



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

# Summary Annual Report

for the Michigan Public School Employees' Retirement System, a pension and  
other post-employment benefits trust fund of the state of Michigan  
fiscal year ended Sept. 30, 2021

Prepared by  
Michigan Department of Technology, Management and Budget,  
Office of Retirement Services

# A message from the director



Director Anthony Estell

The Department of Technology, Management and Budget (DTMB), Office of Retirement Services (ORS) is pleased to present the Summary Annual Report for the Michigan Public School Employees' Retirement System (MPSERS), henceforth referred to as the System, for the fiscal year (FY) ended Sept. 30, 2021.

ORS provides retirement and related retiree healthcare plans to help more than 680 public school employers attract, retain, and reward a highly qualified workforce.

#### Average admin. cost

**\$68** per member/  
retiree

ORS is able to cost-effectively provide these benefits to retirees. In 2020, the total defined benefit (DB) pension administration cost was \$68 per active member and retiree. This was \$34 below the peer average of \$102 per active member and retiree (CEM Benchmarking).

## Accomplishments

### Pension statements go paperless

In October, pension statements for members of the public school, state employee, and state police retirement systems with active online accounts went paperless. Nearly 185,000 customers, almost half of the retiree population served by ORS, shifted to digital statements. The statements are still available in the retiree's miAccount. Retirees can choose to opt back in to paper statements if desired. After five statement cycles we have saved over \$560,000 in printing and mailing costs.

### Newsletters shift to quarterly publication

Beginning in March, both the *Connections* and *Proactive* newsletters — for our retired and active customers, respectively — changed from biannual to quarterly publications. The printed *Connections* newsletter also went entirely digital (the *Proactive* newsletter was already digital). We doubled our efforts to deliver more timely and relevant information in a predictable format, maintaining a digital presence through the pandemic and beyond. Historically the printed *Connections* newsletter required a lengthy publication cycle, which was a limiting factor in the production process. We also will save over \$30,000 a year in printing costs by moving *Connections* to digital delivery.

### COVID-related cost share waived for retirees of the system

ORS staff worked with Blue Cross Blue Shield of Michigan to implement measures to help public school retirees consult with their doctors and therapists during the COVID-19 pandemic. Temporary adjustments were made to remove the member cost share for all testing and treatment related to COVID-19, medical and behavioral telehealth services, in-person primary care office visits, in-office services, and behavioral health office visits.

### Member seminars go virtual

Every year, ORS staff work with our insurance carriers to create presentations, benefit guides, and flyers to educate public school retirees about their healthcare plan. The carriers typically participate in in-person seminars throughout the fall to help distribute this information. In response to the pandemic, the fall 2020 seminar experience was made available exclusively online. The online seminar had 3,421 users and feedback from members was positive overall. In spring 2021, ORS staff and insurance carriers kicked off another round of online seminar planning to deliver educational materials in a similar format as 2020.

# Accomplishments, continued

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## **Infographics share remote work successes**

As we adapted to remote work, ORS staff found new ways to engage customers and keep our work visible. Over the course of a year, leaders of each process reported notable work that was completed in their area each month. These reports were then converted into infographics representing the accomplishments of the business processes and shared regularly on our Facebook page. These posts were consistently among the top five in engagement for every month of the campaign.

## **Regular one-on-one meetings sustain relationships, performance**

One-on-one meetings between leaders and their direct reports have been a standard practice for several years at ORS. But with the disruption and isolation of remote work, these no-less-than-biweekly meetings have proved vital to build and maintain positive relationships, foster effective communication, and support performance management. Every leader is expected to establish one-on-one meetings with each of their direct reports and to adhere to specific outcomes.

## **Leadership fosters open communication with town halls, blogs, videos**

Over the past year, we have normalized more frequent communications from our leadership team to staff. In addition to the biweekly blogs produced by ORS Director Anthony Estell, the ORS division directors and senior executive assistant began producing biweekly videos for staff. The result is a weekly cadence of leadership communication. Additionally, we have continued quarterly town hall events that are heavily dedicated to recognition, and include significant updates from leadership, along with leadership fielding questions from staff. These have all proved beneficial in maintaining an executive presence and being open and transparent with timely communications.

## **ORS exploring different approach to IT**

In fall 2021, we began exploring the Agile methodology to develop technical solutions for the business with our partners in the DTMB Application Support Team. Historically, ORS has used a Waterfall approach to IT projects which involves fully developing a product before delivery. Value is gained upon project completion, not during development and testing. This pivot in practice adopts an iterative approach, reducing the cycle from development to market. The time savings comes from first delivering simple, viable products and adding features and complexity in subsequent releases. ORS has already completed one release using this methodology. The new approach also introduced ORS to Azure DevOps software for planning and organizing the related business activities.

## **ORS reaches new pension payment milestone**

In July, for the first time in ORS' history, we issued over 300,000 pension payments in a single month. The new milestone was confirmed after the monthly pension payroll processed in mid-July for all retirement systems administered by ORS.

# Honors

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## **Government Finance Officers Association Award**

The Government Finance Officers Association of the United States and Canada awarded the System with the Certificate of Achievement for Excellence in Financial Reporting for our FY 2020 annual comprehensive financial report (ACFR). This marks the 30th consecutive year ORS has received this prestigious award.

## **Public Pension Standards Award**

ORS was awarded the 2021 Standards Award from the Public Pension Coordinating Council's Standards Program (PPCC) for both funding and administration. ORS has received this award every year since 2004. The PPCC Standards reflect expectations for public retirement system management and administration and serve as a benchmark for all DB public plans to be measured.

