

# Michigan State Employees' Retirement System

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A Pension and Other Postemployment Benefit Trust Fund of the State of Michigan

## **Schedule of Employer Allocations and Schedules of Pension and Other Postemployment Benefit Amounts by Employer for Fiscal Year Ended September 30, 2017**



**MICHIGAN OFFICE OF  
RETIREMENT SERVICES**  
*Big Plans. Small Steps.*

### **Prepared by**

The Office of Retirement Services  
P.O. Box 30171  
Lansing, MI 48909-7671

517-322-5103  
800-381-5111

**Table of Contents**

Independent Auditor’s Report..... 3

Schedule of Employer Allocations ..... 5

Schedule of Pension Amounts by Employer..... 6

Schedule of Other Postemployment Benefit Amounts by Employer ..... 8

Notes to the Schedule of Employer Allocations and Schedules of Pension  
and Other Postemployment Benefit Amounts by Employer .....10



# OAG

Office of the Auditor General

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

**Doug A. Ringler, CPA, CIA**  
Auditor General

## Independent Auditor's Report

Ms. Laurie Hill, Chair  
State of Michigan Retirement Board  
Stevens T. Mason Building  
and  
Mr. David L. DeVries, Director  
Department of Technology, Management, and Budget  
Lewis Cass Building  
and  
Ms. Kerrie L. Vanden Bosch, Director  
Office of Retirement Services  
Stevens T. Mason Building  
Lansing, Michigan

Dear Ms. Hill, Mr. DeVries, and Ms. Vanden Bosch:

### **Report on the Schedules**

We have audited the accompanying schedule of employer allocations and the related notes of the Michigan State Employees' Retirement System as of and for the fiscal year ended September 30, 2017. We have also audited the respective totals by employer for the following columns, hereafter referred to as the specified column totals:

- September 30, 2017 net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total employer pension expense included in the accompanying schedule of pension amounts by employer as of and for the fiscal year ended September 30, 2017.
- October 1, 2016 net OPEB liability, September 30, 2017 net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total employer OPEB expense included in the accompanying schedule of other postemployment benefit (OPEB) amounts by employer as of and for the fiscal year ended September 30, 2017.

### **Management's Responsibility for the Schedules**

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

### **Auditor's Responsibility**

Our responsibility is to express opinions on the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer are free from material misstatement.



# OAG

Office of the Auditor General

Doug A. Ringler, CPA, CIA  
Auditor General

Ms. Laurie Hill, Chair  
Mr. David L. DeVries, Director  
Ms. Kerrie L. Vanden Bosch, Director  
Page 2

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer, 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 schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer 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 schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer.

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

### **Opinions**

In our opinion, the schedules referred to in the first paragraph present fairly, in all material respects, the employers' pension and OPEB allocations and the respective employers' specified column totals included in the schedule of pension amounts by employer and the schedule of OPEB amounts by employer for the Michigan State Employees' Retirement System as of and for the fiscal year ended September 30, 2017 in accordance with accounting principles generally accepted in the United States of America.

### **Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the System as of and for the fiscal year ended September 30, 2017, and our report thereon, dated December 29, 2017, expressed an unmodified opinion on those financial statements.

### **Restriction on Use**

Our report is intended solely for the information and use of the State of Michigan Retirement Board, the Department of Technology, Management, and Budget, the Office of Retirement Services, and the System's participating employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

Sincerely,

Doug Ringler  
Auditor General  
September 17, 2018

**Michigan State Employees' Retirement System**  
**Schedule Of Employer Allocations**  
**As Of And For The Fiscal Year Ended September 30, 2017**

