

Michigan State Employees' Retirement System

A Fiduciary Component Unit 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, 2022



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

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Office of the Auditor General

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Doug A. Ringler, CPA, CIA
Auditor General

Independent Auditor's Report

David A. Berridge, Chair
State of Michigan Retirement Board
Stevens T. Mason Building
and
Michelle Lange, Director
Department of Technology, Management, and Budget
Elliott-Larsen Building
and
Anthony J. Estell, Director
Office of Retirement Services
Stevens T. Mason Building
Lansing, Michigan

Chair Berridge, Director Lange, and Director Estell:

Report on the Audit of the Schedules

Opinions

We have audited the schedule of employer allocations of the Michigan State Employees' Retirement System (System) as of and for the fiscal year ended September 30, 2022 and the related notes. We have also audited the totals for all entities of the following columns, hereafter referred to as the specified column totals:

- September 30, 2022 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, 2022 and the related notes.
- September 30, 2022 net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total employer OPEB expense in the accompanying schedule of other postemployment benefit (OPEB) amounts by employer as of and for the fiscal year ended September 30, 2022 and the related notes.

In our opinion, the accompanying schedules referred to above present fairly, in all material respects, the employer pension and OPEB allocations and the specified column totals of all participating entities included in the schedule of pension amounts by employer and the schedule of other postemployment benefit (OPEB) amounts by employer for the Michigan State Employees' Retirement System as of and for the fiscal year ended September 30, 2022 in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Schedules section of our report. We are required to be independent of the System and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.



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Responsibilities of Management for the Schedules

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

Auditor's Responsibilities for the Audit of the Schedules

Our objectives are 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 other postemployment benefit (OPEB) amounts by employer are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of other postemployment benefit (OPEB) amounts by employer.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess 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 other postemployment benefit (OPEB) amounts by employer, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer and the schedule of other postemployment benefit (OPEB) amounts by employer.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

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



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Other Matter

We have audited, in accordance with GAAS 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, 2022, and our report thereon, dated February 15, 2023, 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.

Doug Ringler
Auditor General
September 12, 2023

Michigan State Employees' Retirement System
Schedule Of Employer Allocations
As Of And For The Fiscal Year Ended September 30, 2022

Employer Name	Total Required Employer Pension Contributions	Pension Proportionate Share	Total Required Employer OPEB Contributions	OPEB Proportionate Share
GOVERNMENTAL ACTIVITIES				
State of Michigan	\$ 630,882,396	0.926415633	\$ 553,581,769	0.9260904177
State Building Authority	62,054	0.000091123	50,976	0.0000852784
BUSINESS TYPE ACTIVITIES				
Information Technology Fund	29,494,476	0.043310994	25,897,317	0.0433237844
State Lottery Fund	2,887,092	0.004239534	2,529,939	0.0042323503
Liquor Purchase Revolving Fund	1,438,768	0.002112750	1,237,366	0.0020699975
Office Services Revolving Fund	1,468,599	0.002156556	1,270,443	0.0021253322
Correctional Industries Revolving Fund	581,968	0.000854587	498,379	0.0008337410
Motor Transport Fund	436,135	0.000640440	376,305	0.0006295234
Attorney Discipline System	35,562	0.000052221	129,517	0.0002166702
Risk Management Fund	116,540	0.000171132	102,459	0.0001714044
COMPONENT UNITS				
Michigan State Housing Development Authority	4,619,746	0.006783840	4,017,908	0.0067215843
Michigan Strategic Fund	495,193	0.000727164	430,333	0.0007199060
Michigan Economic Development Corporation	1,339,890	0.001967553	1,160,976	0.0019422033
Michigan Finance Authority	802,737	0.001178775	702,410	0.0011750656
Mackinac Bridge Authority	852,221	0.001251439	763,151	0.0012766805
Mackinac Island State Park Commission	223,471	0.000328155	198,785	0.0003325493
Michigan Education Trust	282,594	0.000414973	241,531	0.0004040590
State Land Bank Authority	188,855	0.000277324	170,271	0.0002848466
State Bar of Michigan	38,565	0.000056630	177,708	0.0002972889
Michigan Veterans' Facility Authority	4,745,960	0.006969178	4,224,574	0.0070673170
Total	\$ 680,992,822	1.000000000	\$ 597,762,117	1.000000000