# About the Michigan Public School Employees' Retirement System

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This report is issued in compliance with the Public Employee Retirement System Investment Act, 1965 Public Act (PA) 314, and the Public School Employees Retirement Act, 1980 PA 300, both as amended. The contents come from the complete MPSERS 2021 ACFR, available on our website at [Michigan.gov/ORSSchools](https://Michigan.gov/ORSSchools), the annual actuarial valuations as of Sept. 30, 2021, and additional analysis performed after Sept. 30, 2021.

Public school employees' pensions are protected by Michigan's Constitution. The System's net assets are held in trust to meet future benefit payments.

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

# Executive summary

The present value of assets as of Sept. 30, 2021, was \$72.0 billion for pension and other post-employment benefits (OPEB), and the total actuarial accrued liability (AAL) was \$108.3 billion resulting in a total unfunded actuarial accrued liability (UAAL) of \$36.3 billion.

The System’s assets increased by \$11.3 billion in FY 2021. Asset increases were primarily due to revisions in actuarial assumptions, positive investment experience, and contributions from employers and employees. The AAL for pension and OPEB increased by \$10.1 billion primarily due to revisions in actuarial assumptions. Under the dedicated gains policy, excess investment earnings were used to reduce the pension assumed rate of return (AROR) to 6.00% from 6.80% for the legacy DB (Basic and Member Investment Plan) and Pension Plus plans.

The Pension Plus 2 plan remained at 6.00% and OPEB was reduced from 6.95% to 6.00%. The pension funding ratio increased by 3.20 percentage points even with investment returns being utilized for dedicated gains. The OPEB funding ratio improved by 16.40 percentage points due to positive investment returns and better than expected actuarial experience.

## Statement of assets and liabilities

FY 2021	Pension <sup>1</sup>	OPEB <sup>2</sup>
AAL	\$95,903,396,517	\$12,376,949,317
Present value of assets	\$61,479,748,797	\$10,547,883,872
UAAL	\$34,423,647,720	\$1,829,065,445
Funding ratio	64.10%	85.22%

FY 2020	Pension <sup>3</sup>	OPEB <sup>4</sup>
AAL	\$86,337,689,863	\$11,884,887,341
Present value of assets	\$52,587,345,269	\$8,178,804,782
UAAL	\$33,750,344,594	\$3,706,082,559
Funding ratio	60.90%	68.82%

1. 2021 MPSERS Pension Actuarial Valuation, Page B-1.  
 2. 2021 MPSERS OPEB Actuarial Valuation, Page A-2.  
 3. 2020 MPSERS Pension Actuarial Valuation, Page B-1.  
 4. 2020 MPSERS OPEB Actuarial Valuation, Page A-2.

# Membership

## Members of this DB plan include employees of:

- K-12 public school districts.
- Intermediate school districts.
- District libraries.
- Public school academies/charter schools.
- Community colleges.

## In some instances, membership includes certain employees who began working for the following universities before Jan. 1, 1996:

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

## Plan membership and retirement allowances as of Sept. 30, 2021

### Membership<sup>1</sup>

Retirees and beneficiaries currently receiving benefits	
Regular benefits	198,595
Survivor benefits	19,476
Disability benefits	5,696
<b>Total</b>	<b>223,767</b>
Current employees	
Vested	88,430
Non-vested	68,591
<b>Total<sup>2</sup></b>	<b>157,021</b>
Inactive employees	
Entitled to benefits and not yet receiving them	18,994
<b>Total all members</b>	<b>399,782</b>

1. Pension Actuarial Valuation for the FY ended Sept. 30, 2021, Page D-1.
2. Includes DB members who converted to the Defined Contribution (DC) plan and employees who elected to participate only in the DC plan.

### Retirement allowances<sup>3</sup>

Average annual retirement allowance	\$23,840
<b>Total annual retirement allowances being paid (in thousands)</b>	<b>\$5,334,628</b>

3. Pension Actuarial Valuation for the FY ended Sept. 30, 2021, Page D-2.

# Assets and liabilities

The System's total assets on a market basis as of Sept. 30, 2021, were \$76.7 billion, mostly composed of cash, investments, and contributions due from employers.

Total liabilities as of Sept. 30, 2021, were \$2.7 billion and include accounts payable, unearned revenue, and obligations under securities lending.

Total net assets held in trust for pension and OPEB increased by \$14.6 billion from the previous year.

## Assets and liabilities<sup>1</sup> (dollars in thousands) (combined pension and OPEB<sup>2</sup>)

Assets	FY 2020	FY 2021
Cash	\$ 135,140	\$ 148,905
Receivables	741,352	722,591
Investments	58,828,612	73,419,046
Securities lending collateral	2,452,152	2,434,280
<b>Total assets</b>	<b>\$ 62,157,256</b>	<b>\$ 76,724,821</b>
Liabilities	FY 2020	FY 2021
Unearned revenue	\$ 4,605	\$ 9,029
Accounts payable and other liabilities	225,243	207,159
Obligations under securities lending	2,452,152	2,434,280
<b>Total liabilities</b>	<b>2,682,000</b>	<b>2,650,468</b>
<b>Net assets</b>	<b>\$ 59,475,256</b>	<b>\$ 74,074,353</b>

1. ACFR for the FY ended Sept. 30, 2021, Page 15. Liabilities in this context are exclusive of AAL for pension and OPEB. The sum total of all the line items may not equal the total due to rounding.