<u>Employer Name</u>	<u>Total Required Employer Pension Contributions</u>	<u>Pension Proportionate Share</u>	<u>Total Required Employer OPEB Contributions</u>	<u>OPEB Proportionate Share</u>
<b>GOVERNMENTAL ACTIVITIES</b>				
State of Michigan	\$ 658,466,137	0.9292673414	\$ 597,396,643	0.9287533650
State Building Authority	66,597	0.0000939860	54,975	0.0000854684
<b>BUSINESS TYPE ACTIVITIES</b>				
Information Technology Fund	32,669,432	0.0461050842	29,950,920	0.0465637329
State Lottery Fund	3,056,118	0.0043129791	2,802,328	0.0043566897
Liquor Purchase Revolving Fund	1,780,149	0.0025122546	1,579,874	0.0024561792
Office Services Revolving Fund	1,728,478	0.0024393334	1,560,131	0.0024254857
Correctional Industries Revolving Fund	760,459	0.0010732057	667,476	0.0010377040
Motor Transport Fund	469,654	0.0006628040	420,005	0.0006529682
Attorney Discipline System	108,064	0.0001525063	95,722	0.0001488157
Risk Management Fund	58,666	0.0000827926	54,385	0.0000845506
<b>COMPONENT UNITS</b>				
Michigan State Housing Development Authority	4,722,125	0.0066641496	4,274,821	0.0066459262
Michigan Strategic Fund	538,744	0.0007603078	483,828	0.0007521920
Michigan Economic Development Corporation	1,590,181	0.0022441592	1,431,760	0.0022259112
Michigan Finance Authority	914,393	0.0012904464	827,873	0.0012870673
Mackinac Bridge Authority	966,202	0.0013635634	902,122	0.0014025004
Mackinac Island State Park Commission	315,324	0.0004450047	290,082	0.0004509818
Michigan Education Trust	260,411	0.0003675080	228,767	0.0003556561
Land Bank Fast Track Authority	79,217	0.0001117957	74,978	0.0001165663
State Bar of Michigan	35,981	0.0000507779	127,512	0.0001982392
<b>Total</b>	<b>\$ 708,586,332</b>	<b>1.0000000000</b>	<b>\$ 643,224,202</b>	<b>0.9999999999</b>

Employer-level results may not add to System-wide results due to rounding.  
The accompanying notes are an integral part of this schedule.

Michigan State Employees' Retirement System  
Schedule Of Pension Amounts By Employer  
As Of And For The Fiscal Year Ended September 30, 2017  
Page 1 of 2

Employer Name	September 30, 2017 Net Pension Liability	Deferred Outflows of Resources				
		Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Pension Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
GOVERNMENTAL ACTIVITIES						
State Of Michigan	\$ 4,825,511,692	\$ 1,106,628	\$ –	\$ 39,722,126	\$ 109,937	\$ 40,938,691
State Building Authority	488,052	112	–	4,017	2,127	6,256
BUSINESS TYPE ACTIVITIES						
Information Technology Fund	239,415,089	54,905	–	1,970,791	451,672	2,477,368
State Lottery Fund	22,396,495	5,136	–	184,361	37,513	227,010
Liquor Purchase Revolving Fund	13,045,669	2,992	–	107,388	3,845	114,225
Office Services Revolving Fund	12,667,003	2,905	–	104,271	775	107,951
Correctional Industries Revolving Fund	5,572,957	1,278	–	45,875	366	47,519
Motor Transport Fund	3,441,817	789	–	28,332	4,567	33,688
Attorney Discipline System	791,937	182	–	6,519	39	6,740
Risk Management Fund	429,927	99	–	3,539	26	3,664
COMPONENT UNITS						
Michigan State Housing Development Authority	34,605,684	7,936	–	284,863	2,032	294,831
Michigan Strategic Fund	3,948,136	905	–	32,500	29,462	62,867
Michigan Economic Development Corporation	11,653,499	2,672	–	95,928	67,464	166,064
Michigan Finance Authority	6,701,047	1,537	–	55,161	405	57,103
Mackinac Bridge Authority	7,080,730	1,624	–	58,286	10,329	70,239
Mackinac Island State Park Commission	2,310,826	530	–	19,022	143	19,695
Michigan Education Trust	1,908,400	438	–	15,709	87	16,234
Land Bank Fast Track Authority	580,534	133	–	4,779	8,920	13,832
State Bar Of Michigan	263,680	60	–	2,171	15	2,246
	\$ 5,192,813,173	\$ 1,190,861	\$ –	\$ 42,745,639	\$ 729,724	\$ 44,666,224

