment purposes, but maintains separate trusts for each individual employer. For this reason, MERS does not have a "funded status"; rather, each municipality has its own funded level. Each municipality is responsible for its own plan liabilities; a municipality cannot borrow from another municipality's account to pay for pension expenses. A measure of a municipality's funding progress is the ratio of its actuarial assets to actuarial accrued liabilities.

The most recent MERS actuarial valuation is as of December 31, 2014. On that date, of all 713 individual MERS municipalities, 88 municipalities (12% of all Defined Benefit Plan and Hybrid Plan municipalities in MERS) were funded at 100% or higher and the majority, 462 municipalities, were funded at 70% or higher (65% of all municipalities).

MERS partners with our local governments to determine the best retirement fit for each municipality, to offer cost-reducing strategies, and to provide fiscal best practices.

The difference between MERS' actuarial and market value of assets widened in 2015. The end of the year actuarial calculation of assets is higher at 114% of the market value of assets. Ideally, the differences between actuarial value and market value of assets should be small. The actuarial value of assets reflects smoothing losses of the 2008 downturn; and if investment returns are higher in the next few years than the MERS expected rate of return, the difference will continue to narrow between the actuarial and market values.

Distribution of Funded Percentage of Actuarial Accrued Liability among the 713 participating municipalities as of December 31, 2014, and the 712 participating municipalities as of December 31, 2013



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**Statement of Fiduciary Net Position as of December 31, 2015** (Dollars in Thousands)

	Defined Benefit	Defined Contribution	Health Care Savings Plan
<b>Assets</b>			
Cash and Short-Term Investments	\$ 23,084	\$ 256	\$ 163
Receivables			
Employer and Member Contributions	41,639	275	351
Sale of Investments	298,691	6,382	4,058
Investment Income	10,483	224	143
Loans		4,944	
Interfund Receivables	69		
Other Assets/Prepays	1,473	9	
Total Receivables	352,355	11,834	4,552
<b>Investments, at fair value</b>			
Global Fixed Income	1,834,008	39,189	24,918
Global Equities	4,219,836	90,226	57,369
Real Assets	744,464	15,908	10,115
Diversifying Strategies	671,151	14,341	9,118
Cash Equivalents	327,756	7,003	4,453
Mutual Funds		327,227	4,874
Total Investments	7,797,215	493,894	110,847
Invested Securities Lending Collateral	686,929	14,678	9,333
Prepaid Expenses	626		
Capital Assets, at cost, net of accumulated depreciation	14,339		
<b>Total Assets</b>	<b>8,874,548</b>	<b>520,662</b>	<b>124,895</b>
<b>Deferred Outflow of Resources</b>			
Outflows related to pension	2,424		
<b>Liabilities</b>			
Purchase of Investments	292,249	6,245	3,971
Securities Lending Collateral	687,945	14,700	9,347
Reserves and Forfeitures			
Administrative and Investment Costs	10,192		
Interfund Payables		31	20
<b>Total Liabilities</b>	<b>990,386</b>	<b>20,976</b>	<b>13,338</b>
<b>Deferred Inflow of Resources</b>			
<b>Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others</b>	<b>\$ 7,886,586</b>	<b>\$ 499,686</b>	<b>\$ 111,557</b>

The accompanying notes are an integral part of these Financial Statements.

Retiree Health Funding Vehicle	Investment Services Program	457 Program	Year Ended December 31, 2015	Year Ended December 31, 2014
\$ 971	\$ 100	\$ 20	\$ 24,594	\$ 8,889
766		32	43,063	37,072
24,253	2,484	512	336,380	879,003
851	87	18	11,806	14,324
		61	5,005	4,396
			69	905
			1,482	309
<b>25,870</b>	<b>2,571</b>	<b>623</b>	<b>397,805</b>	<b>936,009</b>
148,919	15,256	3,141	2,065,431	1,738,331
342,860	35,125	7,231	4,752,647	4,955,648
60,450	6,193	1,275	838,405	1,016,978
54,497	5,583	1,149	755,839	647,808
26,613	2,726	561	369,112	576,513
		20,242	352,343	320,664
<b>633,339</b>	<b>64,883</b>	<b>33,599</b>	<b>9,133,777</b>	<b>9,255,942</b>
<b>55,778</b>	<b>5,714</b>	<b>1,176</b>	<b>773,608</b>	<b>931,640</b>
			626	270
			14,339	13,732
<b>715,958</b>	<b>73,268</b>	<b>35,418</b>	<b>10,344,749</b>	<b>11,146,482</b>
			2,424	
23,730	2,431	500	329,126	846,492
55,860	5,723	1,178	774,753	932,575
		3,849	3,849	4,627
			10,192	6,110
15	1	2	69	905
<b>79,605</b>	<b>8,155</b>	<b>5,529</b>	<b>1,117,989</b>	<b>1,790,709</b>
<b>\$ 636,353</b>	<b>\$ 65,113</b>	<b>\$ 29,889</b>	<b>\$ 9,229,184</b>	<b>\$ 9,355,773</b>

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**Statement of Changes in Fiduciary Net Position for the Year Ended December 31, 2015** (Dollars in Thousands)

	Defined Benefit	Defined Contribution	Health Care Savings Plan	Retiree Health Funding Vehicle
<b>Additions</b>				
Contributions and Transfers In				
Employer Contributions and Other	\$ 635,581	\$ 38,151	\$ 20,275	\$ 73,764
Plan Member Contributions	86,553	23,496		
<b>Total Contributions and Transfers In</b>	<b>722,134</b>	<b>61,647</b>	<b>20,275</b>	<b>73,764</b>
Investment Income				
Net Appreciation/(Depreciation) in Fair Value	(209,813)	(8,971)	(2,738)	(14,534)
Interest and Dividend Income	82,344	1,759	1,119	6,685
Subtotal of Investment Income/(Loss)	(127,469)	(7,212)	(1,619)	(7,849)
Less Investment Expense	19,399	346	209	1,275
Net Investment Income/(Loss) Before Securities Lending Activities	(146,868)	(7,558)	(1,828)	(9,124)
Security Lending Activities				
Security Lending Income	4,884	104	66	397
Security Lending Expenses				
Borrower Rebates	402	9	5	33
Management Fees	897	19	12	73
Total Securities Lending Expenses	1,299	28	17	106
Net Income from Security Lending Activities	3,585	76	49	291
Total Net Investment Income/(Loss)	(143,283)	(7,482)	(1,779)	(8,833)
Miscellaneous Income	2,380			
<b>Total Additions</b>	<b>581,231</b>	<b>54,165</b>	<b>18,496</b>	<b>64,931</b>
<b>Deductions</b>				
Benefits/Transfers and Withdrawals	754,978	34,797	3,694	22,002
Forfeitures and Other Miscellaneous			355	
Administrative Expenses	17,665	601	145	732
<b>Total Deductions</b>	<b>772,643</b>	<b>35,398</b>	<b>4,194</b>	<b>22,734</b>
Net Increase/(Decrease)	(191,412)	18,767	14,302	42,197
<b>Net Position-Restricted for Pension and Health Benefits and Investment Accounts Held for Others</b>				
Balance Beginning of Fiscal Period	8,077,998	480,919	97,255	594,156
<b>Balance End of Fiscal Period</b>	<b>\$ 7,886,586</b>	<b>\$ 499,686</b>	<b>\$ 111,557</b>	<b>\$ 636,353</b>

The accompanying notes are an integral part of these Financial Statements.

Investment			
Services Program	457 Program	Year Ended December 31, 2015	Year Ended December 31, 2014
\$ 19,721		\$ 787,492	\$ 700,086
	\$ 12,442	122,491	129,039
<b>19,721</b>	<b>12,442</b>	<b>909,983</b>	<b>829,125</b>
(442)	(868)	(237,366)	470,406
685	141	92,733	105,684
243	(727)	(144,633)	576,090
135	26	21,390	17,753
108	(753)	(166,023)	558,337
41	8	5,500	8,697
3	1	453	800
8	1	1,010	1,579
11	2	1,463	2,379
30	6	4,037	6,318
138	(747)	(161,986)	564,655
		2,380	1,801
<b>19,859</b>	<b>11,695</b>	<b>750,377</b>	<b>1,395,581</b>
40,798	1,066	857,335	784,649
		355	487
82	51	19,276	19,433
<b>40,880</b>	<b>1,117</b>	<b>876,966</b>	<b>804,569</b>
(21,021)	10,578	(126,589)	591,012
86,134	19,311	9,355,773	8,764,761
<b>\$ 65,113</b>	<b>\$ 29,889</b>	<b>\$ 9,229,184</b>	<b>\$ 9,355,773</b>

## NOTES TO BASIC FINANCIAL STATEMENTS

Year ended December 31, 2015

### 1. REPORTING ENTITY AND PLAN DESCRIPTION

MERS is a statutory public corporation, independent from the State of Michigan, which was established to provide a pooled program for retirement, survivor and disability benefits on a voluntary basis to the State of Michigan's local government employees. MERS has helped provide retirement plans for municipal employees for almost 70 years.

MERS was established by the Michigan Legislature under Public Act 135 of 1945 to provide pooled retirement plans specifically for Michigan municipalities on a voluntary basis. This act was repealed and replaced by successor Municipal Employees' Retirement Act of 1984 (PA 427), as last amended by 2004 PA 490, embodied in the MERS Plan Document (as revised). On August 15, 1996, pursuant to 1996 PA 220, MERS became independent from the State of Michigan.

Since 1996, MERS is solely administered by a nine-member retirement board. The MERS Retirement Board (Board) consists of the following members, each of whom, except for the retiree member and the Board appointees, shall be from a different county at the time of election:

- Two members, appointed by the Board, who have knowledge or experience in retirement systems, administration of retirement systems, investment management, or advisory services;
- One member, a retiree of the System, is appointed by the Board;
- Three members of the System, officers of a participating municipality or of a participating court, who are elected as Officer Board members by the delegates at the MERS Annual Meeting; and
- Three employee members of the System, who are not officers of a participating municipality or of a participating court, who are elected as Employee Board members by the delegates at the MERS Annual Meeting.

The regular term of office for members of the Board is three years. Members of the Board serve without compensation with respect to their duties, but are reimbursed by the System for their actual and necessary expenses incurred in the performance of their duties.

The Board establishes the benefit plans and provisions that are available for adoption. The local municipality's governing body adopts all benefits of the plan. The various plans are discussed in the Actuarial Section. Pursuant to Article 9, Section 24 of the Constitution of the State of Michigan: "The accrued financial benefits of each pension plan and retirement system of the state and its political subdivisions shall be a contractual obligation thereof which shall not be diminished or impaired thereby. Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

MERS is an agent multiple-employer retirement system that pools assets of the participating employers for investment purposes, but maintains separate accounts for each individual employer.

Employee contribution rates vary depending on the benefit plan adopted by the local government. If an employee leaves employment or dies before becoming eligible for retirement benefits, accumulated employee contributions (plus interest) are refunded to the employee or designated beneficiary upon application.

The MERS Defined Benefit, Defined Contribution and Hybrid Plan have been determined to be a governmental plan that is a tax-qualified trust under Internal Revenue Code (the Code or IRC) Section 401(a) and tax exempt under Section 501(a). The Internal Revenue Service (IRS) issued the most recent Letter of Favorable Determination for MERS on April 26, 2012. This updated approval is part of the IRS's

Cycle E Program for governmental plan Letters of Favorable Determination. MERS submitted this Plan to IRS for the Second Cycle E requalification on December 30, 2015. The benefits of tax-qualified status include the preferential deferred taxability of contributions, accumulated earnings, pensions, rollovers, annual compensation limits, and benefit limitations.

Under the Code, the major portion of a retiree's pension becomes taxable upon periodic distribution. Pursuant to IRC Section 72(d), any "after tax contributions" are recovered tax-free over the life expectancy of the retiree (or beneficiary, if applicable).

The IRC Section 401(a) (17) limits the amount of compensation an active employee can receive for pension benefit calculation purposes and, correspondingly, limits the amount of employer and employee contributions. Compensation in excess of the limit (\$265,000 for 2015 and 2016) will not be credited by MERS. Employee contributions in excess of the limit will not be collected or accepted, nor figured into final average compensation for benefit purposes.

In addition, IRC Section 415 (b) (1) (A) imposes certain limitations on pension benefit payments from the MERS qualified trust. Any amounts that exceed the limitations shall be paid from a Qualified Excess Benefit Arrangement (QEBA), as authorized by IRC Section 415(m) and Michigan Compiled Law 38.1686. The QEBA shall be a separate plan, and is annually cash funded by the affected participating municipality or court. The Board established the MERS QEBA in 2003 solely for the purpose of providing retirees and beneficiaries, that portion of the retirement allowance exceeding the Section 415 limits, and otherwise not payable by the trust under the terms of the MERS qualified plan. The Internal Revenue Service approval of the QEBA was pursuant to Private Letter Ruling issued December 15, 2003. Retirees and beneficiaries do not have an election, directly or indirectly, to defer compensation to the QEBA.

The MERS Defined Contribution Plan became operative July 8, 1997, under Section 401(a) of the IRC. On this date, the MERS Plan Document of 1996 was first determined by the IRS Letter of Favorable Determination to meet qualifications as

a "governmental plan" trust under Code Section 401(a), and tax exempt under Section 501(a). MERS has contracted with a third party administrator for recordkeeping and administrative functions. The plan is available to all MERS participating municipalities and may be adopted on a division-by-division basis. Plan provisions and requirements are specified in the MERS Plan Document. MERS Defined Contribution Plan provides employees with an account they manage. At retirement, benefits are based solely on the amount contributed by the employee and employer and the performance of investments. The plan has several strategic investment categories designed to help employees meet their retirement goals. All participants have access to the MERS streamlined investment menu that allows for simple and strategic investing.

The MERS Hybrid Plan is an option for members that includes both a defined benefit and a defined contribution component. The defined benefit component (Part I) is employer funded, with benefit multipliers of 1.0, 1.25, and 1.5%. The defined contribution component (Part II) is a combination of employer and employee contributions that are invested in mutual funds selected by the individual participant.

MERS received a Private Letter Ruling dated January 13, 2004, allowing the establishment of an IRC Section 115 Integral Governmental Trust, giving MERS the ability to create two programs — the Health Care Savings Program and the Retiree Health Funding Vehicle.

The MERS Health Care Savings Program became operational in June 2004 and was made available to all municipalities in Michigan. The employer-sponsored program provides medical reimbursement accounts to participating employees. Medical expenses are reimbursed, as defined in Code Section 213, once employees terminate employment, are on medical leave for six months or longer, or are on disability from any public pension plan. There are four types of contributions that may be used in the program: 1) Basic Employer (tax-favored), 2) Mandatory Salary Reductions (tax-favored), 3) Mandatory Leave Conversions (tax-favored), and 4) Voluntary Employee Contributions (post-tax).

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As a result of the Private Letter Ruling, Code Section 213, reimbursements are tax-exempt for the employee, their spouse, and/or Code Section 152 dependent(s). The Health Care Savings Program accounts are invested in the MERS Investment Menu, and earnings are tax exempt as a result of the MERS Private Letter Ruling. Plan provisions and requirements are specified in the MERS Health Care Savings Program and Retiree Health Funding Vehicle Plan Document and Trust.

The MERS Retiree Health Funding Vehicle became operational in the fall of 2004, and was made available to all municipalities in Michigan. Participating municipalities can contribute monies to the Trust as desired and no contribution method is imposed. These funds constitute a health care fund, which enable municipalities to accumulate monies to provide or subsidize health benefits for retirees and beneficiaries as defined by Code Section 213. The Retiree Health Funding Vehicle accounts are invested in the MERS portfolio choices and earnings are tax exempt as a result of the MERS Private Letter Ruling. Plan provisions and requirements are specified in the MERS Health Care Savings Program and Retiree Health Funding Vehicle Plan Document and Trust.

The MERS 457 Supplemental Retirement Program was established as a deferred compensation plan and trust and became operational November 8, 2011. Its purpose is to provide benefits under the Program to participants and beneficiaries upon retirement, termination, disability, or death, upon the terms and conditions, and subject to the limitations contained in the Program. The Program was created for the exclusive benefit of eligible participants and their beneficiaries of any employer electing to participate in the Program. The Program is intended to qualify under Code Section 457(b) and to be tax-exempt under Code Section 501(a). All assets held in connection with the Program, including all contributions and amounts of

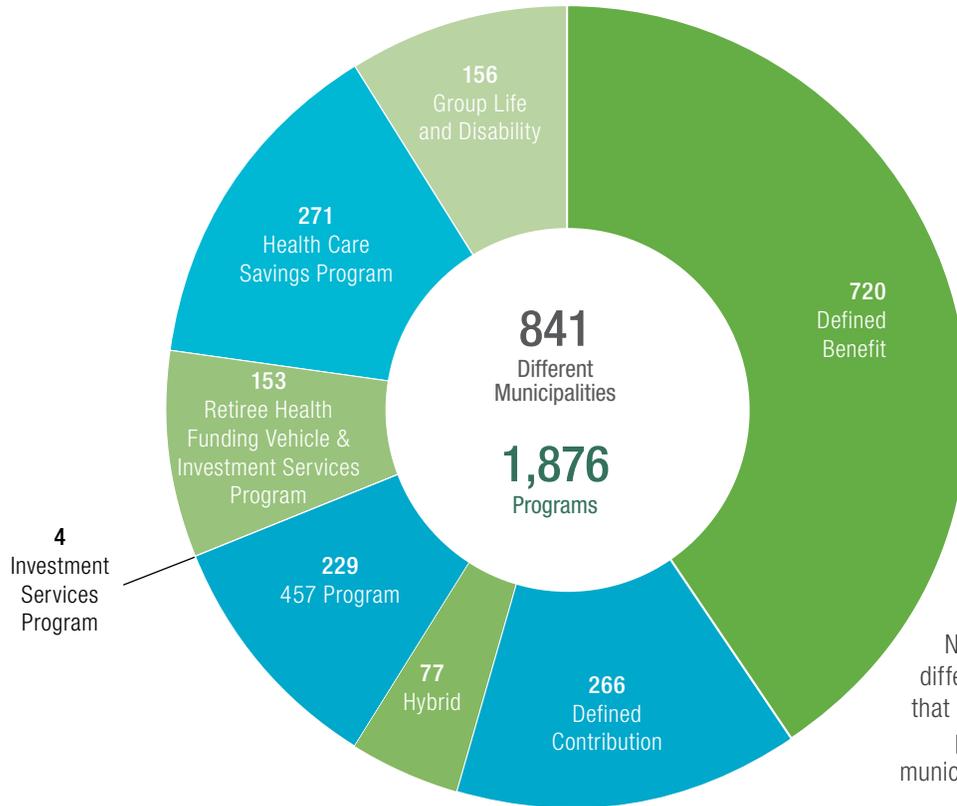
compensation deferred pursuant to the Program, all property and rights acquired or purchased with such amounts, and all income attributable to such amounts, property, or rights shall be held in trust for the exclusive benefit of participants and their beneficiaries under the Program. No part of the assets and income shall be used for, or diverted to, purposes other than for the exclusive benefit of participants and their beneficiaries and for defraying reasonable expenses of the Program.

The Investment Services Program is an investment trust fund that is available to all municipalities in Michigan to invest funds through the MERS portfolio while maintaining administrative functions at the municipal level. The program was established by the Board in March 2006 and began operations in June 2006. The Investment Services Program trust fund complies with all the requirements imposed by the Public Employee Retirement System Investment Act, 1965 Public Act 314. Like the other non-retirement plans, participation in the Investment Services Program does not qualify as membership in MERS, and the participating employer does not have a vote at the MERS Annual Conference.

Through The Standard Insurance Company, MERS offers quality group life and disability insurance to Michigan municipalities. This group buying program offers comprehensive benefit features, a variety of plan designs, and family-friendly provisions at an affordable cost.

Any "municipality" (a term defined by Section 2b (2) of the Retirement Act, Michigan Compiled Law 38.1502b (2)) within the state may elect to become a participating member of MERS by a majority vote of the municipality's governing body or by an affirmative vote of the qualified electors. Changes in retirement plan coverage are available to bargaining units after approval by a majority vote of the municipality's governing body.

**MERS Participating Municipalities as of December 31, 2015**



**MERS Participants as of December 31, 2015**

	Defined Benefit	Defined Contribution	Hybrid	Health Care Savings Program	457
Active	33,801	10,388	1,822	11,269	1,923
Deferred	9,079	NA	136	NA	NA
Retired	37,412	NA	27	NA	NA
Contributions not Vested	10,145	NA	401	NA	NA
Terminated	NA	3,524	NA	3,235	206
<b>Product Totals</b>	<b>90,437</b>	<b>13,912</b>	<b>2,386</b>	<b>14,504</b>	<b>2,129</b>
Total MERS Accounts*					<u>123,368</u>
Total MERS Participants**					<u>114,191</u>

\* Total MERS Accounts represents the total number of accounts within MERS; individuals may be represented multiple times across categories.

\*\* Total MERS Participants represents the number of unique individuals that have a liability in a program. At least one of the individual's employments fell into the following categories: Active Status, Retired Status, Terminated Status Defined Benefit vested, Terminated Status Defined Benefit not vested but has a contribution balance, Terminated Status Hybrid vested, Terminated Status Hybrid not vested but has a contribution balance, Terminated Status Defined Contribution with a contribution balance, or Terminated Status Health Care Savings Program with a contribution balance.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Reporting Entity

The Board is responsible for the administration of the Retirement System (System), has fiduciary responsibility for the investment of assets, and oversees all funds included in these financial statements. The Board appoints the Chief Executive Officer who manages and administers the System under the supervision and direction of the Board.

MERS is a statutory public corporation. MERS' financial statements are not included in the financial statements of any other organization; it is the only entity included in this financial report.

### Cost Allocation

The costs of administering the MERS Defined Benefit Plan are allocated proportionally based on the average daily balance asset size to the municipalities along with investment gains/losses on a quarterly basis.

The costs of administering the MERS Defined Contribution Plan, Health Care Savings Program, Retiree Health Funding Vehicle, and Investment Services Program are allocated out to the municipalities and members based on an administrative expense percentage for each municipality and member.

### Basis of Accounting

The financial statements for MERS are prepared on the accrual basis in accordance with Generally Accepted Accounting Principles (GAAP) as applicable to government organizations in the U.S. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

MERS' Defined Benefit Plan employer and employee contributions are recognized when due pursuant to legal, statutory, and contractual requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Expenses and the associated liabilities for those expenses are also recorded using the accrual method when the liability is incurred.

The Defined Contribution Plan, 457 Program, Health Care Savings Program, Retiree Health Funding Vehicle and Investment Services Program financial statements are prepared using the accrual accounting method for revenues which are recorded when either payroll reports and/or funds are received. Expenses and the associated liabilities for those expenses are also recorded using the accrual method when the liability is incurred.

Plan investments are presented at fair value using the accrual method for those investments which are invested in the MERS portfolio. Investment purchases and sales and the associated investment payables and investment receivables are recorded on their trade date. Investments invested outside of the MERS portfolio (primarily mutual funds) are recorded at fair value.

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### Post-Employment Benefits

MERS does not provide post-employment benefits to its employees and accordingly does not have any expense or liabilities for these benefits.

### Fair Value of Investments

In accordance with GASB Statement No. 67, plan investments are presented at fair value. Short-term investments are valued at cost plus accrued interest, which approximates 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 upon equivalent

values of comparable securities with similar yield and risk. Independent appraisals are the basis for valuing the fair value of real estate. Other investments that do not have established markets are recorded at an estimated fair value. Real estate and private equity investments typically have a quarter lag in reporting, which is an industry standard.

### Investment Act Disclosures

Section 38.1133-1140 of the Michigan Compiled Laws (Public Employee Retirement System Investment Act – PERSIA) requires MERS to follow certain financial management practices and provide related disclosures. Compliance with these requirements is shown throughout the CAFR, in our Summary

Report, and Annual Actuarial Valuations found at [www.mersofmich.com](http://www.mersofmich.com). Section 38.1133 (6) requires limits on board member professional training, education and travel expenses. MERS compliance with the statute is shown in the Schedule of Administrative Expenses.

### Capital Assets

Capital assets represent land, buildings, office furniture, equipment, and software with a value of \$5,000 or more. Assets are carried at cost, less accumulative depreciation. Depreciation expense is

calculated by allocating the net cost of assets over their estimated useful lives using the straight-line method. Useful lives of the related assets vary from 3 to 30 years.

