

Summary Annual Financial Report For the Fiscal Year Ended June 30, 2017 2017

Missouri Department of Transportation and Highway Patrol Employees' Retirement System A Component Unit of the State of Missouri



MoDOT & Patrol Employees' Retirement System

To Members and Stakeholders:

What is the MoDOT and Patrol Employees' Retirement System (MPERS) and why does it matter? It is the System that administers the defined benefit retirement program for covered employees of the Missouri Department of Transportation (MoDOT) and the Missouri State Highway Patrol (MSHP). It matters to its members because it will play a substantial role in their retirement security, especially for those that make a career out of their state employment. It matters to other stakeholders (employers, elected officials, taxpayers) because it is a significant workforce management tool intended to help our employers recruit and retain a talented workforce that will effectively serve the citizens of Missouri.

This For Your Information (FYI) brochure has been prepared to provide you a reader-friendly summary of MPERS' important financial data, along with other important plan details that members and other stakeholders may find valuable. For additional information on the financial details of MPERS, refer to our Comprehensive Annual Financial Report available on our website at www.mpers.org.

MPERS is a defined benefit pension plan designed to provide lifetime retirement benefits to eligible MoDOT and MSHP employees. The monthly benefits provided by MPERS are a valuable source of retirement income for the members we serve. These benefits, when combined with social security and personal savings, provide the basic foundation for our members to leave the workforce and enjoy their retirement years with the dignity that they deserve. The plan provisions have changed many times over the years. The System offers not only enhanced retirement and disability benefits, but also benefits for survivors of active and retired members, benefits for vested former members, and death benefits.

The funding objective of MPERS is to meet future benefit obligations of retirees and beneficiaries through investment earnings and payroll contributions that remain approximately level from generation to generation. During the year ending June 30, 2017, the funded ratio of MPERS, which covers almost 19,000 participants, remained stable with a slight increase to 57.14%, as our positive investment returns for FY2017, along with actuarial gains, helped to offset the investment loss from the previous year.

State statutes require the System to make investments using the same care, skill, and diligence that a prudent person acting in a similar capacity would use. In fulfilling this obligation, the Board has established a formal investment policy to clearly define the roles and responsibilities of the Board, staff and consultants, and to ensure that System assets are invested in a diversified portfolio following prudent investment standards. The Board determines the broad asset allocation policies and return objectives of the Plan. To implement and execute these policies, the Board retains investment staff, consultants, a master custodian, and other advisors.

Fiscal Year 2017 Highlights:

The emphasis on our risk management efforts from last year carried forward to this year. An Enterprise Risk Management policy was completed to reinforce the importance of this issue for staff and to define the overarching purpose it serves in our daily operation. In addition to this policy, we completed a risk/control document identifying the various risks associated with our operation, along with the corresponding control intended to manage that risk effectively. Along the lines of risk management, we also incorporated new

software associated with the MPERS website that provides additional security to the confidential information we are entrusted to protect. We have also successfully completed disaster recovery exercises, including extensive backup generator testing that will support our business continuity efforts and allow us to issue benefit payments when unplanned events or disasters occur. On the investment side of the operation, we have established the reporting framework to assist staff with identifying risks with the portfolio. These efforts and many more encompass our risk management efforts that help us fulfill the "good stewardship" expectations our members and stakeholders have of the System.

Late in the year, the Board approved the addition of a part-time financial officer to assist the chief financial officer (CFO) with the extensive responsibilities connected to that department. Prior to this addition, the accounting department was a one-person operation. Even though our CFO managed to complete the vast number of responsibilities with the high standards expected with our operation, we had difficulty identifying and applying enhancements and efficiencies given the time constraints of that one individual. There was also considerable risk presented with the one-person department in terms of business continuity, should, for any reason, the CFO be unable to work. With the additional time dedicated to these responsibilities, we expect to become more efficient with our reporting demands and to produce more transparency for our stakeholders in the process.