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, 2022
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Employer Name	September 30, 2022 Net Pension Liability	Deferred Outflows of Resources					Total 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		
GOVERNMENTAL ACTIVITIES							
State Of Michigan	\$ 5,983,660,199	\$ -	\$ -	\$ -	\$ -	\$ -	
State Building Authority	588,560	-	-	-	-	-	
BUSINESS TYPE ACTIVITIES							
Information Technology Fund	279,742,979	-	-	-	-	-	
State Lottery Fund	27,382,880	-	-	-	-	-	
Liquor Purchase Revolving Fund	13,646,119	-	-	-	-	-	
Office Services Revolving Fund	13,929,061	-	-	-	-	-	
Correctional Industries Revolving Fund	5,519,725	-	-	-	-	-	
Motor Transport Fund	4,136,562	-	-	-	-	-	
Attorney Discipline System	337,290	-	-	-	-	-	
Risk Management Fund	1,105,330	-	-	-	-	-	
COMPONENT UNITS							
Michigan State Housing Development Authority	43,816,396	-	-	-	-	-	
Michigan Strategic Fund	4,696,705	-	-	-	-	-	
Michigan Economic Development Corporation	12,708,302	-	-	-	-	-	
Michigan Finance Authority	7,613,632	-	-	-	-	-	
Mackinac Bridge Authority	8,082,967	-	-	-	-	-	
Mackinac Island State Park Commission	2,119,533	-	-	-	-	-	
Michigan Education Trust	2,680,284	-	-	-	-	-	
State Land Bank Authority	1,791,216	-	-	-	-	-	
State Bar Of Michigan	365,770	-	-	-	-	-	
Michigan Veterans' Facility Authority	45,013,479	-	-	-	-	-	
Total	\$ 6,458,936,989	\$ -	\$ -	\$ -	\$ -	\$ -	

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, 2022
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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
\$ -	\$ 55,178,954	\$ -	\$ -	\$ 55,178,954	\$ 1,240,766,597	\$ (10,364,502)	\$ 1,230,402,095
-	5,427	-	-	5,427	122,043	15,625	137,668
-	2,579,679	-	-	2,579,679	58,007,262	(2,229,694)	55,777,568
-	252,514	-	-	252,514	5,678,090	(612,143)	5,065,947
-	125,839	-	-	125,839	2,829,647	(691,533)	2,138,114
-	128,448	-	-	128,448	2,888,318	226,662	3,114,980
-	50,901	-	-	50,901	1,144,565	(257,176)	887,389
-	38,146	-	-	38,146	857,754	(172,679)	685,075
-	3,110	-	-	3,110	69,940	(434,417)	(364,477)
-	10,193	-	-	10,193	229,200	16,445	245,645
-	404,058	-	-	404,058	9,085,730	5,306,711	14,392,441
-	43,311	-	-	43,311	973,905	(1,104,950)	(131,045)
-	117,191	-	-	117,191	2,635,183	249,868	2,885,051
-	70,210	-	-	70,210	1,578,756	(368,117)	1,210,639
-	74,538	-	-	74,538	1,676,077	118,086	1,794,163
-	19,545	-	-	19,545	439,505	(217,921)	221,584
-	24,717	-	-	24,717	555,781	194,787	750,568
-	16,518	-	-	16,518	371,425	52,359	423,784
-	3,373	-	-	3,373	75,846	(3,348)	72,498
-	415,097	-	-	415,097	9,333,956	1,830,769	11,164,725
\$ -	\$ 59,561,769	\$ -	\$ -	\$ 59,561,769	\$ 1,339,319,580	\$ (8,445,168)	\$ 1,330,874,412