#### Capital Assets

Capital Assets	Buildings	Land	Leasehold Improvements	Office Furniture and Equipment	Software	Total Capital Assets
Balances December 31, 2014	\$ 5,495,361	\$ 1,266,516		\$ 2,406,158	\$ 21,182,593	\$ 30,350,628
Additions	134,571		\$ 155,811	447,233	2,193,042	2,930,657
Deletions and Transfers				(11,700)		(11,700)
Balances December 31, 2015	5,629,932	1,266,516	155,811	2,841,691	23,375,635	33,269,585
Accumulated Depreciation						
Balances December 31, 2014	183,179			1,880,745	14,555,061	16,618,985
Depreciation Expense	183,965		25,629	266,834	1,847,130	2,323,558
Deletions and Transfers				(11,700)		(11,700)
Balances December 31, 2015	367,144		25,629	2,135,879	16,402,191	18,930,843
<b>Net Capital Assets</b>						
<b>December 31, 2015</b>	<b>\$ 5,262,788</b>	<b>\$ 1,266,516</b>	<b>\$ 130,182</b>	<b>\$ 705,812</b>	<b>\$ 6,973,444</b>	<b>\$ 14,338,742</b>

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### Total Columns on Statements

The "Total" columns on the "Statement of Plan Net Position" and "Statement of Changes in Plan Net Position" are presented to facilitate financial analysis. Amounts in these columns do not present the plan net position and changes in plan net position in conformity with GAAP, nor is such data comparable to a consolidation. Transactions between the Defined Benefit Plan, Defined Contribution Plan, Health Care Savings Program, 457 Supplemental Retirement Program, Retiree Health Funding Vehicle, and Investment Services Program have not been eliminated from the "Total" columns.

The basic financial statements include certain prior-year summarized comparative information in total but not at the level of detail required for a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the government's financial statements for the year ended December 31, 2014, from which the summarized information was derived.

Certain prior year amounts have been reclassified to conform to the current year presentation.

### New Accounting Pronouncements

In June 2012, the GASB issued Statement No. 68, Accounting and Financial Reporting for Pensions – an Amendment of GASB Statement No. 27, which establishes standards for measuring and reporting pension liabilities, deferred outflow and inflows of resources, and expenses. This Statement is effective for both defined benefit and defined contribution plans. For defined benefit plans, the Statement identifies the methods and assumptions that should be used to project benefit payments, and discount those payments to their actuarial present value, taking into account the market value of assets to pay the benefits and then calculating a net pension liability that will be recorded on the government's financial statements. The new Statement also requires certain new notes disclosures, as well as required supplementary information. MERS implemented GASB Statement No. 68 for the year ended December 31, 2015.

The GASB has added Statement No. 71 Pension Transition for Contributions Made Subsequent to the Measurement Date. MERS has determined that Statement No. 71 will not apply directly to MERS but will apply to those municipalities whose fiscal year ends are other than December 31st.

In February 2015, the GASB Issued Statement No. 72 on Fair Value Measurement and Application, primarily as they relate to investments. This will require disclosures according to their relative reliability and to describe positions held in many alternative investments. MERS will work with its custodial banker and investment managers to disclose the new requirements in the financial statements and notes. The effective date of the Statement on financial statements is for periods beginning after June 15, 2015. MERS will implement GASB Statement No. 72 for the year ending December 31, 2016.

In November 2014, GASB issued two preliminary views on Lease Accounting and Fiduciary Responsibilities, neither of which will likely have a major impact on MERS.

In June 2015, GASB issued both Statement No. 74 - Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans and Statement No. 75 - Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. The first Statement will apply to MERS as a plan administrator and is quite similar in manner to GASB Statement No. 67, which covers pensions. The second Statement will apply to local governments and how they record and measure their net OPEB liability in a manner also similar to GASB Statement No. 68. These affect municipalities who are enrolled in the Retiree Health Funding Vehicle as MERS will supply statements of the fair market values of their accounts. MERS will also supply information for employers in regard to the Health Care Savings Program, which is similar to a defined contribution-type program for post-employment health care costs.

### 3. CONTRIBUTIONS AND RESERVES

#### Contributions

The Defined Benefit Plan contribution funding requirements are actuarially determined using the entry age normal actuarial cost method and are based upon the benefit plan adopted by the municipality. Some municipalities fund their entire pension obligations solely from employer contributions. Most municipalities jointly fund pension obligations from employee and employer contributions. Monthly employee contributions are based upon a percentage of actual compensation as determined by the employer. Employer contributions are based upon projected or accrued compensation as determined by an annual actuarial valuation. For details about normal cost and total employer contributions by employer, please see the MERS Summary Actuarial Report found on our website at [www.mersofmich.com](http://www.mersofmich.com). Employee contributions are held in individual member accounts that are credited with interest annually. Pursuant to Board resolution adopted November 9, 2005, the interest rate for each year beginning in 2005 is the one-year T-bill rate as of December 31 each year for the ensuing December 31 employee interest calculation. It is also used for interest calculations the subsequent year for those employees requesting a refund of their contributions.

Contributions to the Defined Contribution Plan are reported directly to MERS third party administrator by the participating municipalities and are separate from contributions made to the MERS Defined Benefit Plan. Both employer contributions and employee voluntary and mandatory contributions are governed by the contribution limits under the IRC. Municipalities may elect to have mandatory employee contributions where the member pays a fixed dollar or percentage. If the municipality has a match contribution type, the member will elect the amount of contribution at the time of enrollment and will not be allowed to make any changes. Municipalities may also choose to allow additional after-tax contributions through payroll deduction.

Participating municipalities may, upon adoption of a Defined Contribution resolution for new hires, offer current Defined Benefit employees as an opportunity to opt into Defined Contribution. MERS transfers the actuarial present value of the employee's accrued benefit in the Defined Benefit Plan into the employee's Defined Contribution account (at a stipulated funded ratio that shall not exceed 100%). Employees direct their contributions to various investment options offered by the MERS Office of Investments, and may transfer their account balances between investment categories or make changes to the percentage allocation on a daily basis.

Contributions to the 457 Supplemental Program are made pre-tax and can be either a flat dollar amount or a percentage of payroll. An employer may also adopt a Roth provision allowing for after-tax contributions. Participation in the program is voluntary, so contributions can start and stop at any time, as well as increase or decrease.

Contributions to the Health Care Savings Program can come in many different forms based on the election of the employer. Mandatory pre-tax salary reductions can be elected based on a fixed dollar or required percentage that is mandatory for the entire group of participant or through a leave conversion election where vacation, personal time, sick time, or severance can be deposited into a Health Care Savings Program upon termination. In addition, post-tax voluntary employee contributions can be elected and can start or stop at any time.

Contributions to the Retiree Health Funding Vehicle and Investment Services Program can be made at any frequency for any amounts the employer wishes.

## Defined Benefit Plan Reserves

Three reserves have been established pursuant to the MERS Plan Document. See “Schedule of Changes in Reserves” in the Statistical Section.

- **Reserve for Employee Contributions**

All additions to and deductions from this reserve are for the Defined Benefit Plan. Employee contributions and interest are credited to this reserve. Also credited are monies received from the purchase of service credit and monies received in repayment of previously refunded contributions. The reserve is reduced by amounts paid to employees who terminate employment and request refunds, and by amounts transferred into the “Reserve for Employer Contributions and Benefit Payments” upon an employee’s retirement. Interest is credited to each employee’s account, as provided in the Board’s November 9, 2005, resolution. The December 31, 2015, balance was \$794 million.

- **Reserve for Employer Contributions and Benefit Payments**

All additions to and deductions from this reserve are for the Defined Benefit Plan. All employer contributions are credited to this reserve. Net income is allocated to this reserve from the “Reserve for Expenses and Undistributed Investment Income.” At retirement, the employee’s accumulated contributions, if any, and including interest are transferred into this reserve from the “Reserve for Employee Contributions”. Monthly benefits paid to retirees reduce this reserve. The December 31, 2015, balance was \$7.1 billion.

- **Reserve for Expenses and Undistributed Investment Income**

All additions to and deductions from this reserve are for the Defined Benefit Plan and Defined Benefit portion of the Hybrid Plan. All investment earnings and other monies received that are not dedicated to other areas are credited to this reserve. All administrative and investment expenses are paid from this reserve. Transfers from this reserve to the “Reserve for Employer Contributions and Benefit Payments” are at allocation rates determined by the Board. The reserve at the end of the year was \$2,673,000 that had been unallocated.

## Other Reserves

Each of the products outside of the Defined Benefit Plan has its own reserve for additions and deductions to be recorded. MERS maintains separate employer account records for each municipality within the products. The December 31, 2015, reserve balances were as follows: Defined Contribution \$500 million, Health Care Savings Program \$112 million, Retiree Health Funding Vehicle \$636 million, Investment Services Program \$65 million, and 457 Program \$30 million.

A more detailed analysis of the reserves can be found in the Statistical Section.

## 4. INVESTMENTS AND DEPOSITS

The Board has the fiduciary responsibility and authority to oversee the investment portfolio. Various professional investment managers are contracted to manage the System's assets. All investment decisions are subject to statutory regulations imposed under the Michigan Public Employee Retirement System Investment Act, 1965 PA 314, as amended, and the investment policy guidelines established by the Retirement Board. Michigan law allows diverse investment in stocks, corporate and government bonds, mortgages, real estate, and other investments. This act sets forth prudent standards and requires the assets of the Retirement System be invested solely in the interest of the participants and beneficiaries. Under Plan Document Section 55(6), 1965 PA 314, and Section 401(a)(2) of the IRC, the investments shall be made for the exclusive purpose of providing benefits to the participants and their beneficiaries and defraying reasonable expenses to the System.

The Board's investment policy requires independent performance measurement of investment managers and establishes total return objectives for the total portfolio and major categories of investments. As of December 31, 2015, all securities held met the required statutory provisions and Board policy. As of the same dates, no investments were in default or subject to bankruptcy proceedings that had not been previously recorded.

MERS asset allocation policy is an important determinant of achieving the investment goals of the Plan. An asset allocation study is conducted every three years to assess portfolio construction and design. The study is presented to the MERS Board for adoption. Factors influencing the allocation policy include projecting actuarial liabilities, historical and expected long-term market returns and risk, future economic conditions, inflation and interest rate risks, and liquidity requirements.

Other investment policies include periodic rebalancing of the portfolio to reflect asset reallocation and ensuring investments remain within the Board approved parameters.

Investment manager selection is an important decision involving complex due diligence. Managers are selected after a lengthy and time consuming process involving a review of quantitative and qualitative components. Policy objectives include focusing on stable, long-term, financially secure, experienced, and disciplined investment managers in the selection decision. Once selected, managers are monitored and reviewed for investment returns, asset allocation compliance, and market related factors.

Other investment processes and procedures include capital calls, cash flow reconciliations, trade settlements, weekly portfolio review, monthly account reconciliation, performance reporting and review, bi-annual conference calls, and asset reallocation and reviews.

The annual money weighted rate of return on pension plan investments is calculated as the internal rate of return on pension plan investments, net of investment expenses. This expresses investment performance adjusted for the changing amounts actually invested throughout the year, measured on monthly inputs with expenses measured on an accrual basis. For the year 2015, the annual money weighted rate of return net of investment expenses measured on monthly inputs was -0.99%. (See Required Supplemental Information)

MERS' Investment Policies are directed by the Board with the Chief Executive Officer (CEO) responsible for all activities and duties of the fund. The CEO has delegated to the Office of Investments authority to manage MERS pension funds, other trust funds, and direct all investment management activities. The Board appoints public members with investment expertise to serve on the Investment Committee (IC), which then reports directly to the Board concerning investment guidelines, principles, and procedures. The Board also acts as a sole fiduciary and sets general investment policy, including the Plan's asset allocation, Investment Guidelines, and Investment Policy Statements. The Board also acts as the "investment fiduciary" following state law and prudent person standards of due diligence. The Board is granted authority and fiduciary responsibility for investment policies under 1945 PA 135 and 1965 PA 314 under Michigan statute.

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The IC serves as the Board's investment policy development arm and monitors investment management activity and policy development recommendations developed by MERS Office of Investments. The IC is composed of three voting Board members, including two public members with investment experience. The CEO and Chief Investment Officer (CIO) also serve on the committee, but with non-voting responsibilities. The IC approves recommendations to hire and terminate managers with the exception of the Emerging Manager Program. The IC also appoints one additional Board member to observe meetings; this observer does not have voting privileges.

There is also a Portfolio Review Committee (PRC) that reports to the IC made up of staff from the Office of Investments. The voting members of the committee are assigned by the CIO. The PRC determines tactical shifts within the portfolio and is chaired by the CIO. The committee has the final say for the Emerging Manager Program, and reports decisions to the IC.

The Office of Investments carries out all investment activity for the fund, providing a monthly report on the fund's activities and performance, monitors external investment managers, and reports any material changes to the IC and the Board.

Amending the Board's investment policy decisions is delegated to the IC, PRC, and then on to the Office of Investments for further analysis and action. Generally, this concerns asset allocation and investment manager changes. The IC makes recommendations to the Board for deliberation and approval. The Board then reviews and decides by voting on amending investment policy decisions.

During the year 2015, the Board made decisions to approve new investment managers to be added to the portfolio. The Board also made decisions with reference to the implementation of the 2013 Asset Allocation Study. The allocation is as follows:

Global Equity	57.5%
Global Fixed Income	20.0
Real Assets	12.5
Diversifying Strategies	10.0

There are three investment managers who exceed 5% of the pension plan's net position: Mellon Tangent, Credit Suisse and Janus. These firms however, have many individual diversified investments under each firm's control, so that no one specific position exceeds the investment guideline limits.

MERS offers a variety of investment choices to participants and municipalities:

- The Defined Benefit plan invests in the whole portfolio of MERS including global equities, global bonds, diversified strategies, and real assets;
- The Defined Contribution, Health Care Savings Program and 457 plans have several investment options. One is a Retirement Strategies option whereby a participant can choose a target date fund that adjusts the member's investment allocation automatically over time as the member approaches retirement. Another choice is the Premium Select Option whereby a member can select from various pre-built select funds. A third option for Defined Contribution and 457 participants only is the Self Directed Brokerage account for those knowledgeable investors who are responsible and understand the risks of selecting their own investment choices;
- The Retirement Health Funding Vehicle and Investment Services Program have several investment options available under the Premium Select Options of various pre-built select funds of which employers may choose.

### Cash Deposits

Custodial credit risk for cash deposits is the risk that, in the event of a failure of a depository financial institution, the system may not be able to recover its deposits. Balances on deposits are insured by the Federal Deposit Insurance Corporation (FDIC) up to specified limits. Balances in excess of FDIC limits are uninsured. MERS has not experienced any losses in its accounts and believes it is not exposed to a significant credit risk on its cash.

## Credit Risk

Credit risk is the financial risk that an issuer, or other counterparty, will not fulfill its obligations to MERS. Credit risk exposure is dictated by each investment manager's agreement. Other criteria based on the Board's investment policy, includes that if a security is downgraded below investment grade after purchase, a review with a written explanation shall be forwarded to the Investments staff. Board policy also allows that when calculating the average rating of the portfolio, the manager may use the highest rating of the major rating agencies to calculate the average. Board policy, with regard to global fixed income securities, is that no more than 10% of the portfolio may be invested in corporate bonds or sovereign bonds rated below investment grade, as defined by Moody's and Standard & Poor's rating agencies. Board policy for global fixed income securities is that the average weighted credit of the portfolio will be a minimum of A-. When calculating the average rating of the global portfolio, the manager may use the highest rating of the major agencies to calculate the average. Board policy with regard to global, non-investment grade

fixed income securities includes criteria that credit quality must maintain a minimum of 10% of the portfolio in investment grade fixed income with at least two ratings of BBB-/Baa3 or higher at the time of purchase (as assigned by Standard & Poor's or Moody's). Each portfolio is managed in accordance with investment guidelines that are specific as to permissible credit quality ranges, exposure levels within individual security quality rating tiers, and/or the average credit quality of the overall portfolio.

As of December 31, 2015, the domestic fixed income portfolio consisted of fixed income investments with respective quality ratings, excluding those obligations of the U.S. government. Investments issued by or explicitly guaranteed by the U.S. government are not considered to have credit risk. The Plan's exposure to credit risk as of December 31, 2015, is presented on the following pages, by investment category as rated by Standard & Poor's, Moody's, and Fitch credit ratings.

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### Credit Ratings Summary – December 31, 2015

Quality Rating	Agencies	Asset Backed	Corporate Bonds	Foreign Currency	LMTD Part Units	Mortgage Backed Securities
AAA/Aaa	\$ 32,061,594	\$ 5,956,524	\$ 16,534,000	\$ 9,447,232		\$ 11,029,262
AA+/Aa1	77,154,035		5,937,264			161,404,663
AA/Aa2	4,221,218		12,064,355			
AA-/Aa3	1,677,928		42,432,986			1,239,823
A+/A1	3,469,746	406,555	37,661,932			271,780
A/A2			66,031,630			1,180,636
A-/A3	23,486,011		46,777,565			
BBB+/Baa1	6,743,427	3,408,305	88,396,167			949,256
BBB/Baa2	6,617,630	7,023,966	69,950,142			
BBB-/Baa3	6,809,774	1,670,128	113,235,549			5,078,757
BB+/Ba1			32,203,821			
BB/Ba2		28,308	16,985,636			
BB-/Ba3			9,804,242			3,552,977
B+/B1			8,334,008			4,438,297
B/B2			4,819,458			
B-/B3			2,455,190			1,202,290
CCC+/Caa1			302,772			
CCC/Caa2		817,068	3,802,820			380,749
CCC-/Caa3			102,943			
CC/Ca						
C		41,000				
D/C			3,990,539			
NA						
Cash with no ratings			3,748,321			
NR*	3,354,442	927,931	14,094,671	298,728	\$ 227,953,033	3,182,017
<b>Totals</b>	<b>\$ 165,595,805</b>	<b>\$ 20,279,785</b>	<b>\$ 599,666,011</b>	<b>\$ 9,745,960</b>	<b>\$ 227,953,033</b>	<b>\$ 193,910,507</b>

\*The Not Rated classification includes \$228 million in commingled funds and limited partnerships without credit ratings. Removing that classification leaves the overall portfolio at 1.2% Not Rated.

### Reconciliation of Investments

Fixed income from page 70	\$ 2,073,981,585
Difference from Investments	(17,991,478)
Payables settling in 2016	(241,652,480)
Margin Variation settling in 2016	2,149,266
Receivables settling in 2016	250,599,018
Rounding Difference	5
Equities Holdings Difference	6,895,669
<b>Total</b>	<b>\$ 17,991,478</b>

Municipals	Op- Foreign Currency	Quasi Sovereign	Short-Term Cash	Sovereign	U.S. Treasuries	Total	% of Portfolio
		\$ 406,870		\$ 2,134,327	\$ 57,238,607	\$ 134,808,417	6.56%
					516,535,621	761,031,584	37.02%
\$ 2,559,642		433,995		2,276,615		21,555,825	1.05%
2,506,046						47,856,782	2.33%
		244,122		1,280,596		43,334,731	2.11%
563,697						67,775,963	3.30%
		488,244		2,561,192		73,313,013	3.57%
		2,553,110		13,392,901		115,443,165	5.61%
		2,386,972		12,521,384		98,500,094	4.79%
		5,218,110		27,372,741		159,385,060	7.75%
		5,767,385		30,254,082		68,225,289	3.32%
		3,431,272		17,999,489		38,444,706	1.87%
		1,078,206		5,655,966		20,091,392	0.98%
		3,814,408		20,009,314		36,596,027	1.78%
		796,787		4,179,723		9,795,968	0.48%
		589,962		3,094,774		7,342,216	0.36%
		169,529		889,303		1,361,604	0.07%
		2,129,287		11,169,644		18,299,568	0.89%
		57,640		302,363		462,945	0.02%
							0.00%
						41,000	0.00%
		2,234,396		11,721,011		17,945,945	0.87%
							0.00%
		2,098,772	\$ 47,694,353	11,009,569		64,551,015	3.12%
	\$ (25,374)	6,781		35,572		249,827,802	12.15%
<b>\$ 5,629,385</b>	<b>\$ (25,374)</b>	<b>\$ 33,905,848</b>	<b>\$ 47,694,353</b>	<b>\$ 177,860,566</b>	<b>\$ 573,774,228</b>	<b>\$ 2,055,990,107</b>	<b>100%</b>

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### Interest Rate Risk

Interest rate risk is the risk that an investment's value will change due to a change in the absolute level of interest rates. Interest rate risk is controlled through diversification of portfolio management styles. Duration is a measure of interest rate risk. The greater the duration of a bond or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates and vice-versa. Sensitivity to changing interest rates may derive from prepayment options embedded in an investment. The Board policy, in regard to interest rate risk, is that the effective duration of the domestic portfolio shall be (+/-) 20% of the Barclays Capital Aggregate Index or the Barclays Universal Bond Index. Board policy in regard to global non-investment grade fixed income securities is that the portfolio's duration is (+/-) 2 years of the benchmark duration. The benchmark for

global non-investment grade fixed income securities is 1/3 Barclays Capital U.S. Treasury Inflation Protected Securities Index, 1/3 Citigroup High Yield Market Index, and 1/3 JP Morgan Emerging Markets Global Bond Index. As of December 31, 2015, the Plan's exposure to interest rate risk (as measured by the effective duration method summary) is listed below by investment type.

The term duration has a special meaning in the context of bonds. It is a measurement of how long, in years, it takes for the price of a bond to be repaid by its internal cash flows. It is an important measure for investors to consider, as bonds with higher durations carry more risk and have higher price volatility than bonds with lower durations.

### Effective Duration – December 31, 2015

Investment Type	Market Value	Weighted Effective Duration
Agency	\$40,592,935	2.64
Asset Backed	21,934,361	3.11
Cash Equivalent	17,968,940	5.79
CMBS	9,164,223	2.56
CMO	23,660,534	2.93
Corporate	528,080,917	4.90
Foreign	145,478,630	5.96
Mortgage Pass-Through	161,362,612	3.05
Municipals	3,069,742	0.72
Preferred Stock	8,508,817	4.94
Quasi Sovereign	33,905,851	5.79
Sovereign	177,860,574	5.79
US Treasury	573,774,228	4.19
Yankee (Intl bonds in U.S. dollars)	53,520,354	6.08
	<b>\$1,798,882,718</b>	

### Concentration of Credit Risk Debt Securities

Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's exposure in a single issuer. The MERS investment policy states securities representing debt and equity of any one company shall not exceed 5% of the fair value

of the Plan's portfolio. MERS did not hold a single organization's securities that exceeded 5% of the Plan's investment portfolio other than those issued or explicitly guaranteed by the U.S. government as of December 31, 2015.

## Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. MERS' currency risk exposure, or exchange rate risk, is primarily derived from its holdings in foreign currency denominated equities, and fixed income investments. The MERS Retirement Board investment policy for the global non-investment grade fixed income portfolio, allows currency hedging to mitigate currency exposure.

Hedging the non-U.S. dollar currency exposure of the portfolio is permitted. The portfolio will be limited to the maximum net currency exposure of 25% at any given time.

MERS' exposure to foreign currency risk in U.S. dollars as of December 31, 2015, is summarized below.

### Foreign Currency Risk in U.S. Dollar Denominations – December 31, 2015

Currency	Equities	Fixed Income	Currency	Private Equity	Real Estate*	Total
Australian dollar	8,446,200	\$ 28,782,979	\$ 65,456	\$ 82,853,376		120,148,011
Brazilian real	65,459	4,248,959	136,312		\$ 62,359	4,513,089
British pound sterling	29,453,315	25,440,913	2,526,968		207,368	57,628,564
Canadian dollar	780,504		706,145	6,996,109	(4,647,221)	3,835,537
Danish krone	4,327,439					4,327,439
Euro	41,904,483	23,008,754	13,003	17,602,841	523,977	83,053,058
Hong Kong dollar	3,561,822		95,400			3,657,222
Hungarian forint			30			30
Indonesian rupiah	165,901		22,497			188,398
Israeli shekel	3,749,126		153,561			3,902,687
Japanese yen	81,587,652		1,501			81,589,153
Malaysian ringgit	457,101	4,884,632	91,661			5,433,394
Mexican peso	1,669,381	9,075,588	224,781		469,797	11,439,547
New Zealand dollar	148,863	14,030,834	4,202			14,183,899
Norwegian krone	1,997,263	9,473,276	49,320			11,519,859
Philippine peso	154,427		18,918			173,345
Polish zloty	283,551	9,525,792				9,809,343
Romanian lue		3,108,254				3,108,254
Singapore dollar	1,406,239	6,575,469	137,415		150,486	8,269,609
South African rand	511,710	3,372,385	(4,929)			3,879,166
South Korean won	1,441,698	5,032,370	127,101			6,601,169
Swedish krona	8,370,401					8,370,401
Swiss franc	10,222,141					10,222,141
Taiwan dollar	4,140,874		163,655			4,304,529
Thailand baht	5,520,122					5,520,122
Turkish lira	55,416				79,574	134,990
<b>Investment Securities</b>	<b>\$ 210,421,088</b>	<b>\$ 146,560,205</b>	<b>\$ 4,532,997</b>	<b>\$ 107,452,327</b>	<b>\$ (3,153,660)</b>	<b>\$ 465,812,956</b>

\* Negative real estate reflects investments that did not settle until 2016.

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### Custodial Credit Risk

Custodial credit risk is the risk that deposits may not be recovered in the event of failure of a depository financial institution. As of December 31, 2015, the \$24.6 million carrying amount of the Plan's cash and cash equivalents was comprised of \$13.5 million of short-term investments and \$11.1 million in deposits, which was subject to custodial credit risk because it was uninsured and uncollateralized.

