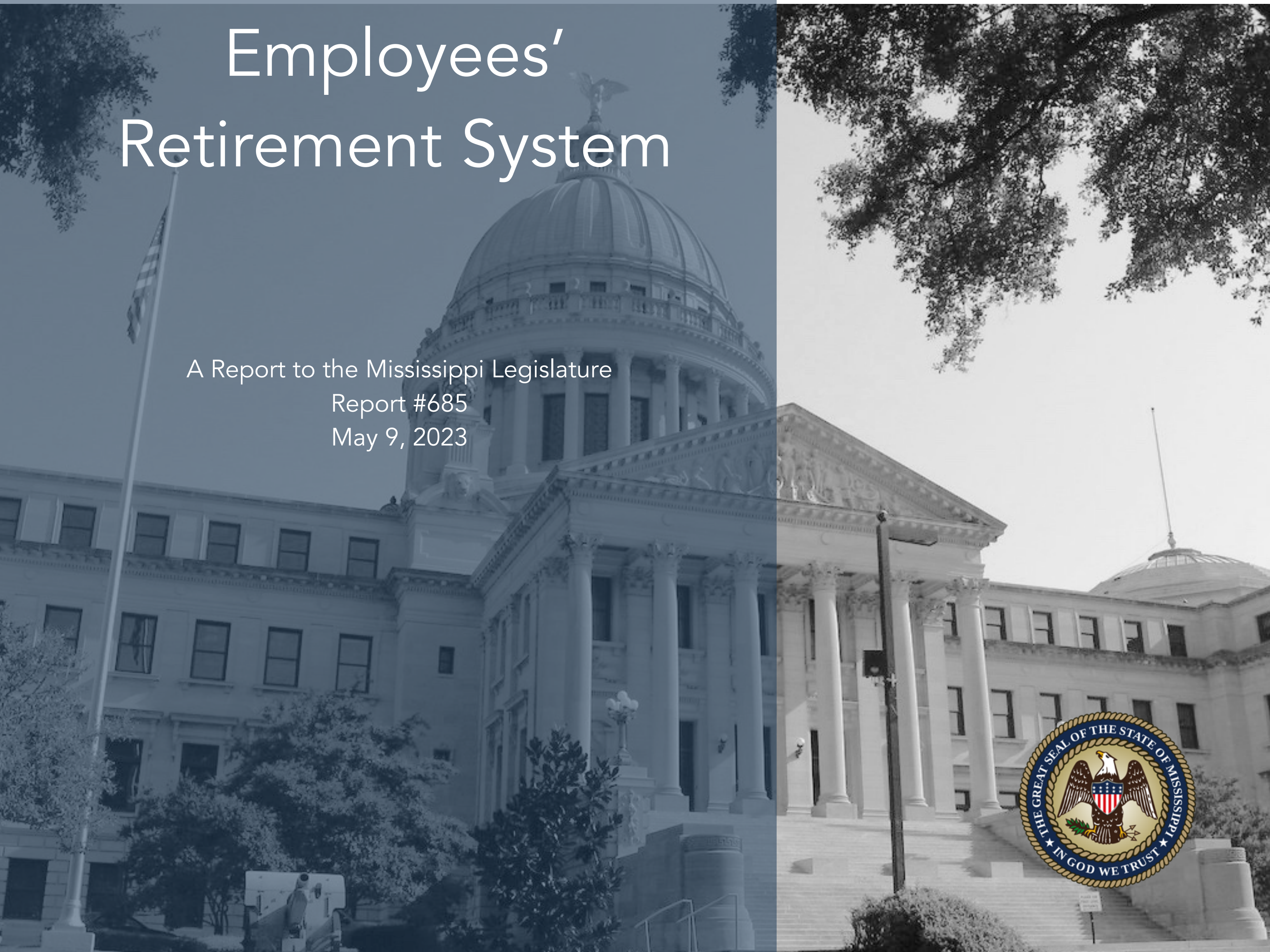
PEER
MISSISSIPPI
Joint Legislative Committee on Performance Evaluation and Expenditure Review