# Revenue and expenditures, change in net assets

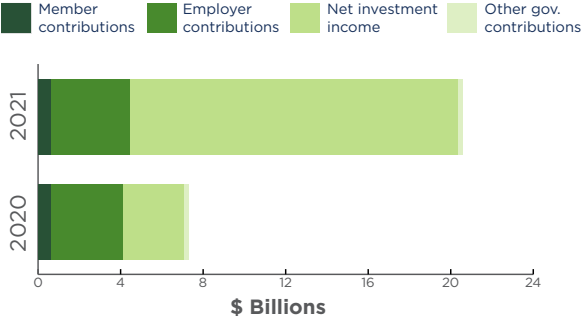
The reserves needed to finance pension and OPEB are accumulated through the collection of employer and employee contributions including earnings on investments.

Contributions and net investment income for FY 2021 totaled \$20.6 billion. The primary expenses of the System include the payment of pension benefits to members and beneficiaries; payment for health, dental, and vision benefits; refunds of contributions to former members; and the cost of administering the System.

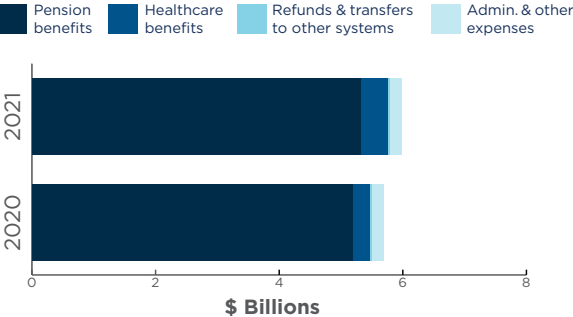
Additions and deductions <sup>1</sup> (dollars in thousands)			
Additions		FY 2020	FY 2021
Member contributions	\$	606,379	\$ 617,300
Employer contributions		3,517,348	3,830,605
Other governmental contributions		254,348	236,168
Net investment income (loss)		2,919,801	15,895,354
Miscellaneous income		192	248
<b>Total additions</b>	<b>\$</b>	<b>7,298,068</b>	<b>\$ 20,579,674</b>
Deductions		FY 2020	FY 2021
Pension benefits	\$	5,183,129	\$ 5,309,514
Healthcare benefits		286,465	449,558
Refunds and transfers to other systems		28,029	26,835
Administrative and other expenses		186,832	194,669
<b>Total deductions</b>	<b>\$</b>	<b>5,684,455</b>	<b>\$ 5,980,576</b>
Net position <sup>2</sup>		FY 2020	FY 2021
Net increase (decrease) in net position	\$	1,613,613	\$ 14,599,098
Beginning of year		57,861,643	59,475,256
<b>End of year</b>	<b>\$</b>	<b>59,475,256</b>	<b>\$ 74,074,353</b>

1. ACFR for the FY ended Sept. 30, 2021, Page 16.  
 2. FY 2020 beginning of year fiduciary net position was restated due to an audit adjustment for contributions received after the measurement date.

## Revenue



## Expenditures



# 2021 plan expenditures

## Plan expenses for FY ended Sept. 30, 2021<sup>1,2</sup>

### Pension plan administrative and other expenses

Dollars in thousands

These expenditures are the administrative costs of running the System and are paid by DTMB, ORS and DTMB, Financial Services through an annual appropriation.

#### Personnel services

Staff salaries	\$	6,296
Retirement and Social Security		3,530
Other fringe benefits		1,253
<b>Subtotal</b>	<b>\$</b>	<b>11,079</b>

#### Professional services

Accounting	\$	2,000
Actuarial		432
Attorney general		278
Audit		494
Consulting		1,815
Medical		221
<b>Subtotal</b>	<b>\$</b>	<b>5,241</b>

#### Building and equipment

Building rentals	\$	933
Equipment purchase, maintenance, and rentals		52
<b>Subtotal</b>	<b>\$</b>	<b>985</b>

#### Miscellaneous

Travel and board meetings (excluding travel and education for board members)	\$	0
Office supplies		14
Postage, telephone, and other		3,120
Printing		234
Technological support		11,007
<b>Subtotal</b>		<b>14,375</b>

Travel and education for board members		1
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<b>Total administrative and other expenses</b>	<b>\$</b>	<b>31,682</b>
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## 2021 plan expenditures, continued

Health, dental, and vision expenses	Dollars in thousands
These expenditures are for the self-insurance of the health, dental, and vision plans and are paid from the System's trust fund.	
Health fees	157,595
Dental fees	5,181
Vision fees	211
<b>Total health, dental, and vision expenses</b>	<b>\$ 162,987</b>
Investment expenses	Dollars in thousands
These expenditures are related to the Treasury, Bureau of Investments (BOI) for managing the System's assets, and are paid from the System's trust fund.	
Real estate operating expenses	\$ 0
Securities lending expenses	3,075
Other investment expenses	
ORS-investment expenses	12,968
Custody fees	1,380
Management fees	275,033
Research fees	8,096
<b>Total investment expenses</b>	<b>\$ 300,552</b>
Benefits paid to members	Dollars in thousands
These were the retirement benefits paid to members of the System during the fiscal year.	
Retirement benefits	\$ 5,309,514
Health benefits	377,043
Dental and vision benefits	72,514
Refunds of member contributions	26,835
<b>Total payments to members</b>	<b>\$ 5,785,907</b>
<b>Total of all sections</b>	<b>\$ 6,281,128</b>
<small>1. DTMB, Financial Services report. The sum total of all the line items may not equal the total due to rounding.                  2. Treasury, BOI report.</small>	

# 2022 budget for plan expenditures

## Budget for plan expenses for FY ending Sept. 30, 2022<sup>1,2</sup>

### Pension plan administrative and other expenses

Dollars in thousands

These expenditures are the administrative costs of running the System and are paid by DTMB, ORS and DTMB, Financial Services through an annual appropriation.

