



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



Summary Annual Report

for The State Employees' Retirement System,
a Pension and Other Employee Benefit
Trust Fund of the State of Michigan
Fiscal Year Ended September 30, 2016

Prepared By
Office of Retirement Services
Department of Technology, Management and Budget

About the Michigan State Employees' Retirement System

This report is in compliance with Public Employee Retirement System Investment Act, 1965 PA 314, as amended. The contents came from the complete Michigan State Employees' Retirement System 2016 Comprehensive Annual Financial Report (CAFR), an existing public data source available on our website at www.michigan.gov/orsstatedb, and additional analysis performed after September 30, 2016.

The Michigan State Employees' Retirement System serves 59,038 retirees receiving monthly benefits, and 12,381 active defined benefit plan members. State employee pensions are protected by Michigan's Constitution. The System's net assets are held in trust to meet future benefit payments.

The State Treasurer is the investment fiduciary and custodian of all investments of the System pursuant to state law.

Executive Summary

The System's assets increased by approximately \$821 million in fiscal year 2016. The Actuarial Accrued Liabilities for pension and OPEB increased by \$1.8 billion primarily due to a reduction in the discount rate from 8 percent to 7.5 percent.

Statement of Assets and Liabilities

FY 2016	Pension*	OPEB**
Actuarial Accrued Liability	\$ 17,015,799,242	\$ 9,996,882,816
Present Value of Assets	\$ 10,937,446,017	\$ 1,601,782,232
Unfunded Actuarial Accrued Liability	\$ 6,078,353,225	\$ 8,395,100,584
Funding Ratio	64.3%	16.0%

*Source: 2016 SERS Pension Actuarial Valuation, page B-1

**Source: 2016 SERS OPEB Actuarial Valuation, page A-2

FY 2015	Pension*	OPEB**
Actuarial Accrued Liability	\$ 16,237,489,614	\$ 9,001,867,412
Present Value of Assets	\$ 10,416,577,282	\$ 1,302,110,883
Unfunded Actuarial Accrued Liability	\$ 5,820,912,332	\$ 7,699,756,529
Funding Ratio	64.2%	14.5%

*Source: 2015 SERS Pension Actuarial Valuation, page B-1

**Source: 2015 SERS OPEB Actuarial Valuation, page A-2

Membership

Members of this defined benefit plan include employees of the State of Michigan and its noncentral agencies as listed below:

- Classified or unclassified state employees, including civil service employees, appointed officials in the executive branch, and employees of the legislative and judiciary branches who were hired before March 31, 1997.
- Employees who work for the Business Enterprise Program, Mackinac Island State Park, or Michigan State Bar and were hired before March 31, 1997.
- Employees hired before October 1, 1996, and employed by the American Legion, American Veterans, Disabled American Veterans, Marine Corps League, Military Order of the Purple Heart, Wayne County Clerk Recorders Court, Third Circuit Court, or 36th District Court.

Plan Membership and Retirement Allowances as of September 30, 2016	
Membership	
Retirees and Beneficiaries Currently Receiving Benefits	
Regular Benefits	48,479
Survivor Benefits	7,155
Disability Benefits	3,404
Total	59,038
Current Employees	
Vested	12,124
Non-vested	257
Total	12,381
Inactive Employees	
Entitled to benefits and not yet receiving them	4,225
Total All Members	75,644
Source: CAFR for the fiscal year ended September 30, 2016, p. 23	
Retirement Allowances	
Average annual retirement allowance	\$ 21,863
Total annual retirement allowances being paid (in thousands)	\$ 1,290,760
Source: Pension Actuarial Valuation for the fiscal year ended September 30, 2016, p. D-2	

Benefit Structures

Employees who began state employment before March 31, 1997, and did not choose to transfer to the Defined Contribution (DC) plan under Public Act 487 of 1996, are in the Defined Benefit (DB) plan.

Effective March 31, 1997, Public Act 487 of 1996 closed the DB plan to new members. All new employees become participants in the DC plan.

On December 15, 2011, the Governor signed Public Act 264 of 2011 into law. This law added provisions for DB plan members to elect to contribute 4% of their compensation to the Pension Fund, or to freeze their pension benefit and become a participant of the DC plan for the remainder of their career.

Assets and Liabilities

The System's total market value of assets as of September 30, 2016, were \$13.5 billion, mostly comprised of cash, investments, and contributions due from employers.

Total liabilities as of September 30, 2016 were \$897.9 million and include warrants outstanding, accounts payable, and obligations under securities lending.

Total net assets held in trust for pension and Other Post-Employment Benefits (OPEB) increased \$548.1 million between fiscal years 2015 and 2016.