Employer-level results may not add to System-wide results due to rounding.  
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Michigan State Employees' Retirement System  
Schedule Of Pension Amounts By Employer  
As Of And For The Fiscal Year Ended September 30, 2017  
Page 2 of 2

Deferred Inflows of Resources					Pension Expense		
Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Pension Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Pension Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
\$ -	\$ 289,544,272	\$ -	\$ 383,375	\$ 289,927,647	\$ 921,164,348	\$ (704,997)	\$ 920,459,351
-	29,284	-	-	29,284	93,166	30,205	123,371
-	14,365,579	-	-	14,365,579	45,703,059	8,482,031	54,185,090
-	1,343,853	-	-	1,343,853	4,275,371	704,663	4,980,034
-	782,777	-	47,052	829,829	2,490,348	(1,035,955)	1,454,393
-	760,056	-	8,247	768,303	2,418,063	(125,614)	2,292,449
-	334,393	-	25,411	359,804	1,063,848	(528,100)	535,748
-	206,519	-	-	206,519	657,025	74,859	731,884
-	47,518	-	2,389	49,907	151,176	(39,724)	111,452
-	25,797	-	14,689	40,486	82,071	(209,611)	(127,540)
-	2,076,438	-	103,693	2,180,131	6,606,040	(1,664,600)	4,941,440
-	236,899	-	-	236,899	753,678	(3,400,221)	(2,646,543)
-	699,243	-	-	699,243	2,224,591	(10,100)	2,214,491
-	402,082	-	2,862	404,944	1,279,194	(104,641)	1,174,553
-	424,864	-	-	424,864	1,351,673	238,297	1,589,970
-	138,656	-	6,296	144,952	441,124	(94,071)	347,053
-	114,509	-	834	115,343	364,303	(4,912)	359,391
-	34,834	-	-	34,834	110,821	136,701	247,522
-	15,822	-	34	15,856	50,335	730	51,065
\$ -	\$ 311,583,394	\$ -	\$ 594,882	\$ 312,178,276	\$ 991,280,234	\$ 1,744,940	\$ 993,025,174

Employer-level results may not add to System-wide results due to rounding.  
The accompanying notes are an integral part of this schedule.

Michigan State Employees' Retirement System  
Schedule Of Other Postemployment Benefit (OPEB) Amounts By Employer  
As Of And For The Fiscal Year Ended September 30, 2017  
Page 1 of 2

Employer Name	October 1, 2016 Net OPEB Liability	September 30, 2017 Net OPEB Liability	Deferred Outflows of Resources				
			Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on OPEB Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer OPEB Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
GOVERNMENTAL ACTIVITIES							
State Of Michigan	\$ 7,796,977,917	\$ 7,658,637,130	\$ -	\$ -	\$ -	\$ -	\$ -
State Building Authority	717,516	704,785	-	-	-	-	-
BUSINESS TYPE ACTIVITIES							
Information Technology Fund	390,907,221	383,971,404	-	-	-	-	-
State Lottery Fund	36,574,848	35,925,905	-	-	-	-	-
Liquor Purchase Revolving Fund	20,619,871	20,254,016	-	-	-	-	-
Office Services Revolving Fund	20,362,196	20,000,913	-	-	-	-	-
Correctional Industries Revolving Fund	8,711,629	8,557,060	-	-	-	-	-
Motor Transport Fund	5,481,734	5,384,472	-	-	-	-	-
Attorney Discipline System	1,249,323	1,227,156	-	-	-	-	-
Risk Management Fund	709,811	697,217	-	-	-	-	-
COMPONENT UNITS							
Michigan State Housing Development Authority	55,793,219	54,803,287	-	-	-	-	-
Michigan Strategic Fund	6,314,727	6,202,686	-	-	-	-	-
Michigan Economic Development Corporation	18,686,748	18,355,192	-	-	-	-	-
Michigan Finance Authority	10,805,059	10,613,347	-	-	-	-	-
Mackinac Bridge Authority	11,774,132	11,565,225	-	-	-	-	-
Mackinac Island State Park Commission	3,786,038	3,718,862	-	-	-	-	-
Michigan Education Trust	2,985,769	2,932,793	-	-	-	-	-
Land Bank Fast Track Authority	978,586	961,223	-	-	-	-	-
State Bar Of Michigan	1,664,238	1,634,710	-	-	-	-	-
	\$ 8,395,100,582	\$ 8,246,147,383	\$ -	\$ -	\$ -	\$ -	\$ -