#### Personnel services

Staff salaries	\$	6,841
Retirement and Social Security		3,552
Other fringe benefits		1,299
<b>Subtotal</b>	<b>\$</b>	<b>11,693</b>

#### Professional services

Accounting	\$	2,020
Actuarial		435
Attorney general		300
Audit		506
Consulting		2,053
Medical		260
<b>Subtotal</b>	<b>\$</b>	<b>5,575</b>

#### Building and equipment

Building rentals	\$	933
Equipment purchase, maintenance, and rentals		26
<b>Subtotal</b>	<b>\$</b>	<b>959</b>

#### Miscellaneous

Travel and board meetings (excluding travel and education for board members)	\$	4
Office supplies		16
Postage, telephone, and other		1,144
Printing		253
Technological support		12,404
<b>Subtotal</b>		<b>13,821</b>

Travel and education for board members		1
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<b>Total administrative and other expenses</b>	<b>\$</b>	<b>32,049</b>
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## 2022 budget, continued

<b>Health, dental, and vision expenses</b>	<b>Dollars in thousands</b>
These expenditures are for self-insurance of the health, dental, and vision plans, and are paid from the System's trust fund.	
Health fees	162,323
Dental fees	5,751
Vision fees	209
<b>Total health, dental, and vision expenses</b>	<b>\$ 168,283</b>
<b>Investment expenses</b>	<b>Dollars in thousands</b>
These expenditures are related to the Treasury, BOI for managing the System's assets and are paid from the System's trust fund.	
Real estate operating expenses	\$ 0
Securities lending expenses	3,106
Other investment expenses	
ORS-investment expenses	11,931
Custody fees	1,518
Management fees	277,784
Research fees	8,177
<b>Total investment expenses</b>	<b>\$ 302,514</b>
<b>Benefits paid to members</b>	<b>Dollars in thousands</b>
These are the projected retirement benefits paid to members of the System.	
Retirement benefits	\$ 5,415,704
Health benefits	452,452
Dental and vision benefits	87,017
Refunds of member contributions	25,762
<b>Total payments to members</b>	<b>\$ 5,980,935</b>
<b>Total of all sections</b>	<b>\$ 6,483,782</b>
<ol style="list-style-type: none"> <li>1. DTMB, Financial Services report. The sum total of all the line items may not equal the total due to rounding.</li> <li>2. Treasury, BOI report.</li> </ol>	

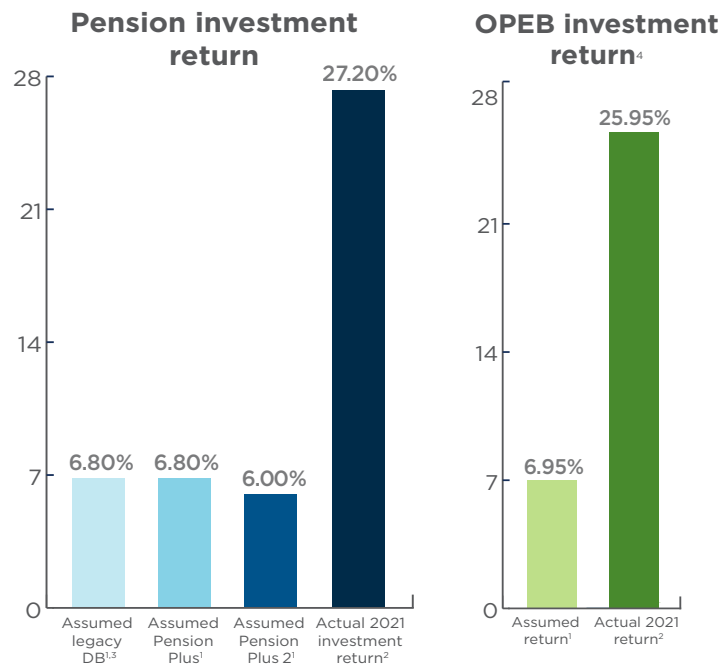
# Assumed and actual investment returns

The Michigan Department of Treasury, BOI administers all of the System's investments in accordance with the Public Employee Retirement System Investment Act, PA 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 AROR is a key assumption used by the plan actuary in determining the employer contribution rates each year. As a result of the dedicated gains policy, the AROR for the legacy DB plans and Pension Plus was reduced from 6.80% to 6.00%, Pension Plus 2 remained at 6.00%, and OPEB was reduced from 6.95% to 6.00%.

The ARORs for all MPSERS plans are provided in the charts in this section. The actual rate of investment return for the pension plan in FY 2021 was 27.20%.