Assets & Liabilities (in thousands) (combined pension and OPEB)			
Assets	FY 2016		FY 2015
Cash	\$	73,842	\$ 5,396
Receivables		154,090	171,440
Securities Lending Collateral		873,388	712,497
Investments		12,378,716	11,923,319
Total Assets	\$	13,480,035	\$ 12,812,652
Liabilities	FY 2016		FY 2015
Accounts Payable and Other Liabilities	\$	25,723	\$ 29,284
Obligations Under Securities Lending		872,187	712,391
Amounts Due From Other Funds			36,948
Total Liabilities	\$	897,910	\$ 778,623
Net Assets	\$	12,582,125	\$ 12,034,029

Source: CAFR for the fiscal year ended September 30, 2016, p. 17

Note: Liabilities in this context are exclusive of Actuarial Accrued Liabilities (AAL) for pension and OPEB.

Revenue and Expenditures

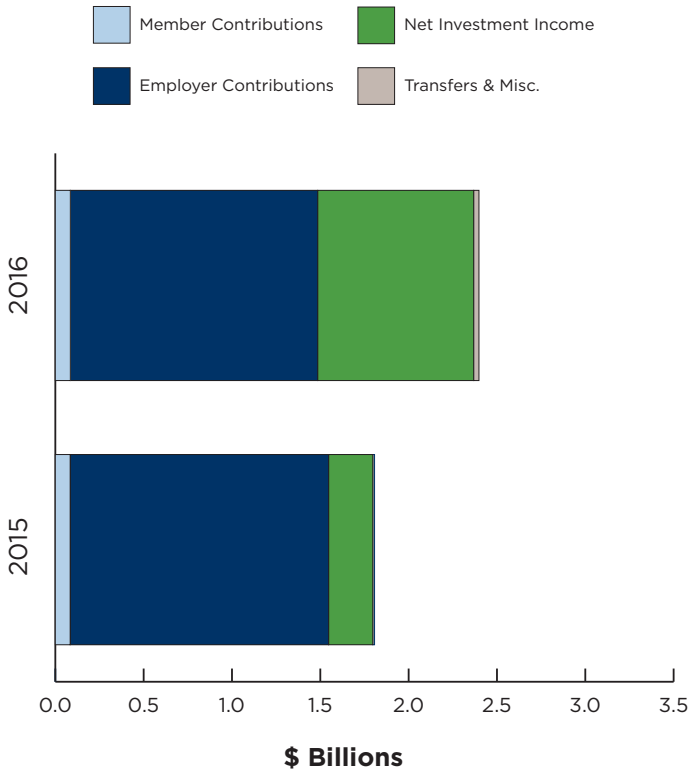
The reserves needed to finance pension and OPEB are accumulated through the collection of employer and employee contributions and through earnings on investments. Contributions and net investment income for fiscal year 2016 totaled approximately \$2.4 billion.

The primary expenses of the System include the payment of pension benefits to members and beneficiaries, payment of health, dental and vision benefits, refunds of contributions to former members, and the cost of administering the System.

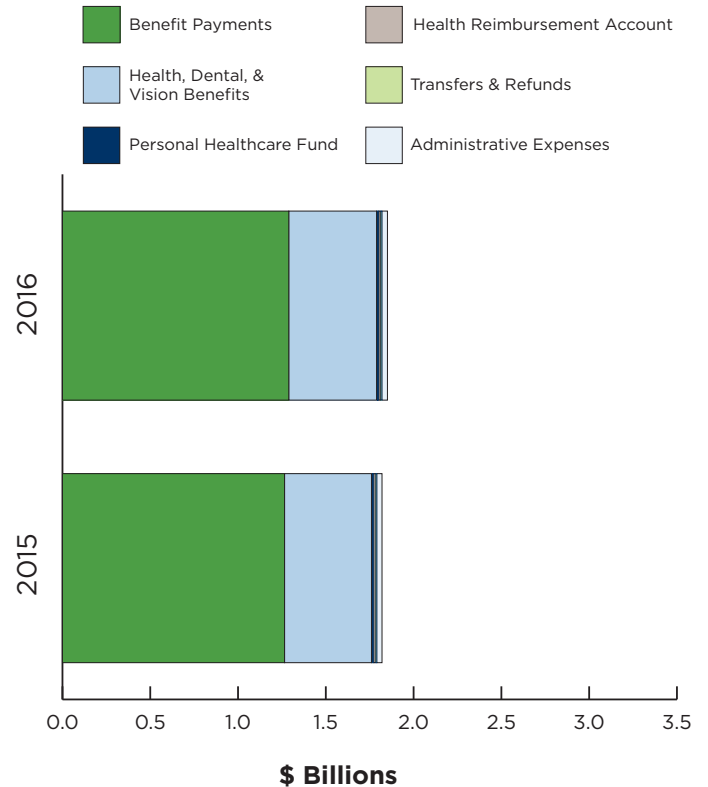
Additions & Deductions (in thousands) (combined pension and OPEB)			
Additions	FY 2016		FY 2015
Member Contributions	\$	85,327	\$ 84,376
Employer Contributions		1,403,117	1,463,148
Net Investment Income (loss)		883,648	250,622
Transfers and Misc. Income		\$322	167
Total Additions	\$	2,372,415	\$ 1,798,313
Deductions	FY 2016		FY 2015
Benefit Payments	\$	1,289,598	\$ 1,265,334
Health, Dental, & Vision Benefits		502,317	500,630
Transfers & Refunds		169	162
Administrative Expenses		32,235	30,983
Total Deductions	\$	1,824,319	\$ 1,797,109
Beginning of Year Assets	\$	12,034,029	\$ 12,032,825
End of Year Net Assets	\$	12,582,125	\$ 12,034,029