As an important recruitment and retention tool for our employers, it is important that our membership is aware and understands the benefits MPERS provides. A number of tools are utilized to support those efforts, with newsletters becoming more prominent in our efforts. Previously, we produced newsletters sporadically as time permitted. Starting this fiscal year and going forward, we have dedicated ourselves to delivering two newsletters each to both our active employee and retiree populations. This commitment should improve our communication efforts and enhance the value of our benefits to our members. A more modern tool that was added to our tool chest in recent years is the webinar. We now have in place a library of webinars for a variety of basic topics. These 30-minute productions allow members round-the-clock access to important information. We plan to add more topically specific webinars in the coming year.

Transparency continues to be a point of emphasis for essentially any governmental operation. With that in mind, MPERS has taken strides to become more transparent this past year. The FYI brochure we have produced for some time represents an easily understood summary document explaining some basic historical details of the System, important funding decisions, and of course details on benefits provided. In addition to that information, we now include various financial reporting details. This consolidated information provides accessibility to information in a format much more likely to be read by our stakeholders. We also added a webinar to our library that provided an overview of how the system is funded.

We express our gratitude to the members of the board, the staff, the consultants, and the many people who have worked so diligently to assure the continued successful operation of MPERS. For over 60 years, MPERS has been committed to providing a foundation for financial security to plan participants through the delivery of quality benefits, exceptional member service and professional plan administration.

Sincerely,

Scott Simon
Executive Director

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The Highways and Transportation Employees' and Highway Patrol Retirement System was established September 1, 1955, through legislation. In 2004, the System was renamed the MoDOT and Highway Patrol Employees' Retirement System (MPERS).

Members of MPERS are comprised of eligible employees of the Missouri Department of Transportation (MoDOT), the Missouri State Highway Patrol (MSHP or Patrol), and MPERS. MPERS administers the retirement, survivor, and disability benefits in accordance with Chapter 104 of the Revised Statutes of Missouri (RSMo). The retirement system operates as a 401(a) tax qualified "defined benefit plan." In a defined benefit plan, retirement benefits are based on a formula that is set by law.

Benefits are part of the compensation package used to recruit and retain employees who will provide high quality services to Missouri citizens. MPERS' retirement benefit, when combined with Social Security and personal savings, is designed to help career employees achieve a reasonable level of replacement income to support their financial needs during retirement.

Mission Statement

To provide a basic level of financial security to plan participants by delivering quality benefits and exceptional customer service through professional plan administration and prudent management of System assets.

Vision Statement

To be the best retirement system we can be by making strategic investment decisions and implementing technological tools that streamline our processes and enhance customer service.

Core Values

- Our members are our number one focus...we work for them.
- Our goal is to provide exceptional service always, no matter who is on the phone or sitting across from us.
- We strive to preserve, protect, and grow our assets.
- We are committed to the security and privacy of our members' information.
- We make decisions in the best interest of our members, based upon statutory guidance.
- We conduct business at a reasonable cost to the tax payers of Missouri.

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ABOUT MPERS

Board of Trustees

The System operates under the direction and control of an 11-member Board of Trustees. As of June 30, 2017, the Board consisted of the following members:



Sue Cox Board Chair MoDOT Retiree Representative



Bill Seibert Board Vice-Chair MSHP Retiree Representative



John W. Briscoe Highways & Transportation Commissioner



Sergeant Matt Broniec

MSHP Employee

Representative



Colonel Sandra Karsten Superintendent of the MSHP Ex-Officio Member



Patrick McKenna
Director of MODOT
Ex-Officio Member



Michael B. Pace
Highways & Transportation
Commissioner



Representative Shawn Rhoads State Representative



Senator Dave Schatz State Senator



Gregg C. Smith
Highways & Transportation
Commissioner



Todd TylerMoDOT Employee
Representative



The Board of Trustees has the ultimate fiduciary responsibility for the System and those covered by the System. Fiduciary duty is a legal relationship of trust between parties, where one party is acting for the benefit of another. Fiduciaries of pension funds have strict standards imposed upon them by law. The Board's primary fiduciary responsibilities are the duty of loyalty, the duty of prudence, and the duty to follow plan documents.