### Securities Lending

MERS' policy authorizes participation in a securities lending program administered by its global custodian, State Street Bank and Trust Company. MERS receives income as the owner of securities, as well as income from the lending of those securities. There are no dividends or coupon payments owing on the securities on loan. Securities lending earnings are credited to MERS and other participating clients on approximately the 15th day of the following month. The securities are open contracts and, therefore, could be terminated at any time by either party.

The borrower collateralizes the loan with cash at 102% of market value plus accrued interest on domestic securities, and 105% of market value plus

accrued interest on international securities loaned. Due to the nature of the program's collateralization of U.S. fixed income securities on loans at 102% plus accrued interest, MERS' management believes that there is no credit risk per GASB 40 because the lender owes the borrower more than the borrower owes the lender. Cash collateral is invested for MERS in a dedicated short-term investment fund consisting of investment grade fixed income securities. The custodian provides for full indemnification to MERS for any losses that might occur in the event of borrower default resulting from negligence or intentional misconduct. Securities on loan are marked to market daily to ensure the adequacy of the collateral. There are no restrictions on the amount of securities that can be loaned at one time.

MERS has never experienced a loss on securities lending transactions resulting from the default of a borrower or lending agent since it commenced lending securities in March 1995. As of December 31, 2015, the fair market value of fixed income securities invested in the cash collateral pool was below the original cost, resulting in a cumulative unrealized loss of \$1 million that is reflected in the financial statements. Security lending produced a net income of \$4 million in 2015, excluding unrealized gains and losses.

### Collateral Held and Fair Value of Securities on Loan

Fair Value of Securities on Loan	Nature of Collateral	Collateral Held
\$ 752,945,631	Cash	\$ 774,752,703
	Calculated Mark	(4,450,461)
	Non-Cash	1,688,185
<b>\$ 752,945,631</b>		<b>\$ 771,990,427</b>

### Securities Lending Collateral

	S & P Rating	Percentage	Amount
<b>Short-Term Credit Ratings</b>	A-1+/P-1 *	3.99%	\$ 30,908,093
	A-1/P-1 *	41.87%	324,421,062
<b>Long-Term Credit Ratings</b>	AAA	0.08%	605,934
	AA	11.99%	92,861,750
	A	26.07%	201,968,517
	BBB+	0.77%	5,999,360
	BBB	0.00%	
	BBB-	0.00%	
	BB+	0.00%	
	BB	0.00%	
	BB-	0.00%	
	Split	1.86%	14,428,839
	Other	13.37%	103,559,148
	100.00%	774,752,703	
Net accumulated depreciation in fair value			(1,144,285)
<b>Invested Securities Lending Collateral</b>			<b>\$ 773,608,418</b>

\* A short term obligation rated A-1/P-1 is rated in the highest category by both Standard & Poor's (S&P) and Moody's Investor Services. These Issuer's have a superior ability to repay short-term obligations. S&P will designate certain issues with a plus sign (+) to indicate that the obligor's capacity to meet its financial commitment is extremely strong.

### Derivatives

Derivative instruments are financial contracts whose value depends on the values of underlying assets, reference rates, or financial indices. They include futures contracts, swap contracts, credit-linked notes (CLN) and forward foreign currency exchange. While the Board has no formal policy specific to derivatives, MERS holds investments in futures contracts, swap contracts, credit linked notes, and forward foreign currency exchange. MERS enters into these derivative contracts primarily to obtain exposure to different markets to enhance the performance, and reduce the volatility of the portfolio. It enters swaps and futures contracts to gain or hedge exposure to certain markets, and to manage interest rate risk and forward

foreign exchange contracts primarily to hedge foreign currency exposure.

The following tables summarize the various contracts in the portfolio as of December 31, 2015. The notional value associated with these derivative instruments are generally not recorded on the financial statements; however, the amounts for the exposure (unrealized gains/losses) on these instruments are recorded. Interest rate risks associated with these investments are included in the table. MERS does not anticipate additional significant market risk from the swap arrangements.

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### Foreign Currency Forward Contracts

Pending Receivable	\$ 3,209,989
Pending Payable	(2,813,886)
<b>Foreign Currency Forward Contract Asset (Liability)</b>	<b>\$ 396,103</b>

### Futures and Options Contracts – December 31, 2015

Futures Contract	Expiration Date	Long/Short	Cost	Market Value	Unrealized Gain/(Loss)
Mini MSCI Emg Mkt Mar 16	3/18/2016	Long	\$ 82,603,735	\$ 81,821,250	\$ (782,485)
Mini MSCI EAFE Mar 16	3/18/2016	Long	309,144,870	316,289,750	7,144,880

MERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MERS and its investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MERS anticipates that counterparties will be able to satisfy their obligations under the contracts. Investments in limited partnerships and combined funds may include derivatives that are not shown in the derivative totals.

### Private Equity and Capital Calls

The MERS Board has approved \$1,161,538,605 for investment in private equity securities. As of December 31, 2015, \$932,615,168 was invested in private equity leaving \$228,923,437 available for future investments. Investments in private equity market values reflect capital returns, income and gains or losses.

MERS has various investments that can be difficult to value in that there are not readily accessible comparable market values. MERS has level 2 investment values of approximately \$2.4 billion, (chiefly in global fixed income and participant directed mutual funds). Level 2 investments typically have quoted prices for similar type assets and have pricing models that can be derived principally from observable market data. MERS also has level 3 investments of approximately \$1.6 billion (chiefly in real estate, private equity, timber, commingled funds and limited partnerships). These investments tend to be illiquid and do not trade frequently, and as a result there may not be readily marketable prices for them. Management's estimates of these values are based on information provided by investment managers, general partners, real estate advisors and other means. Because alternative investments are not readily marketable, their estimated value is subject to uncertainty and therefore may differ from the values that would have been used had a ready market for these securities existed. The differences could be material.

## 5. RISK MANAGEMENT AND INSURANCE

MERS maintains insurance for workers' compensation, owned and leased vehicles, blanket property, fiduciary, fidelity, and faithful performance to cover other risk of loss such as personal injury to employees or others, property damage, or other liability.

## 6. SELF INSURANCE

MERS self-insured for its dental insurance in 2015 with a third party administrator to assist with coverage.

## 7. COMMITMENTS AND CONTINGENCIES

In the normal course of business, MERS is involved in a number of disputes over benefits or other claims. MERS does not anticipate any material loss as a result of these claims. Furthermore, the cost of a successful benefit claim is ultimately the responsibility of the affected municipality — it becomes a funding obligation.

In 1998, MERS entered into a contractual agreement with a municipality and its bargaining units to pay for a certain portion of the municipality's and employees' benefit costs to settle a legal dispute. In 2015, MERS paid \$1,414,007 towards those obligations. MERS' position is that its funding obligations under that agreement ended on December 31, 2015, but the municipality and bargaining units believe MERS has additional obligations, in an unknown amount. Litigation is pending on the issue of whether MERS' funding obligations ended on December 31, 2015. The potential amount in controversy is unknown.

## 8. RELATED PARTIES

Cobalt Community Research is a 501(c) (3) nonprofit, non-partisan coalition that helps local governments, schools and membership organizations measure, benchmark, and manage their efforts through shared data, high-quality affordable surveys, focus groups and meetings that use instant audience feedback technology. MERS facilitated the creation of Cobalt and MERS employees perform the regular work required to run Cobalt. Cobalt maintains separate financial reporting and is responsible for repaying MERS for all administrative costs including staff time. In 2015, Cobalt paid MERS \$48,000 to cover the year's expenses.

## 9. FUNDED STATUS AND FUNDING PROGRESS

MERS' funded status is summarized in the Management's Discussion and Analysis.

Actuarial valuations are prepared annually as of December 31 for each participating municipality. To facilitate budgetary planning needs, employer contribution requirements are provided for each municipality's unique fiscal year that commences after the following calendar year end. For example, the contribution requirements for fiscal years that began in 2015 were determined by actuarial valuations as of December 31, 2013. Approximately 78% of the participating municipalities have fiscal years that begin January 1 or July 1.

## 10. INTERFUND BALANCES

The general purpose of the interfund receivables and payables in the financial statements relates to transactions that occurred between the various product positions within MERS that did not settle until 2016.

## 11. GASB 68

The Governmental Accounting Standards Board (GASB) Statement No. 68, "Accounting and Financial Reporting for Pensions," requires certain disclosures for employers who provide pensions. MERS' employees participate in the MERS Defined Benefit Plan. The sections below are required and pertain to MERS' staff only.

### ***Pensions***

The Net Pension Asset, deferred outflows of resources and deferred inflows of resources related to pension, and pension expense as calculated on the same basis for all other MERS employees. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

### ***Plan Description***

The employer's defined benefit pension plan provides certain retirement, disability, and death benefits to plan members and beneficiaries. MERS is an agent multiple employer, statewide public employee pension plan established by the Michigan Legislature under Public Act 135 of 1945 and administered by a nine member Retirement Board. MERS issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained accessing the MERS website at [www.mersofmich.com](http://www.mersofmich.com).

### ***Benefits Provided***

Benefit Multiplier: 2.25% Multiplier (80% max)  
 Normal Retirement Age: 60  
 Vesting: 6 years  
 Early Retirement (Unreduced): 55/30  
 Early Retirement (Reduced): 50/25, 55/15  
 Final Average Compensation: 3 years  
 COLA for Future Retirees: 2.50% (Non-Compounded)  
 Employee Contributions: 4%  
 Act 88: Yes (Adopted 9/24/1996)

At the December 31, 2014 valuation date, the following employees were covered by the benefit terms:

Inactive Employees or Beneficiaries Currently Receiving Benefits: 28  
 Inactive Employees Entitled to but Not Yet Receiving Benefits: 28  
 Active Employees: 119  
 Total Employees: 175

### ***Contributions***

The employer is required to contribute amounts at least equal to the actuarially determined rate, as established by the Board. The actuarially determined rate is the estimated amount necessary to finance the cost of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The Actuarial Determined Contribution rate for 2014 was 7.63% of payroll. MERS total employer contributions totaled \$2,089,079. MERS' employees are required to contribute 4% of their salaries to help fund the pension.

Article 9, Section 24 of the State of Michigan constitution requires that financial benefits arising on account of employee service rendered in each year be funded during that year.

### ***Net Pension Asset***

MERS' Net Pension Asset, measured as of December 31, 2014, was \$1,154,345, and the total pension liability used to calculate the total pension asset used to calculate the Net Pension Asset was determined by an annual valuation as of that date.

**Actuarial Assumptions**

The total pension asset in the December 31, 2014 annual actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

- Inflation: 3% - 4%
- Salary Increases: 1%
- Investment Rate of Return: 8.25% net of investment expense, including inflation

Although no specific price inflation assumptions are needed for the valuation, the 4.5% long-term wage inflation assumption would be consistent with a price inflation of 3%-4%.

Mortality rates used were based on the 1994 Group Annuity Mortality Table of a 50% Male and 50% Female blend. For disabled retirees, the regular mortality table is used with a 10-year set forward in ages to reflect the higher expected mortality rates of disabled members.

The actuarial assumptions used in the valuation were based on the results of the most recent actuarial experience study in 2008. During 2015, the Board conducted an actuarial experience study covering the period from January 1, 2009 through December 31, 2013. (New assumptions were adopted for future annual valuation reports.)

The long-term expected rate of return on pension plan investments was determined using a model method in which the best-estimate ranges of expected future real rates of return (expected returns, net of investment and administrative expenses 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. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	57.50%	5.02%
Global Fixed Income	20.00%	2.18%
Real Assets	12.50%	4.23%
Diversifying Strategies	10.00%	6.56%

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### Discount Rate

The discount rate used to measure the total pension liability is 8.25% for 2014. The projection of cash flows used to determine the discount rate assumes that employer and employee contributions will be made at the rates agreed upon for employees and the actuarially determined rates for employers. Based on these assumptions, the pension plan's fiduciary

net position was projected to be available to pay all projected future benefit payments of current active and inactive employees. 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.

### Changes in Net Pension Asset

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
<b>Balances at December 31, 2013</b>	<b>\$ 18,130,219</b>	<b>\$ 18,373,983</b>	<b>\$ (243,764)</b>
<b>Changes for the Year</b>			
Service Cost	1,203,192		1,203,192
Interest on Total Pension Liability	1,523,654		1,523,654
Changes in Benefits	-		-
Difference Between Expected and Actual Experience	-		-
Changes in Assumptions	-		-
Employer Contributions		2,089,079	(2,089,079)
Employee Contributions		398,940	(398,940)
Net Investment Income		1,193,652	(1,193,652)
Benefit Payments, Including Employee Refunds	(526,561)	(526,561)	-
Administrative Expenses		(44,244)	44,244
<b>Net Changes</b>	<b>2,200,285</b>	<b>3,110,866</b>	<b>(910,581)</b>
<b>Balances as of December 31, 2014</b>	<b>\$ 20,330,504</b>	<b>\$ 21,484,849</b>	<b>\$ (1,154,345)</b>

### Sensitivity of the Net Pension Asset to Changes in the Discount Rate

The following presents the Net Pension Liability of MERS, calculated using the discount rate of 8.25%, as well as what the employer's Net Pension Asset

would be using a discount rate that is 1% lower (7.25%) or 1% higher (9.25%) than the current rate.

### Sensitivity of Net Pension Liability

	1% Decrease (7.25%)	Current Discount Rate (8.25%)	1% Increase (9.25%)
Net Pension Liability		\$ (1,154,345)	
Change in Net Pension Liability	\$ 3,300,982		\$ (2,703,121)
Adjusted Net Pension Liability	2,146,637	(1,154,345)	(3,857,466)

Note: the current discount rate shown for GASB 68 purposes is higher than the MERS assumed rate of return. This is because GASB 68 requires that the discount rate must be gross of administrative expenses, whereas for funding purposes, it is net of administrative expenses. MERS has a net position asset due to the Plan Fiduciary Net Position exceeding the total Pension Liability.

### Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended December 31, 2015, MERS recognized pension expense of \$857,468. MERS also reported deferred outflows and inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences in Experience	\$ -	\$ -
Differences in Assumptions	-	-
Excess (Deficit) Investment Returns	321,029	-
Contributions Subsequent to the Measurement Date*	2,103,336	-
<b>Total</b>	<b>\$ 2,424,365</b>	<b>\$ -</b>

*\*The amount reported as deferred outflows of resources resulting from contributions subsequent to the measurement date will be recognized as a reduction in the Net Pension Liability for the measurement date of December 31, 2015, which is recorded in 2016.*

Amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

<b>Year Ended</b>	
2016	\$80,257
2017	80,257
2018	80,257
2019	80,258

## 12. SUMMARY INFORMATION – ACTUARIAL FUNDING METHODS AND ASSUMPTIONS

<b>Valuation Date</b>	December 31, 2014
<b>Actuarial Cost Method</b>	Entry Age Normal
<b>Amortization Method</b>	Level Percent of Payroll, Open
<b>Remaining Amortization Period</b>	<p>There are 24 years for positive unfunded liabilities, and 10 years for negative unfunded liabilities. This period will be reduced by one year in each successive annual valuation, until the unfunded liability is paid off.</p> <p>For divisions that are closed to new hires, and the new hires that are not covered by the MERS Defined Benefit Plan or Hybrid Plan provisions (in a linked division), the amortization period is shortened in order to ensure adequate funding of the closed division. The employer has two amortization options. Under Amortization Option A, the amortization period for positive unfunded liabilities is decreased annually by 2 years until the period reaches 6 or 5 years. Each year thereafter the amortization period decreases one year each valuation year until the unfunded liability is paid off. Under Amortization Option B, the amortization period for positive unfunded liabilities is decreased annually by 2 years until the period reaches 16 or 15 years and thereafter, the period is decreased annually by 1 year until the unfunded liability is paid off. In addition, the minimum contribution requirement for a closed division is equal to the excess of three years of annual retiree benefit payments over the current market value of assets. An employer that elected Amortization Option A may later change to Amortization Option B.</p>
<b>Asset Valuation Method</b>	A 10-year smoothed market asset valuation method was adopted December 31, 2005, with a prospective application. Prior to 2006, a 5-year smoothing method was used. Beginning 2015, a 5-year smoothed market asset valuation method will be used.
<b>Actuarial Assumptions</b>	Investment Rate of Return – 8%. Beginning 2015, a 7.75% will be used.
<b>Projected Salary Increases</b>	A 4.5% for base inflation, plus a percentage based on an age-related scale to reflect merit, longevity and promotional pay increases. For calendar years 2014, the wage inflation assumption is 1%, instead of 4.5%. Beginning 2015, a wage inflation assumption of 3.75% per year will be used.
<b>Post-Retirement Benefit</b>	A 2.5% annual post-retirement benefit adjustment – if adopted by individual municipalities.

**Deferred Retirement Option  
Program (DROP+) Partial  
Lump Sum**

Any participant who is eligible to retire with full, immediate retirement benefits, has the option to retire and receive a monthly benefit payable immediately, or delay the retirement date and continue to work if the participating employer has adopted the DROP+ benefit.

If a participant is covered by the Benefit Program DROP+ and retires at least 12 months after first becoming eligible for unreduced benefits, they have the option to receive a partial lump sum and a reduced monthly benefit:

- The participant can elect a lump sum equal to 12, 24, 36, 48, or 60 times their monthly straight life accrued benefit.
- For each 12 months included in the lump sum, the participant's lifetime benefit is reduced by the DROP+ percentage adopted by the employer. The employer can adopt any of the following DROP+ reduction percentages: 4, 5, 6, 7, or 8%.

Benefit Program DROP+ may not be adopted after June 30, 2013. Two employers adopted this benefit prior to it ending.

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### REQUIRED SUPPLEMENTARY INFORMATION

The following schedules are presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, information is presented for those years where information is available.

#### Annual Money Weighted Return

The annual money weighted rate of return on pension plan investments is calculated as the internal rate of return on pension plan investments, net of investment expenses. This expresses investment performance adjusted for the changing amounts actually invested throughout the year, measured on monthly inputs with expenses measured on an accrual basis.

#### Schedule of Investment Returns

	2013	2014	2015
Annual money-weighted rate of return, net of investment expenses	14.97%	7.32%	(0.99%)

*This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, information is presented for those years where information is available.*

The following schedules refer to MERS' staff only. A measurement date of December 31, 2014, was used.

#### Schedule of Employer Contributions

The Schedule of Employer Contributions shows the employer's required annual contributions from the annual actuarial valuation, compared with the actual contributions remitted over the past ten years.

#### Schedule of Employer Contributions

	2015	2014	2013	2012	2011
Actuarial Determined Contributions	\$ 1,088,267	\$ 1,089,079	\$ 1,006,942	\$ 1,276,266	\$ 1,194,741
Contributions in Relation to the Actuarially Determined Contribution	2,099,146	2,089,079	2,506,942	1,276,266	1,194,741
Contribution Deficiency (Excess)	(1,010,879)	(1,000,000)	(1,500,000)		
Covered Employee Payroll	9,184,670	9,184,670	9,741,710	9,400,436	10,195,504
Contributions as a Percentage of Covered Employee Payroll	12%	12%	10%	14%	12%

	2010	2009	2008	2007	2006
Actuarial Determined Contributions	\$ 1,136,057	\$ 1,070,451	\$ 935,463	\$ 768,376	\$ 680,018
Contributions in Relation to the Actuarially Determined Contribution	1,136,057	1,070,451	935,463	768,376	680,018
Contribution Deficiency (Excess)					
Covered Employee Payroll	9,113,922	8,198,952	7,802,747	5,879,341	5,374,269
Contributions as a Percentage of Covered Employee Payroll	12%	13%	12%	13%	13%

### Schedule of Changes in Employer's Net Pension Liability and Related Ratios

The Schedule of Changes in Employer's Net Pension Liability and Related Ratios shows the changes in the total pension liability less the statement of changes in fiduciary net position resulting in the net Pension Liability calculation for the employer.

#### Schedule of Changes in the Net Pension Liability and Related Ratios

Total Pension Liability	
Service Cost	\$ 1,203,192
Interest	1,523,654
Changes of Benefit Terms	-
Difference Between Expected and Actual Experience	-
Changes of Assumptions	-
Benefit Payments Including Employee Refunds	(526,561)
Other	-
Net Change in Total Pension Liability	2,200,285
Total Pension Liability Beginning Balance	18,130,219
<b>Total Pension Liability Ending Balance</b>	<b>20,330,504</b>
<b>Plan Fiduciary Net Position</b>	
Contributions-Employer	2,089,079
Contributions-Employee	398,940
Net Investment Income	1,193,652
Benefit Payments Including Employee Refunds	(526,561)
Administrative Expense	(44,244)
Net Change in Plan Fiduciary Net Position	3,110,866
Plan Fiduciary Net Position Beginning Balance	18,373,983
<b>Plan Fiduciary Net Position Ending Balance</b>	<b>21,484,849</b>
<b>Employer Net Pension Asset</b>	<b>\$ (1,154,345)</b>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	106%
Covered Employee Payroll (from GASB 68 actuarial page)	\$ 9,184,670
Employer's Net Pension Liability as a percentage of covered employee payroll	(13%)

*Note: There were no changes in the actuarial assumptions or methods affecting the 2014 valuation.  
This calculation was done with an effective date of December 31, 2014.*

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**OTHER SUPPLEMENTARY INFORMATION****Schedule of Administrative Expenses for the Year Ended December 31, 2015**

	Budget	Actual	Balance	Percentage of Budget
<b>Personnel Services</b>				
Salaries	\$9,780,000	\$9,227,952	\$552,048	94%
Social Security	726,200	645,532	80,668	89%
Retirement	964,500	763,511	200,989	79%
Insurance	1,987,400	1,715,344	272,056	86%
<b>Total Personnel Services</b>	<b>13,458,100</b>	<b>12,352,339</b>	<b>1,105,761</b>	<b>92%</b>
<b>Professional Services</b>				
Third Party Administrator	1,704,600	1,611,426	93,174	95%
Actuarial Services	1,338,300	1,428,185	(89,885)	107%
Audit Services	267,100	177,636	89,464	67%
Commercial Banking	95,000	90,027	4,973	95%
Payroll Processing	17,000	15,290	1,710	90%
IT Services/Continuity/Records	387,500	190,689	196,811	49%
Business Consultants	243,400	157,438	85,962	65%
Legal Services	299,700	329,558	(29,858)	110%
Medical Services	120,000	77,525	42,475	65%
<b>Total Professional Services</b>	<b>4,472,600</b>	<b>4,077,774</b>	<b>394,826</b>	<b>91%</b>
<b>Communication</b>				
Annual Conference	100,000	98,310	1,690	98%
Board Travel, Education and Meetings <sup>1</sup>	32,000	23,495	8,505	73%
Outreach	150,300	87,742	62,558	58%
Postage / Shipping	224,000	144,498	79,502	65%
Printing and Copying Services	149,000	64,142	84,858	43%
Telephone / Communications	200,000	200,400	(400)	100%
Travel and Meetings	353,000	263,702	89,298	75%
<b>Total Communication</b>	<b>1,208,300</b>	<b>882,289</b>	<b>326,011</b>	<b>73%</b>
<b>Miscellaneous</b>				
Depreciation	2,360,200	2,323,558	36,642	98%
Equipment Purchases & Rental	27,000	28,968	(1,968)	107%
Insurance	285,000	264,604	20,396	93%
Building / Maintenance / Utilities	537,500	446,353	91,147	83%
Office Supplies/Subscriptions	90,900	85,071	5,829	94%
Operating Expenses	827,600	1,509,162	(681,562)	182%
Personnel Support	108,000	128,951	(20,951)	119%
Professional Development	166,500	110,142	56,358	66%
Software Support	1,625,000	1,858,507	(233,507)	114%
Service Fees <sup>2</sup>	(4,012,700)	(4,791,484)	778,784	119%
<b>Total Miscellaneous</b>	<b>2,015,000</b>	<b>1,963,832</b>	<b>51,168</b>	<b>97%</b>
<b>Total Administrative Expenses</b>	<b>\$21,154,000</b>	<b>\$19,276,234</b>	<b>\$1,877,766</b>	<b>91%</b>

<sup>1</sup> Board Travel, Education, and Meetings includes \$3,470 for board members training and educations, including related travel expenditures. These expenditures comply with the requirements of Section 38.1133 of the Michigan Compiled Laws.

<sup>2</sup> Service fees primarily come from fees paid on participant directed accounts intended to cover administrative expenses. They are treated as an expenditure credit and not revenue.