Source: CAFR for the fiscal year ended September 30, 2016, p. 18

Revenue



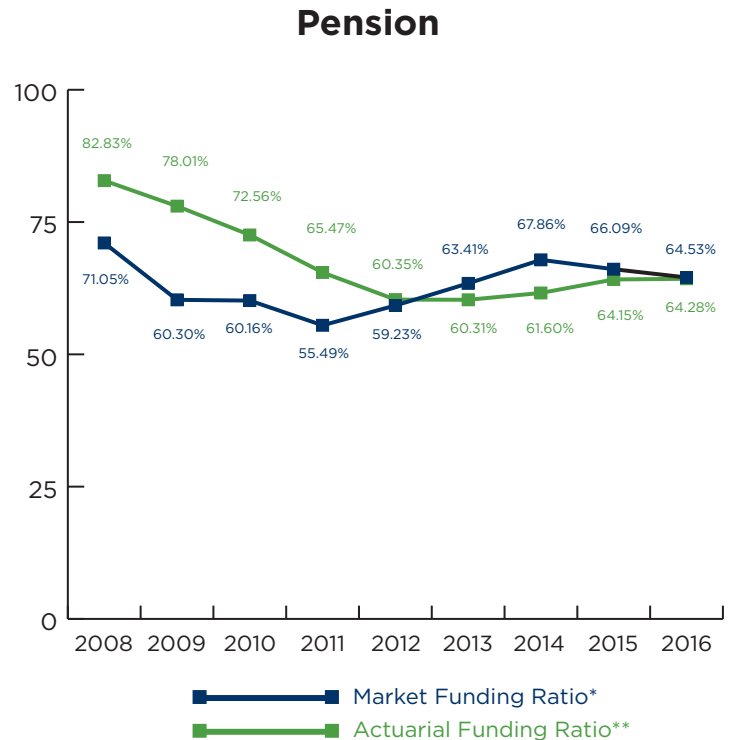
Expenditures



Market and Actuarial Funding Ratios

Pension

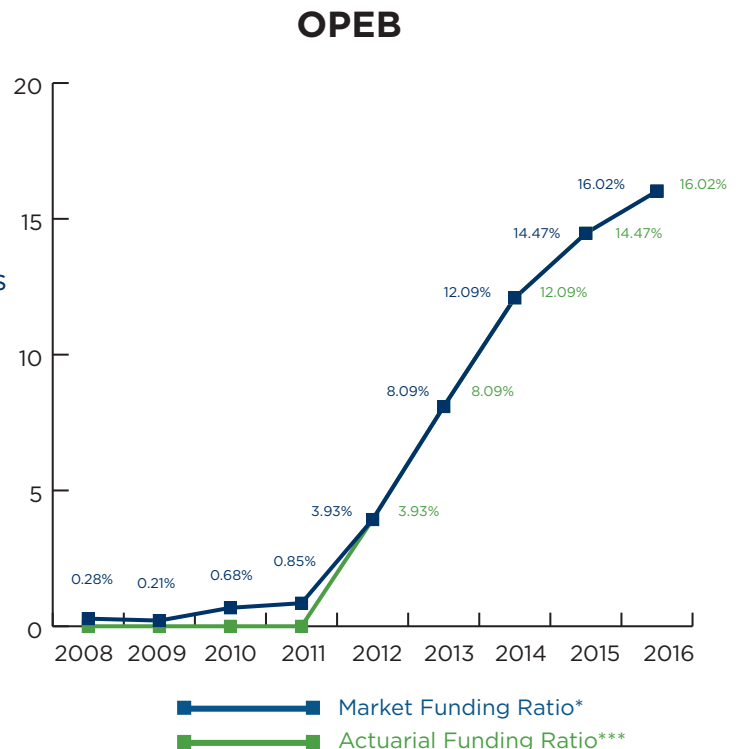
The market funding ratio is based on the market value of assets at fiscal year end. The actuarial funding ratio is the best practice used by all pension plans nationwide. It incorporates a five-year “smoothing” period, which minimizes volatility in a pension system’s funding requirements.