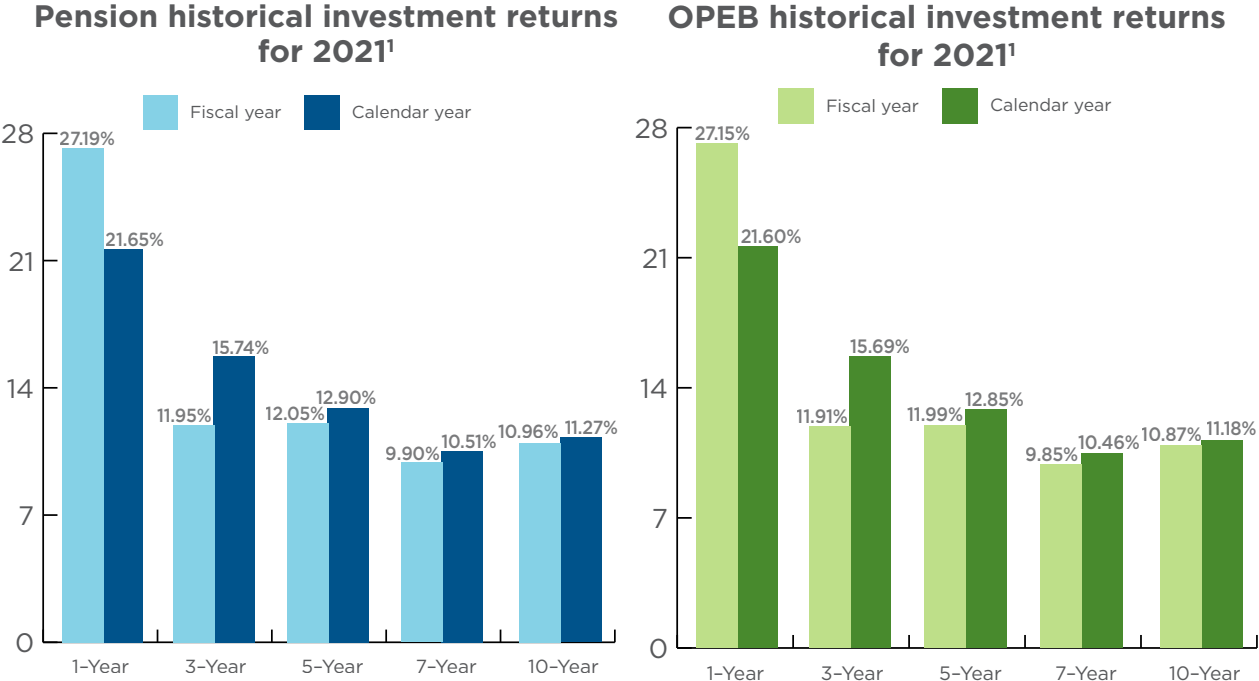
The actual rate of investment return for OPEB was 25.95%. All changes to the AROR are reflected in the Sept. 30, 2021, actuarial valuations, but for comparison with the current year investment results, the prior-year assumptions are presented in the chart.



1. 2021 MPSERS Pension Actuarial Valuation, Section C.
2. Treasury, BOI report.
3. Legacy DB refers to the plans for members hired before July 1, 2010, who opted to remain in that plan.
4. 2021 MPSERS Pension Actuarial Valuation, D-3.

# Historical investment returns

Historical investment returns for both pension and OPEB are presented in the following charts.

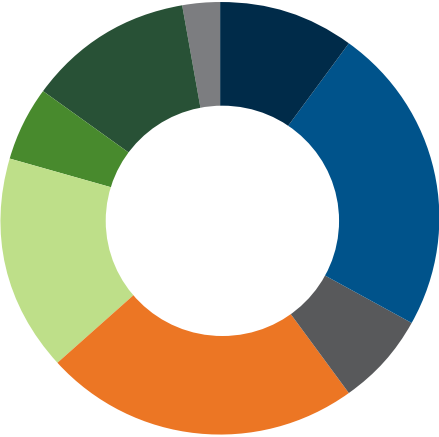


1. Treasury, BOI report. These figures are shown net of fees. Information shown in the financial report is shown gross of fees.

# Investments and earnings

A key function of the investment fiduciary is to ensure the System’s investment portfolio is diversified. Having a diverse portfolio helps to maximize investment income responsibly while minimizing risk. Even though market performance may fluctuate, the long-term performance of the System’s portfolio is stable.

Investments and earnings <sup>1</sup>		
	Market value	Total investment and interest income
Fixed income pools	\$ 7,446,870,352	\$ 260,865,443
Domestic equity pools	16,936,637,675	4,235,660,390
Real estate and infrastructure pools	5,175,724,773	642,457,009
Private equity pools	11,170,717,004	6,376,048,456
International equity pools	11,983,966,285	2,458,407,540
Absolute return pools	3,946,704,738	445,455,698
Real return and opportunistic pools	8,947,092,041	1,760,189,544
Short-term investment pools	1,961,643,033	5,484,152
<b>Market value and net investment gain</b>	<b>\$ 73,569,355,901</b>	<b>\$ 16,184,568,232</b>



- Fixed income pools - 10.1%**
- Domestic equity pools - 23.0%**
- Real estate and infrastructure pools - 7.0%**
- Private equity pools - 23.3%**
- International equity pools - 16.3%**
- Absolute return pools - 5.4%**
- Real return and opportunistic pools - 12.2%**
- Short-term investment pools - 2.7%**