2022 Update on Financial Soundness of the Public Employees' Retirement System



A Report to the Mississippi Legislature
Report #685
May 9, 2023

PEER Committee

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About PEER:

The Mississippi Legislature created the Joint Legislative Committee on Performance Evaluation and Expenditure Review (PEER Committee) by statute in 1973. A joint committee, the PEER Committee is composed of seven members of the House of Representatives appointed by the Speaker of the House and seven members of the Senate appointed by the Lieutenant Governor. Appointments are made for four-year terms, with one Senator and one Representative appointed from each of the U.S. Congressional Districts and three at-large members appointed from each house. Committee officers are elected by the membership, with officers alternating annually between the two houses. All Committee actions by statute require a majority vote of four Representatives and four Senators voting in the affirmative.

Mississippi's constitution gives the Legislature broad power to conduct examinations and investigations. PEER is authorized by law to review any public entity, including contractors supported in whole or in part by public funds, and to address any issues that may require legislative action. PEER has statutory access to all state and local records and has subpoena power to compel testimony or the production of documents.

PEER provides a variety of services to the Legislature, including program evaluations, economy and efficiency reviews, financial audits, limited scope evaluations, fiscal notes, and other governmental research and assistance. The Committee identifies inefficiency or ineffectiveness or a failure to accomplish legislative objectives, and makes recommendations for redefinition, redirection, redistribution and/or restructuring of Mississippi government. As directed by and subject to the prior approval of the PEER Committee, the Committee's professional staff executes audit and evaluation projects obtaining information and developing options for consideration by the Committee. The PEER Committee releases reports to the Legislature, Governor, Lieutenant Governor, the agency examined, and the general public.

The Committee assigns top priority to written requests from individual legislators and legislative committees. The Committee also considers PEER staff proposals and written requests from state officials and others.

Joint Legislative Committee on Performance Evaluation and Expenditure Review
PEER Committee

P.O. Box 1204 | Jackson, Mississippi 39215-1204

May 9, 2023

Honorable Tate Reeves, Governor
Honorable Delbert Hosemann, Lieutenant Governor
Honorable Philip Gunn, Speaker of the House
Members of the Mississippi State Legislature

On May 9, 2023, the PEER Committee authorized release of the report titled ***2022 Update on Financial Soundness of the Public Employees' Retirement System.***

Jerry R. Turner

Representative Jerry Turner, Chair

This report does not recommend increased funding or additional staff.

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PEER MISSISSIPPI
Joint Legislative Committee on Performance Evaluation and Expenditure Review

2022 Update on Financial Soundness of the Public Employees' Retirement System

Report Highlights

May 9, 2023

KEY FINDINGS: As of June 30, 2022, all three of the plan's funding policy metrics reached red signal-light status. Based on these results and the negative investment experience of the plan for FY 2022, the PERS Board voted to adopt the recommendation of its actuary to increase the employer contribution rate from 17.40% to 22.40%, an increase of 5.00%. Additionally, during its June 2022 meeting, the PERS Board, on the recommendation of Callan LLC, adopted changes to the overall asset allocation model utilized by the System to include private credit and private infrastructure.

BACKGROUND

Background

The Public Employee's Retirement System of Mississippi (PERS) is a defined benefit retirement plan for a majority of employees (and/or their beneficiaries) of state agencies, counties, cities, colleges and universities, public school districts, and other participating political subdivisions. State law requires PEER to report annually to the Legislature on the financial soundness of PERS.

The PERS system is under the administration of the 10-member PERS Board of Trustees, which has a primary responsibility of ensuring adequate funding of the plans it administers. One way the Board accomplishes this task is by setting contribution rates for employers participating in the plan. For assistance in setting these rates, the PERS Board receives actuarial reports annually and works with independent actuarial advisers to develop comprehensive models that are used to project the financial position of the various plans. These models include components such as investment return assumptions, wage inflation assumptions, retirement tables, and retiree mortality tables.