OPEB

Starting in 2012, the System began pre-funding OPEB costs, which significantly decreased the liability and increased the asset levels. Pre-funding is a best practice that invests assets and allows investment returns to help fund the plan. Many states do not pre-fund. This reform puts Michigan on the leading edge of retirement funding practices.

Before 2012, the System was funded on a pay-as-you-go basis. The funding ratio will improve over time as pre-funding contributions are made to the plan.



*Calculated on Market Value of Assets

**Source: Pension Actuarial Valuation for the fiscal year ended September 30, 2016, p. B-8

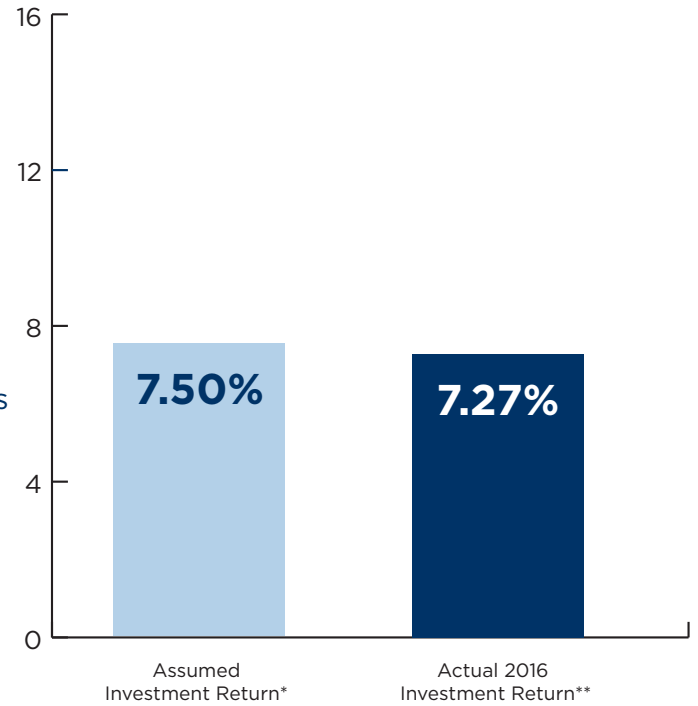
***Source: OPEB Actuarial Valuation for the fiscal year ended September 30, 2016, Appendix A-1