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, 2022
Page 1 of 2

Employer Name	September 30, 2022 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	\$ 3,604,721,235	\$ -	\$ 87,583,043	\$ 1,140,319,030	\$ 29,894,259	\$ 1,257,796,332
State Building Authority	331,938	-	8,065	105,005	164,626	277,696
BUSINESS TYPE ACTIVITIES						
Information Technology Fund	168,633,821	-	4,097,255	53,345,694	1,966,663	59,409,612
State Lottery	16,474,032	-	400,266	5,211,402	438,672	6,050,340
Liquor Purchase Revolving Fund	8,057,274	-	195,766	2,548,841	1,463,397	4,208,004
Office Services Revolving Fund	8,272,659	-	200,999	2,616,976	513,951	3,331,926
Correctional Industries Revolving Fund	3,245,260	-	78,849	1,026,607	49,635	1,155,091
Motor Transport Fund	2,450,362	-	59,536	775,148	194,340	1,029,024
Attorney Discipline System	843,369	-	20,491	266,792	409,034	696,317
Risk Management Fund	667,176	-	16,210	211,055	322,516	549,781
COMPONENT UNITS						
Michigan State Housing Development Authority	26,163,145	-	635,680	8,276,460	5,521,333	14,433,473
Michigan Strategic Fund	2,802,167	-	68,084	886,439	1,613,814	2,568,337
Michigan Economic Development Corporation	7,559,847	-	183,680	2,391,485	2,162,546	4,737,711
Michigan Finance Authority	4,573,834	-	111,129	1,446,889	64,529	1,622,547
Mackinac Bridge Authority	4,969,361	-	120,739	1,572,010	209,454	1,902,203
Mackinac Island State Park Commission	1,294,417	-	31,450	409,477	28,950	469,877
Michigan Education Trust	1,572,762	-	38,213	497,528	312,400	848,141
State Land Bank Authority	1,108,739	-	26,939	350,739	496,723	874,401
State Bar Of Michigan	1,157,170	-	28,115	366,059	512,745	906,919
Michigan Veterans' Facility Authority	27,508,877	-	668,377	8,702,170	34,417,812	43,788,359
Total	\$ 3,892,407,445	\$ -	\$ 94,572,886	\$ 1,231,325,806	\$ 80,757,399	\$ 1,406,656,091

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, 2022
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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
\$ 2,680,258,938	\$ -	\$ 132,573,527	\$ 42,328,648	\$ 2,855,161,113	\$ (294,760,125)	\$ (11,162,263)	\$ (305,922,388)
246,810	-	12,208	95,577	354,595	(27,143)	(6,200)	(33,343)
125,386,202	-	6,201,972	15,921,782	147,509,956	(13,789,284)	(5,023,211)	(18,812,495)
12,249,122	-	605,878	1,144,503	13,999,503	(1,347,091)	(188,594)	(1,535,685)
5,990,915	-	296,328	1,204,963	7,492,206	(658,848)	(529,739)	(1,188,587)
6,151,063	-	304,250	459,337	6,914,650	(676,460)	(495,456)	(1,171,916)
2,412,984	-	119,353	690,111	3,222,448	(265,367)	(297,984)	(563,351)
1,821,945	-	90,119	577,266	2,489,330	(200,367)	(21,282)	(221,649)
627,079	-	31,017	29,245	687,341	(68,963)	79,569	10,606
496,073	-	24,537	16,529	537,139	(54,555)	128,620	74,065
19,453,377	-	962,222	2,778,458	23,194,057	(2,139,375)	(227,320)	(2,366,695)
2,083,527	-	103,057	3,277,635	5,464,219	(229,135)	53,549	(175,586)
5,621,058	-	278,034	1,573,189	7,472,281	(618,173)	(505,890)	(1,124,063)
3,400,834	-	168,215	601,664	4,170,713	(374,005)	(157,421)	(531,426)
3,694,925	-	182,762	605,531	4,483,218	(406,347)	(202,403)	(608,750)
962,453	-	47,606	427,009	1,437,068	(105,845)	(175,756)	(281,601)
1,169,414	-	57,843	241,341	1,468,598	(128,606)	62,441	(66,165)
824,393	-	40,777	196,664	1,061,834	(90,662)	249,451	158,789
860,403	-	42,558	43,769	946,730	(94,622)	124,320	29,698
20,453,985	-	1,011,715	30,592	21,496,292	(2,249,417)	9,589,625	7,340,208
<u>\$ 2,894,165,500</u>	<u>\$ -</u>	<u>\$ 143,153,978</u>	<u>\$ 72,243,813</u>	<u>\$ 3,109,563,291</u>	<u>\$ (318,284,390)</u>	<u>\$ (8,705,944)</u>	<u>\$ (326,990,334)</u>

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 and a fiduciary component unit of 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. Executive Order 2018-10 created the new State of Michigan Investment Board to be the investment fiduciary with respect to the investment and functions for which the State Treasurer had responsibilities and investment authority. The order became effective November 26th, 2018.