Employer-level results may not add to System-wide results due to rounding.  
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Michigan State Employees' Retirement System  
Schedule Of Other Postemployment Benefit (OPEB) Amounts by Employer  
As Of And For The Fiscal Year Ended September 30, 2017  
Page 2 of 2

Deferred Inflows of Resources					OPEB Expense			
Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on OPEB Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer OPEB Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of OPEB Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer OPEB Contributions and Proportionate Share of Contributions	Total Employer OPEB Expense	
\$ 55,555,838	\$ 66,330,838	\$ -	\$ 48,771,192	\$ 170,657,868	\$ 636,766,276	\$ (9,782,412)	\$ 626,983,864	
5,113	6,104	-	4,275	15,492	58,598	(858)	57,740	
2,785,333	3,325,545	-	2,343,289	8,454,167	31,924,745	(470,011)	31,454,734	
260,607	311,151	-	219,219	790,977	2,987,007	(43,970)	2,943,037	
146,923	175,418	-	86,533	408,874	1,683,991	(17,356)	1,666,635	
145,087	173,226	-	121,780	440,093	1,662,947	(24,426)	1,638,521	
62,073	74,112	-	51,858	188,043	711,464	(10,402)	701,062	
39,059	46,634	-	32,628	118,321	447,684	(6,544)	441,140	
8,902	10,628	-	7,451	26,981	102,030	(1,494)	100,536	
5,058	6,039	-	4,244	15,341	57,969	(851)	57,118	
397,544	474,647	-	333,933	1,206,124	4,556,540	(66,980)	4,489,560	
44,994	53,721	-	37,850	136,565	515,713	(7,592)	508,121	
133,149	158,973	-	111,917	404,039	1,526,116	(22,448)	1,503,668	
76,989	91,921	-	64,650	233,560	882,431	(12,967)	869,464	
83,894	100,165	-	70,928	254,987	961,574	(14,227)	947,347	
26,977	32,209	-	22,605	81,791	309,199	(4,534)	304,665	
21,275	25,401	-	17,442	64,118	243,843	(3,499)	240,344	
6,973	8,325	-	5,876	21,174	79,919	(1,179)	78,740	
11,858	14,158	-	9,924	35,940	135,916	(1,991)	133,925	
\$ 59,817,644	\$ 71,419,217	\$ -	\$ 52,317,594	\$ 183,554,455	\$ 685,613,964	\$ (10,493,741)	\$ 675,120,223	

Employer-level results may not add to System-wide results due to rounding.  
The accompanying notes are an integral part of this schedule.

# **Michigan State Employees' Retirement System Notes to the Schedule of Employer Allocations and Schedules of Pension and OPEB Amounts by Employer**

## **Note 1: Plan Description**

### **Organization**

The Michigan State Employees' Retirement System (System) is a single-employer, state-wide, defined benefit public employee retirement plan governed by the State of Michigan (State) and created under Public Act 240 of 1943, as amended. Section 2 of this act established the board's authority to promulgate or amend the provisions of the System. Executive Order 2015-13 signed by the Governor on October 27, 2015 established the State of Michigan Retirement Board. The executive order establishes the board's authority to promulgate or amend the provision of the System.