Assumed and Actual Investment Returns

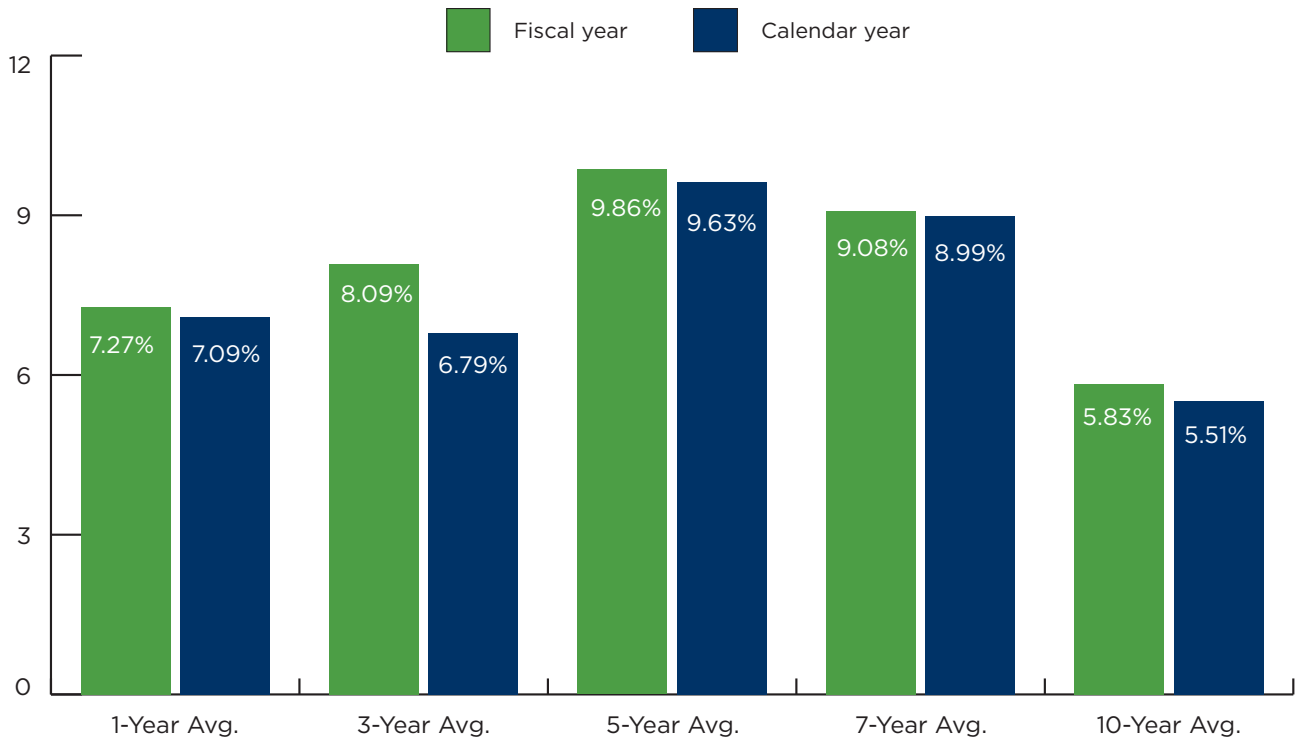
The State Treasurer administers all of the System's investments in accordance with the Public Employee Retirement System Investment Act, Public Act 314 of 1965. The main objective is maximizing the rate of return while meeting the actuarial assumptions through maintaining a diverse portfolio, eliminating unnecessary risks, and investing prudently.

The assumed rate of investment return is a key assumption used by the plan actuary in determining the contribution rates each year. When investments do not exceed the assumed rates of return, this results in an actuarial loss for the System. The actual rate of investment return in FY 2016 was 7.27 percent, which is less than the assumed rate of return of 7.5 percent.

Assumed and Actual Investment Returns for Fiscal Year 2016



Historical Investment Returns as of Fiscal Year 2016**



Note: These figures are shown net of fees. Information shown in the CAFR is shown gross of fees.

*Source: Pension Actuarial Valuation for the fiscal year ended Sept. 30, 2016, p. E-2

** Source: Treasury Bureau of Investments FY2016

Member and Employer Contributions

Employer Contributions

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

Definition of Normal Cost

Normal Cost is the actual cost of the retirement benefit a member earns each year, and is set using the assumed rate of investment return in addition to other actuarial assumptions. After member contributions are accounted for, the employer pays the remainder of the Normal Cost as shown here.

Member and Employer Pension Contributions	
Member Contributions	
Weighted Average	4%
Employer Contributions	
Normal Cost of benefits expressed as a percentage of valuation payroll	4.32%
Calculated UAAL contribution rate expressed as a percentage of valuation payroll	19.93%*
Valuation Payroll	
For Normal Cost	\$ 713,602,406
For Calculated Defined Contribution employee payroll	\$ 2,109,079,416**
For Unfunded Actuarial Accrued Liabilities (UAAL)	\$ 2,822,681,822***
*This rate was calculated with the total payroll used to collect UAAL.	
**This rate was calculated with the total payroll for DC employees.	
***UAAL costs are spread over the payroll associated with both DB and DC employees.	
Source: Pension Actuarial Valuation for the fiscal year ended Sept. 30, 2016, p. A-1	