**Schedule of Investment Expenses for the Year Ended December 31, 2015**

	Budget	Actual	Balance	Percent of Budget
<b>Personnel Services</b>				
Salaries	\$1,502,900	\$1,505,560	\$ (2,660)	100%
Social Security	95,800	77,302	18,498	81%
Retirement	127,200	93,957	33,243	74%
Insurance	135,700	120,785	14,915	89%
<b>Total Personnel Services</b>	<b>1,861,600</b>	<b>1,797,604</b>	<b>63,996</b>	<b>97%</b>
<b>Professional Services</b>				
Commercial Banking	1,350,000	975,571	374,429	72%
Investment Managers	19,000,000	18,221,230	778,770	96%
Business Consultants	130,000	33,779	96,221	26%
<b>Total Professional Services</b>	<b>20,480,000</b>	<b>19,230,580</b>	<b>1,249,420</b>	<b>94%</b>
<b>Miscellaneous</b>				
Travel	153,000	112,203	40,797	73%
Office Supplies	2,600	353	2,247	14%
Professional Development	10,400	4,445	5,955	43%
Operating Expenses	5,000	5,007	(7)	100%
Research and Portfolio Management	250,000	239,842	10,158	96%
<b>Total Miscellaneous</b>	<b>421,000</b>	<b>361,850</b>	<b>59,150</b>	<b>86%</b>
<b>Total Investment Expenses</b>	<b>\$22,762,600</b>	<b>\$21,390,034</b>	<b>\$1,372,566</b>	<b>94%</b>

*Note: See accompanying Independent Auditor's Report*

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**Schedule of Payments to Consultants – December 31, 2015**

Firm	Nature of Services	Amount
Tegrit Software Ventures, Inc.	Software Consulting and Configuration Services	\$ 2,864,900
Alerus Retirement Solutions	Third Party Administration	1,614,500
CBIZ Benefits & Insurance Services, Inc.	Actuarial Consultants	1,500,000
State Street Corporation	Depository Trust Banking Services	1,051,000
Dewpoint, Inc.	Project Management Services	191,400
Plante Moran, PLLC	Auditing Services	169,100
Rapid7 LLC	Software Consulting and Configuration Services	132,000
Bloomberg Finance L.P.	Investment Data Services	128,000
Optima Consulting LLC	Software Consulting and Configuration Services	120,700
Analysts International Corporation	Project Management Services	111,100
Ice Miller LLP	Legal Services	103,100
Total Solutions, Inc.	Software Consulting and Configuration Services	92,800
Maner Costerisan	Software Consulting and Configuration Services	67,400
Consulting Physicians	Medical Advisors	53,700
Cheiron, Inc	Actuarial Consultants	51,000
Byrum Fisk Communications LLC	Marketing and Public Relations Services	45,100
Michigan Legislative Consultants	Legislative Consultants	42,800
Gavekal Capital	Investment Consultants	40,000
Viawest, Inc	Business Continuity Services	39,600
CBRE/Martin	Commercial Real Estate Agents	32,700
Jackson Walker LLP	Legal Services	27,200
Miller, Canfield, Paddock, and Stone, P.L.C.	Legal Services	27,100
Karoub Associates	Legislative Consultants	24,700
Ned Davis Research	Investment Consultants	22,500
Mayotte Group	Construction and Building Modification	22,200
Informa Investment Solutions	Investment Consultants	21,000

All items are rounded to the nearest \$100.

This schedule only includes firms whose annual payment amount was \$20,000 or above.

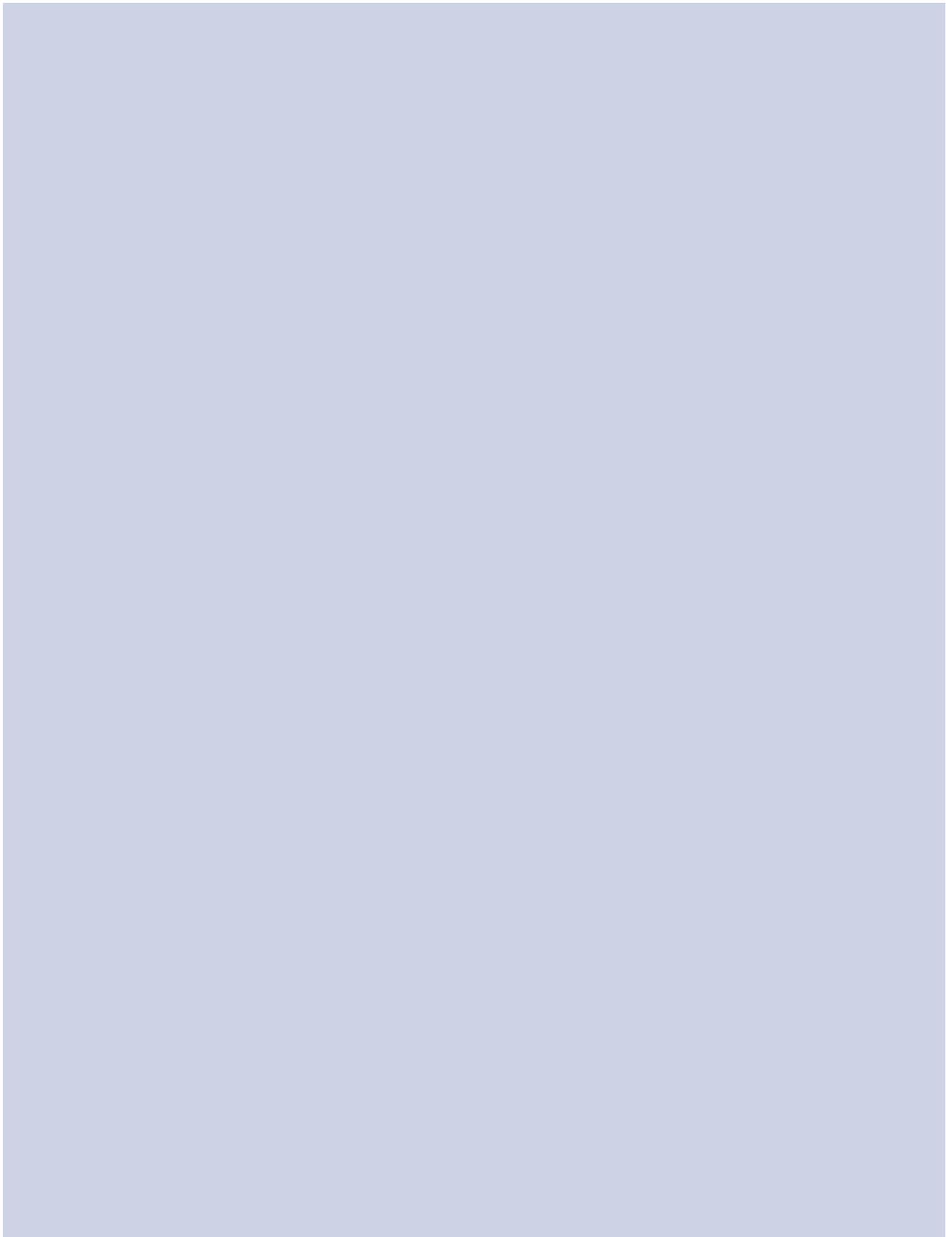
Fees paid to investment managers are included in the Investment Section.

Payments to consultants are already included in the Administrative and Investments Expenses reported in the Statement of Changes in Fiduciary Net Position.

See previous Independent Auditor's Report.

The background of the page is a vibrant green color with a complex geometric pattern. It consists of numerous overlapping triangles and quadrilaterals in various shades of green, creating a mosaic effect. On the right side, there are several thin, white, parallel lines that intersect to form a grid-like pattern.

SECTION 3  
**INVESTMENTS**



## CHIEF INVESTMENT OFFICER REPORT

### Dear Members and MERS Retirement Board:

I respectfully submit the investment activity report for the Municipal Employees' Retirement System (MERS) of Michigan's Comprehensive Annual Financial Report for the year ending December 31, 2015.

As always, our goal is to invest fund assets to achieve the long term objectives of our member municipalities established by the Retirement Board within risk parameters. Our investment returns consistently outperform our benchmarks and market averages, with a prudent, long-term approach designed to provide downside protection and upside market participation.

### Economic Overview

The year 2015 was eventful, characterized by increased market volatility and lower returns across most asset classes. Seven years after the Global Financial Crisis (GFC), the tepid recovery characterized by years of muted economic growth began to show signs of distress. Quantitative easing and other policy tools used to push risk asset prices higher finally came to an end in the United States as the Federal Reserve (the Fed) raised short-term interest rates for the first time in nearly a decade to 25 basis points (bps). However, just as the Fed began its first steps toward monetary tightening, Europe and Japan began expanding aggressive quantitative easing programs. The U.S. Dollar (USD) remained the strongest major global currency, negatively affecting emerging markets which hold significant amounts of dollar denominated debt and further exacerbating the decline in these markets. The strong USD also began to impact U.S. manufacturing and profits, although the service sector continued to produce growth. Commodity markets saw significant losses as global oil prices continued to decline in 2015 on the back of global over-supply and weak demand. This weakness in commodities stoked market volatility and is expected to put stresses on political and social structures within OPEC countries adding to geopolitical instability.

It should be mentioned that we find ourselves at an inflection point. Developed markets possess aging populations with high legacy costs while low interest rates compress returns across all asset classes. In a zero interest rate environment it is extremely difficult to meet return objectives, placing additional stress on financial systems. Until this normalizes, difficult policy choices will be the norm rather than the exception.

### MERS Total Market Fund

Even with all the uncertainty and volatility, the MERS Total Market Fund (the Fund) performed well from a relative perspective, returning -0.85% gross of fees for the year, outperforming its blended benchmark which returned -2.33%. Also, the Fund outperformed its target weighted benchmark, indicating skill and value added through active management decisions. It should be noted that the new Diversifying Strategies allocation was the year's top performing asset class on an absolute basis. The Fund continues to outperform its benchmark for all time periods through ten years. It is critical to view the fund's 2015 performance in the context of longer term horizons such as 5, 7, and 10 years. On this basis, the fund has returned 6.8%, 9.3%, and 5.6% per year over the last 5, 7, and 10 years. While year-to-year returns can vary considerably, returns over longer time horizon remain much closer to the plan's actuarial objectives. Importantly, the portfolio exhibits the downside protection and risk characteristics that have been carefully designed and approved by the Board.

The defined investment objective of the MERS Fund is to grow assets at a rate which, when coupled with contributions, satisfies earned benefits to our members. The MERS Office of Investments strives to achieve a real rate of return of at least 3.50% annually over the rate of inflation and/or exceed the actuarial assumption rate of 7.75%, annually. On an

## INVESTMENTS

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absolute return basis, MERS seeks opportunities to enhance performance, but feels confident about the performance relative to our benchmarks.

The Total Market Fund closed out the year with a return of -0.85% (-1.02% after investment expenses). Global Equity returned -2.36% (gross of fees) for the year with private equity performing the best on the year with a return of 9.6%. Global Fixed Income held steady at 1.55% for the year outperforming the Barclays Global Aggregate by 470bps. Triple Net Real Estate was the major contributor of the positive asset class return with a 22.47% return for the year. The Real Assets asset class returned -1.33%. Within Real Assets, the Real Estate sub-asset class generated the highest returns of any sub-asset class at 10.41%. This is largely due to the MERS Internal Real Estate portfolio which returned 16.86% for the year. MERS' newest asset class, Diversifying Strategies, produced the highest returns of the four asset classes producing 4.12%.

### MERS 2015 highlights:

- The MERS Total Market Fund return for 2015 was -0.85%, gross of investment fees, outperforming benchmark at -2.33%
- MERS continued to implement the new asset allocation from the 2013 allocation study. The broader main asset classes allow MERS to strategically navigate the markets while tactically allocating amongst sub-asset classes.
- At the broad asset class level, absolute returns gross of investment fees for the year were as follows:

Global Equity	(2.36%)
Global Fixed Income	1.55
Real Assets	(1.33)
Diversifying Strategies	4.12

In conclusion, I would like to thank the MERS Retirement Board for their continued support of the Office of Investments in their roles as the fiduciaries of the MERS Plan. The clarity of MERS' governance structure and the functional checks and balances has allowed the investment program to be successful for our members. This relationship makes for a more efficient decision-making process, benefiting our membership through stronger, risk-adjusted returns.

Respectfully,

**Jeb Burns**

Chief Investment Officer

## REPORT ON INVESTMENT ACTIVITY

MERS is organized for the express purpose of utilizing its collective resources to ensure that its member municipalities have sufficient financial resources to meet the pension obligations that each such municipality is individually responsible for under Constitution 1963, article 9, section 24. MERS is authorized to create subsidiary entities and to provide additional benefits and savings to its members at the discretion of the Board. See 2004 PA 490, section 36(2)(a); MCL 38.1536(2)(a).

The MERS Retirement Board (Board), as “investment fiduciary” under the Public Employee Retirement System Investment Act (PERSIA), PA 314 of 1965, has the fiduciary responsibility and authority to direct the Retirement System’s investment program. Members of the Board must follow the state law and prudent standards of diligence consistent with “discharging their duties for the exclusive benefit of plan participants.” The prudent person standard requires that the Board “exercise the same judgment, care, skill, prudence, and diligence under the circumstances which persons acting in a like capacity and familiar with such matters would use in the conduct of a similar enterprise with similar aims.” MERS has a Defined Benefit Plan, Defined Contribution Plan, Hybrid Plan Health Care Savings Program, Retiree Health Funding Vehicle, Investment Services Program, and a 457 Deferred Compensation Program. The Board has approved full discretion to manage all investment management operations and activities to the Chief Executive Officer (CEO), except those specifically reserved for the Board. The CEO is directly responsible for all activities and duties of the fund. The CEO has delegated to the Office of Investments authority to manage MERS pension funds, other trust assets, and direct all investment management activities.

The Investment Policy Statement (IPS) outlines the investment goals, objectives, and policies of the Fund. The purpose of the IPS is to ensure that the investment activities are carried out within the framework established by MERS’ policy and administrative documents. The IPS assists the

Board, Investment Committee, and staff in effectively monitoring the MERS investment program and offers a map to assist in making prudent and informed investment decisions. The IPS addresses the following issues:

- The goals of the MERS Investment Program;
- Investment policies;
- Performance objectives and evaluation;
- Major investment programs; and
- Investment processes and procedures.

The IPS is designed to provide sufficient flexibility in the management and oversight process to reflect the dynamic nature of the capital markets. It will serve as a working document and may be modified as needed or as market conditions change. The IPS will be reviewed annually and approved by the Board.

In accordance with GASB Statement No. 67, plan investments are presented at fair value. Short-term investments are valued at cost plus accrued interest, which approximates 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 upon equivalent values of comparable securities with similar yield and risk. Independent appraisals are the basis for valuing the fair value of real estate. Other investments that do not have established markets are recorded at an estimated fair value. Real estate, private equity, and certain alternative investments typically have a quarter lag in reporting, which is an industry standard. Periodic and independent appraisals of these assets are carried out to ensure an accurate valuation to assist in properly assessing the value of the total fund.

MERS uses a time-weighted rate of return calculation methodology, based on the market rate of return, for the schedule of investment results in this report.

The annual money weighted rate of return on pension plan investments is calculated as the internal rate of

## INVESTMENTS

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return on pension plan investments, net of investment expenses. This expresses investment performance adjusted for the changing amounts actually invested throughout the year, measured on monthly inputs with

expenses measured on an accrual basis. For the year 2015, the annual money weighted rate of return net of investment expenses measured on monthly inputs was -0.99%.

### DEFINED BENEFIT PLAN – INVESTMENT OBJECTIVES AND ACTIVITY

In conformity with PERSIA, the primary goal of the MERS investment program is to grow assets at a rate which, when coupled with employer and employee contributions, satisfies promised benefits to MERS' members. This should be done with a high degree of prudence to reduce risk. The following objectives are intended to assist in achieving this goal:

- Exceed the actuarial investment assumption on a long-term basis, which is currently 7.75% annually. More specifically, earn a minimum real rate of return of at least 3.5% per year above inflation;
- Maintain adequate liquidity to pay promised benefits;
- Adopt a strategic asset allocation plan that reflects current and future liabilities, minimizes volatility, and maximizes the long-term total rate of return;
- Minimize the costs associated with implementation of the asset allocation through the efficient use of internal and external resources;
- Maintain above median peer rankings for the 3, 5, and 10-year time periods; and
- Exceed the return of the Fund's Policy Benchmark. The Policy Benchmark currently consisting of 35% Barclays Global Aggregate Bond Index and 65% MSCI ACWI IMI.

## PORTFOLIO HIGHLIGHTS

### Asset Allocation

The portfolio's asset allocation is the single most important determinant of achieving the stated investment goals. MERS' Office of Investments conducts a full asset allocation study every three years to assess portfolio construction and strategy. MERS Office of Investments will conduct the next asset allocation study in 2016. MERS adopts and implements an asset allocation policy that is predicated on a number of factors, including:

- A projection of actuarial assets, liabilities and benefit payments, and the cost of contributions;
- Historical and expected long-term capital market risk and returns for each asset class;
- Expected correlations of returns among various asset classes;
- An assessment of future economic conditions, including inflation and interest rate levels;
- Various risk/return scenarios; and
- Liquidity requirements.

### Criteria for Inclusion of Asset Classes

The following criteria will be used in assessing an asset class for inclusion in the portfolio:

- Sufficient size and liquidity to permit an investment by the portfolio;
- Staff, external managers, and consultant expertise to ensure proper due diligence and cost-effective implementation;
- The incorporation of the asset class contributes to the return enhancement and/or further diversification of the portfolio's assets; and
- Ability to readily measure performance and risk against appropriate benchmarks.

### Portfolio Weighting Guidelines

- New investment strategies (asset classes or sub-asset classes) will be given:
  - A minimum weighting of 2% of the total portfolio and a maximum weighting of 5% of the total portfolio;
  - Allocations may be increased above the 5% threshold after successful integration into the portfolio; and
  - Strategies may be allocated among several managers to reduce risk.
- Each manager will have a maximum allocation of 15% of the total portfolio

The Board adopted the most recent asset allocation study in November 2013. In January 2014, the MERS Office of Investments began implementing the new allocation in stages as investing permitted.

• Global Equity	57.5%	• Real Assets	12.5
• Global Fixed Income	20.0	• Diversifying Strategies	10.0



## DEFINED BENEFIT PORTFOLIO

MERS investments' one year gross return for 2015 was -0.85% using a time-weighted rate of return based on the market rate of return of the portfolio. Performance across all asset classes varied during the year with triple net lease and real estate generating some of the highest returns, 22.47% and 10.41%, respectively.

### Portfolio Rebalance Policy

MERS adopted a new asset allocation in November 2013; the MERS Investment Guidelines and Investment Policy Statement have been officially amended to reflect this new asset allocation. To ensure that the portfolio remains within the asset allocation parameters established by the Board, the following rebalancing policy has been established. This policy should minimize unintended drift from MERS' strategic asset allocation, allow tactical

shifts to take advantage of market conditions, and ensure that adequate cash levels are maintained to meet ongoing pension fund expenses. Systematic rebalancing should reduce volatility and increase portfolio returns over the long-term. As stated in the Investment Policy Statement, the next Asset Allocation Study will be conducted in 2016.

### Daily Review and Optional Rebalance

In an effort to minimize tracking error at the Total Market Portfolio level, MERS' Office of Investments works with Investment Manager Parametric to monitor allocations and implement a policy overlay utilizing index futures. Asset allocation levels for the following asset classes are monitored daily in relation to the predetermined variation bands and rebalanced using the appropriate index futures:

Asset Class	Variation Band %	Index Futures
Global Equity	± 5.0%	S&P 500, S&P 400, Russell 2000, MSCI EAFE, or MSCI EM Index futures
Global Fixed Income	± 5.0%	Treasury futures matching the duration of the Barclays U.S. Aggregate Index

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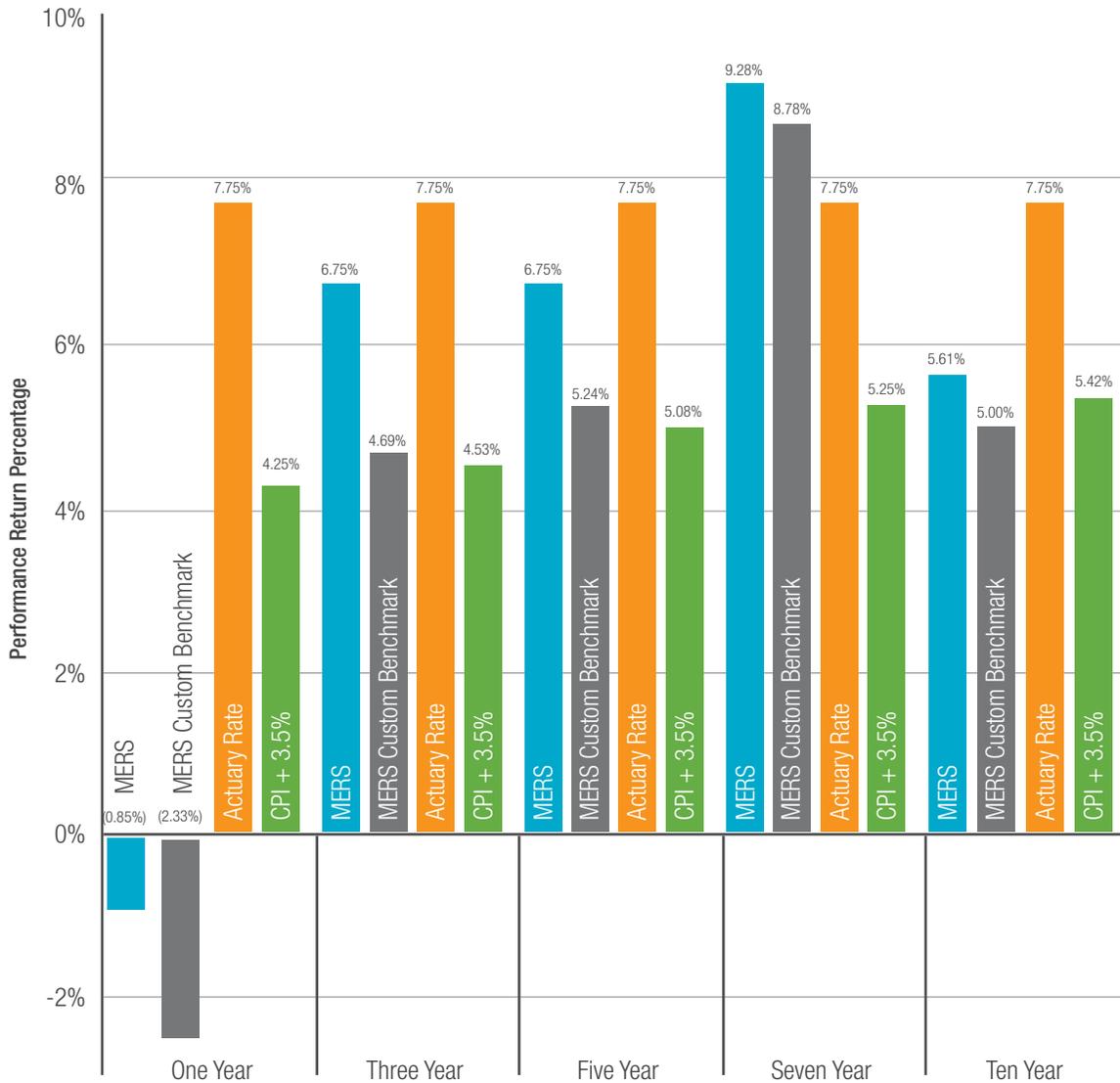
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### Annual Portfolio Rebalance

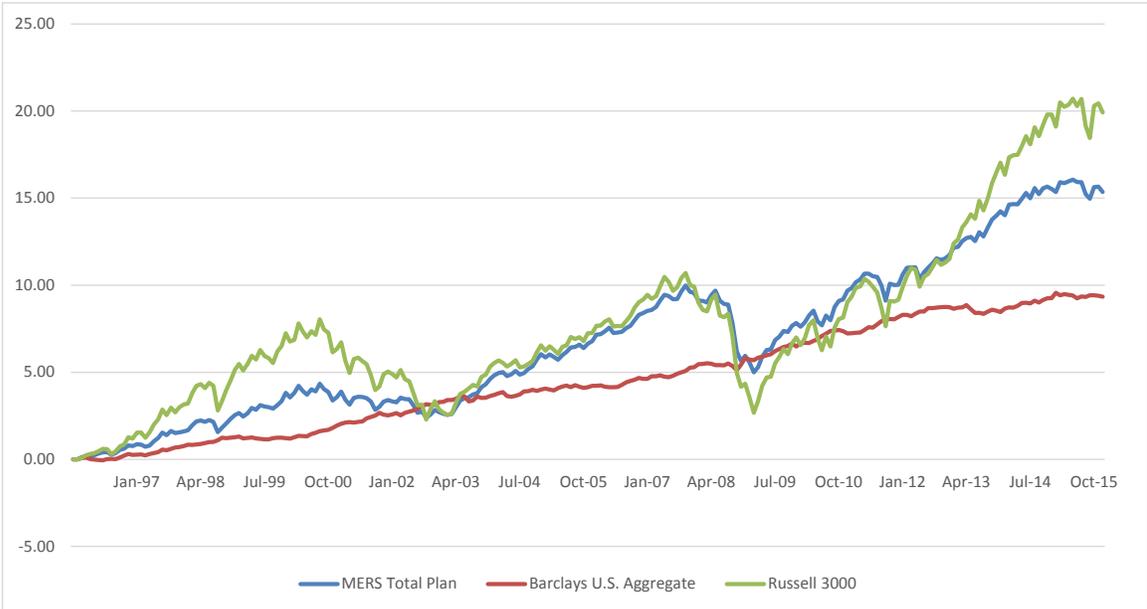
MERS' Office of Investments monitors the portfolio's asset allocation on an ongoing basis, making strategic and tactical adjustments within the guidelines of the plan. MERS feels a more robust portfolio-rebalancing

regimen can add additional value and reduce the overall risk to the portfolio in certain market environments.