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

### **Plan Membership**

The System's pension and OPEB plans were established by the State to provide retirement, survivor and disability benefits to state employees. Members are eligible to receive a monthly benefit when they meet certain age and service requirements. In addition, the System's OPEB plan provides all retirees with the option of receiving health, dental, and vision coverages under the Michigan State Employees' Retirement Act as well as eligible Special Duty Officers from the Military Retirement Provisions (MRP).

Effective March 31, 1997, Public Act 487 of 1996 closed the pension plan to new entrants. All new employees become members of the defined contribution plan. The Public Act allows returning employees and members who left State employment on or before March 31, 1997, to elect the defined benefit plan instead of the defined contribution plan.

Public Act 185 of 2010 established a pension supplement. Members who retired under the retirement incentive of the legislation agreed to forfeit accumulated leave balances, excluding banked leave time; in exchange they receive a pension supplement for 60 months to their retirement allowance payments equal to 1/60 of the amount forfeited from funds, beginning January 1, 2011.

Public Act 264 of 2011 closed the premium subsidy component of the OPEB plan to new employees hired on or after January 1, 2012. These employees become participants in the Personal Healthcare Fund (PHF). Former nonvested members of the premium subsidy component of the OPEB plan who are reemployed by the State on or after January 1, 2014, are not eligible for the premium subsidy benefit but will become participants in the PHF. Both groups of employees are eligible for a credit into a health reimbursement account at termination if they terminated with at least 10 years of service. The credit will be \$2,000 for participants who are at least 60 years old or \$1,000 for participants who are less than 60 years old at termination.

The System's financial statements are available on the ORS website at [michigan.gov/ORSstatedb](http://michigan.gov/ORSstatedb).

## **Note 2: Summary of Significant Accounting Policies**

### **Governmental Accounting Standards Board (GASB) Statements 68 and 75**

Employers participating in the System are required to report pension information in their financial statements for fiscal periods beginning on or after June 15, 2014, in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions*.

Employers participating in the System are required to report information about OPEB in their financial statements for fiscal periods beginning on or after June 15, 2017, in accordance with Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

The requirements of GASB 68 and 75 incorporate provisions intended to reflect the effects of transactions and events related to pensions and OPEB in the measurement of employer liabilities and recognition of expense and deferred outflows of resources and deferred inflows of resources related to pensions and OPEB.

The Schedule of Employer Allocations recognizes the employers' proportionate share of net pension and OPEB liabilities determined in conformity with GASB 68 and 75. The Schedule of Pension Amounts by Employer recognizes the pension expense, including ending net pension liability, deferred inflows of resources and deferred outflows of resources related to the System's pension plan. The Schedule of OPEB Amounts by Employer recognizes the OPEB expense, including ending net OPEB liability, deferred inflows of resources and deferred outflows of resources related to the System's OPEB plan. These schedules were prepared by ORS with assistance from its third-party actuaries and provide employers with the required information for financial reporting related to the System's pension and OPEB plans as of and for the fiscal year ended September 30, 2017 (the measurement period).

### **Basis of Accounting and Presentation**

The System's financial statements are prepared using the accrual basis of accounting, in accordance with accounting principles generally accepted in the United States (GAAP). Employer contributions are recognized as revenue when due and payable. Benefits and refunds are recognized when due and payable in accordance with the terms of the System.

The Schedule of Employer Allocations, Schedule of Pension Amounts by Employer, and Schedule of OPEB Amounts by Employer were prepared in conformity with GAAP. The preparation of these schedules required management to make estimates and assumptions that affect certain amounts and disclosures. Actual results could differ from those estimates.

The schedules present elements of the financial statements of the System and its participating employers and are not a complete financial presentation of the System or its participating employers.

### **Proportionate Share Allocation Methodology**

The primary government and certain component units participate in the System, which is classified for financial reporting purposes as a single-employer. However, GASB 68 and 75 require that, in stand-alone financial statements, each government should account for and report its participation in the single-employer plan as if it was a cost-sharing employer. Therefore, these allocations are to identify the primary government activities, business-type activities, and component units' proportionate shares of the collective net pension and OPEB liabilities.