2016 Plan Expenditures

Plan Expenses for Fiscal Year Ended September 30, 2016*		
Administrative and Other Expenses	Dollars	% of Total
These expenditures are the administrative costs of running the retirement system, and are paid by DTMB–Office of Retirement Services and DTMB–Financial Services through an annual appropriation.		
Personnel Services		
Staff Salaries	\$ 1,859,431	0.09950%
Retirement and Social Security	713,491	0.03818%
Other Fringe Benefits	258,940	0.01386%
Total	\$ 2,831,863	0.15154%
Professional Services		
Accounting	\$ 293,426	0.01570%
Actuarial	196,488	0.01051%
Attorney General	305,655	0.01636%
Audit	111,750	0.00598%
Consulting	15,670	0.00084%
Medical	140,322	0.00751%
Total	\$ 1,063,311	0.05690%
Building and Equipment		
Building Rentals	\$ 159,990	0.00856%
Equipment Purchase, Maintenance, and Rentals	24,380	0.00130%
Total	\$ 184,370	0.00987%
Miscellaneous		
Travel & Board Meetings (Excluding Travel & Education for Board Members)	\$ 5,169	0.00028%
Office Supplies	13,262	0.00071%
Postage, Telephone, and Other	526,834	0.02819%
Printing	50,678	0.00271%
Technological Support	1,952,463	0.10448%
Subtotal	2,548,406	0.13637%
Travel and Education for Board Members	771	0.00004%
Total Administrative and Other Expenses	\$ 6,628,720	0.35472%
Health, Dental & Vision Fees	Dollars	% of Total
These expenditures are for self-insurance of the health, dental, and vision plans, and are paid from the retirement system's trust fund.		
Staff Salaries	\$ 376,704	0.02016%
Health Fees	23,039,938	1.23293%
Dental Fees	1,908,507	0.10213%
Vision Fees	280,711	0.01502%
Total Health, Dental & Vision Fees	\$ 25,605,859	1.37024%
Investment Expenses	Dollars	% of Total
These expenditures are related to the Department of Treasury (Bureau of Investments) for managing the retirement system's assets, and are paid from the retirement system's trust fund.		
Real Estate Operating Expenses	\$ 291,288	0.01559%
Securities Lending Expenses	3,273,394	0.17517%
Other Investment Expenses		
ORS–Investment Expenses	3,441,540	0.18417%
Custody Fees	316,901	0.01696%
Management Fees	36,188,688	1.93656%
Research Fees	874,857	0.04682%
Total Investment Expenses	\$ 44,386,669	2.37525%
Benefits Paid to Members	Dollars	% of Total
These are the projected retirement benefits paid to members of the retirement system.		
Retirement Benefits	\$ 1,289,597,875	69.00999%
Health Benefits	455,156,440	24.35669%
Dental/Vision Benefits	42,960,871	2.29896%
Personal Healthcare Fund	4,151,445	0.22216%
Health Reimbursement Account	48,211	0.00258%
Refunds of Member Contributions	169,311	0.00906%
Total Payments to Members	\$ 1,792,084,153	95.89943%
Soft Dollar Expenses	Dollars	% of Total
These expenditures are for research provided by the retirement system's service providers and are incorporated into the brokerage fees & commissions.		
Bass Trading Int'l Group (BTIG)		
Macro Mavens Newsletter	\$ 6,518	0.00035%
High Tech Strategist	28	0.00000%
Total Soft Dollar Expenditures	\$ 6,546	0.00035%
Total of All Sections Above	\$ 1,868,711,947	100%
*Source: DTMB Financial Services report		
**Source: Treasury Bureau of Investments		

2017 Budget for Plan Expenditures

Budget for Plan Expenses for Fiscal Year Ending September 30, 2017*		
Administrative and Other Expenses	Dollars	% of Total
These expenditures are the administrative costs of running the retirement system, and are paid by DTMB–Office of Retirement Services and DTMB–Financial Services through an annual appropriation.		
Personnel Services		
Staff Salaries	\$ 2,112,304	0.10784%
Retirement and Social Security	700,928	0.03578%
Other Fringe Benefits	249,908	0.01276%
Total	\$ 3,063,140	0.15638%
Professional Services		
Accounting	\$ 316,020	0.01613%
Actuarial	100,000	0.00511%
Attorney General	243,104	0.01241%
Audit	100,000	0.00511%
Consulting	16,520	0.00084%
Medical	200,000	0.01021%
Total	\$ 975,643	0.04981%
Building and Equipment		
Building Rentals	\$ 146,495	0.00748%
Equipment Purchase, Maintenance, and Rentals	24,521	0.00125%
Total	\$ 171,016	0.00873%
Miscellaneous		
Travel & Board Meetings (Excluding Travel & Education for Board Members)	\$ 5,401	0.00028%
Office Supplies	4,810	0.00025%
Postage, Telephone, and Other	452,638	0.02311%
Printing	63,153	0.00322%
Technological Support	2,013,287	0.10278%
Subtotal	2,539,288	0.12963%
Travel and Education for Board Members	1,000	0.00005%
Total Administrative and Other Expenses	\$ 6,750,087	0.34460%
Health, Dental & Vision Fees	Dollars	% of Total
These expenditures are for self–insurance of the health, dental, and vision plans, and are paid from the retirement system’s trust fund.		
Staff Salaries	\$ 427,934	0.02185%
Health Fees	23,016,898	1.17505%
Dental Fees	1,906,598	0.09733%
Vision Fees	280,430	0.01432%
Total Health, Dental & Vision Fees	\$ 25,631,860	1.30854%
Investment Expenses	Dollars	% of Total
These expenditures are related to the Department of Treasury (Bureau of Investments) for managing the retirement system’s assets, and are paid from the retirement system’s trust fund.		
Real Estate Operating Expenses	\$ 139,310	0.00711%
Securities Lending Expenses	3,389,607	0.17304%
Other Investment Expenses		
ORS–Investment Expenses	3,953,254	0.20182%
Custody Fees	283,438	0.01447%
Management Fees	35,376,104	1.80600%
Research Fees	658,742	0.03363%
Total Investment Expenses	\$ 43,800,454	2.23608%
Benefits Paid to Members	Dollars	% of Total
These are the projected retirement benefits paid to members of the retirement system.		
Retirement Benefits	\$ 1,316,191,629	67.19351%
Health Benefits	515,998,927	26.34250%
Dental/Vision Benefits	46,890,837	2.39385%
Personal Healthcare Fund	3,161,410	0.16139%
Health Reimbursement Account	50,601	0.00258%
Refunds of Member Contributions	325,341	0.01661%
Total Payments to Members	\$ 1,882,618,743	96.11044%
Soft Dollar Expenses**	Dollars	% of Total
These expenditures are for research provided by the retirement system’s service providers and are incorporated into the brokerage fees & commissions.		
Bass Trading Int’l Group (BTIG)		
Macro Mavens Newsletter	\$ 6,518	0.00033%
High Tech Strategist	28	0.00000%
Total Soft Dollar Expenditures	6,546	0.00033%
Total of All Sections Above	\$ 1,958,807,691	100%
*Source: DTMB Financial Services report		
**Source: Treasury Bureau of Investments		