Each of these components must work in concert with the others for the PERS plan to maintain financial soundness. Underperformance in any one area can cause additional stress on other components and can lead to underperformance of the PERS plan as a whole.

This report includes information regarding the financial soundness of the PERS plan, as well as information regarding prospective changes in the PERS plan's asset allocation model, including the addition of private credit and private infrastructure investments.

ACTUARIAL SOUNDNESS

The PERS Board, in consultation with its actuaries, develops an actuarial model based on assumptions such as projected investment returns, payroll increases, inflation, retirement ages, mortality rates, marriage rates, and accrued leave to project the plan's future assets and liabilities. Although the PERS Board sets plan assumptions based on biennial experience studies, the plan's actual experience (e.g., investment returns or mortality rates) is a product of environmental and demographic factors.

- **Over the last 5- and 10-year periods, the PERS actual average annual payroll increase has remained below the actuarial model's projected rate.**
  The projected annual rate of wage increase is 2.65%. While actual wage increases for FY 2022 were above the projected annual rate of wage increase of 2.65%, for the past five fiscal years, the actual average annual payroll increase was 1.36%, and during the past 10 fiscal years the actual average annual payroll increase was 0.98%.

- **The ratio of active to retiree members in the PERS plan decreased from 1.81:1 in FY 2012 to 1.24:1 in FY 2022, or approximately 31.49%.**
  The declining ratio is attributable to a decrease in the number of active members and an increase in the number of retiree members.

- **The PERS Board's investment assumption target is 7.00%. Due to the Board's funding policy, the current investment assumption rate will be reduced over time from its current rate, 7.55%, until it reaches the target rate of 7.00%.**
  PERS Board, at its August 2021 meeting, set the plan's current investment return assumption target at 7.00%. However, due to the plan's funding policy, the PERS plan has only experienced excess returns sufficient to reduce the plan's utilized investment return assumption rate from 7.75% to 7.55%. While PERS's actuary did provide the methodology for assumption changes utilized by the Board in the PERS funding policy, the PERS Board's choice to utilize this methodology could continue to be a cause of concern. Selection of this methodology has delayed implementation of the assumption reduction and exacerbated the plan's lower-than-projected investment returns.

Funding Ratio

For FY 2022, the actuarial value of assets in PERS remained flat in relation to the actuarial value of its liabilities—61.3% for both FY 2021 and FY 2022.

According to projections prepared by PERS's consulting actuary as of June 30, 2022, the plan's funding ratio was projected to be 48.6% by 2047, as compared to 93.5% reported in the FY 2021 projection reports. The decrease in the future funding level is primarily due to less-than-expected investment gains.

Investment Return

For FY 2022, the PERS system had an investment return of -8.54%, which is below the assumed investment rate of return. Because the system did not exceed the expected return, the PERS plan did not make progress in lowering its investment return assumption to the actuarial recommendation in FY 2022. As no progress was made toward the target rate assumption, it is critical that the PERS Board and its actuary continue to monitor this assumption and the experience of the plan. The PERS plan's actuary will evaluate the plan's investment return assumption in the plan's next experience study.

SUSTAINABILITY

The PERS plan's funding policy defines several goals and objectives, including the maintenance of an increasing trend in the plan's funded ratio (over the projection period) with the target of a 100% funding level by 2047.

- **Based on the results of the evaluation metrics in the funding policy as of June 30, 2022, all three of the plan's metrics are at red signal-light status.** One of the plan's funding policy metrics analyzes the plan's projected funded ratio as of FY 2047. For the fiscal year ended June 30, 2022, the plan's projected funding level was 48.6%, decreased from 93.5% for the year ended June 30, 2021.

Metric	Result	Status
Funded Ratio (in FY 2047)	48.6%	Red
Cash Flow as a Percentage of Assets	-7.8%	Red
ADC/FCR Ratio	124.8%	Red

- **In its December 2022 meeting, the Board voted to increase the employer contribution from 17.40% to 22.40%. The prospective date for implementation of this change is July 1, 2024.**
  Based on these results, and the negative investment experience of the plan for FY 2022, the plan's actuary recommended increasing the plan's employer contribution rate. In light of concern expressed by multiple employer groups, the PERS Board voted in its February 2022 meeting to amend the effective date of the prospective rate change to July 1, 2024.