In determining the proportionate share allocation, GASB 68 and 75 require that the proportion for each employer be consistent with the determination of the System's contributions. The System has determined that utilizing the statutorily required employer pension and OPEB contributions based on reportable compensation during the System's fiscal year is an appropriate allocation methodology. Each employer's proportionate share allocation is determined by dividing each employer's statutorily required contributions to the system during the measurement period by the percent of pension and OPEB contributions required from all applicable employers during the measurement period.

In December 2003, a settlement was reached between the State Employees Retirement System, the State Bar of Michigan, the Attorney Grievance Commission, and the Attorney Discipline Board. Based on the settlement agreement, State Bar of Michigan and Attorney Discipline System pay retiree premiums for eligible former employees who qualify for the premium subsidy benefit. Because the agreement was determined before the System began prefunding OPEB benefits, the original funding process remains in place. The sum of the retiree premiums invoiced to these employers for the applicable fiscal year comprises their statutorily required contributions for the proportionate share calculation in this report.

The Schedule of Employer Allocations has been rounded and presents the first ten decimal places.

### Note 3: Net Pension and OPEB Liability

The System's net pension liability is measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this is the accrued liability less the market value of assets.

#### Net Pension Liability As of September 30, 2016

Pension Liability	\$ 16,272,174,819
Fiduciary Net Position	(10,980,342,752)
<b>Net Pension Liability*</b>	<u><u>\$ 5,291,832,067</u></u>

Fiduciary Net Position as a Percentage of Total Pension Liability	67.48%
Net Pension Liability as a Percentage of Covered Employee Payroll	606.61%

#### Net Pension Liability As of September 30, 2017

Pension Liability	\$ 16,999,872,305
Fiduciary Net Position	(11,807,059,132)
<b>Net Pension Liability*</b>	<u><u>\$ 5,192,813,173</u></u>

Fiduciary Net Position as a Percentage of Total Pension Liability	69.45%
Net Pension Liability as a Percentage of Covered Payroll**	170.24%

\* Employer-level results may not add to System-wide results due to rounding.

\*\*Covered payroll based on implementation of GASB 82.

The System's net OPEB liability is measured as the total OPEB liability, less the amount of the OPEB plan's fiduciary net position. In actuarial terms, this is the accrued liability less the market value of assets.

#### Net OPEB Liability As of September 30, 2016

OPEB Liability	\$ 9,996,882,816
Fiduciary Net Position	(1,601,782,232)
<b>Net OPEB Liability*</b>	<u><u>\$ 8,395,100,584</u></u>

#### Net OPEB Liability As of September 30, 2017

OPEB Liability	\$ 10,293,376,143
Fiduciary Net Position	(2,047,228,760)
<b>Net OPEB Liability*</b>	<u><u>\$ 8,246,147,383</u></u>

Fiduciary Net Position as a Percentage of Total OPEB Liability	19.89%
Net OPEB Liability as a Percentage of Covered Payroll	270.34%

\* Employer-level results may not add to System-wide results due to rounding.

## Discount Rate

A discount rate of 7.50% was used to measure the total pension and OPEB liabilities. This discount rate was based on the expected rate of return on pension and OPEB plan investments of 7.50%. The projection of cash flows used to determine this discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the fiduciary net positions of both the pension and OPEB plans were projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension and OPEB plan investments was applied to all periods of projected benefit payments to determine the total pension and OPEB liabilities.

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

As required by GASB Statement No. 68, the following presents the System's net pension liability, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one percent lower or one percent higher.