Actuarial Assumptions

Actuarial valuations for both the pension and OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, investment performance, and the healthcare cost trend.

Actuarial Assumptions for Fiscal Year Ended September 30, 2016	
Actuarial Cost Method	Entry Age, Normal
Amortization Method – Pension	Level–Dollar
Amortization Method – OPEB	Level Percent of Payroll
Amortization Period	Ending Sept. 30, 2036
Asset Valuation Method	5–Year Smoothed, Closed Period
Wage Inflation Rate	3.5%
Investment Rate of Return – Pension – Closed	7.5%
Investment Rate of Return – OPEB – Closed*	7.5%
Healthcare Cost Trend Rate	9.0% Year 1 graded to 3.5% Year 10
<p>*Note: The OPEB plan closed to employees first hired on or after January 1, 2012. These employees participate in the Personal Healthcare Fund and may become eligible for a lump sum payment into a Health Reimbursement Account upon their first termination from employment (\$1,000 with at least 10 years of service if under age 60; \$2,000 with at least 10 years of service if age 60 or older). These employees have the option of enrolling in State Retiree Healthcare at full cost at termination.</p>	
<p>Source: Pension and OPEB Actuarial Valuations for the fiscal year ended September 30, 2016</p>	

Michigan State Employees' Retirement System Service Providers

A service provider is any individual, third-party agent or consultant, or other entity that receives direct or indirect compensation for consulting, investment management, brokerage, or custody services related to the system's assets.