### Performance Versus Custom Benchmarks as of December 31, 2015 (gross of fees)



Downside Protection, Upside Participation as of December 31, 2015

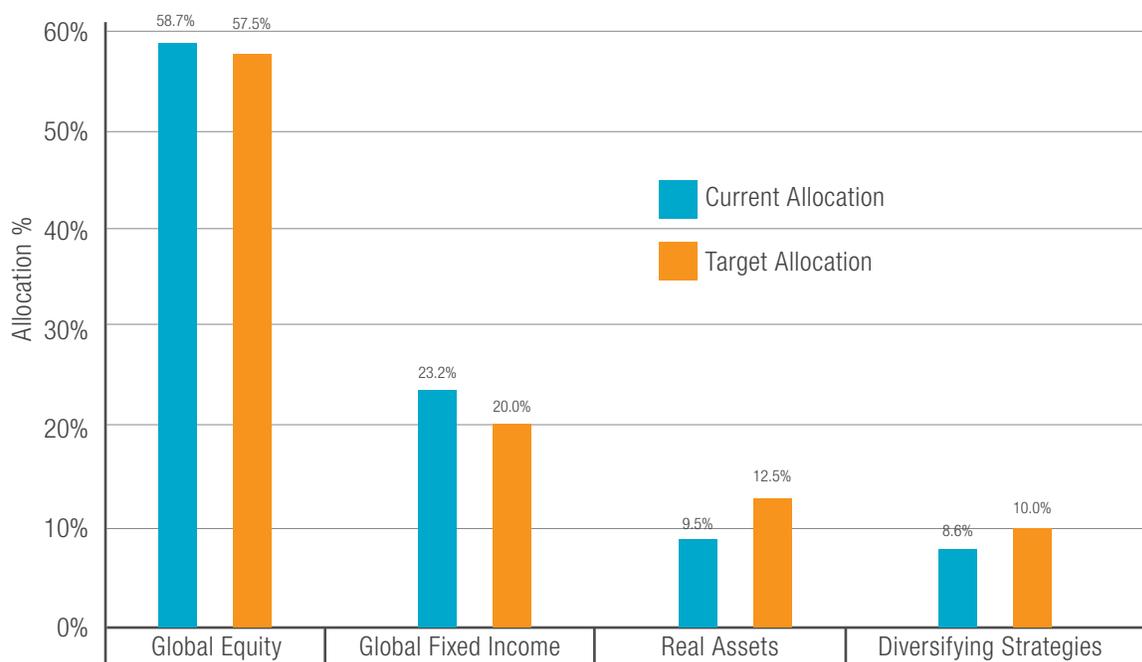


Diversification is a portfolio strategy designed to reduce exposure to the volatility of returns by combining a variety of investments (such as stocks, bonds, real estate, and commodities) which are unlikely to all move in the same direction. The goal of diversification is to reduce the risk in a portfolio. While it is impossible to foresee all market risks, the strategic goal of the MERS asset allocation policy and the portfolio is to create a well-diversified portfolio that provides downside market protection with upside market participation.

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### Current Asset Allocation versus Target Allocation as of December 31, 2015



### Statistical Performance

	1 Year	3 Year	5 Year	7 Year	10 Year
Annualized Return (Gross of fees)	(0.85)%	6.75%	6.75%	9.28%	5.61%
Annualized Standard Deviation	6.20%	5.83%	7.12%	8.33%	9.36%
Sharpe Ratio	(0.14%)	1.15%	0.94%	1.10%	0.47%
Excess Return	1.48%	2.05%	1.50%	0.49%	0.61%
Beta	0.66%	0.77%	0.86%	0.80%	0.85%
Correlation to Policy Benchmark	0.95%	0.94%	0.97%	0.97%	0.98%

	1 Year	3 Year	5 Year	7 Year	10 Year
Total Market Fund (Gross of Fees)	(0.85)%	6.75%	6.75%	9.28 %	5.61%
Total Market Fund (Net of Fees)	(1.02)%	6.55%	6.51%	9.01%	5.35%
TMF Custom Benchmark	(2.33)%	4.69%	5.24%	8.78%	5.00 %

### Commission Recapture

MERS requests that all domestic equity managers direct a target of 25% of commission trades with the State Street Global Markets LLC (SSGM) for the purpose of commission recapture. Notwithstanding these instructions, brokerage transactions in the normal course of business should only be directed to this broker if in so doing the obligation to achieve best execution of the portfolio's transactions is fulfilled. The SSGM program provides a network of brokers

with whom trades can be executed. MERS has the ability to waive commission recapture participation for investment managers via their investment guidelines as certain strategies are more sensitive to trade execution (i.e. micro cap). The recapture commissions are shared based on a contractually-negotiated split of 90% MERS / 10% broker. Recapture dollars are used to offset the administrative, custodial, accounting, and performance measurement costs incurred by the fund.

### Securities Lending

MERS participates in the securities lending program at State Street Bank. Income earned from participation in the program is credited to each portfolio within 15 business days of the previous month's end. The

goal of the securities lending program is to enhance the overall income of the Plan and to help offset investment management related expenses.

### Securities Lending 2015 Rebates and Fees

	Gross Earnings	Rebates	Agent/Mgr fees	Net earnings
First Quarter	\$ 1,618,564	\$ 115,216	\$ 301,218	\$ 1,202,130
Second Quarter	1,591,309	93,277	299,565	1,198,467
Third Quarter	1,149,737	97,180	210,483	842,074
Fourth Quarter	1,138,222	145,370	198,542	794,310
<b>Totals</b>	<b>\$ 5,497,832</b>	<b>\$ 451,043</b>	<b>\$ 1,009,808</b>	<b>\$ 4,036,981</b>

## INVESTMENTS

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### Investment Summary for Defined Benefit Plan, Defined Contribution Plan, Hybrid, Health Care Savings Program, Retiree Health Funding Vehicle, 457, and Investment Services Programs as of December 31, 2015

Type of Investment	Market Value
<b>Global Fixed Income</b>	
Global Fixed Income	\$ 2,073,981,585
<b>Total Global Fixed Income</b>	<b>2,073,981,585</b>
<b>Global Equities</b>	
Global Stock	4,233,619,370
Private Equity	546,343,794
<b>Total Global Equities</b>	<b>4,779,963,164</b>
<b>Diversifying Strategies</b>	
Diversifying Strategies	758,639,472
<b>Total Diversifying Strategies</b>	<b>758,639,472</b>
<b>Real Assets</b>	
Agriculture and Farmland	196,381,053
Infrastructure	271,431,473
Commodities	43,182,176
Real Estate	330,514,878
<b>Total Real Assets</b>	<b>841,509,580</b>
<b>Sub Total Investments</b>	<b>8,454,093,801</b>
<b>Cash Equivalents</b>	
Cash Equivalents	370,480,259
<b>Total Cash Equivalents</b>	<b>370,480,259</b>
<b>Sub Total Investments &amp; Cash</b>	<b>\$ 8,824,574,060</b>

### Reconciliation of Investments to Financial Statements

Total Investments from above	\$ 8,824,574,060
Receivables - Sale of Investments, Interest & Dividends	(348,187,297)
Alternative asset adjustment not on State Street portfolio	(9,702,177)
Bonds in default	(899,825)
Rounding adjustment	(1)
Investments not in MERS State Street' portfolio	352,343,252
Investments in cash	(13,476,919)
Payables - Purchases of Investments	329,125,934
<b>Investments on Financial Statements</b>	<b>\$ 9,133,777,027</b>

Note: Includes receivables and payables for sales and purchases of securities with settlement dates after December 31, 2015.

## GLOBAL EQUITY ASSET CLASS SUMMARY

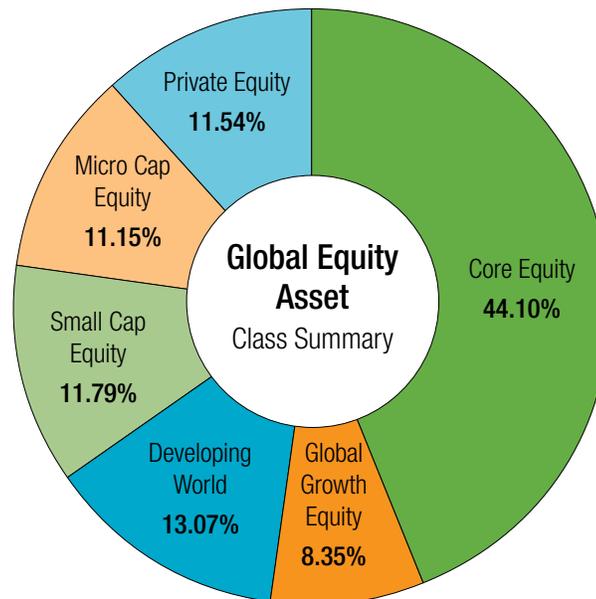
As of December 31, 2015, the global equity portfolio had a market value of \$5.2 billion, representing 58.7% of the Total Market Fund. Performance for the total global equity portfolio was -2.36% gross of fees for the year.

The Global Equity allocation represents the largest portion of the MERS Defined Benefit Portfolio and is the largest driver of the portfolio's return and risk. The allocation employs a Core-Satellite structure with the Core portfolio focused on lower volatility strategies in more efficient areas of the global equity markets. Satellite strategies are expected to outperform the Core portfolio over time with increased levels of volatility. MERS' Office of Investments has also increased internal, active equity management as a way to reduce overall portfolio costs and increase returns over traditional active managers.

The Global Equity portfolio has a target allocation of 57.5% of the Total Market Fund. As of December 31, 2015, the portfolio includes core, global growth,

developing world, small cap, micro cap, and private equity sub-asset classes. These portfolios are diversified by geographic region, styles, sectors, and market capitalizations. Active management is used to take advantage of less efficient areas of the market while passive management is deployed in more efficient areas and used to reduce fees. Allocations of these classes are monitored in relation to asset class bands on an ongoing basis and rebalances take place when deemed appropriate. This portfolio is expected to perform well in periods of low to falling inflation and rising economic growth. It is also projected to provide ongoing income as well as downside protection in volatile markets.

### Equity Asset Class Summary



## INVESTMENTS

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### Global Equity Performance as of December 31, 2015

	% OF PLAN	1 YEAR	3 YEARS	5 YEARS	10 YEARS
Global Equity	58.7%	(2.36)	10.63	8.83	6.22
Global Equity Blend*		(2.27)	11.65	9.30	6.86
<b>EXCESS</b>		<b>(0.09)</b>	<b>(1.02)</b>	<b>(0.47)</b>	<b>(0.64)</b>
Core Equity	23.7%	(1.30)	15.32	12.89	8.73
Core Equity Blend**		(0.04)	14.79	12.18	7.65
<b>EXCESS</b>		<b>(1.26)</b>	<b>0.53</b>	<b>0.71</b>	<b>1.08</b>
Small Cap Equity	6.3%	(1.15)	10.71	8.51	6.28
Russell 2000		(4.41)	11.65	9.19	6.80
<b>EXCESS</b>		<b>3.26</b>	<b>(0.94)</b>	<b>(0.68)</b>	<b>(0.52)</b>
Microcap Equity	6.0%	(4.80)	12.89		
RUSSELL MICROCAP INDEX ( DAILY)		(5.16)	12.70	9.23	5.13
<b>EXCESS</b>		<b>0.36</b>	<b>0.19</b>		
Global Growth Equity	4.5%	0.03	8.28	4.53	
Global Growth Blend***		3.32	13.11	10.31	7.15
<b>EXCESS</b>		<b>(3.29)</b>	<b>(4.83)</b>	<b>(5.78)</b>	
Developing World	7.0%	(10.48)	(2.38)	(5.23)	
Developing Equity Blend****		(14.59)	(0.96)	(2.01)	1.61
<b>EXCESS</b>		<b>4.11</b>	<b>(1.42)</b>	<b>(3.22)</b>	
Private Equity	6.2%	9.62	14.63	11.86	9.12
STATE STREET PE 1 QTR LAG		6.05	11.94	11.74	10.31
<b>EXCESS</b>		<b>3.57</b>	<b>2.69</b>	<b>0.12</b>	<b>(1.19)</b>

\*Global Equity Blend - 36.22% Core Equity Blend, 13.79% Russell 2000 Index, 12.93% Russell Micro Cap Index, 13.79% Global Growth Blend, 13.479% Developing Equity Blend, 9.48% State Street Private Equity 1Q Lagged Index

\*\*Core Equity Blend - 50% Russell Top 200 Index/50% Russell Mid Cap Index

\*\*\*Global Growth Blend - 50% Russell 3000 Growth, 50% MSCI AC World Growth

\*\*\*\*Developing Equity Blend - 50% MSCI Emerging Markets Index, 50% MSCI Frontier Markets Index

### Top 10 Public Equity Holdings as of December 31, 2015

Note: A complete list of portfolio holdings is available upon request.

Security	Fair Value	Percentage of Total Fair Value
Apple Inc.	\$ 26,940,876	0.31%
Evercore Partners Inc Class A	20,555,305	0.23%
Citigroup, Inc.	19,706,866	0.22%
Goldman Sachs Group, Inc.	18,439,872	0.21%
United Technologies Corporation	18,001,693	0.20%
Bank of America Corporation	16,267,373	0.18%
Honeywell International, Inc.	15,566,882	0.18%
Alphabet, Inc. CL A	15,555,532	0.18%
Cisco Systems, Inc.	15,444,216	0.18%
Celgene Corp	15,164,490	0.17%

### Global Equity – Investment Managers

External Manager	Strategy	Fair Value
Mellon Capital Management	U.S. Tangent Added Tactical Asset Allocation	\$ 552,592,996
Wellington Management Company	U.S. Mid Cap Core	155,888,760
William Blair Opportunity Fund	Global Opportunity Fund	254,612,304
Irving Magee Investment Management	U.S. Small Cap Value	208,671,564
Acadian Asset Management	International Small Cap	221,458,926
Punch & Associates	U.S. Micro Cap Core	106,044,176
Morgan Dempsey Capital Management	U.S. Small/ Micro Cap Value	89,380,082
EAM Investors	U.S. Ultra Micro Cap Growth	98,177,482
Kennedy Capital Management	U.S. Micro Cap Value	108,004,452
Downriver Capital Management	U.S. Micro Cap Value	23,172,954
Hellman, Jordan Management Company	U.S. All Cap Growth	394,510,106
Mountain Pacific Advisors	Emerging Markets Small Cap	178,190,829
BlackRock Investment Management	Frontier Markets Index	12,080,195
Consilium Investment Management	Frontier Markets	80,895,823
Frontier Market Asset Management	Frontier Markets	97,300,450
Polunin Capital Partners	Emerging Markets Small Cap	181,167,260
LMCG Investments	Emerging Markets Small Cap	22,225,000
Terra Partners Global Opportunity	Frontier Markets	46,924,585
GCM Grosvenor Private Markets	Global Private Equity	312,468,151
Mesirow Financial	Global Private Equity	15,798,658
AlpInvest Partners	Global Private Equity	171,437,174
Internal Manager	Strategy	Fair Value
MERS S&P 400	U.S. Mid Cap Index	\$ 478,313,309
MERS S&P 500	U.S. Large Cap Index	544,875,877
MERS Systematic Alpha Large Cap Index	U.S. Large Cap Enhanced Index	101,190,778
MERS S&P 600	U.S. Small Cap Index	128,089,953
MERS Micro Cap	U.S. Micro Cap Core	103,011,249
MERS Internal Private Equity	Separately Managed Private Equity	46,639,811
<b>Total</b>		<b>\$ 4,733,122,904</b>

## INVESTMENTS

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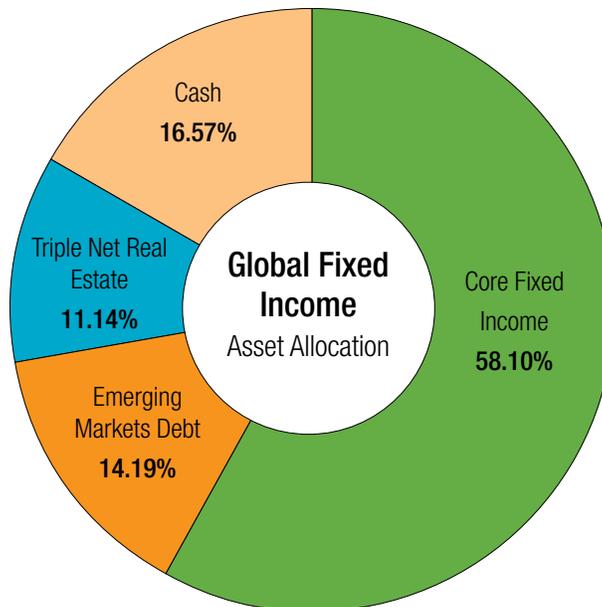
### GLOBAL FIXED INCOME ASSET CLASS SUMMARY

As of December 31, 2015, the Global Fixed Income portfolio had a fair value of \$2.1 billion, representing 23.2% of the Total Market Fund. Performance for fixed income was 1.55% gross of fees for the year.

The Global Fixed Income allocation plays a vital role in the MERS Defined Benefit Portfolio. The Global Fixed Income portfolio has a target allocation of 20% of the total fund. This portfolio is designed to provide significant downside protection, diversification and stable income. As a result of the low interest rate environment and likely upward pressure on interest

rates, the allocation to traditional fixed income has been reduced in favor of other asset classes with a better risk/return profile. The portfolio follows a Core-Satellite structure with U.S. Fixed Income and Global Fixed Income serving as the Core and Triple-Net Lease Real Estate and Emerging Markets Debt serving as satellites. The majority of the portfolio is allocated to investment grade credits across all market sectors and diversified by geography. Active management has been deployed for each strategy as significant alpha has been achieved within the asset class.

#### Global Fixed Income Asset Allocation



**Global Fixed Income Performance as of December 31, 2015 (gross of fees)**

	1 YEAR	3 YEARS	5 YEARS	10 YEARS
Global Fixed Income	1.55	1.85	2.74	4.34
Global Fixed Income Blend*	(0.56)	0.41	3.15	4.88
<b>EXCESS</b>	<b>2.11</b>	<b>1.44</b>	<b>(0.41)</b>	<b>(0.54)</b>
Core Fixed Income	(0.47)	1.02	3.38	
Core Fixed Income Blend**	(0.93)	0.17	2.31	4.23
<b>EXCESS</b>	<b>0.46</b>	<b>0.85</b>	<b>1.07</b>	
Emerging Markets Debt	(2.22)	(2.27)		
JPM EMBI GLOBAL DIVERSIFIED	1.18	0.99	5.36	6.86
<b>EXCESS</b>	<b>(3.40)</b>	<b>(3.26)</b>		
Triple Net Real Estate	22.47	11.99		
Barclays CMBS Investment Grade	0.94	1.76	4.31	4.95
<b>EXCESS</b>	<b>21.53</b>	<b>10.23</b>		
Cash	0.16	0.61	(4.74)	0.57
91 DAY TREASURY BILL (DAILY)	0.05	0.05	0.07	1.26
<b>EXCESS</b>	<b>0.11</b>	<b>0.56</b>	<b>(4.81)</b>	<b>(0.69)</b>

\*Global Fixed Income Blend – 53.49% Core Fixed Income Blend, 13.16% JP Morgan EMBI Global Diversified Index, 13.21% Barclays Investment Grade CMBS Index, 13.16% High Yield Blend, 6.98% U.S. 90-Day Treasury Bills

\*\*Core Fixed Income Blend – 60% Barclays US Agg, 40% Barclays Global Agg

**Top 10 Global Fixed Income Holdings as of December 31, 2015**

Asset Description	Market Value	Percentage of Total Market Value
Australian Government Bond 3.25% 4/21/2025	\$ 40,504,371	0.46%
United States Treasury 2.25% 11/15/2024	27,458,401	0.31%
United States Treasury 0.5% 11/30/2016	25,013,532	0.28%
Spanish Government Bond 2.75% 10/31/2024	22,185,259	0.25%
United States Treasury 0.25% 9/15/2015	17,532,098	0.20%
United Kingdom Treasury 2.375% 9/07/2024	17,150,076	0.19%
Poland Government Bond 4.0% 10/25/2023	15,446,510	0.18%
United States Treasury 1.5% 11/30/2019	15,008,790	0.17%
United States Treasury 0.375% 1/31/2016	14,933,790	0.17%
GNMA Pool 5.0% 9/15/2039	14,923,245	0.17%

## INVESTMENTS

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### Global Fixed Income – Investment Managers

Investment Manager	Strategy	Fair Value
<b>Core Fixed Income</b>		<b>\$ 1,188,692,274</b>
C.S. McKee Investment Managers	U.S. Core Fixed Income	338,317,467
Janus Capital Management	U.S. Core Plus Fixed Income	514,407,188
First International Advisors	Global Fixed Income	335,967,620
<b>Emerging Markets Debt</b>		<b>\$ 290,289,822</b>
TCW Group	Emerging Markets Debt	290,289,822
<b>Triple Net Real Estate</b>		<b>\$ 227,953,033</b>
ElmTree Funds	Triple Net Lease Real Estate	135,869,679
Oak Street Real Estate Capital	Triple Net Lease Real Estate	92,083,354
<b>Cash</b>		<b>\$ 367,046,456</b>
MERS of Michigan	Short Duration Fixed Income	275,507,304
Janus Capital Management	Short Duration Fixed Income	90,989,883
MERS of Michigan	Short Duration Fixed Income	549,269
<b>Total</b>		<b>\$ 2,073,981,585</b>

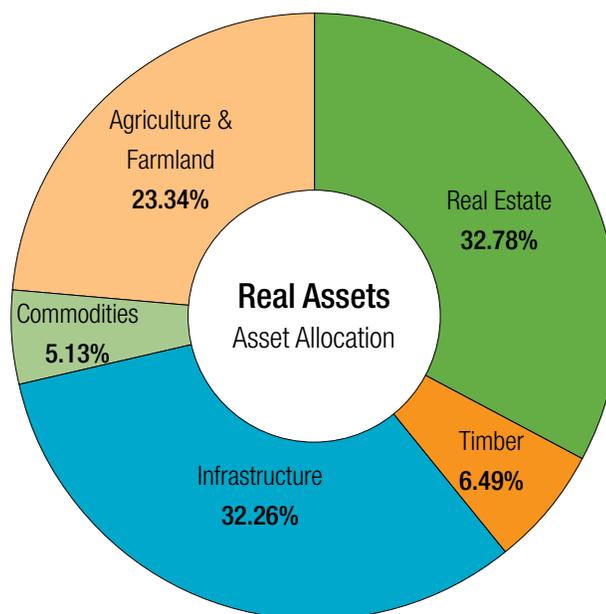
## REAL ASSETS CLASS SUMMARY

As of December 31, 2015, the Real Assets portfolio had a fair value of \$800 million, representing 9.5% of the Defined Benefit Portfolio. The targeted allocation of the portfolio is 12.5% of the portfolio. The Real Assets portfolio consists of real estate, timber, infrastructure, commodities, and agriculture and farmland sub-asset classes. Performance for real assets was -1.33% gross of fees for the year.

The real assets allocation is designed to provide a hedge against unexpected spikes in inflation as well as capitalize on long-term themes such as an emerging middle class in developing markets and

global population growth. An income component is present in each of the sub-asset classes that comprise the portfolio. The majority of the investments within this portfolio will be private investments making the portfolio relatively illiquid and longer duration. Private Infrastructure has traditionally been 5% of the overall portfolio but as the investments mature it is anticipated this allocation will be managed down in favor of a combination of public and private infrastructure investments. The underlying allocation to each sub-asset class will fluctuate over time depending on market opportunities but it is anticipated that each will be equally weighted within the portfolio.