In addition to administrative rules, the Board adopted "governance policies" that set forth the expectations the Board has for itself and formalize the way the Board conducts business. The policies are intended to help the Board meet its fiduciary responsibilities. The governance policies set forth the structure, manner, and process by which the Board exercises its authority and control.

FINANCIAL INFORMATION

Financial Statements report information using accounting methods similar to those used by private sector companies. These statements provide both long-term and short-term information about the System's overall financial status. The Net Position reported below is an indicator of the System's financial standing at the end of the fiscal year. For more financial information, refer to the Comprehensive Annual Financial Report at www.mpers.org. Overall, the financial position of MPERS strengthened by \$178 million, reported as the Net Increase. This is primarily a result of net appreciation in the fair value of investments for the year ended June 30, 2017.

Assets and Liabilities

The Summarized Comparative Statement of Fiduciary Net Position below includes all the System's assets and liabilities, with the difference between the two reported as net position.

	FY2017	FY2016
Assets:		
Cash and Receivables	\$ 18,697,840	\$ 20,195,007
Investments	2,162,264,152	1,982,820,836
Invested Securities Lending Collateral	56,823,478	51,560,512
Capital Assets	1,204,317	1,569,100
Total Assets	2,238,989,787	2,056,145,455
Liabilities:		
Accounts Payable	10,109,326	10,668,117
OPEB Obligation	715,962	680,169
Securities Lending Collateral	58,389,459	52,723,223
Total Liabilities	69,214,747	64,071,509
Net Position	\$2,169,775,040	\$1,992,073,946

Income and Expenses

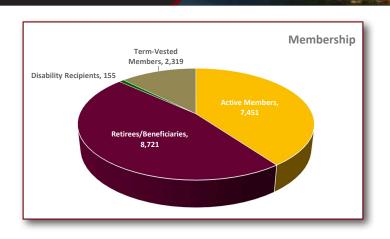
The Summarized Comparative Statement of Changes in Fiduciary Net Position below accounts for all the current year's additions (income) and deductions (expenses), regardless of when cash is received or paid.

	FY2017	FY2016
Contributions	\$ 213,198,963	\$ 205,821,588
Investment Income	251,035,802	45,301,776
Less Investment Expenses	(30,734,675)	(23,869,686)
Other Income	614	5
Net Additions	433,500,704	227,253,683
Benefits	251,284,152	240,176,011
Administrative Expenses	4,515,458	4,370,860
Total Deductions	255,799,610	244,546,871
Net Increase (Decrease)	177,701,094	(17,293,188)
Net Position-Beginning	1,992,073,946	2,009,367,134
Net Position-Ending	\$2,169,775,040	\$1,992,073,946

MEMBERSHIP AND BENEFITS

Membership Profile

MPERS' membership is comprised of eligible employees of the Missouri Department of Transportation (MoDOT), the Missouri State Highway Patrol (MSHP), and the MoDOT & Patrol Employees' Retirement System (MPERS).



	MoDOT and MPERS	Civilian Patrol	Uniformed Patrol	Total
Active Members				
Closed Plan	1,739	315	563	2,617
Year 2000 Plan	1,723	439	393	2,555
2011 Tier	1,610	365	304	2,279
Total Active Members	5,072	1,119	1,260	7,451
Retirees and Beneficiaries				
Closed Plan	3,501	480	931	4,912
Year 2000 Plan	3,251	552	6	3,809
2011 Tier (10-year vesting)	0	0	0	0
Total Regular Pensioners	6,752	1,032	937	8,721
Disability Recipients	130	16	9	155
Terminated-Vested Members	1,914	241	164	2,319
Grand Totals	13,868	2,408	2,370	18,646

Averages for a New MPERS' FY2017 Retiree

Status Retired From	# of Retirees	Average Benefit	Average Service	Average FAP	Average Age
Normal retirement or disability status (members retiring directly from active employment)	263	\$2,461	24.7 yrs	\$4,350	57.8 yrs
Vested, but no longer working for state	89	\$676	13.5 yrs	\$2,760	58.7 yrs
Overall average	352	\$2,010	22.3 yrs	\$3,951	58.0 yrs