Plan Membership

The System's pension and other postemployment benefit (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 granted members a choice regarding their future retirement plan. They had the following options: 1) Defined Benefit (DB) Classified – Members voluntarily elected to remain in the DB plan for future service and contribute 4% of their annual compensation to the pension fund until they terminate state employment; 2) DB 30 – Members voluntarily elected to remain in the DB plan for future service and contribute 4% of pay until they reach 30 years of service, when they will switch to the state's defined contribution (DC) plan; or 3) DB/DC Blend – Members voluntarily elected not to pay the 4% and therefore became participants in the DC plan for future service beginning April 1, 2012.

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.

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*, as amended

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*, as amended.

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, 2022 (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, 2021

Total Pension Liability	\$ 18,546,770,523
Fiduciary Net Position	(14,481,587,667)
Net Pension Liability*	<u><u>\$ 4,065,182,856</u></u>

Fiduciary Net Position as a Percentage of Total Pension Liability	78.08%
Net Pension Liability as a Percentage of Covered Payroll	121.42%

Net Pension Liability As of September 30, 2022

Total Pension Liability	\$ 19,523,627,787
Fiduciary Net Position	(13,064,690,798)
Net Pension Liability*	<u><u>\$ 6,458,936,989</u></u>

Fiduciary Net Position as a Percentage of Total Pension Liability	66.92%
Net Pension Liability as a Percentage of Covered Payroll	186.42%

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

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, 2021

Total OPEB Liability	\$ 8,897,632,929
Fiduciary Net Position	(5,082,261,574)
Net OPEB Liability*	<u><u>\$ 3,815,371,355</u></u>

Fiduciary Net Position as a Percentage of Total OPEB Liability	57.12%
Net OPEB Liability as a Percentage of Covered Payroll	113.96%

Net OPEB Liability As of September 30, 2022

Total OPEB Liability	\$ 8,977,010,440
Fiduciary Net Position	(5,084,602,997)
Net OPEB Liability*	<u><u>\$ 3,892,407,443</u></u>

Fiduciary Net Position as a Percentage of Total OPEB Liability	56.64%
Net OPEB Liability as a Percentage of Covered Payroll	112.34%

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

Discount Rate

A discount rate of 6.00% was used to measure the total pension liability and 6.20% to measure the total OPEB liability. This discount rate was based on the expected rate of return on pension and OPEB plan investments of 6.00% and 6.20% respectively. 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 1 percentage point lower or 1 percentage point higher.

	1% Decrease 5.0%	Current Discount Rate 6.0%	1% Increase 7.0%
Total Pension Liability	\$ 21,500,906,520	\$ 19,523,627,787	\$ 17,842,730,754
Fiduciary Net Position	(13,064,690,798)	(13,064,690,798)	(13,064,690,798)
Net Pension Liability	<u>\$ 8,436,215,722</u>	<u>\$ 6,458,936,989</u>	<u>\$ 4,778,039,956</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 1 percentage point lower or 1 percentage point higher.

	1% Decrease 5.2%	Current Discount Rate 6.2%	1% Increase 7.2%
Total OPEB Liability	\$ 10,026,453,255	\$ 8,977,010,440	\$ 8,095,792,027
Fiduciary Net Position	(5,084,602,997)	(5,084,602,997)	(5,084,602,997)
Net OPEB Liability	<u>\$ 4,941,850,258</u>	<u>\$ 3,892,407,443</u>	<u>\$ 3,011,189,030</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 1 percentage point lower or 1 percentage point higher.