Real Assets Allocation



Real Assets Performance as of December 31, 2015 (gross of fees)

	1 YEAR	3 YEARS	5 YEARS	10 YEARS
Real Assets	(1.33)	2.50	3.56	
Real Assets Blend*	0.52	1.78	2.54	3.62
<b>EXCESS</b>	<b>(1.85)</b>	<b>0.72</b>	<b>1.02</b>	
Real Estate	10.41	14.44	14.76	4.87
NCREIF ODCE Value Weighted	13.95	12.77	12.60	5.55
<b>EXCESS</b>	<b>(3.54)</b>	<b>1.67</b>	<b>2.16</b>	<b>(0.68)</b>
Timber	(3.29)	3.72	3.72	
NCREIF TIMBERLAND INDEX QTR LAG	9.26	9.77	6.28	7.94
<b>EXCESS</b>	<b>(12.55)</b>	<b>(6.05)</b>	<b>(2.56)</b>	
Infrastructure	(0.71)	5.85	3.77	
CPI + 3.5%	4.25	4.53	5.08	5.42
<b>EXCESS</b>	<b>(4.96)</b>	<b>1.32</b>	<b>(1.31)</b>	
Commodities	(11.28)	(12.45)	(6.68)	
Bloomberg Commodity Index Total Return	(24.66)	(17.29)	(13.47)	(6.43)
<b>EXCESS</b>	<b>13.38</b>	<b>4.84</b>	<b>6.79</b>	
Agriculture & Farmland	(8.48)	4.96		
CPI + 3.5%	4.25	4.53	5.08	5.42
<b>EXCESS</b>	<b>(12.73)</b>	<b>0.43</b>		

\*Real Assets Blend – 20.00% Private Real Estate, 20.00% S&P Global Timber & Forestry Index, 20.00% Private Infrastructure, 20.00% DJ UBS Commodities Index, 20.00% Agriculture/Farmland.

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### Real Assets – Investment Managers

Investment Manager	Strategy	Fair Value
<b>Real Estate</b>		
The Townsend Group	Private Real Estate	\$ 60,622,718
MERS of Michigan	Private Real Estate	215,260,905
<b>Timber</b>		
Hancock Natural Resource Group	Global Timber	54,631,255
<b>Infrastructure</b>		
GCM Grosvenor Private Markets	Global Private Infrastructure	271,431,473
<b>Commodities</b>		
Electrum Strategic Opportunity Fund	Commodities	17,978,623
<b>Agriculture &amp; Farmland</b>		
Australian Pastoral Fund	Agriculture/Livestock Production	40,565,574
Adveq Management AG	Diversified Agriculture	47,659,479
Adveq Management AG	Agriculture/Almond Production	26,202,697
Wood Creek Capital Management	Diversified Agriculture	26,202,697
<b>Total</b>		<b>\$ 776,061,649</b>

## DIVERSIFYING STRATEGIES CLASS SUMMARY

As of December 31, 2015, the Diversifying Strategies portfolio had a fair value of \$758.6 million, representing 8.6% of the total portfolio. The targeted allocation of the portfolio is 10.0% of the total portfolio. Currently, the portfolio includes investments in middle market direct lending, litigation finance, healthcare royalties, bank regulatory capital, and opportunistic credit. The majority of these investments were funded in 2014 with the creation of the asset class in the MERS portfolio. Performance for the diversifying strategies was 4.12% gross of fees for the year.

The Diversifying Strategies allocation is expected to provide downside protection and uncorrelated returns with traditional asset classes – specifically equities. Core fixed income has traditionally been one of the most diversifying asset classes, but the low return expectations for the asset class make it less attractive on a risk-adjusted basis. Consequently, non-traditional asset classes must be considered as an alternative.

### Diversifying Strategies Performance as of December 31, 2015 (gross of fees)

	1 YEAR	3 YEARS	5 YEARS	10 YEARS
Diversifying Strategies	4.12%	8.76%		
Custom Diversifying Strategies Blend*	0.66%	4.96%	3.11%	3.28%
<b>EXCESS</b>	<b>3.46%</b>	<b>3.80%</b>		

\*Diversifying Strategies Blend- HFRI Fund of Funds Index + 1%

### Diversifying Strategies – Investment Managers

Investment Manager	Strategy	Fair Value
Orchard Global Asset Management	Bank Regulatory Capital	\$ 169,474,807
Gerchen Keller Capital	Litigation Financing	16,465,613
MC Credit Partners	Middle Market Direct Lending	19,891,480
Napier Park Global Capital	Global Opportunistic Credit	223,740,191
Wood Creek Capital Management	Intangible/Tangible Assets	58,390,308
Orchard Global Asset Management	Structured Lending	105,424,621
Connor, Clark & Lunn Investment Management	Canadian Small/Mid Cap Market Neutral Equity	118,527,510
Comvest Partners	Lower Middle Market Direct Lending	33,534,076
Oberland Capital Partners, LLC	Healthcare Royalties	13,190,866
<b>Total</b>		<b>\$ 758,639,472</b>

## INVESTMENTS

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### Investment Management Fees

Since management fees directly affect the returns of a manager, a best effort is made to achieve the best fee agreement possible. MERS leverages the scale of investments to negotiate deals that are at the lower end of industry standards and more than competitive with peers. While it is understood that

superior managers often have higher fee structures, performance expectations and costs are carefully balanced. Fees are the only factor that one can be certain of ex-ante; thus it is critical to minimize them to the extent possible. All else being equal, managers with lower fees will be favored.

### Schedule of Investment Fees – as of December 31, 2015

Investment Managers	Average Assets Under Management	Annual Fee	Average Basis Points
Global Equity	\$ 4,779,963,164	\$ 10,495,214	\$ 21.96
Global Fixed Income	2,073,981,585	2,724,874	13.14
Diversifying Strategies	758,639,472	4,771,334	62.89
Real Assets	841,509,580	229,808	2.73
<b>Total</b>	<b>\$ 8,454,093,801</b>	<b>\$ 18,221,230</b>	<b>21.55</b>

*The above table presents the 2015 investment manager fees MERS incurred, excluding alternative investments and comingled funds. The alternative investments and comingled fund portfolios results are reported to MERS net of fees, therefore the management fees paid for these investments are not reported in the above table.*

#### Investment Custodian

State Street Bank and Trust \$ 975,571

#### Securities Lending Agent

State Street Bank and Trust 1,009,808

**Total Investment Fees \$ 20,206,609**

**Schedule of Investment Commissions as of December 31, 2015**

Brokerage Firm	Shares Traded	Total Dollars	Commission/Share
Instinet, LLC	30,604,923	\$ 383,737	0.013
Cantor Fitzgerald & Company	17,244,915	249,597	0.014
Nesbitt Burns	16,994,294	224,180	0.013
Goldman Sachs & Company	11,413,005	198,906	0.017
Instinet	13,258,153	155,113	0.012
Scotia Capital, Inc.	10,331,697	125,606	0.012
RBC Dominion Securities, Inc	7,348,049	120,865	0.016
Citigroup Global Markets, Inc.	5,621,960	117,422	0.021
Knight Equity Markets, LP	6,345,625	113,588	0.018
Canaccord Genuity Corporation	10,721,307	107,894	0.010
TD Waterhouse CDA	6,740,489	94,113	0.014
J.P. Morgan Securities, Inc.	3,440,756	92,669	0.027
CIBC World Markets, Inc.	6,197,135	89,622	0.014
GMP Securities LTD.	8,289,417	87,863	0.011
JonesTrading Institutional Services, LLC	3,927,541	83,602	0.021
Barclays Capital, Inc.	2,886,614	82,681	0.029
Cormark Securities, Inc.	5,468,711	82,479	0.015
NBC Clearing Services Incorporated	4,954,492	78,958	0.016
Merrill Lynch, Pierce, Fenner, and Smith Inc.	2,817,091	72,851	0.026
Bloomberg Tradebook, LLC	4,947,268	66,958	0.014
Credit Suisse Securities (USA) LLC	15,024,542	63,564	0.004
First Energy Capital	4,361,143	49,282	0.011
Pershing LLC	1,687,060	45,843	0.027
Raymond James and Associates Incorporated	1,617,647	43,440	0.027
Fidelity Clearing Canada	2,967,096	38,848	0.013
<b>Subtotal (25 Largest)</b>	<b>205,210,930</b>	<b>2,869,680</b>	<b>0.014</b>
Remaining Total	123,984,965	931,715	0.008
<b>Total Commissions</b>	<b>329,195,895</b>	<b>\$ 3,801,395</b>	<b>0.012</b>

## INVESTMENTS

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### MERS INVESTMENT MENU SUMMARY

#### FOR THE PARTICIPANT DIRECTED ACCOUNTS AND INSTITUTIONAL

The Board, together with MERS' Office of Investments, selects the menu of investment options for the MERS' Defined Contribution Program, Hybrid Plan (Part II), Health Care Savings Program, and 457 Supplemental Program (Participant Directed Accounts) and Retiree Health Funding Vehicle and Investment Services Program (Institutional Funds). In addition, the Board establishes and maintains investment guidelines, approves any material changes, and directs staff to help participants with investment education.

The MERS Investment Menu is divided into three categories consisting of Retirement Strategies, Premium Select Options, and a Self-Directed Brokerage Account. The availability of the investment options in these categories is dependent on the plan of which a participant or municipality partakes.

#### Retirement Strategies

Retirement Strategies, also known as Target Date Funds, are complete, diversified investment options whose asset allocation changes as the participants move toward and through retirement. They provide diversification across asset types and styles while managing volatility and disciplined rebalancing through active management. Retirement Strategies are the default investment selection for the Defined Contribution Program, Hybrid (Part II), and the 457 Supplemental Program. Retirement Strategies are also available as an investment option in the Health Care Savings Program.

#### Premium Select Options

Premium Select Options are investment portfolios that are either constructed from portions of the MERS Total Market Fund or are portfolios managed by external managers outside of the MERS Total Market Fund.

#### Self-Directed Brokerage Account

The Self-Directed Brokerage Account offers access to a broader selection of funds. This option has requirements that are needed for participants to be eligible to use as well as a minimum account balance. Further description of the brokerage account can be found in the Understanding the MERS Investment Menu Summary on the MERS website at [www.mersofmich.com/investments](http://www.mersofmich.com/investments). The Brokerage Account is only available for the Defined Contribution Plan and the 457 Supplemental Program.

On the next page is a list of the investment menu for both Participant Directed Accounts and Institutional Funds that are available for participants and municipalities to choose from.

## Participant Directed Accounts

### 1 Retirement Strategies

- 2005 Retirement Strategy
- 2010 Retirement Strategy
- 2015 Retirement Strategy
- 2020 Retirement Strategy
- 2025 Retirement Strategy
- 2030 Retirement Strategy
- 2035 Retirement Strategy
- 2040 Retirement Strategy
- 2045 Retirement Strategy
- 2050 Retirement Strategy
- 2055 Retirement Strategy
- 2060 Retirement Strategy

### 2 Premium Select Options

#### *Portfolios Built for You*

- MERS Total Market Portfolio
- MERS Global Stock Portfolio (100/0)
- MERS Capital Appreciation Portfolio (80/20)
- MERS Established Market Portfolio (60/40)
- MERS Balanced Income Portfolio (40/60)
- MERS Capital Preservation Portfolio (20/80)
- MERS Diversified Bond Portfolio (0/100)

#### *Funds to Build Your Own Portfolio*

- Large Cap Stock Index
- Mid Cap Stock Index
- Small Cap Stock Index
- Emerging Market Stock
- International Stock Index
- Real Estate Stock
- Bond Index
- High-Yield Bond
- Short-Term Income
- Stable Value (DC Only)

### 3 Self-Directed Brokerage Account

- TD Ameritrade (DC & 457 Only)

## Institutional Funds

#### *Portfolios Built for You*

- MERS Total Market Portfolio
- MERS Global Stock Portfolio (100/0)
- MERS Capital Appreciation Portfolio (80/20)
- MERS Established Market Portfolio (60/40)
- MERS Balanced Income Portfolio (40/60)
- MERS Capital Preservation Portfolio (20/80)
- MERS Diversified Bond Portfolio (0/100)

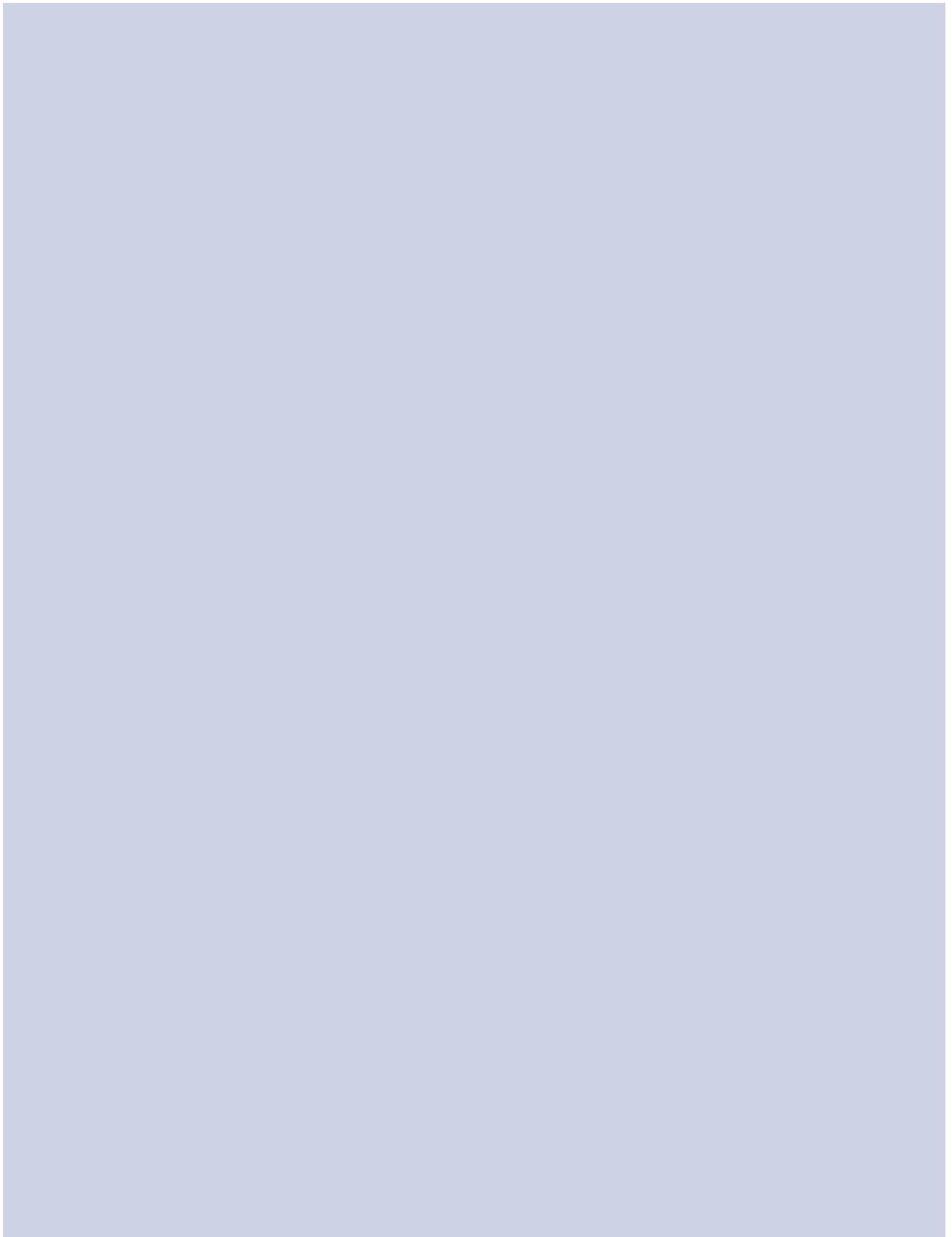
#### *Funds to Build Your Own Portfolio*

- Large Cap Stock Index
- Mid Cap Stock Index
- Small Cap Stock Index
- Emerging Market Stock
- International Stock Index
- Short-Term Income

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SECTION 4  
**ACTUARIAL**





**CBIZ Retirement Plan Services**  
CBIZ Benefits & Insurance Services, Inc.  
17187 N. Laurel Park Dr., Ste. 250  
Livonia, MI 48152  
<http://retirement.cbiz.com>

September 22, 2015

The Retirement Board  
Municipal Employees' Retirement System of Michigan  
1134 Municipal Way  
Lansing, Michigan 48917

Dear Board Members:

The basic financial objective of the Municipal Employees' Retirement System of Michigan (MERS) is to establish and receive contributions for each municipality and court which:

- (1) fully cover the cost of benefits that members earn during the coming fiscal year, and
- (2) amortize the unfunded costs of benefits earned based on past service, and which
- (3) when combined with present assets and future investment return will be sufficient to meet the financial obligations, of each municipality and court under MERS, to present and future retirees and beneficiaries.

In order to measure progress toward this fundamental objective, MERS has annual actuarial valuations completed. Separate actuarial valuations are prepared for each participating municipality and court. The purpose of the December 31, 2014 annual actuarial valuations was to (i) measure MERS' funding progress, (ii) establish contribution requirements for fiscal years beginning in 2016 that provide for the normal cost (i.e. the costs assigned by the valuation method to the year of service about to be rendered) and amortization of unfunded actuarial accrued liabilities over a reasonable period (generally 24 years), and (iii) provide actuarial information in connection with applicable Governmental Accounting Standards Board statements. The valuations should not be relied upon for any other purpose. The valuations were completed based upon population data, asset data, and plan provision data as of December 31, 2014.

The actuarial valuations are based upon financial data, plan provision data, and participant data which are prepared by MERS' administrative staff. We checked the data for internal and year-to-year consistency as well as general reasonableness, 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 MERS' administrative staff. The actuary summarizes and tabulates population data in order to analyze long term trends. MERS' external auditor audits the actuarial data annually.

This letter was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This letter may be provided to parties other than the System only in its entirety and only with the permission of the System.

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Retirement Board  
September 22, 2015  
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Actuarial valuations are based on assumptions regarding future rates of investment return and inflation, rates of retirement, withdrawal, death, disability, and pay increase among MERS members and their beneficiaries. These assumptions are adopted by the Board after considering the advice of the actuary and other professionals. The assumptions and methods comply with the requirements of Governmental Accounting Standards Board Statement No. 68. The demographic assumptions adopted by the Retirement Board were based upon the actual experience of MERS during the years 2004 to 2008.

The economic assumptions were last revised by the Board for the December 31, 2012 annual valuations. Future actuarial valuation results may differ significantly from those presented in the annual valuations due to such factors as experience differing from that anticipated by the actuarial assumptions, or changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of the assignment, we did not perform an analysis of the potential range of future measurements.

Assets are valued on a market related basis that fully recognizes expected investment return and averages unanticipated market return over a 10-year period.

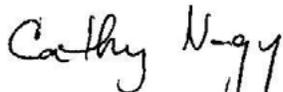
Based on the actuarial valuations, MERS' staff prepared various supporting schedules in the Comprehensive Annual Financial Report:

To the best of our knowledge, the actuarial valuations are complete and accurate and are made in accordance with generally recognized actuarial methods, in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS plan document, as revised. All of the undersigned are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The actuarial assumptions used in the December 31, 2014 annual actuarial valuation reports produce results that we believe are reasonable.

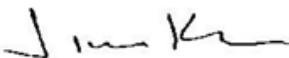
Respectfully submitted,



Alan E. Sonnanstine, MAAA, ASA



Cathy Nagy, MAAA, FSA



W. James Koss, MAAA, ASA

CBIZ Retirement Plan Services is a trade name under which certain subsidiaries of CBIZ, Inc. market investment advisory, third party administration, actuarial and other corporate retirement plan services.

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

An actuarial valuation is the mathematical process that estimates plan liabilities and employer contribution requirements for the purpose of financing the Retirement System. This process is repeated annually to update the liabilities and contribution requirements for changes in member census and plan features, and to reflect actual plan experience in the process. The valuation reflects the current language of the Municipal Employees' Retirement Act of 1984, as last amended by Public Act 490 of 2004, embodied in the MERS Plan Document (as revised).

In addition to using current membership and financial data, an actuarial valuation requires the use of a series of assumptions regarding uncertain future events. The assumptions and methods used in the December 31, 2014, actuarial valuations are those adopted by the MERS Retirement Board (Board). The actuarial assumptions are unchanged from those used in the December 31, 2013 valuations. The most recent experience study for the System was completed in March 2010, and covered the period from January 1, 2004, through December 31, 2008. During 2015, MERS Retirement Board conducted an actuarial experience study covering the period from January 1, 2009, through December 31, 2014. New assumptions were adopted for future annual valuation reports.

There have been no changes in the funding method that was adopted by the Board commencing with the December 31, 1993, valuations. The basic funding method is entry age normal, and employer contribution amounts are developed as a level percentage of payroll.

Valuation assets (cash and investments) were valued for each municipality using a 10-year smoothing method. For the 2006 valuation and later, 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) that is spread over 10 years. (Board adopted in 2006.)

The employer contribution rate has been determined for each municipality based on the entry age normal funding method (adopted 1994). Under the entry age normal cost funding method, the total employer contribution is comprised of the normal cost plus the amortization payment required to fund the unfunded actuarial accrued liability over a period of years. For open divisions (new hires are included in the division) the amortization period is 24 years. The 24 year period will decline by one each year until the unfunded accrued liability is paid off. For closed divisions (new hires are not covered by the MERS Defined Benefit Plan or Hybrid provisions in a linked division) of active municipalities electing Option A, the amortization period is decreased annually by two years until the period reaches six or five years, thereafter it decreases by one each year until the unfunded liability is paid off. For closed divisions of active municipalities electing Option B, the amortization period is decreased annual by two years until the period reaches 16 or 15 years, after which the amortization period is decreased annually by one year until the unfunded accrued liability is paid off. Negative unfunded accrued liabilities are amortized over 10 years. As of December 31, 2014, there were 1,188 closed divisions.

The total normal cost is, for each active member, the level percentage of payroll contribution (from entry age to retirement) required to accumulate sufficient assets at the member's retirement to pay for his or her projected benefit. The employer normal cost is the total normal cost reduced by the member contribution rate. Closed municipalities (no longer actively participating in MERS) are covered by special funding. Employer's computed normal cost of benefits expressed as a percentage of valuation payroll is 7.00% and the total contribution rate expressed as a percentage of valuation payroll is 22.50%.

For employers that adopt E-1 or E-2 post-retirement benefit increases, retirement benefits are assumed to increase by an annual, non-compounded rate of 2.5%. (Board adopted in 1981.)

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There have been no recent changes that have had an impact on the System. Municipalities have the ability to modify provisions that apply to their individual plan. The individual municipality contribution rates are modified to account for changes in provisions of the plan selected by the municipality.

MERS' staff has provided the data about persons currently covered and present assets. Although examined for general reasonableness, the actuary has not audited the data. The actuarial valuation

computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA). The Board adopted the assumptions used in the actuarial valuations after consulting with the actuary. Details on MERS' provisions, actuarial assumptions, and actuarial methodology follow this section.

Note: the Annual Actuarial Valuation addresses assets and liabilities for participation under the MERS Defined Benefit Plan, including the defined benefit portion (Part I) of the Hybrid Plan. The defined contribution portion of the Hybrid Plan (Part II) is not addressed in the valuation results as it is not a defined benefit program.

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## ASSUMPTIONS AND METHOD CHANGES

The December 31, 2014, actuarial valuation reflects no changes to the actuarial assumptions.

### Actuarial Assumptions

To calculate MERS' contribution requirements, assumptions are made about future events that could affect the amount and timing of benefits to be paid, and the assets to be accumulated. The economic and demographic assumptions include:

- An assumed rate of investment return used to discount liabilities and project what plan assets will earn.
- A mortality table projecting the number of members who will die before retirement, and the duration of benefit payments after retirement.
- Assumed retirement rates projecting when members will retire and commence receiving retirement benefits.
- A set of withdrawal and disability rates to estimate the number of members who will leave the workforce before retirement.
- Assumed rate of pay increases to project member compensation in future years.

### Interest Rate

Funding plan benefits involves the accumulation of assets to pay benefits in the future. These assets are invested, and the net rate of investment earnings is a

significant factor when determining the contributions required to support the ultimate cost of benefits. For the 2014 actuarial valuation, the long-term investment yield, net of administrative and investment expenses, is assumed to be 8%. This assumption was first used for the December 31, 1981, actuarial valuation.

The reader should note that, given that the actuarial value of assets is currently 6% higher than the market value, meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 8% investment return assumption.

### Pay Increases

Because benefits are based on a member's final average compensation (FAC), it is necessary to make an assumption with respect to each member's estimated pay progression. The pay increase assumption used in the actuarial valuation projects annual pay increases of 4.5% in the long term (2% and 3% for calendar years 2015 and 2016, respectively) plus a percentage based on an age-related scale to reflect merit, longevity and promotional pay increases.

The pay increase assumption for sample ages is shown below. The 4.5% long-term wage inflation assumption was first used for the December 31, 1997, actuarial valuation. The merit and longevity pay increase assumption was first used for the December 31, 2011, actuarial valuation.

### Annual Percentage Increase in Salary

Sample Ages	Base Inflation*	Merit and Longevity	Total Percentage Increase in Salary
20	4.50%	13.00%	17.50%
25	4.50%	6.80%	11.30%
30	4.50%	3.26%	7.76%
35	4.50%	2.05%	6.55%
40	4.50%	1.30%	5.80%
45	4.50%	0.81%	5.31%
50	4.50%	0.52%	5.02%
55	4.50%	0.30%	4.80%
60	4.50%	0.00%	4.50%

\* For calendar years 2015 and 2016, the wage inflation assumption is 2% and 3%, respectively, instead of 4.5%. The 4.5% assumption was first used for the December 31, 2012, actuarial valuations.