1. ACFR for the FY ended Sept. 30, 2021, Page 77.

# Market and actuarial funding ratios

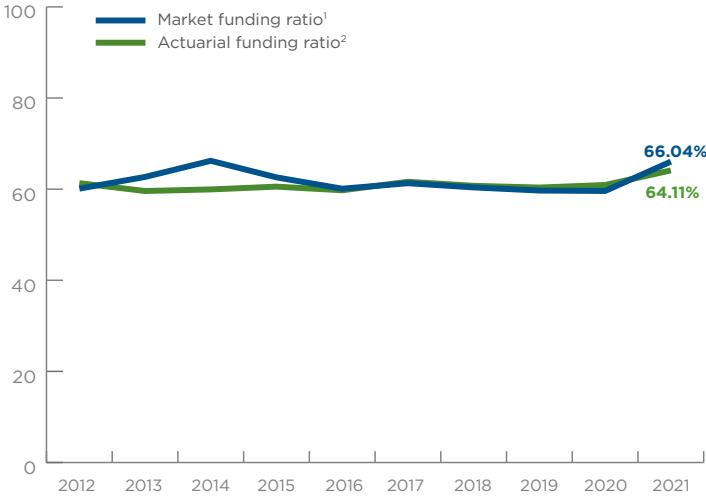
**Pension**

The market funding ratio is based on the market value of assets at FY 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.

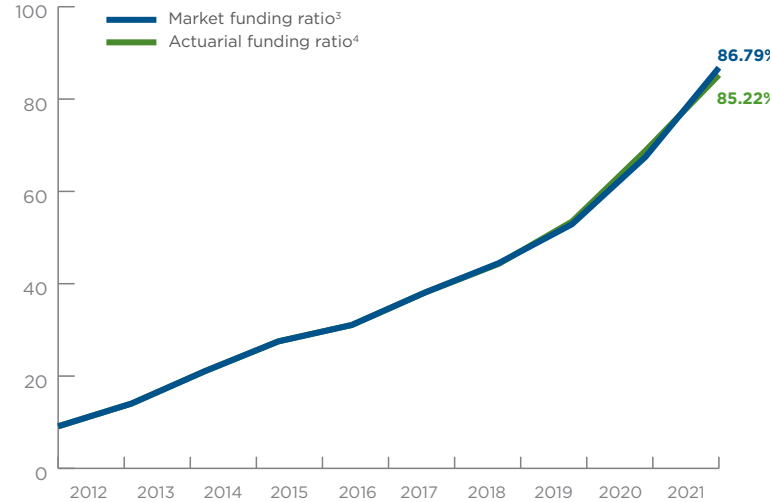
**OPEB**

Starting in FY 2013, 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 OPEB costs. This reform put Michigan on the leading edge of OPEB funding practices.

Prior to FY 2018, the market funding ratio was equal to the actuarial funding ratio. Five-year smoothing was adopted for the OPEB plan with the 2018 valuation and requires separate actuarial and market funding ratios to be calculated moving forward. The market value of assets as of Sept. 30, 2021, was \$10.7 billion, while the actuarial value of assets was \$10.5 billion.



1. Calculated on market value of assets.  
 2. Pension Actuarial Valuation for the FY ended Sept. 30, 2021, pages B-5 and C-10.



3. Calculated on market value of assets.  
 4. OPEB Actuarial Valuation for the FY ended Sept. 30, 2021, pages A-2 and D-2.

# Member and employer contributions

## Employer contributions

Statute requires participating employers 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 percent of payroll funding principles so the contribution rates remain stable. With the enactment of PA 181 of 2018, the UAAL will gradually shift from level percent of payroll amortization to level-dollar amortization over a period of seven years.

## Definition of normal cost

Normal cost is the cost of the retirement benefit a member earns each year and is set using the AROR in addition to other actuarial assumptions. All Pension Plus, Pension Plus 2, Member Investment Plan, and some Basic plan members contribute toward the cost of their retirement benefits. After member contributions are accounted for, the employer pays the remainder of the normal cost as shown above.

## Member and employer pension contributions for FY 2024

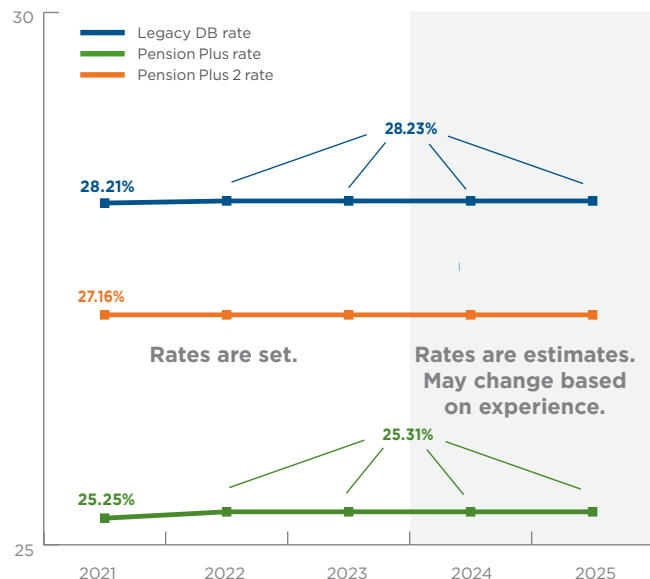
Member contributions	Pension <sup>1</sup>	OPEB <sup>2</sup>
Weighted average		
Legacy DB	4.86%	3.00%
Pension Plus	5.36%	3.00%
Pension Plus 2	6.20%	-
Employer contributions	Pension <sup>1</sup>	OPEB <sup>2</sup>
Normal cost of benefits expressed as a percentage of valuation payroll <sup>4</sup>		
Legacy DB	9.13%	1.25%, 1.25%
Pension Plus <sup>3</sup>	5.27%	1.25%, 1.25%
Pension Plus 2 <sup>3</sup>	6.20%	-
UAAL contribution rate expressed as a percentage of valuation payroll <sup>4</sup>		
Legacy DB	30.56%	0.61%, 7.01%
Pension Plus	30.56%	0.61%, 7.01%
Pension Plus 2	30.56%	-
Valuation payroll (dollars in thousands)		
For normal cost	\$8,079	\$5,998
For UAAL	\$9,645	\$9,645