MEMBERSHIP AND BENEFITS

Sumi	ma	ry of	Be	enefit Pro	visions							
2011 Tier (1/1/2011 - Present)	Defined benefit (contributory)	Employee - 4% Employer - per actuarial valuation	10 years	 Age 67 with 10 years of service "Rule of 90" - age 55 with age and service equaling 90 or more 	• Age 55 with 10 years of service • Mandatory retirement at age 60 (no minimum service)	Service x 1.7% x Final Average Pay	Service x .08% x Final Average Pay	Not available	• Age 62 with 10 years of service Reduced .005 for each month younger than normal retirement	80% of the increase in the CPI-U	Not available	Available to: • Active members and long-term disability recipients retiring after 9/28/85 • Members who began receiving work-related disability benefits after 9/28/85
Year 2000 Plan (7/1/2000 - 12/31/2010)	Defined benefit (non-contributory)	Employee - no cost Employer - per actuarial valuation	5 years	 Age 62 with 5 years of service "Rule of 80" - age 48 with age and service equaling 80 or more 	 "Rule of 80" - age 48 with age and service equaling 80 or more Mandatory retirement at age 60 	Service x 1.7% x Final Average Pay	Service x .08% x Final Average Pay	Not available	• Age 57 with 5 years of service Reduced .005 for each month younger than normal retirement	• 80% of the increase in the CPI-U	• Available	Available to: • Active members and long-term disability recipients retiring after 9/28/85 • Members who began receiving work-related disability benefits after 9/28/85
Closed Plan (9/1/1955 - 6/30/2000)	Defined benefit (non-contributory)	Employee - no cost Employer - per actuarial valuation	5 years	 Age 65 with 5 years of service Age 60 with 15 years of service "Rule of 80" - age 48 with age and service equaling 80 or more 	 Age 55 with 5 years of service "Rule of 80" - age 48 with age and service equaling 80 or more Mandatory retirement at age 60 	Service x 1.6% x Final Average Pay	Not available	\$90 per month until age 65 (stops any month gainfully employed)	 Age 55 with 10 years of service Reduced .006 for each month younger than normal retirement 	 Employed before 8/28/97. Minimum annual rate is 4% until total increases equal 65% of initial benefit then it's 80% of the increase in the CPI-U Employed on or after 8/28/97. 80% of the increase in the CPI-U 	• Available	Available to: • Members retiring after 9/28/85 • Members who began receiving workrelated or normal disability benefits after 9/28/85
Benefit	Type of Plan	Contributions	Vesting Requirement	Normal Retirement Eligibility	(Uniformed Patrol) Normal Retirement Eligibility	Base Benefit Formula	Temporary Benefit Formula (payable until age 62)	(Uniformed Patrol hired before 1/1/1995) Special Benefit	Early Retirement Eligibility (reduced benefit)	Cost-of-Living Adjustment (COLA) (maximum annual COLA rate is 5%)	BackDROP (must work at least 2 years beyond date first eligible for normal retirement)	\$5,000 Death Benefit • No cost to member • Terminated-vested members do not qualify • Potentially taxable to beneficiary(ies)

	Long-Term Disability	Work-Related Disability
Benefit Amount	• 60% of pre-disability salary (reduced by deductible income) Lesser of:	Lesser of:
		• 70% of pre-disability salary (not offset by deductible income)
		• 90% of pre-disability salary (<u>offset</u> by deductible income)
Benefit Waiting Period Later of:	Later of:	Later of:
	When sick leave runs out	When sick leave runs out
	• Member disabled 180 days	• Member reaches maximum medical improvement under Workers' Compensati

MEMBERSHIP AND BENEFITS

Retirement Plans

MPERS administers retirement, survivor, disability, and death benefits for members of the plan. Legislation is required to make changes to the benefits.