### Inflation

Although no specific price inflation assumption is needed for this valuation, the 4.5% long-term wage inflation assumption would be consistent with a price inflation of 3% – 4%.

### Payroll Growth

For divisions that are open to new hires, the number of active members is projected to remain constant, and the total payroll is projected to increase 4.5% annually in the long term (2% and 3% annually for calendar years 2015 and 2016, respectively). The 4.5% assumption was first used for the December 31, 1997, actuarial valuations.

### Increase in Final Average Compensation

The 1999-2003 and 2004-2008 experience studies determined that for some retirees of some municipalities, the actual final average compensation (FAC) at retirement was larger than would be expected based on reported annual pays and FACs for the years just before retirement. Some possible sources for the differences are:

- Lump sum payments for unused paid time off. Unused sick leave payouts have been excluded from FAC since the mid 1970s. However, since that time it has become popular to combine sick and vacation time into paid time off, which is included in the FAC. Consequently, the lump sums that are includible in FAC have grown over the years.

- Extra overtime pay during the final year of employment. Our studies only reflect any increase in overtime during the final year, not any increase that occurs during the full three or more year averaging period.

The amount of unexpected FAC increase varies quite a bit between municipalities. Some municipalities show no sign of FAC loading, while other municipalities show increases above the average increase. This is presumably the result of different personnel policies among municipalities.

The Board adopted new FAC assumptions to be first used for the December 31, 2011, annual actuarial valuations. These assumptions reflect an FAC load of 0% to 8% for each municipality, based on the municipality's experience. The FAC increase assumption(s) for each municipality are shown in individual annual actuarial valuation reports. Note that for divisions that adopted Sick Leave in FAC (SLIF), the assumption is developed individually for each division based on the specific SLIF provision and/or past experience.

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### Withdrawal Rates

The withdrawal rates are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of withdrawal applied in the current valuation are based on years of service and scaled up or down according to each division's experience.

Sample rates of withdrawal from active employment, prior to the scaling factor, are shown below. These rates were first used for the December 31, 2008, actuarial valuations.

The base withdrawal rates (see the table below) are multiplied by a scaling factor to obtain the assumed withdrawal rates. The scaling factor for each division is shown in each municipality's annual actuarial report.

### Rates of Withdrawal (Excluding Death or Disability) from Active Employment Before Retirement

Sample Years of Service	% of Active Members Withdrawing Within the Next Year
0	20.0%
1	17.0%
2	14.0%
3	11.0%
4	9.0%
5	6.5%
10	5.0%
15	3.7%
20	3.0%
25	2.7%
30	2.6%
34 and Over	2.4%

## Retirement Rates

A schedule of retirement rates is used to measure the probability of eligible members retiring during the next year. The retirement rates for Normal Retirement are determined by each member's replacement index at the time of retirement. The replacement index is defined as the approximate percentage of the member's pay (after reducing member contributions) that will be replaced by the member's benefit at retirement. The index is calculated as:

$$\text{Replacement Index} = 100 \text{ multiplied by } \frac{\text{Accrued Benefit}}{\text{Pay} - \text{Member Contributions}}.$$

Retirement rates for early reduced retirement are determined by the member's age at early retirement.

The revised normal retirement rates below were first used for the December 31, 2009, actuarial valuations. The early retirement rates were first used for the December 31, 2011, actuarial valuations.

### Normal Retirement – Service Based Benefit F(N) Adopted

Sample Replacement Index	Percent of Eligible Active Members Retiring Within the Next Year
5	5%
10	11%
15	16%
20	19%
25	20%
30	20%
35	20%
40	20%
45	20%
50	20%
55	21%
60	22%
65	24%
70	24%
75	28%
80	32%
85	38%
90	45%
95	48%
100+	50%

### Normal Retirement Early Retirement – Reduced Benefit

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
50	1.60%
51	1.60%
52	2.30%
53	3.30%
54	4.50%
55	3.50%
56	3.25%
57	3.00%
58	4.50%
59	5.75%

*Municipalities that have adopted a non-standard benefit multiplier after December 31, 1996, that is in excess of the B-4, 2.5% multiplier, will have a retirement rate equal to 75% at the first age at which unreduced plan benefits are available.*

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### Disability Rates

Disability rates are used in the valuation to estimate the incidence of member disability in future years. The assumed rates of disablement at various ages are shown below. These rates were first used for the December 31, 2011, actuarial valuations.

*\* 85% of the disabilities are assumed to be non-duty, and 15% of the disabilities are assumed to be duty related. For those plans that have adopted disability provision D-2, 55% of the disabilities are assumed to be non-duty, and 45% are assumed to be duty related*

### Rates of Withdrawal Due To Disability\*

Sample Ages	Percent of Active Members Becoming Disabled Within Next Year
20	0.02%
25	0.02%
30	0.02%
35	0.06%
40	0.06%
45	0.11%
50	0.24%
55	0.60%
60	0.60%
65	0.60%

### Mortality Tables

In estimating the amount of reserves required at retirement to pay a member's benefit for the remainder of their lifetime, it is necessary to make an assumption with respect to the probability of surviving to retirement, and the life expectancy after retirement.

The mortality table used to project the mortality experience of plan members is a 50% male/50% female blend of the 1994 Group Annuity Mortality Table. For disabled retirees, the regular mortality table is used with a 10-year set forward in ages to reflect the higher expected mortality rates of disabled

members. These mortality tables were first used for the December 31, 2004, actuarial valuations.

It is assumed that 90% of active members' deaths are non-duty and 10% of deaths are assumed to be duty related.

Possible future mortality improvements are reflected in the mortality assumption. The results of the 2004-2008 Experience Study showed that retirees were not living as long as projected by the current mortality table. Actual deaths during the period exceeded expected deaths by 12%.

### Mortality Tables (Non – Disabled)

Age	Expected Years of Life Remaining	Mortality Rates
20	61.55	0.04%
25	56.68	0.05%
30	51.82	0.06%
35	46.97	0.07%
40	42.13	0.09%
45	37.34	0.13%
50	32.60	0.20%
55	27.98	0.34%
60	23.53	0.62%
65	19.40	1.16%
70	15.66	1.87%
75	12.24	2.99%
80	9.25	5.07%

### Mortality Tables (Disabled)

Age	Expected Years of Life Remaining	Mortality Rates
20	51.82	0.06%
25	46.97	0.07%
30	42.13	0.09%
35	37.34	0.13%
40	32.60	0.20%
45	27.98	0.34%
50	23.53	0.62%
55	19.40	1.16%
60	15.66	1.87%
65	12.24	2.99%
70	9.25	5.07%
75	6.81	8.25%
80	4.85	13.46%

**Schedule of Active Member Valuation Data**

Valuation December 31	Participating Municipalities	Active Members	Active Members Annual Payroll	Annual Average Pay	Percent Increase in Average Pay	Persons on Deferred Status
2005	644	36,467	\$ 1,462,411,810	\$ 40,102	2.6%	6,126
2006	668	36,846	1,545,886,480	41,955	4.6%	6,235
2007	683	36,518	1,581,597,937	43,310	3.2%	6,438
2008	692	36,092	1,624,855,145	45,020	3.9%	6,662
2009	699	35,598	1,636,501,282	45,972	2.1%	6,726
2010	715	35,816	1,683,983,258	47,018	2.3%	6,961
2011	721	35,111	1,669,676,476	47,554	1.1%	7,160
2012	726	34,187	1,640,390,877	47,983	0.9%	7,262
2013	728	34,809	1,687,391,045	48,476	1.0%	7,620
2014	728	35,302	1,743,799,124	49,397	1.9%	7,960

**Schedule of Retirees and Beneficiaries Added to and Removed from Rolls**

Valuation December 31	Added to Rolls		Removed from Rolls	
	Retirees/Beneficiaries Number	Annual Allowance	Retirees/Beneficiaries Number	Annual Allowance
2005	1,666	\$ 32,839,907	782	\$ 7,000,257
2006	2,071	38,752,141	762	4,291,133
2007	2,030	36,947,384	894	5,928,199
2008	2,015	43,573,642	783	5,156,426
2009	1,871	36,164,024	773	4,545,379
2010	2,809	67,149,443	809	9,250,641
2011	2,212	50,594,419	940	11,072,125
2012	2,348	53,957,105	811	9,477,177
2013	3,578	73,762,997	857	11,138,379
2014	4,242	107,064,445	948	12,090,122

Valuation December 31	End-of-Year Rolls			
	Retirees/Beneficiaries Number	Annual Allowance	% Increase in Annual Allowance	Average Annual Allowance
2005	20,155	\$ 288,061,637	9.9%	\$ 14,292
2006	21,464	322,522,645	12.0%	15,026
2007	22,600	353,541,830	9.6%	15,643
2008	23,832	391,959,046	10.9%	16,447
2009	24,930	423,577,691	8.1%	16,991
2010	26,930	481,476,493	13.7%	17,879
2011	28,202	520,998,787	8.2%	18,474
2012	29,739	565,478,715	8.5%	19,015
2013	32,460	628,103,333	11.1%	19,350
2014	35,754	723,077,656	15.1%	20,224

## SUMMARY OF PLAN DOCUMENT PROVISIONS

There were no recent changes in the nature of the Plan that would have a material impact on the actuarial valuations for December 31, 2014. Pursuant to a collective bargaining agreement, a participating municipality may provide for retirement benefits that are modifications of standard retirement benefits otherwise included, although the Hybrid Plan is not modifiable. The actuary took the known modifications into consideration when determining the municipality contribution rates in the December 31, 2014, actuarial valuation.

The benefits summarized in this section are intended only as general information regarding the Municipal Employees' Retirement System. The Comprehensive Annual Financial Report and valuation are not a substitute for the language of the MERS Act and the MERS Plan Document, as revised. If any conflict occurs between the information in this summary and the MERS Act or the MERS Plan Document, as revised, the provision of the Act and the MERS Plan Document govern.

The December 31, 2014, actuarial valuation was based on the provisions of the MERS Plan Document.

### Defined Benefit Plan

#### ***Eligibility for Retirement***

Monthly retirement payments are made over the lifetime of the retiree and/or over the lifetime of the beneficiary. Payments are based on the choice of benefits adopted by each municipality, and the final payment option elected by the retiring member.

Vesting occurs after 10 years of credited service unless the municipality selects a lesser number of years.

Normal retirement for a member occurs after vesting and attaining age 60. The municipality may choose other combinations of age and service such as age 55 and 15 years of service, age 50 and 25 years of service, etc.

Early retirement benefits are available if the vested member meets either the age 55 with 15 years of service or age 50 with 25 years of service eligibility requirements. The monthly payment is reduced (unless waived by the municipality) for each month the member is younger than the age the unreduced retirement benefits are available.

#### ***Benefit Formula***

The annual benefit equals a specified percentage of the member's final average compensation, multiplied by the number of years and months of credited

service. The plan has several benefit multipliers available. The benefit multipliers vary and are adopted by a participating municipality.

#### ***Mandatory Retirement***

There is no mandatory retirement age.

#### ***Deferred Retirement***

Deferred retirement occurs when an employee leaves MERS covered employment after vesting, but before reaching the minimum retirement age. The member or beneficiary will become eligible for the deferred allowance once they reach the minimum retirement age. However, the member's contributions must remain on deposit with MERS.

#### ***Maximum Benefit Payable by MERS***

The maximum benefit that may be paid by MERS is governed by Section 415 of the Internal Revenue Code. Benefits in excess of the maximum benefit will be paid by the MERS Excess Benefit Plan under Plan Section 55A.

#### ***Act 88 (Reciprocal Retirement Act)***

If a municipality elects to come under the provision of Act 88, service with former and future public employers in Michigan may be used to satisfy the service eligibility conditions of MERS.

### ***Final Average Compensation***

Final average compensation (FAC) is the highest monthly average of a member's compensation over a consecutive period of months of credited service. The municipality selects the number of months. A FAC-3 is over a 36-month period, and a FAC-5 is over a 60-month period. The compensation used in calculating the final average compensation cannot exceed the limit set by Internal Revenue Code Section 401(a)(17).

### ***Disability Retirement Allowance – Duty or Non-Duty***

Duty disability is available to a member who becomes totally and permanently disabled while employed by a participating municipality, and after meeting the vesting requirement of the benefit program. The service requirement is waived if the disability is the natural and proximate result of duty-related causes.

The allowance is computed in the same manner as a service retirement allowance, except that the reduction for retirement before age 60 is not applied.

If disability is due to duty-connected causes, the amount of the retirement allowance shall not be less than 25% of the member's final average compensation.

### ***Death Allowance – Duty or Non-Duty***

If a member or vested former member with the minimum years of service required to be vested dies before retirement, a monthly survivor allowance may be made payable. If the member is married, the spouse is the automatic beneficiary unless the spouse, in writing, declines a benefit in favor of another named beneficiary.

A contingent survivor beneficiary will receive a retirement allowance computed in the same manner as a service retirement allowance, based on service and final average compensation at death, but reduced to reflect an Option II election. The reduction for retirement before age 60 is not applied. Payment to the contingent survivor beneficiary of a deceased member commences immediately. Payment to the contingent survivor beneficiary of a deceased vested former member commences on the date the member would have first satisfied eligibility for retirement with an unreduced service retirement allowance.

If there is no named beneficiary and the member leaves a spouse, the spouse will receive an Option II survivor allowance. The amount shall be 85% of the deceased member's or the deceased former vested member's accrued retirement allowance computed in the same manner as a service retirement allowance, based on service and final average compensation at the time of death. Payment to the surviving spouse of a deceased member commences immediately. Payment to the contingent surviving spouse of a deceased former vested member commences on the date the member would have first satisfied eligibility for retirement with an unreduced service retirement allowance. The amount of a surviving spouse's benefit is always the larger of (1) the benefit computed as a contingent survivor beneficiary, and (2) the 85% of accrued retirement allowance benefit described above. If there is no named beneficiary and no retirement allowance being paid to a surviving spouse, unmarried children under 21 will be paid an equal share of 50% of the deceased member's or the deceased former vested member's accrued retirement allowance. The reduction for retirement before age 60 is not applied.

If no retirement benefits are payable on death, the beneficiary or the decedent's estate would receive a refund of the employee's contributions.

A duty death allowance, computed in the same manner as a non-duty death allowance, may be payable to a spouse or child(ren) if death occurs as the natural and proximate result of performance of duty with a participating municipality. The vesting requirement is waived, and the minimum benefit is 25% of the deceased member's final average compensation.

### ***Member Contributions***

Each member may contribute a percentage of their annual compensation, if selected by the municipality, up to the compensation limit under Section 401(a)(17) of the Internal Revenue Code. The weighted average of member contributions in 2014 was 4.30%. Interest is credited to accumulated member contributions each December 31 at a rate determined by MERS. Currently MERS is using the one-year U.S. Treasury bill rate determined as of December 31.

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If a member leaves the municipality, or dies without a retirement allowance or other benefit payable on their account, the member's accumulated contributions plus interest are refunded with spousal consent to the member, if living, or to the member's surviving spouse or a named beneficiary.

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

Each municipality may elect to provide post-retirement adjustments to retirees and their beneficiaries. The municipality can choose a one-time adjustment, an annual adjustment for all retirees or, an adjustment for future retirees only. This cost-of-living adjustment (COLA) increase is effective in January of each year.

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

The member elects a payment option as part of the retirement application process. Once the election is made, the selection is irrevocable after receipt of first payment. The payment options include:

1. Straight Life over the retiree's life only.
2. A reduced benefit to cover retiree and beneficiary as long as either lives.
3. A reduced benefit to cover retiree for their lifetime and further reduced to 75% or 50% of the original reduced amount to cover beneficiary (if the beneficiary outlives the retiree).
4. A reduced benefit for the retiree's life guaranteed for a specified number of years. The reduced benefit continues for the beneficiary even if the retiree dies, but terminates after the guaranteed number of years.

### ***Deferred Retirement Option Program (DROP+) Partial Lump Sum***

Any member (covered or not covered by the Benefit Program DROP+) who is eligible to retire with full, immediate retirement benefits, has the option to retire and receive a monthly benefit payable immediately, or delay the retirement date and continue to work.

If a member is covered by the Benefit Program DROP+ and retires at least 12 months after first becoming eligible for unreduced benefits, they have the option to receive a partial lump sum and a reduced monthly benefit:

- The member can elect a lump sum equal to 12, 24, 36, 48, or 60 times their monthly accrued benefit.
- For each 12 months included in the lump sum, the member's lifetime benefit is reduced by the DROP+ percentage adopted by the employer. The employer can adopt any of the following DROP+ reduction percentages: 4, 5, 6, 7, or 8%.

As of June 30, 2013, Benefit Program DROP+ may no longer be adopted. Two employers adopted this benefit prior to it ending.

## HYBRID PLAN

### Part I - Defined Benefit Portion of Hybrid Plan

#### **Eligibility for Retirement**

Monthly retirement payments are made over the lifetime of the retiree and/or over the lifetime of the beneficiary. Payments are based on the choice of benefits adopted by each municipality, and the final payment option elected by the retiring member.

Vesting occurs after six years of credited service.

Normal retirement for a member occurs after vesting and reaching age 60. (There is not a mandatory or early retirement provision.)

#### **Benefit Formula**

The annual benefit equals a specified percentage of the member's final average compensation multiplied by the number of years and months of credited service. Percentage options are 1.0, 1.25, and 1.5%, and may be selected by a participating municipality.

#### **Mandatory Retirement**

There is no mandatory retirement age.

#### **Deferred Retirement**

Deferred retirement occurs when an employee leaves MERS covered employment after vesting, but before reaching the minimum retirement age. The member or beneficiary will become eligible for the deferred allowance once they reach the minimum retirement age. However, the member's contributions must remain on deposit with MERS.

#### **Maximum Benefit Payable by MERS**

Section 415 of the Internal Revenue Code governs the maximum benefit that may be paid by MERS. Benefits in excess of the maximum benefit will be paid by the MERS Excess Benefit Plan.

#### **Act 88 (Reciprocal Retirement Act)**

If the municipality has elected to come under the provision of Act 88, service with former and future public employers in Michigan may be used to satisfy the service eligibility conditions of MERS.

#### **Final Average Compensation**

Final average compensation (FAC) is computed using the FAC-3 under the Defined Benefit Plan. The compensation used in calculating final average compensation cannot exceed the limit set by Internal Revenue Code Section 401(a)(17).

#### **Disability Benefit – Duty or Non-Duty**

Benefits are the same as are provided in the Defined Benefit Plan, except that optional benefit program D-2 does not apply.

#### **Death Allowance – Duty or Non-Duty**

Benefits are the same as are provided in the Defined Benefit Plan, except that the optional benefit program D-2 does not apply.

#### **Member Contributions**

Each member may contribute a percentage of their annual compensation, if it required to comply with a state statute that places restrictions on employee contributions to retirement plans, up to the compensation limit under Section 401(a)(17) of the Internal Revenue Code. Interest is credited to accumulated member contributions each December 31 at a rate determined by MERS. Currently MERS is using the one-year U.S. Treasury bill rate determined as of December 31.

If a member leaves the municipality, or dies without a retirement allowance or other benefit payable on their account, the member's accumulated contributions plus interest are refunded with spousal consent to the member, if living, or to the member's surviving spouse or a named beneficiary.

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

There are no post-retirement adjustments within the Hybrid Plan.

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

The member elects a payment option as part of the retirement application process. Once the election is made, the selection is irrevocable after receipt of the first payment. The payment options include:

1. Straight Life over the retiree's life only.
2. A reduced benefit to cover retiree and beneficiary as long as either lives.
3. A reduced benefit to cover retiree for their lifetime, and further reduced to 75% or 50% of the original reduced amount to cover beneficiary (if the beneficiary outlives the retiree).
4. A reduced benefit for the retiree's life guaranteed for a specified number of years. The reduced benefit continues for the beneficiary even if the retiree dies, but terminates after the guaranteed number of years.

### ***Deferred Retirement Option Program (DROP+) Partial Lump Sum***

There is no DROP+ option in the Hybrid Plan.

## Part II - Defined Contribution of Hybrid Plan

### ***Contributions — Employer***

Any percentage of compensation that is allowed by federal law.

There are three optional vesting schedules for an employer to adopt:

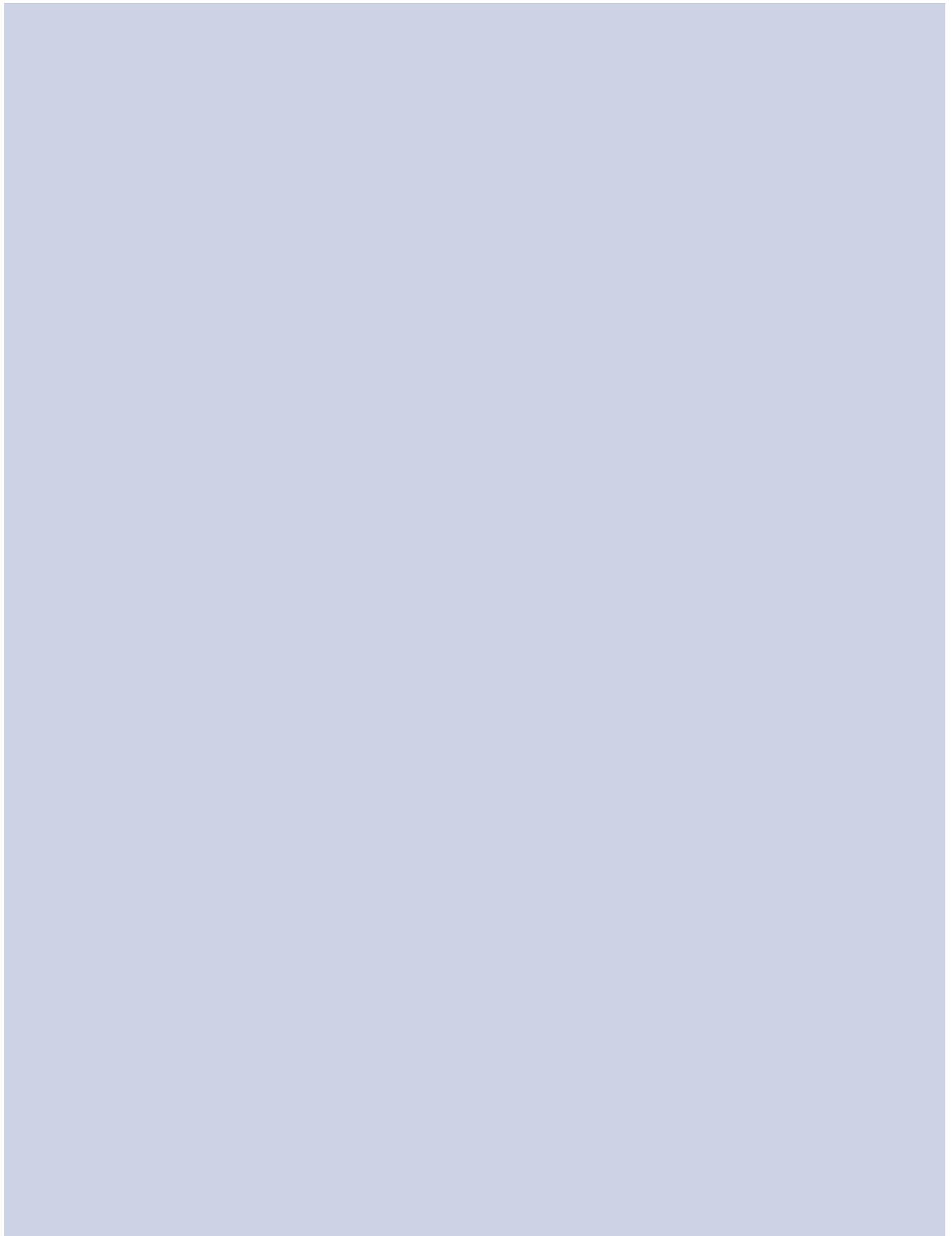
- Immediate vesting upon participation,
- 100% vesting after stated years (the maximum vesting period is five years), or
- Graded vesting percentages per year of service (must be 100% vested after six years).

### ***Contributions — Member***

Any percentage of compensation that is allowed by federal law and subject to procedures established by the Retirement Board. Member contributions are vested immediately.

The background of the page is a vibrant green color with a complex geometric pattern. It consists of numerous overlapping triangles and quadrilaterals in various shades of green, creating a mosaic effect. On the right side, there are several thin, white, parallel lines that intersect to form a grid-like pattern, adding a sense of depth and structure to the design.

SECTION 5  
**STATISTICAL**



## STATISTICAL SECTION

The Statistical Section provides pertinent information to assist readers when viewing the Financial Statements, Notes to the Financial Statements, and Required Supplementary Information to help in understanding and assessing the System's overall financial condition. The information reported here is in compliance with GASB Statement No. 44, Economic Condition Reporting: The Statistical Section. This statement establishes standardized reporting requirements for the supplementary information provided in this section.