1. Pension Actuarial Valuation for the FY ended Sept. 30, 2021, Page A-1.
2. OPEB Actuarial Valuation for the FY ended Sept. 30, 2021, Page A-5, Comment D.
3. This is the DB component of Pension Plus and Pension Plus 2. There is an additional 1.00% employer match for the DC component.
4. PA 300 of 1980 as amended includes statutory contribution floors for pension and OPEB. Contribution rates are presented with and without floors, as applicable.

# Contribution rates

Contribution rates are determined actuarially, based on the economic conditions and an assumed investment return each year. Contribution rates for FY 2022 and FY 2023 have been calculated, provided to the employers, and published on the employer website.

Rates for FY 2024 and FY 2025 are estimated using a projection of the most recent data available.





# 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. In accordance with Section 41(1) of the MPSERS statute (PA 300 of 1980 as amended), the actuarial assumptions are adopted by the retirement board and the DTMB director after consultation with the actuary and the state treasurer. Examples include assumptions about future employment, investment performance, and the healthcare cost trend.

## Actuarial assumptions for FY ended Sept. 30, 2021

Pension and OPEB <sup>1,2</sup>		
Actuarial cost method		Entry age, normal
Amortization method		Level percent of payroll
Payroll growth assumption <sup>3</sup>	2.00% reduced to 0.00% by Sept. 30, 2025	
Amortization period		Closed period, ending Sept. 30, 2038
Asset valuation method		5-year smoothed
Wage inflation rate		2.75%
OPEB		
Healthcare cost trend rates <sup>2</sup>		
Medical and prescription drug premiums		
Pre-65	7.75% year 1 graded to 3.50% year 15, 3.00% year 120	
Post-65	5.25% year 1 graded to 3.50% year 15, 3.00% year 120	
Medicare offset payments	5.25% year 1 graded to 3.50% year 15, 3.00% year 120	
Dental and vision premiums	3.50% each year, 3.00% year 120	
AROR—closed <sup>2,4</sup>		6.00%
Pension—AROR <sup>1</sup>		
Legacy DB plan—closed		6.00%
Pension Plus—closed		6.00%
Pension Plus 2—open		6.00%

1. MPSERS Pension Actuarial Valuation for the FY ended Sept. 30, 2021, Section C.
2. MPSERS OPEB Actuarial Valuation for the FY ended Sept. 30, 2021, Appendix-3.
3. PA 181 of 2018 enacted a gradual phase-in reduction to the payroll growth assumption to 0.00% in 50 basis point increments beginning with the Sept. 30, 2019, valuations. Once the 0% payroll growth assumption is fully phased-in, the amortization method for both pension and OPEB will be level-dollar.
4. The OPEB plan closed to employees first hired on or after Sept. 4, 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 60; \$2,000 with at least 10 years of service if age 60 or older). These employees have the option of enrolling in the System's retiree healthcare at full cost at termination.

# Investment service providers

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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.

Advent International Corp.	BTIG Brokers	Fidelity Institutional Asset Management
AEW Capital Management LP	Burgiss; Private iQ; Private Informant	FIMI Opportunity Funds
Affinity Equity Partners	Cantor Fitzgerald	Financial Times
Ancora Advisors LLC	Capital Institutional Services Inc.	Fortress Investment Group LLC
Angelo Gordon	Capri Capital Partners LLC	Fox Paine & Company LLC
Aon Hewitt	The Carlyle Group LP	Freeman Spogli & Co.
Apax Partners Worldwide LLP	Centerbridge Partners	FRT/Financial Recovery Technologies LLC
Apollo Global Management Inc.	Cerberus Manitou Residential Loan	FTN Financial
Apollo Private Equity	Charlesbank Capital Partners	FTSE International Ltd. (Data)
ArcLight Capital Partners LLC	CIM Investment Advisors	Gaw Capital
Ardian	Citigroup	Genstart Capital LLC
Ark Investment Management LLC	Citigroup Global Markets Inc.	Glass Lewis & Co. LLC
Asana Partners	Clarion Partners	Glen Eagle Wealth LLC
Attucks Asset Management LLC	Clarkston Capital Partners LLC	Goldman Sachs Group Inc.
Avanath Capital Management LLC	Coller Capital	Great Mountain Partners
Axiom Asia Private Capital	Columbia Management Investment Advisors	Green Street
Bank of Montreal	Cornerstone Macro LP	Grosvenor Capital Management
Barclays Capital	CoStar	GTCR
Barings Alternative Investments	CoStar Realty Information Inc.	HarbourVest Partners LLC
Barron's	Cowen & Co. LLC	Harvest Partners LLC
Basalt Infrastructure Partners LLP	Credit Suisse Securities	Heitman Capital Management LLC
BB&T Capital Markets	CreditSights	Hellman & Friedman
BC Partners	CUSIP Global Services	Hilltop Securities Inc.
BCA Research	Cutter Associates	Hokenson Global Demographics
BentallGreenOak	CVC Capital Partners	Hopen Life Sciences Ventures
Beringea	Czech Asset Management LP	HPS Investment Partners III LLC
Berkshire Partners LLC	D.A. Davidson Companies	Huron Capital Partners LLC
BGC Partners	DAIWA	InSight Venture Partners
Bivium Capital Partners LLC	Dalmore Capital Limited	Invesco Ltd.
BLA Schwartz	Deutsche Bank	Investor Education Speakers Bureau, Inc./Gregory Valliere
BlackRock	Domain Capital Advisors LLC	Investors Diversified Realty
Blackstone Alternative Asset Management LP	Domain Capital Group LLC	Irradiant Partners
Blackstone Group	Dow Jones & Company Inc.	Institutional Shareholder Services Inc.
Blackstone Private Equity	Drexel Hamilton	J.P. Morgan
Bloomberg	Effissimo Capital Management	Jefferies
Bloomberg AIM - Order Management System	eFront (Via Domain)	JM IV LP
BNP Paribas	eFront/FrontInvest	Journal of Portfolio Management
BNP Paribas Finance	Empirical Research Partners	JP Morgan
BNY Convergenx G.	EnCap Investments LP	JP Morgan Securities LLC
Bridgepoint Capital	EnTrust White Pine Partners LP	Kayne Anderson Capital Advisors LP
BroadRiver Asset Management LP	Ernst & Young (Foreign Investing Tax Consulting)	KBS Realty Advisors
Brookfield Asset Management Inc.	FactSet Data Systems	