	<b>1% Decrease</b> 6.5%	<b>Current Discount Rate</b> 7.5%	<b>1% Increase</b> 8.5%
Total Pension Liability	\$ 18,591,216,299	\$ 16,999,872,305	\$ 15,628,368,607
Fiduciary Net Position	(11,807,059,132)	(11,807,059,132)	(11,807,059,132)
Net Pension Liability	<u>\$ 6,784,157,167</u>	<u>\$ 5,192,813,173</u>	<u>\$ 3,821,309,475</u>

## Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

As required by GASB Statement No. 75, the following presents the System's net OPEB liability, as well as what the System's net OPEB liability would be if it were calculated using a discount rate that is one percent lower or one percent higher.

	<b>1% Decrease</b> 6.5%	<b>Current Discount Rate</b> 7.5%	<b>1% Increase</b> 8.5%
Total OPEB Liability	\$ 11,435,269,104	\$ 10,293,376,143	\$ 9,325,764,431
Fiduciary Net Position	(2,047,228,760)	(2,047,228,760)	(2,047,228,760)
Net OPEB Liability	<u>\$ 9,388,040,344</u>	<u>\$ 8,246,147,383</u>	<u>\$ 7,278,535,671</u>

## Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

As required by GASB Statement No. 75, the following presents the System's net OPEB liability calculated using assumed trend rates, as well as what the System's net OPEB liability would be if it were calculated using a trend rate that is one percent lower or one percent higher.

	<b>1% Decrease</b>	<b>Current Healthcare Cost Trend Rate</b>	<b>1% Increase</b>
Total OPEB Liability	\$ 9,269,469,752	\$ 10,293,376,143	\$ 11,467,665,583
Fiduciary Net Position	(2,047,228,760)	(2,047,228,760)	(2,047,228,760)
Net OPEB Liability	<u>\$ 7,222,240,992</u>	<u>\$ 8,246,147,383</u>	<u>\$ 9,420,436,823</u>

## **Timing of the Pension and OPEB Valuations**

Actuarial valuations to determine the total pension liability and total OPEB liability are required to be performed every two years. The System's pension and OPEB valuations are performed every year. If the actuarial valuations are not calculated as of the System's fiscal year end, the total pension liability or total OPEB liability is required to be rolled forward from the actuarial valuation date to the System's fiscal year end.

The total pension and OPEB liabilities as of September 30, 2017, are based on the results of an actuarial valuation date of September 30, 2016 and rolled forward using generally accepted actuarial procedures.

## **Actuarial Valuations and Assumptions**

Actuarial valuations for the pension and OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment and mortality.

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

In the fall of 2017, the Department of Technology, Management, and Budget Director and the State of Michigan Retirement Board adopted a dedicated gains policy to lower the discount rate below 7.50% in years where investment returns exceed the current assumption based on a schedule determined by the plan actuary. Excess investment gains in the 2017 fiscal year were sufficient to reduce the discount rate for the System's pension plan from 7.50% to 7.00%; and to reduce the System's OPEB plan discount rate from 7.50% to 7.35% beginning with the September 30, 2017 actuarial valuations.

Additional information as of the latest actuarial valuation follows:

### Summary of Actuarial Assumptions

Valuation Date:	September 30, 2016
Actuarial Cost Method:	Entry-Age, Normal
Remaining Amortization Period:	20 years
Inflation:	2.5%
Salary Increases:	3.5% – 12.5%
Investment Rate of Return:	7.5% net of investment and administrative expenses
Healthcare Cost Trend Rate:	9.0% year 1 graded to 3.5% year 10
Mortality:	RP-2000 Male and Female Combined Healthy Life Mortality Tables, adjusted for mortality improvements to 2015 using projection scale BB. For retirees, 100% of the table rates were used. For active members, 50% of the table rates were used for males and females.

### Notes:

- Assumption changes as a result of an experience study for the periods 2007 through 2012 have been adopted by the System for use in the annual pension and OPEB valuations beginning with the September 30, 2014 valuation.
- Recognition period for pension liabilities is the average of the expected remaining service lives of all employees in years is 1.0640.
- Recognition period for pension assets in years is 5.0000
- Recognition period for OPEB liabilities is the average of the expected remaining service lives of all employees in years is 5.9856.
- Recognition period for OPEB assets in years is 5.0000
- Full actuarial assumptions are available in the 2017 State Employees' Retirement System CAFR available on the ORS website at [michigan.gov/ORSstatedb](http://michigan.gov/ORSstatedb).