- **As of June 30, 2022, PERS's anticipated accrued liability payment period was 48.8 years, a decrease from 50.9 years as of June 30, 2021.**
  The PERS Board's actuary attributes the decrease primarily to higher-than-expected wage growth experienced by the plan during FY 2022. Higher-than-expected mortality experience also contributed to the reduction in the payment period.

Prospective Changes in Asset Allocation Model for the PERS Plan

- During its June 2022 meeting, the PERS Board, on the recommendation of its investment consultant Callan LLC, adopted changes to the overall asset allocation model utilized by the System to include private credit and private infrastructure.
  - *Private Credit:* Private credit investments are an asset class of privately negotiated loans and debt financing from non-bank lenders (e.g., direct lending, real asset lending).
  - *Private Infrastructure*: Private infrastructure investments are long-lived assets that are essential for the economic productivity of society and facilitate the movement of people, goods, and ideas (e.g., investment in debt related to these types of projects, purchase and operation of existing assets).
- When asked why the PERS Board adopted changes to the plan's asset allocation model, the PERS Board responded:

> *The driving reason for the addition of the new asset classes is that they are expected to provide further diversification to a portfolio heavily weighted in public equities. The benefits that both private credit and infrastructure can provide to the PERS portfolio are (but are not limited to) cash flow generation, expected return premiums, higher downside protection, and volatility dampening.*

2022 Update on Financial Soundness of the Public Employees' Retirement System

Introduction

Authority, Scope, and Purpose

MISS. CODE ANN. § 25-11-101 (1972) directs the PEER Committee to:

> *…have performed random actuarial evaluations, as necessary, of the funds and expenses of the Public Employees' Retirement System and to make annual reports to the Legislature on the financial soundness of the system.*

The PEER Committee, under the authority found in MISS. CODE ANN. § 5-3-51 (1972) et seq., carried out the statutorily required review of the financial condition of the Public Employees' Retirement System (PERS). Actuarial reviews authorized by MISS. CODE ANN. § 25-11-101 (1972) are discretionary.

This 2022 report includes an update on the financial soundness of PERS and an update on changes to the PERS plan's target asset allocation.

Method

To conduct this analysis, PEER:

- reviewed PERS's financial reports;
- reviewed actuarial reports, projections, and experience studies prepared for PERS;
- reviewed investment assessments prepared for PERS; and,
- interviewed personnel of PERS.

Background

Mississippi provides a retirement system for public employees overseen by an agency of state government that is responsible for the investment and administration of the benefit payment process.

This chapter will present:

- an overview of PERS; and,
- the composition and role of the Board of Trustees of the Public Employees' Retirement System (PERS Board).

Overview of the Public Employees' Retirement System

Under MISS. CODE ANN. § 25-11-101 (1972), the Legislature created a retirement system to provide retirement allowances and other benefits for officers and employees in the state's service and their beneficiaries. The PERS Board is responsible for the administration of PERS and for all other state retirement systems.

Under MISS. CODE ANN. § 25-11-101 (1972), the Legislature created a retirement system to provide retirement allowances and other benefits for officers and employees in the state's service and their beneficiaries. The PERS Board is responsible for the administration of PERS and for all other state retirement systems. For purposes of this report, the collection of these systems will be referred to as the "System." Exhibit 1 on page 2 lists the plans under the System.

Exhibit 1: Overview of the System

The System

- Public Employees' Retirement System
- Mississippi Highway Safety Patrol Retirement System
- Mississippi Government Employees' Deferred Compensation Plan and Trust
- Municipal Retirement Systems
- Supplemental Legislative Retirement Plan
- Optional Retirement Plan
- Medicare Supplemental Insurance Program

SOURCE: Public Employees' Retirement System of Mississippi.