To participate in MPERS, the employee must be working in a "benefit eligible" position for MoDOT, MSHP, or MPERS. A benefit eligible position is one normally requiring the performance of duties during at least 1,040 hours per year (half-time or greater). The employer determines if the position is benefit eligible. Based on date of hire, members participate in one of the following plans:

1. Closed Plan (non-contributory)

The Closed Plan was the original retirement plan for eligible employees hired <u>prior to July 1, 2000</u>. At retirement, these members may elect to stay in the Closed Plan or retire under the Year 2000 Plan.

2. Year 2000 Plan (non-contributory)

Benefit eligible employees <u>hired for the first time on or after July 1, 2000</u>, <u>but prior to January 1, 2011</u>, are members of the Year 2000 Plan.

3. 2011 Tier (contributory)

In 2010, a special legislative session was held to address pension reform. A contributory tier was added to the Year 2000 Plan for benefit eligible employees <u>hired for the first time on or after January 1, 2011</u>. Both the employee and the employer make monthly contributions to fund the retirement of 2011 Tier members.

Steps of a Defined Benefit Retirement Plan



Base Benefit Formula

The base benefit formula is comprised of the following three components:

Final Average Pay (FAP) - The average of a member's highest 36 consecutive months of pay.

Credited Service - The member's years and full months of service.

Multiplier - The multiplier is a percentage that is set by law.



FUNDING THE SYSTEM

Contribution Rates

When the plan was created in 1955, employees and employers each paid contributions equal to 4% of the employee's first \$7,500 in salary to fund the system (and their retirement). In 1976, legislation was passed which made the System noncontributory and all contributions were refunded to members, plus interest. From then until 2011, the cost of the plan was funded solely by employer contributions and income on investments from those contributions. In 2010, legislation was passed which created the contributory 2011 Tier. Employees hired for the first time in a benefit eligible position on or after January 1, 2011, contribute 4% of their pay to help fund their retirement benefits.

Decisions made by multiple entities over the years regarding benefit increases, plan assumptions, contributions, and investment policy, coupled with market declines in the past decade, have resulted in an unfunded liability. MPERS is currently 57.1% funded; however, the following should be noted:

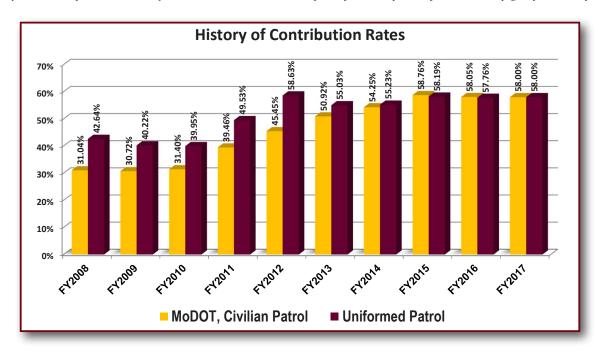
- MPERS has an aggressive plan in place to address the underfunding and the plan is working it takes time. It did not become underfunded overnight and it cannot become fully funded overnight.
- MoDOT and the MSHP (our employers) have contributed 100% of their actuarily required contributions and have never missed a contribution payment.

The Board establishes the employers' contribution rate, which is a percentage of payroll, and is based on recommendations from an actuary.

FY2017 Employer Contribution Rates

	MoDOT & Civilian Patrol	Uniformed Patrol
Normal Cost of Benefit	10.48%	16.60%
Catch Up Payment on the Unfunded Liabilities*	45.85%	39.73%
Administrative Costs	1.14%	1.14%
Subtotal	57.47%	57.47%
Disability Insurance Premium	.53%	.53%
Total Employer Contribution Rate	58.00%	58.00%

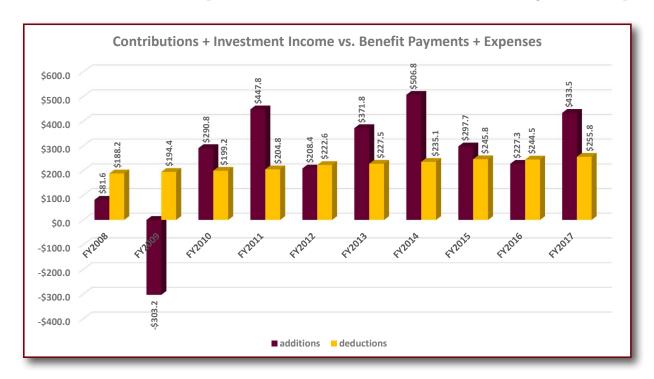
^{*} The "Catch Up Payment on the Unfunded Liabilities" is just that - extra contributions, over a set period of time, to improve our funded status. See page 12 for details on funding policies.