The schedules and graphs beginning on the next page show financial trend information about the growth of MERS assets for the past 10 years. These schedules provide detailed information about the trends of key sources of additions and deductions to the System's assets, and assist in providing a context framing of how MERS' financial position has changed over time. The financial trend schedules presented are:

- Changes in Fiduciary Net Position – Last 10 Years and
- Schedule of Changes in Reserves

The next schedules show demographic, economic, operating, and trend information about the MERS environment.

- Schedule of Average Benefit Payments
- Schedule of Benefit Expenses by Type
- Schedule of Retired Members by Type of Benefit
- Schedule of Retired Members by Type of Option Selected
- Defined Contribution Plan Participants and total MERS Participants

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**Changes in Fiduciary Net Position – Last 10 Years Ended December 31, 2015 (Dollars in Thousands)**

Year	2006	2007	2008	2009
<b>DEFINED BENEFIT PLAN</b>				
<b>Additions:</b>				
Plan Member Contributions	\$ 84,124	\$ 61,772	\$ 64,871	\$ 62,677
Employer Contributions	286,228	320,204	310,717	350,737
Net Investment Gain (Loss)	634,950	456,280	(1,533,327)	789,800
<b>Total Additions to Plan Net Assets</b>	<b>1,005,302</b>	<b>838,256</b>	<b>(1,157,739)</b>	<b>1,203,214</b>
<b>Deductions:</b>				
Benefits and Employee Refunds	309,635	347,470	379,401	419,576
Administrative Expenses	12,540	13,904	16,365	18,793
Special Expenses & Fees	526	588	571	461
<b>Total Deductions from Plan Net Assets</b>	<b>322,701</b>	<b>361,962</b>	<b>396,337</b>	<b>438,830</b>
Net Increase (Decrease)	682,601	476,294	(1,554,076)	764,384
<b>Net Assets Held in Trust</b>				
Balance Beginning of Fiscal Period	4,907,442	5,590,043	6,066,337	4,512,261
<b>Balance End of Fiscal Period</b>	<b>\$ 5,590,043</b>	<b>\$ 6,066,337</b>	<b>\$ 4,512,261</b>	<b>\$ 5,276,645</b>
<b>DEFINED CONTRIBUTIONS</b>				
<b>Additions:</b>				
Plan Member Contributions	\$ 5,632	\$ 6,995	\$ 6,978	\$ 8,086
Employer Contributions	24,765	19,816	20,147	21,994
Net Investment Gain (Loss)	19,196	13,411	(61,679)	39,951
<b>Total Additions to Plan Net Assets</b>	<b>49,593</b>	<b>40,222</b>	<b>(34,554)</b>	<b>70,031</b>
<b>Deductions:</b>				
Benefits and Withdrawals	10,591	12,764	12,406	8,868
Administrative Expenses				
<b>Total Deductions from Plan Net Assets</b>	<b>10,591</b>	<b>12,764</b>	<b>12,406</b>	<b>8,868</b>
Net Increase (Decrease)	39,002	27,458	(46,960)	61,163
<b>Net Assets Held in Trust</b>				
Balance Beginning of Fiscal Period	164,113	203,115	230,573	183,613
<b>Balance End of Fiscal Period</b>	<b>\$ 203,115</b>	<b>\$ 230,573</b>	<b>\$ 183,613</b>	<b>\$ 244,776</b>
<b>HEALTH CARE SAVINGS PROGRAM</b>				
<b>Additions:</b>				
Employer Contributions	\$ 2,301	\$ 2,927	\$ 10,127	\$ 16,964
Net Investment Gain (Loss)	753	719	(4,604)	2,978
Miscellaneous Income	92	96	162	263
<b>Total Additions to Plan Net Assets</b>	<b>3,146</b>	<b>3,742</b>	<b>5,685</b>	<b>20,205</b>
<b>Deductions:</b>				
Medical Disbursements Paid	145	328	462	512
Forfeitures and transfers	104	118	212	322
Administrative Expenses	197	244	360	159
<b>Total Deductions from Plan Net Assets</b>	<b>446</b>	<b>690</b>	<b>1,034</b>	<b>993</b>
Net Increase (Decrease)	2,700	3,052	4,651	19,212
<b>Net Assets Held in Trust</b>				
Balance Beginning of Fiscal Period	4,066	6,766	9,818	14,469
<b>Balance End of Fiscal Period</b>	<b>\$ 6,766</b>	<b>\$ 9,818</b>	<b>\$ 14,469</b>	<b>\$ 33,681</b>

	2010	2011	2012	2013	2014	2015
\$	83,573	\$ 64,790	\$ 73,133	\$ 88,410	\$ 102,446	\$ 86,553
	341,354	298,328	783,292	409,563	523,372	635,581
	754,011	130,115	668,303	988,639	501,254	(140,903)
	<b>1,178,938</b>	<b>493,233</b>	<b>1,524,728</b>	<b>1,486,612</b>	<b>1,127,072</b>	<b>581,231</b>
	461,204	505,854	565,695	662,708	707,268	754,978
	20,951	22,070	24,412	20,271	17,804	17,665
	389	444	71	71	18	
	<b>482,544</b>	<b>528,368</b>	<b>590,178</b>	<b>683,050</b>	<b>725,090</b>	<b>772,643</b>
	696,394	(35,135)	934,550	803,562	401,982	(191,412)
	5,276,645	5,973,039	5,937,904	6,872,454	7,676,016	8,077,998
<b>\$</b>	<b>5,973,039</b>	<b>\$ 5,937,904</b>	<b>\$ 6,872,454</b>	<b>\$ 7,676,016</b>	<b>\$ 8,077,998</b>	<b>\$ 7,886,586</b>
\$	8,694	\$ 10,376	\$ 1,997	\$ 20,370	\$ 20,805	\$ 23,496
	26,374	22,079	40,103	42,706	26,112	38,151
	28,971	1,862	38,552	63,614	25,208	(7,482)
	<b>64,039</b>	<b>34,317</b>	<b>80,652</b>	<b>126,690</b>	<b>72,125</b>	<b>54,165</b>
	10,902	19,901	18,532	26,021	63,304	34,797
		826	759	812	623	601
	<b>10,902</b>	<b>20,727</b>	<b>19,291</b>	<b>26,833</b>	<b>63,927</b>	<b>35,398</b>
	53,137	13,590	61,361	99,857	8,198	18,767
	244,776	297,913	311,503	372,864	472,721	480,919
<b>\$</b>	<b>297,913</b>	<b>\$ 311,503</b>	<b>\$ 372,864</b>	<b>\$ 472,721</b>	<b>\$ 480,919</b>	<b>\$ 499,686</b>
\$	11,651	\$ 7,307	\$ 10,742	\$ 12,164	\$ 11,649	\$ 20,275
	4,055	918	5,406	7,979	3,480	(1,779)
	377					
	<b>16,083</b>	<b>8,225</b>	<b>16,148</b>	<b>20,143</b>	<b>15,129</b>	<b>18,496</b>
	890	1,474	1,787	2,316	3,011	3,694
	458	16	300	723	469	355
	(439)	717	144	125	163	145
	<b>909</b>	<b>2,207</b>	<b>2,231</b>	<b>3,164</b>	<b>3,643</b>	<b>4,194</b>
	15,174	6,018	13,917	16,979	11,486	14,302
	33,681	48,855	54,873	68,790	85,769	97,255
<b>\$</b>	<b>48,855</b>	<b>\$ 54,873</b>	<b>\$ 68,790</b>	<b>\$ 85,769</b>	<b>\$ 97,255</b>	<b>\$ 111,557</b>

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**Changes in Fiduciary Net Position – Last 10 Years Ended December 31, 2015 (Dollars in Thousands)**

Year	2006	2007	2008	2009
<b>RETIREE HEALTH FUNDING VEHICLE</b>				
<b>Additions:</b>				
Employer Contributions	\$ 29,365	\$ 67,014	\$ 42,377	\$ 48,029
Net Investment Gain (Loss)	4,463	6,486	(32,642)	23,525
<b>Total Additions to Plan Net Assets</b>	<b>33,828</b>	<b>73,500</b>	<b>9,735</b>	<b>71,554</b>
<b>Deductions:</b>				
Disbursements Paid to Municipalities	1,109	5,827	3,857	6,088
Transfers and Special Expenses	89	332	487	623
Administrative Expenses	136	185	319	54
<b>Total Deductions from Plan Net Assets</b>	<b>1,334</b>	<b>6,344</b>	<b>4,663</b>	<b>6,765</b>
Net Increase (Decrease)	32,494	67,156	5,072	64,789
<b>Net Assets Held in Trust</b>				
Balance Beginning of Fiscal Period	13,693	46,187	113,343	118,415
Balance End of Fiscal Period	\$ 46,187	\$ 113,343	\$ 118,415	\$ 183,204
<b>INVESTMENT SERVICES PROGRAM</b>				
<b>Additions:</b>				
Employer Contributions	\$ 15,527	\$ 26,680	\$ 2,969	\$ 999
Net Investment Gain (Loss)	726	2,177	(11,607)	3,376
<b>Total Additions to Plan Net Assets</b>	<b>16,253</b>	<b>28,857</b>	<b>(8,638)</b>	<b>4,375</b>
<b>Deductions:</b>				
Disbursements and Transfers			750	33,593
Administrative Expenses	17	238	154	4
<b>Total Deductions from Plan Net Assets</b>	<b>17</b>	<b>238</b>	<b>904</b>	<b>33,597</b>
Net Increase (Decrease)	16,236	28,619	(9,542)	(29,222)
<b>Net Assets Held in Trust</b>				
Balance Beginning of Fiscal Period		16,236	44,855	35,313
Balance End of Fiscal Period	\$ 16,236	\$ 44,855	\$ 35,313	\$ 6,091
<b>457 PROGRAM</b>				
<b>Additions:</b>				
Employee Contributions				
Employer Contributions				
Net Investment Gain (Loss)				
<b>Total Additions to Plan Net Assets</b>				
<b>Deductions:</b>				
Benefits				
Administrative Expenses				
<b>Total Deductions from Plan Net Assets</b>				
Net Increase (Decrease)				
<b>Net Assets Held in Trust</b>				
<b>Balance Beginning of Fiscal Period</b>				
<b>Balance End of Fiscal Period</b>				

The Changes in Fiduciary Net Position over the last 10 years chart shows contributions being received from municipalities, investment gains/losses and disbursements to retirees/municipalities. Some products have been in existence for less than 10 years.

	2010	2011	2012	2013	2014	2015
	\$ 52,613	\$ 48,644	\$ 78,809	\$ 58,111	\$ 64,161	\$ 73,764
	29,278	6,820	36,770	59,826	32,947	(8,833)
	<b>81,891</b>	<b>55,464</b>	<b>115,579</b>	<b>117,937</b>	<b>97,108</b>	<b>64,931</b>
	5,564	9,074	13,071	14,341	9,556	22,002
	859			4		
	1,039	1,647	521	659	692	732
	<b>7,462</b>	<b>10,721</b>	<b>13,592</b>	<b>15,004</b>	<b>10,248</b>	<b>22,734</b>
	74,429	44,743	101,987	102,933	86,860	42,197
	183,204	257,633	302,376	404,363	507,296	594,156
	<b>\$ 257,633</b>	<b>\$ 302,376</b>	<b>\$ 404,363</b>	<b>\$ 507,296</b>	<b>\$ 594,156</b>	<b>\$ 636,353</b>
			\$ 700		\$ 74,660	\$ 19,721
	\$ 867	\$ 162	791	\$ 1,148	2,781	138
	<b>867</b>	<b>162</b>	<b>1,491</b>	<b>1,148</b>	<b>77,441</b>	<b>19,859</b>
			106	300	280	40,798
	250	28	11	10	81	82
	<b>250</b>	<b>28</b>	<b>117</b>	<b>310</b>	<b>361</b>	<b>40,880</b>
	617	134	1,374	838	77,080	(21,021)
	6,091	6,708	6,842	8,216	9,054	86,134
	<b>\$ 6,708</b>	<b>\$ 6,842</b>	<b>\$ 8,216</b>	<b>\$ 9,054</b>	<b>\$ 86,134</b>	<b>\$ 65,113</b>
			\$ 8,170	\$ 4,582	\$ 5,788	\$ 12,442
				77	132	
			163	1,558	786	(747)
			<b>8,333</b>	<b>6,217</b>	<b>6,706</b>	<b>11,695</b>
			21	584	1,230	1,066
			6	34	70	51
			<b>27</b>	<b>618</b>	<b>1,300</b>	<b>1,117</b>
			8,306	5,599	5,406	10,578
				<b>8,306</b>	<b>13,905</b>	<b>19,311</b>
			<b>\$ 8,306</b>	<b>\$ 13,905</b>	<b>\$ 19,311</b>	<b>\$ 29,889</b>

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**Schedule of Changes in Reserves – Year Ended December 31, 2015 (Dollars in Thousands)**

	Reserve for Employee Contributions	Reserve for Employer Contributions and Benefit Payments	Reserve for Expenses and Undistributed Investment Income	Total Reserve for Defined Benefit Plan
<b>Additions</b>				
Member Contributions	\$ 86,553			\$ 86,553
Employer Contributions		\$ 635,581		635,581
Net Investment Income			\$ (143,280)	(143,280)
Miscellaneous Income			2,380	2,380
<b>Total Additions</b>	<b>86,553</b>	<b>635,581</b>	<b>(140,900)</b>	<b>581,234</b>
<b>Deductions</b>				
Benefits and Withdrawals	7,976	747,002		754,978
Transfers, Forfeitures/ Misc		3		3
Administrative Expense			17,665	17,665
<b>Total Deductions</b>	<b>7,976</b>	<b>747,005</b>	<b>17,665</b>	<b>772,646</b>
<b>Net Increase (Decrease)</b>	<b>78,577</b>	<b>(111,424)</b>	<b>(158,565)</b>	<b>(191,412)</b>
Other Changes in Reserves				
Investment Income Allocations	4,600	(144,441)	139,841	
Retirement and Division Transfers	(53,268)	53,268		
<b>Total Other Changes in Reserves</b>	<b>(48,668)</b>	<b>(91,173)</b>	<b>139,841</b>	
<b>Net Increase in Reserves After Other Changes</b>	<b>29,909</b>	<b>(202,597)</b>	<b>(18,724)</b>	<b>(191,412)</b>
Reserve Balance Beginning of Year	763,749	7,298,198	16,051	8,077,998
<b>Reserve Balance End of Year</b>	<b>\$ 793,658</b>	<b>\$ 7,095,601</b>	<b>\$ (2,673)</b>	<b>\$ 7,886,586</b>

The Schedule of Changes in Reserves shows the balance in each of the reserves and changes to those reserves' balances over the year. The Employee Contributions, Employer Contributions and Reserve for Expenses and Undistributed Investment Income are components of the Defined Benefit Plan. A balance in the Reserve for Expenses and Undistributed Investment Income will be allocated at a future date.

Reserve for Defined	Reserve for Health Care Savings Program	Reserve for Retiree Health Funding Vehicle	Reserve for Investment Services Program	Reserve for 457 Program	Total Reserve for Pension Trust Funds
\$ 23,496				\$ 12,442	\$ 122,491
38,151	\$ 20,275	\$ 73,764	\$ 19,721		787,492
(7,482)	(1,780)	(8,833)	138	(747)	(159,336)
					2,380
54,165	18,495	64,931	19,859	11,695	753,027
34,797	3,694	22,002		1,066	816,537
	354		40,798		41,155
601	145	732	82	51	19,276
35,398	4,193	22,734	40,880	1,117	876,968
<b>18,767</b>	<b>14,302</b>	<b>42,197</b>	<b>(21,021)</b>	<b>10,578</b>	<b>(123,941)</b>
<b>18,767</b>	<b>14,302</b>	<b>42,197</b>	<b>(21,021)</b>	<b>10,578</b>	<b>(123,941)</b>
480,919	97,255	594,156	86,134	19,311	9,355,773
<b>\$ 499,686</b>	<b>\$ 111,557</b>	<b>\$ 636,353</b>	<b>\$ 65,113</b>	<b>\$ 29,889</b>	<b>\$ 9,231,832</b>

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**Schedule of Average Benefit Payments – Defined Benefit Plan**

Valuation Date December 31	Number of Retirees and Beneficiaries	Average Yearly Benefit
2005	20,155	\$ 14,292
2006	21,464	15,026
2007	22,600	15,643
2008	23,832	16,447
2009	24,930	16,991
2010	26,930	17,879
2011	28,202	18,474
2012	29,739	19,015
2013	32,460	19,350
2014	35,754	20,224

*The Schedule of Average Benefit Payments shows the historical record and trends of retirees and the benefits they are drawing.*

**Schedule of Benefit Payments by Type – Defined Benefit Plan (Dollars in Thousands)**

Fiscal Year Ended	Pension Benefits and Employer Withdrawals	Disability Benefits	Employee Refunds and Withdrawals	Total
December 31, 2006	\$ 293,138	\$ 11,035	\$ 4,711	\$ 308,884
December 31, 2007	326,666	12,791	5,058	344,515
December 31, 2008	355,626	16,729	5,580	377,935
December 31, 2009	391,613	18,254	9,510	419,377
December 31, 2010	433,778	19,415	7,006	460,199
December 31, 2011	476,993	20,812	7,915	505,720
December 31, 2012	535,900	21,284	8,052	565,236
December 31, 2013	631,906	20,913	9,889	662,708
December 31, 2014	670,032	27,959	9,277	707,268
December 31, 2015	715,638	31,364	7,976	754,978

*The Schedule of Benefit Expenses by Type shows the benefits paid as regular pension benefits, disability benefits and refunds for employees who have been terminated and requested refunds of their employee contributions.*

**Schedule of Retired Members by Type of Benefit – Defined Benefit Plan**

December 31, 2014, Tabulated by Optional Form of Benefit Being Paid, Tabulated by Type of Benefit Being Paid

Type of Benefit	Number of Retirees	Total Monthly Benefits
Normal Retirement for age and service	29,137	\$ 53,432,918
Non-Duty Disability	1,147	1,376,459
Duty Disability	472	634,119
Beneficiaries	4,162	3,946,088
Non-Duty Death	778	806,661
Duty Death	58	60,226
<b>Totals</b>	<b>35,754</b>	<b>\$ 60,256,471</b>

<sup>1</sup> At age 60, these benefit types are converted to normal retirement for age and service

<sup>2</sup> Includes EDRO alternate payees

**Schedule of Retired Members by Type of Option Selected – Defined Benefit Plan**

December 31, 2014, Tabulated by Optional Form of Benefit Being Paid

Type of Benefit	Number of Retirees	Total Monthly Benefits
Beneficiary draws 100% of retiree's benefit	10,945	\$ 19,388,757
Beneficiary draws 75% of retiree's benefit	2,217	5,319,293
Beneficiary draws 60% of retiree's benefit	113	304,650
Beneficiary draws 50% of retiree's benefit	5,403	10,696,866
Equated Option (changing at Social Security age)	473	443,464
5 year certain and life	304	456,251
10 year certain and life	808	1,494,175
15 year certain and life	202	301,294
20 year certain and life	392	545,859
Straight life allowance	14,897	21,305,862
<b>Totals</b>	<b>35,754</b>	<b>\$ 60,256,471</b>

The Schedule of Retired Members by Type of Benefit and by Type of Option Selected present distributions of retirees and beneficiaries on the rolls by the types of benefit being paid and option selected.

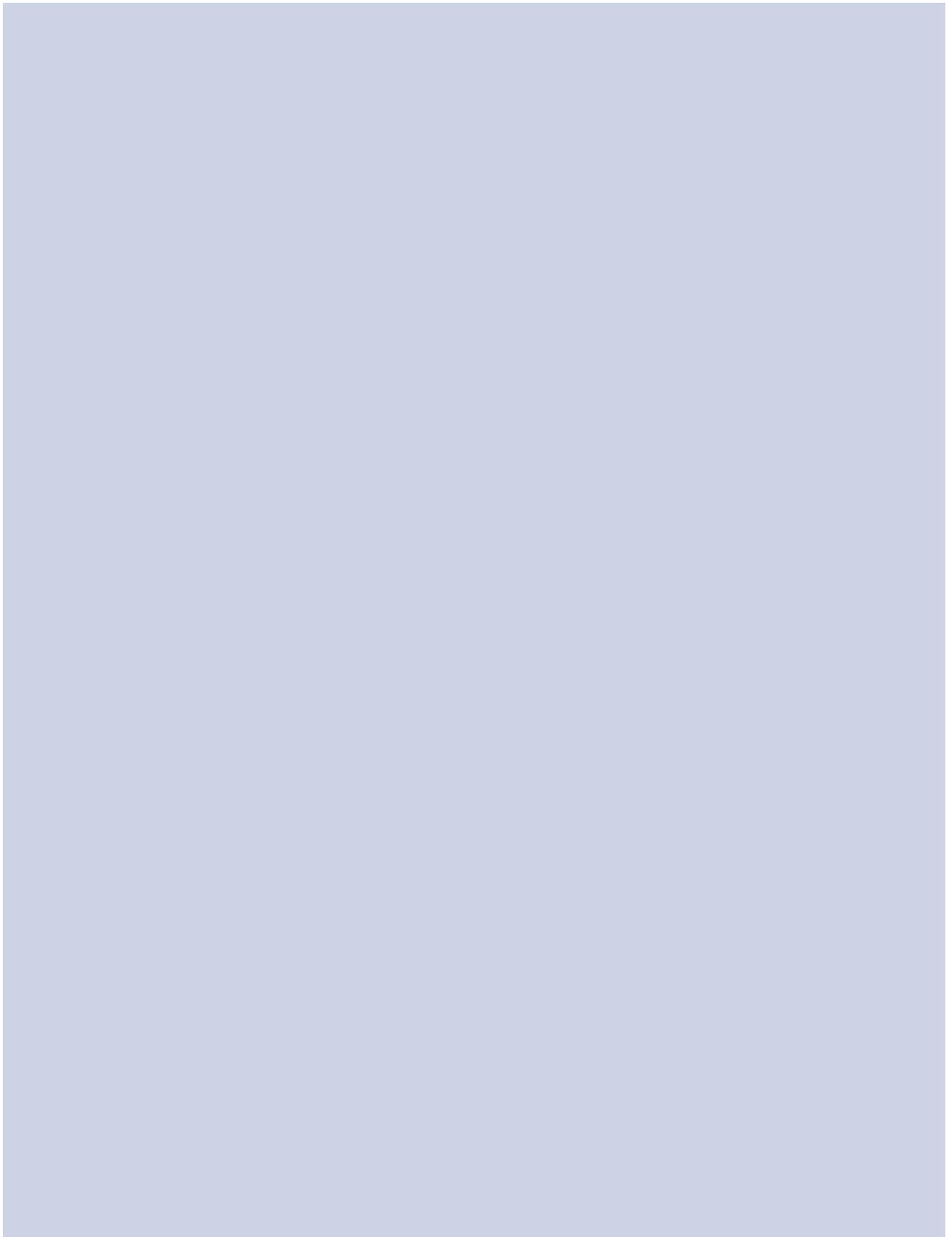
**STATISTICAL**

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**Defined Contribution Plan Participants and Total MERS Participants**

	Number of Participants Total	Defined Benefit	% of Total	Defined Contribution	% of Total	Hybrid	% of Total
December 31, 2006	71,572	64,545	90.2%	7,027	9.8%	N/A	0.0%
December 31, 2007	72,932	65,556	89.9%	7,376	10.1%	N/A	0.0%
December 31, 2008	74,400	66,586	89.5%	7,814	10.5%	N/A	0.0%
December 31, 2009	75,605	67,254	89.0%	8,351	11.0%	N/A	0.0%
December 31, 2010	78,343	69,707	89.0%	8,636	11.0%	N/A	0.0%
December 31, 2011	91,666	81,926	89.4%	9,193	10.0%	547	0.6%
December 31, 2012	93,462	82,331	88.1%	10,210	10.9%	921	1.0%
December 31, 2013	98,072	85,530	87.2%	11,340	11.6%	1,202	1.2%
December 31, 2014	101,589	87,661	86.3%	12,239	12.0%	1,689	1.7%
December 31, 2015	106,735	90,437	84.7%	13,912	13.0%	2,386	2.2%

Although MERS Defined Contribution Plan participants are not included in the annual actuarial valuation of the MERS Defined Benefit Plan, the trend in Defined Contribution participation is of interest. Numerous municipal divisions have established Defined Contribution Plan benefits for future new employees. Existing Defined Benefit Plan active members in those divisions were offered a choice of plans. The table above shows recent participation trends in Defined Contribution and Hybrid Plans, and overall MERS participants.





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*This publication contains a summary description of MERS benefits, policies or procedures. MERS has made every effort to ensure that the information provided is accurate and up to date (as of the date of publication 04/22/16). If this publication conflicts with the relevant provisions of the Plan Document, the Plan Document Controls. MERS, as a governmental plan, is exempted by state and federal law from registration with the SEC. However, it employs registered investment advisors to manage the trust fund in compliance with Michigan Public Employee Retirement System Investment Act. Past Performance is not a guarantee of future returns. Please make independent investment decisions carefully and seek the assistance of independent experts when appropriate.*