Composition and Role of the PERS Board of Trustees

Established in MISS. CODE ANN. § 25-11-15 (1972), the 10-member PERS Board of Trustees is responsible for the administration of the state's retirement system.

Composition of the PERS Board of Trustees

The current membership of the PERS Board includes:

- the State Treasurer;
- a gubernatorial appointee;
- two state employees;
- one municipal employee;
- one county employee;
- one Institutions of Higher Learning employee;
- one public school/junior college employee; and,
- two retiree members of PERS.

Except for the State Treasurer and the Governor's appointee, all trustees are elected by the employee groups they represent.

Except for the State Treasurer and the Governor's appointee, all trustees are elected by the various constituency employee groups they represent (i.e., state, municipal, county, Institutions of Higher Learning, public schools, junior colleges, and retirees).

In addition to those members, state law provides for four legislative advisers to assist the PERS Board (two each from the Mississippi Senate and House).

Role of the PERS Board of Trustees

A primary responsibility of the PERS Board is to ensure adequate funding of the plans it administers. In FY 2021, the PERS Board continued its contractual relationship with Cavanaugh Macdonald Consulting, LLC, a nationwide actuarial and healthcare consulting firm, to create comprehensive models that are used to project the financial position of the various plans. These models include such factors as investment return assumptions, wage inflation assumptions, retirement tables, and retiree mortality tables.

In addition to annual actuarial valuation and projection reports, the PERS Board biennially compares the actual experiences of the various plans to expected experience for reasonableness and adjusts, as necessary, the assumptions used. The PERS Board received the results of the most recent study at its April 2023 meeting.

The PERS Board also contracts with an investment consultant to conduct asset/liability studies, provide quarterly performance reports and economic updates, and assist the PERS Board and staff in establishing an asset allocation policy and selecting investment management firms. The PERS Board currently contracts with Callan LLC, one of the nation's largest independently owned investment consulting firms.

PERS Board members have a duty to manage and invest the funds of the various plans for the exclusive benefit of the members and beneficiaries in the manner provided by law. MISS. CODE ANN. § 25-11-121 (1972) provides guidelines and limitations on the types of assets the PERS Board may use as investments for the PERS plan.

Financial Soundness of the Public Employees' Retirement System

"Financial soundness" should be defined not as a point-in-time comparison of assets and liabilities, but as a multifaceted construct that encompasses sustainability in consideration of all relevant environmental conditions and an understanding of the role of risk and investment management in the long-term financial health of the System.

This chapter discusses:

- actuarial soundness and sustainability; and,
- risk management and investment management.

Actuarial Soundness and Sustainability

"Actuarial soundness" and "sustainability" are two of the major components of financial soundness. The purpose of these two components should be to establish actuarial assumption models that can be upheld and defended in view of all relevant environmental conditions, including contractual obligations involved and the potential economic consequences of doing away with those obligations.

Actuarial Soundness

The PERS Board, in consultation with its actuaries, develops an actuarial model based on assumptions such as projected investment returns, payroll increases, inflation, retirement ages, mortality rates, marriage rates, and accrued leave to project the plan's future assets and liabilities. Although the PERS Board sets plan assumptions based on biennial experience studies, the plan's actual experience (e.g., investment returns or mortality rates) is a product of environmental and demographic factors.

Variances in the actual experience of the plan compared to the model's assumptions have an impact on the plan's financial condition. Therefore, the PERS Board, with assistance from its staff and other contractual advisers, endeavors to maintain the actuarial soundness of the plan by monitoring all components used in the PERS actuarial model through quarterly updates on the performance of the plan's assets, annual actuarial updates, annual projections, and biennial experience reports.

This section discusses the actuarial soundness of the following three areas of the PERS plan:

- differences between actual and assumed wage inflation;
- active and retired member assumptions; and,
- differences between the actuarially recommended and Board-adopted long-term assumed investment rate of return.