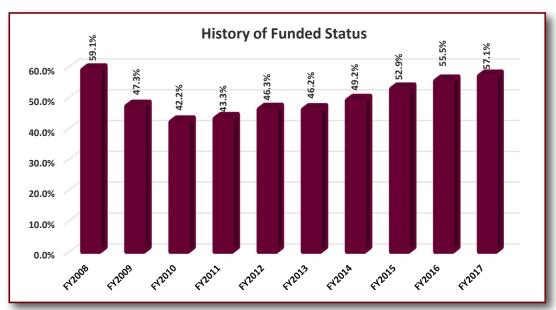


FUNDING THE SYSTEM

Understanding How a Pension Plan is Funded

The funding objective of MPERS is to meet current and future benefit obligations of retirees and beneficiaries through contributions and investment earnings. Each year, an actuary calculates the liability associated with the benefits, determines the funded status, and recommends the contribution rate needed to fund the system in accordance with the funding policies put in place by the Board. The contribution rate is based on a number of factors, including the current level of benefits, the number of participants, current and future pay levels, members' age and average life expectancy, expected earnings on investments, and the plan's unfunded liability. The investment portfolio is constructed to generate a total return that, when added to employer contributions, is sufficient to meet benefit obligations and expenses.





FUNDING THE SYSTEM

Funded Status

Calculating Accrued Liabilities

Total Actuarial Accrued Liability (AAL)	\$3,802,443,730
(Value of all future benefits, or the amount needed to pay monthly benefits to current members,	
including actives, retirees, terminated-vested, and beneficiaries, according to the laws as written today)	
Current Actuarial Value of MPERS' Assets	- 2,172,787,144
Unfunded Actuarial Accrued Liability (UAAL)	\$1,629,656,586
(Difference in the current assets of MPERS and amount needed to pay all future benefits.)	

Calculating Funded Status

 $2,172,787,144 \div 3,802,443,730 = 57.1\%$

Of the \$3,802,443,730 needed to pay all future benefits, MPERS currently has \$2,172,787,144 in assets (cash and investments), which means that MPERS is 57.1% funded.

Permanent and Temporary Funding Policies

In an effort to address the System's underfunded situation, the Board has adopted policies intended to improve MPERS' funded status over time. The Unfunded Actuarial Accrued Liabilities are amortized as follows:

Permanent Policy: In September 2006, the Board adopted a policy where the total contribution is based on normal cost plus a 29-year amortization of unfunded actuarial accrued liabilities. The amortization period started July 1, 2007. As of July 2017, there are 19 years remaining in the permanent policy amortization period.

Temporary Accelerated Policy: In September 2009, after the market downturn, the Board adopted a policy where the total contribution is based on normal cost plus a 15-year amortization period for unfunded retiree liabilities and a 30-year amortization period for other unfunded liabilities. Both amortization periods started July 1, 2010.

Funding Policy	Remaining as of July 1, 2017
Permanent Policy: 29 years Started July 1, 2007	19 years
Temporary Policy: 15 years (retirees) Started July 1, 2010	8 years
Temporary Policy: 30 years (other) Started July 1, 2010	23 years

The temporary accelerated policy will remain in effect until such time as the retiree liability becomes 100% funded or the permanent policy produces a higher contribution rate.

Reserve Fund

In September 2014, the Board adopted the use of a contribution rate stabilization reserve that would result in employer contribution rates similar to the fiscal year 2015 rates. The reserve is intended to keep the contribution relatively level over time and may be used if the market experiences a downturn in the future. In February 2015, the Board further adopted that the employer contribution rate would not fall below 58% unless the fund became fully funded or the contribution stabilization reserve reached \$250 million.