## Investment service providers, continued

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Kelso & Company	Parthenon Capital Inc.	T. Rowe Price
Kensington Realty Advisors	Permira	Tahquamenon Fund LP
KKR & Co.	PGIM Inc.	The Carlyle Group
Kohlberg, Kravis, Roberts & Co.	PIMCO	The John Buck Company
L&B Realty Advisors LLP	PIMCO Mortgage Fund	The Riverside Company
LA Capital Management	Piper Jaffray	Thomas Bravo
Landmark Realty Advisors	Pitchbook	TICP SMA Management
LaSalle Investment Management	PPC Enterprises LLC	TIS Group/The Institutional Strategist
Lazard Asset Management	Pregin	TPG Capital
Leuthold Group LLC	PricingDirect	TPG Global LLC
LGT Capital Partners	Principal Financial Group	TPG Real Estate Advisors
Lombard International Life Assurance Company	Principal Real Estate Advisors	Transwestern Investment Group
Lonestar	Pritzker Private Capital	Trilantic Capital Management LLC
Loomis Sayles & Company	Proprium Capital Partners LP	Trophy Property
Lubert-Adler Management Company	Prudential Investment Management	True North Management Group
Managed Asset Portfolios	Putnam Advisory Company	TSG Consumer Partners
Marathon Asset Management	Q2 - Investment Accounting and Portfolio Management System	Turnbridge Capital Management LLC
MarketAxess Corporation	QED/Broadridge Financial Solutions	Turning Rock Partners
Martin Currie Inc.	Raymond James & Associates Inc.	UBS
Mellon Capital Management	RBC Capital Markets LLC	U.S. Bancorp Investments Inc.
Merill Lynch (Bank of America)	Renaissance Venture Capital	Value Line
Merill Lynch Pierce Fenner & Smith LLC	Rhone Capital	Veritas Capital Fund Management LLC
Merit Energy Company	Rialto Capital	Vida Capital Inc.
Mesirow Financial Inc.	Ridgewood Capital Management LLC	Visium Balanced Fund LP
Metropolitan West Asset Management	Ridgewood Energy	Vista Equity Partners
MFR Securities	Riverside	Warburg Pincus LLC
Mischler Financial Group	Robert W. Baird & Co. Inc.	Warwick Energy Group
MKM Holdings LLC	The Rohatyn Group	Wayne Co.
MKM Partners	Rosenberg Research	Wellington Trust Company
Money Media Inc. /FundFire	R.W. Pressprich & Co.	Wells Fargo Securities LLC
Monument Park Fund LP	Scotia Capital Inc.	Westlaw
Moody's Analytics - CreditView ABS and ABCP	Seizert Capital Partners	Wilshire Atlas
Morgan Stanley	Shamrock Capital Advisors LLC	Wilshire Compass
MP Securitized Credit Fund LP	Silver Lake	
MSCI BarraOne	Sixth Street Partners	
MUFG	SJC Direct Lending Revolver Fund III LP	
Multi-Bank Securities Inc.	Soc Gen	
Napier Park Global Capital	Sprott Resource	
New York Times	State Street Bank	
NGP Energy Capital	State Street Global Advisors	
Nordic Capital	Stifel Nicolaus & Co. Inc.	
Odyssey Investment Partners	Stockbridge Capital Group	
Omego TradeSuite/DTCC	Stonepeak Advisors LLC	
Orion Resource Partners	Strategas Securities LLC	
Paladin Realty Partners LLC	SunTrust Robinson Humphrey	
Parallel Resource Partners	Susquehanna International Group LLP	



## **Office of Retirement Services**

Department of Technology, Management and Budget  
Anthony Estell, director

### **Our purpose**

ORS is an innovative retirement organization driven to empower our customers for a successful today and a secure tomorrow.

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