	1% Decrease	Current Healthcare Cost Trend Rate	1% Increase
Total OPEB Liability	\$ 8,057,499,598	\$ 8,977,010,440	\$ 10,034,830,226
Fiduciary Net Position	(5,084,602,997)	(5,084,602,997)	(5,084,602,997)
Net OPEB Liability	<u>\$ 2,972,896,601</u>	<u>\$ 3,892,407,443</u>	<u>\$ 4,950,227,229</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, 2022, are based on the results of an actuarial valuation date of September 30, 2021 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 in years where investment returns exceed the current assumption based on a schedule determined by the plan actuary. Excess investment gains in the 2021 fiscal year were sufficient to reduce the discount rate for the System's pension plan from 6.70% to 6.00%; and to reduce the System's OPEB plan discount rate from 6.90% to 6.20% beginning with the September 30, 2022 actuarial valuations. There were no new changes to the discount rates for the September 30, 2022 actuarial valuations.

Additional information as of the latest actuarial valuation follows:

Summary of Actuarial Assumptions

Valuation Date:	September 30, 2021
Actuarial Cost Method:	Entry-Age, Normal
Wage Inflation Rate:	2.75%
Projected Salary Increases:	2.75% – 11.75%, including wage inflation at 2.75%
Investment Rate of Return:	
– Pension Plan	6.00% net of investment expenses
– OPEB Plan	6.20% net of investment expenses
Healthcare Cost Trend Rate:	Pre-65: 7.50% year 1 graded to 3.50% year 15; 3.00% Year 120 Post-65: 6.25% Year 1 graded to 3.50% Year 15; 3.00% Year 120

Mortality:

Retirees	RP-2014 Male and Female Healthy Annuitant Mortality Table scaled by 93% for males and 98% for females and adjusted for mortality improvements using projection scale MP-2017 from 2006.
Active	RP-2014 Male and Female Employee Annuitant Mortality Table scaled by 100% for males and 100% for females and adjusted for mortality improvements using projection scale MP-2017 from 2006.

Notes:

- Assumption changes as a result of an experience study for the periods 2012 through 2017 have been adopted by the System for use in the determination of the total pension and OPEB liabilities beginning with the September 30, 2018 valuation.
- Recognition period for pension liabilities is the average of the expected remaining service lives of all employees in years is 1.0000.
- 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 5.4806.
- Recognition period for OPEB assets in years is 5.0000
- Full actuarial assumptions are available in the 2022 State Employees' Retirement System ACFR available on the ORS website at 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, 2022.

Expense	Total
Service Cost	\$ 47,981,071
Interest on the Total Pension Liability	1,194,541,993
Current-Period Benefit Changes	-
Employee Contributions (shown as negative for addition here)	(18,751,535)
Projected Earnings on Plan Investments (shown as negative for addition here)	(944,052,671)
Pension Plan Administrative Expense	6,002,959
Other Changes in Plan Fiduciary Net Position	(3,996)
Recognition of Outflow (Inflow) of Resources due to Liabilities	1,217,886,388
Recognition of Outflow (Inflow) of Resources due to Assets	(164,284,628)
Total Pension Expense*	\$ 1,339,319,581

*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:

Fiscal Year Ending September 30	Net Deferred (Inflows) and Outflows of Resources
2023	\$ (81,618,112)
2024	(127,493,299)
2025	(166,140,549)
2026	315,690,191
2027	-
Thereafter	-
Total	\$ (59,561,769)

OPEB Plan

The following table provides details of the System's OPEB expense for the fiscal year ended September 30, 2022.

Expense	Total
Service Cost	\$ 84,390,382
Interest on the Total OPEB Liability	605,545,170
Current-Period Benefit Changes	-
Employee Contributions (shown as negative for addition here)	-
Projected Earnings on Plan Investments (shown as negative for addition here)	(359,273,205)
OPEB Plan Administrative Expense	1,310,131
Other Changes in Plan Fiduciary Net Position	1,829,287
Recognition of Outflow (Inflow) of Resources due to Liabilities	(640,516,706)
Recognition of Outflow (Inflow) of Resources due to Assets	(11,569,450)
Total OPEB Expense*	\$ (318,284,391)

*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:

Fiscal Year Ending September 30	Net Deferred (Inflows) and Outflows of Resources
2023	\$ (604,631,896)
2024	(594,965,220)
2025	(458,461,049)
2026	(28,551,670)
2027	(24,810,953)
Thereafter	-
Total	\$ (1,711,420,788)