Accel Partners	Carlyle Group LP	Fortress Investment Group
Advent International Corp	Carlyle Investment Management	Fox Paine & Company LLC
AEW Capital Management	Castle Harlan Inc	Freeman, Spogli & Co
Affinity Equity Partners	CCMP Capital Advisors LLC	FrontPoint Partners
Apax Partners Worldwide LLP	Centerbridge Capital	FTN Financial
Apollo Capital Management	Cerberus Capital Management LP	Gateway Capital
Apollo Global Management LLC	CIE Management - BC Partners	Genstar, LLC
Arboretum Ventures	CIM Investment Advisors	Goldman Sachs
Arclight Capital Partners	Citigroup	Grosvenor Capital Management LP
Ardian	Citigroup Global Markets Inc	GSO Capital Partners
Ares Management LLC	Clarion Partners	HC Wainwright
ARK Investment Management	Clarkston Capital Partners LLC	HarbourVest Partners LLC
Attucks Asset Management	Coller Capital	Harvest Partners LLC
Avanath Capital Management	Columbia Management Investment Advisors	Heitman Capital Management
Axiom Asia Private Capital	CoStar Realty Information Inc	Highbridge Principal Strategies
Bank of America/Merrill	Cowen Group	Hilltop Securities
Bank of Montreal	Credit Suisse Securities LLC	Hopen Life Sciences Ventures
Barclay's Capital	Crescent Capital Group	HPS Investment Partners III LLC
Barings	Czech Asset Management	Huron Capital Partners LLC
Basalt Infrastructure Partners	DA Davidson & Co	InSight Venture Partners
BB&T Capital Markets	Dalmore Capital Limited	Invesco Ltd
Beacon Capital Partners	Deutsche Bank	Jana Partners
Bentall Kennedy	Devon Self Storage	Jefferies
Beringea	DLJ Merchant Banking Partners	JP Morgan Asset Management
Berkshire Partners LLC	Dodge & Cox	JP Morgan Investment Management
BGC Partners	Domain Capital Advisors	JP Morgan Securities LLC
Bivium Capital Partners	Drexel Hamilton	Kayne Anderson
BlackRock Financial Management	EDF Ventures	KBS Realty Advisors
Blackstone Alternative Asset Management	Effissimo Capital Management	Kelso & Company
Blackstone Group	EnCap Investments LP	Kensington Realty Advisors
BMO Capital Markets	EnTrust Capital	Kevin Miller Financial Services
BNP Paribas Finance	Fidelity Institutional Asset Management	Khosla Ventures
BNY ConverEx	FIMI Opportunity Funds	Kohlberg Kravis Roberts & Co
Brevan Howard Asset Management	First Reserve Management	L&B Realty Advisors
Bridgepoint Capital	FirstMark Capital	Landmark Realty Advisors
Brookfield Asset Management Inc	Fisher Investments Institutional Group	LaSalle Investment Management
BTIG Inc	Five Star Realty Partners	Lazard Asset Management
Cantor Fitzgerald	Flagship Ventures	Leonard Green & Partners LP
Capital Institutional Services		LGT Capital Partners
Capri Capital Partners		Lightspeed Ventures

Michigan State Employees' Retirement System Service Providers, cont.

Lion Capital	Paladin Realty Partners	Stifel Nicolaus & Co
Lombard International Life Assurance Company	Parallel Resource Partners	Stockbridge Capital Group
Lonestar	Parthenon Capital Inc	Stonepeak Advisors LLC
Loomis Sayles & Co	Peninsula Capital Partners LLC	Sun Trust, Robinson, Humphrey
Los Angeles Capital Management	Phoenix Equity Partners	Susquehanna Intl Group
Lowe Enterprises Investment Management	PIMCO	T Rowe Price Associates
Lubert-Adler Management Company	Piper Jaffray	TCW Group Inc
Marathon Asset Management	Principal CMBS	TH Real Estate Limited
MarketAxess	Principal Financial Group	The John Buck Company
Matlin Patterson Global Advisors	Proprium Capital Partners	Thomas Bravo
Menlo Management Partners	Prudential Fixed Income	TPG Real Estate Advisors
Merit Energy	Prudential Insurance Co	TPG Inc
Meritech Capital Partners	Prudential Investment Management	Transwestern Investment Management
Merrill Lynch Pierce Fenner & Smith	Public Pension Capital	Trilantic Capital Management LLC
Mesirow Financial Inc	Questor Management Company LLC	True North Management Group
Metropolitan West Asset Management	Raymond James & Assoc	TSG Consumer Partners
MFR Securities Inc	RBC Capital Markets	Turnbridge Capital Management LLC
Mischler Financial Group	RBS Securities	UBS
Morgan Stanley	Renaissance Venture Capital	US Bancorp
Multi-Bank Securities	Rhone Capital	Venator Real Estate
Napier Park Global Capital	Rialto Capital	Veritas Capital Fund LP
New Leaf Venture Partners	Ridgewood Energy	Victory Capital
Nordic Capital	Riverside	Visium Capital Management
NorthPointe Capital	RW Baird	Vista Equity Partners
Oak Investment Partners	RW Pressprich & Co	Warburg, Pincus LLC
Oaktree Capital Management LLC	Sanford C. Bernstein & Co Inc	Warwick Energy Group
One Liberty Ventures	Scotia Capital (USA) Inc	Wayne Co
Oppenheimer & Co	Seizert Capital Partners	Wellington Management Co
Orchard Global Asset Management	Shamrock Capital Advisors	Wellington Trust Co
Orion Resource Partners	Siguler, Guff & Co LLC	Wells Fargo Securities LLC
OTA Ltd Partnership	Silver Lake	Western National Group
P Schoenfeld Asset Management	Societe Generale	
	Sprott Resources	
	Sprout Group	
	State Street Global Advisors	

Our website is available seven days a week, even when our office is closed:
www.michigan.gov/orsstatedb

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Office of Retirement Services
Director Kerrie Vanden Bosch

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