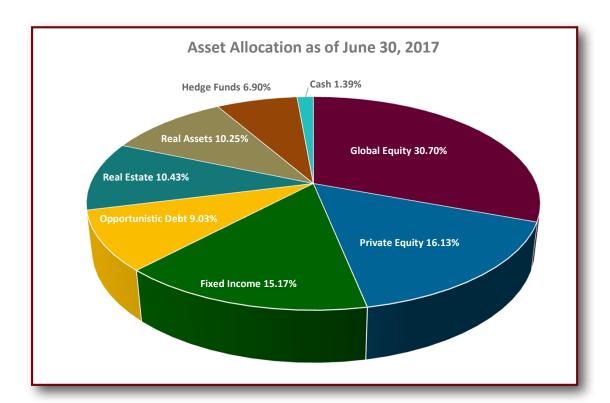
INVESTMENTS

MPERS Investment Policy

The primary objective of MPERS is to provide active and retired employees with adequate retirement benefits. The investment portfolio is constructed to generate a total return that, when added to employer contributions, is sufficient to meet benefit obligations. Following prudent standards for preservation of capital, the goal is to achieve the highest possible rate of return consistent with the plan's tolerance for risk as determined by the Board in its role as fiduciary.

Asset Allocation

During the course of FY2014, MPERS' investment consultant completed an asset/liability study to determine whether or not changes were needed to the asset allocation. The asset/liability study is completed every 5 years. The asset allocation is reviewed annually by the Board.



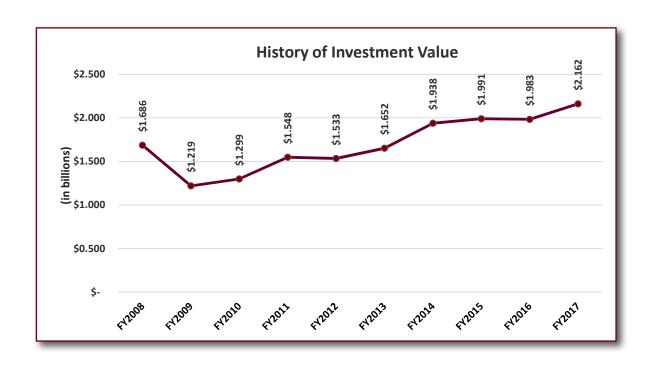
Pension plans invest assets with a long-term perspective because pension costs are spread over the working careers of plan participants. While market uncertainty brings additional risk to the investment portfolio, it's important to keep in mind that pension plans are in the business of managing risk, not simply avoiding risk. The asset allocation approved by the Board of Trustees is designed to protect the fund against the uncertainty that is found in the global economy, and should perform well across various market environments.

INVESTMENTS

Investment Performance

As of June 30, 2017, MPERS' investment portfolio had a total market value of \$2.16 billion, representing a return of 11.22% for the fiscal year. The portfolio continues to perform well versus the peer universe, particularly over longer periods. Relative to our peer group, the 11.22% return for FY2017 ranked MPERS in the 64th percentile, outpacing 36% of other public funds within the universe. The trailing three-year and five-year performance of 6.20% and 9.82%, respectively, ranks MPERS in the top 5% and 6%, respectively, of the peer universe. The trailing 10-year performance of 5.19% ranks MPERS in the top 43% of the universe.

	FY2017	FY2016	FY2015	FY2014	FY2013
Asset Value	\$2.2 billion	\$2.0 billion	\$2.0 billion	\$1.9 billion	\$1.7 billion
1-Year Return	11.22%	1.01%	6.62%	17.56%	13.42%
3-Year Return	6.20%	8.19%	12.45%	11.06%	12.36%
5-Year Return	9.82%	8.10%	12.21%	13.50%	3.82%
10-Year Return	5.19%	5.77%	7.20%	7.62%	7.38%



LOCATION OF MPERS' RETIREES



MPERS at a Glance

Retirees and beneficiareies reside in 42 of the 50 states, as well as 5 foreign countries.









MoDOT & Patrol Employees' Retirement System

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