## Note 4: Pension and OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions and OPEB

### Pension Plan

The following table provides details of the System's pension expense for the fiscal year ended September 30, 2017.

<b>Expense</b>	<b>Total</b>
Service Cost	\$ 68,310,501
Interest on the Total Pension Liability	1,251,600,108
Current-Period Benefit Changes	—
Employee Contributions (shown as negative for addition here)	(40,838,900)
Projected Earnings on Plan Investments (shown as negative for addition here)	(855,291,659)
Pension Plan Administrative Expense	6,284,973
Other Changes in Plan Fiduciary Net Position	(293,724)
Recognition of Outflow (Inflow) of Resources due to Liabilities	687,140,589
Recognition of Outflow (Inflow) of Resources due to Assets	(125,631,654)
<b>Total Pension Expense*</b>	<b>\$ 991,280,234</b>

\*Employer-level results may not add to System-wide results due to rounding.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in future years' pension expense as follows:

<b>Fiscal Year Ending September 30</b>	<b>Net Deferred (Inflows) and Outflows of Resources</b>
2018	\$ (81,695,155)
2019	25,296,508
2020	(100,027,504)
2021	(111,220,743)
2022	—
Thereafter	—
<b>Total</b>	<b>\$ (267,646,894)</b>

## OPEB Plan

The following table provides details of the System's OPEB expense for the fiscal year ended September 30, 2017.

<b>Expense</b>	<b>Total</b>
Service Cost	\$ 108,530,313
Interest on the Total OPEB Liability	735,978,603
Current-Period Benefit Changes	—
Employee Contributions (shown as negative for addition here)	(27,000)
Projected Earnings on Plan Investments (shown as negative for addition here)	(128,681,261)
OPEB Plan Administrative Expense	444,585
Other Changes in Plan Fiduciary Net Position	(778,389)
Recognition of Outflow (Inflow) of Resources due to Liabilities	(11,998,083)
Recognition of Outflow (Inflow) of Resources due to Assets	(17,854,804)
<b>Total OPEB Expense*</b>	<b>\$ 685,613,964</b>

\*Employer-level results may not add to System-wide results due to rounding.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in future years' OPEB expense as follows:

<b>Fiscal Year Ending September 30</b>	<b>Net Deferred (Inflows) and Outflows of Resources</b>
2018	\$ (29,852,887)
2019	(29,852,887)
2020	(29,852,887)
2021	(29,852,888)
2022	(11,825,312)
Thereafter	—
<b>Total</b>	<b>\$ (131,236,861)</b>

## **Note 5: Subsequent Events**

### **Discount Rate – Dedicated Gains Policy**

The Department of Technology, Management, and Budget Director and the State of Michigan Retirement Board adopted a dedicated gains policy to lower the discount rate below 7.50% in years where investment returns exceed the current assumption based on a schedule determined by the plan actuary. In 2017, excess investment gains were sufficient to reduce the discount rate for the SERS pension plan from 7.50% to 7.00%; and to reduce the System's OPEB plan discount rate from 7.50% to 7.35% beginning with the September 30, 2017 actuarial valuations. This will impact the fiscal year 2018 collective schedules of pension and OPEB amounts, however the dollar value of this impact cannot be determined at this time.

### **2012–2017 Actuarial Experience Study**

The Department of Technology, Management, and Budget Director and the State of Michigan Retirement Board approved the use of new actuarial assumptions at the July 17, 2018 board meeting. The new assumptions were based on the recommendations from the plan actuary in the most recent actuarial experience study covering the period of October 1, 2012–September 30, 2017. While the dollar impact cannot be determined at this time, it is expected that these assumption changes will increase the System's pension and OPEB liabilities beginning with the September 30, 2018 actuarial valuations.