Differences between Actual and Assumed Wage Inflation

The wage inflation assumption is the estimate of the amount that PERS members' wages will increase annually in future years. This rate affects the projected amount of funds that are to be contributed annually for investments to calculate and meet the number of future plan liabilities. PERS receives employee and employer contributions[1] from seven sources:

- state agencies;
- state universities;
- public school districts;
- community and junior colleges;
- counties;
- municipalities; and,
- other political subdivisions (e.g., water or sewer utility districts).

The wage inflation assumption is composed of the impact of inflation and the real rate of wage inflation, which work together to account for the overall increases in the value of labor over time. Currently, these components are 2.40% and 0.25%, respectively.[2] Wage inflation figures can be affected both by changes in payments to an individual (e.g., wage increases resulting from pay or merit raises) and the payments to the total number of individuals (e.g., growing or shrinking workforces).

Over the last 5- and 10-year periods, the PERS actual average annual payroll increase has remained below the actuarial model's projected rate.

For the past five fiscal years (FY 2018 through FY 2022) and 10 fiscal years (FY 2013 through FY 2022), the PERS average annual payroll[3] increase fell below the projected 2.65% annual rate of wage increase. For the past five fiscal years, the average annual payroll increase was 1.36%, and during the past 10 fiscal years the average annual payroll increase was 0.98%.

Exhibit 2 on page 6 presents the total payroll reported to PERS for fiscal years 2021 and 2022. As this exhibit indicates, for FY 2022 alone, PERS experienced an increase in payroll of 3.34%, attributable to increases in total payroll in state agencies, state universities, public schools, counties, and municipalities and to decreases in total payroll in community/junior colleges, and other political subdivisions. Also illustrated in Exhibit 2, wages of employees of state agencies, which represented approximately 17% of the PERS plan's total covered payroll, experienced an increase of 2.07% for FY 2022. For context, for FY 2021 alone, PERS experienced a total payroll decrease of approximately -0.66% with state agencies experiencing a decrease of approximately -3.48%.

[1] Each employee must contribute 9% of his or her salary to PERS, and his or her employer must contribute 17.40% of the employee's total salary to PERS.

[2] Over the past 10-year period, the PERS Board's actuarial assumptions included an assumed growth rate of 4.25% from FY 2012 to FY 2014, 3.75% for FY 2015 and FY 2016, 3.25% for FY 2017 and FY 2018, 3.00% for FY 2019 and FY 2020, and 2.65% for FY 2021 and FY 2022.

[3] Annual payroll is a statistical figure reported in the PERS plan's annual valuation that represents the total combined wages paid to PERS members by PERS plan employers.

Exhibit 2: PERS Plan Payroll Growth (by Source) for FYs 2021 and 2022

Payroll Source	Total Payroll		Increase (Decrease)	Percentage Change
	FY 2022	FY 2021		
State Agencies	$ 1,098,269,192	$ 1,076,040,014	$ 22,229,178	2.07%
State Universities	1,020,004,907	996,451,048	23,553,859	2.36%
Public Schools	2,522,338,521	2,403,327,174	119,011,347	4.95%
Community & Junior Colleges	298,907,368	300,434,410	(1,527,042)	(0.51%)
Counties	587,889,282	572,143,978	15,745,304	2.75%
Municipalities	626,517,397	595,147,054	31,370,343	5.27%
Other Political Subdivisions	300,833,496	302,533,163	(1,699,667)	(0.56%)
Total	**$6,454,760,163**	**$6,246,076,841**	**$ 208,683,322**	**3.34%**

SOURCE: PEER analysis of the *Report on the Annual Valuation of the Public Employees' Retirement System of Mississippi* as of June 30, 2022.

While PERS has experienced positive payroll growth in three of the last five fiscal years, as shown in Appendix A on page 26, each of these periods' results, with the exception of FY 2022, was below the rate of wage growth assumed by the PERS Board for the corresponding period.

Definition: amortization period
The amount of time it takes a borrower to pay back full loan principal plus interest.

As reported in *An Update on the Financial Soundness of the Mississippi Public Employees' Retirement System and Related Legal Issues: 2014* (PEER Report #591), PERS's actuaries stated that less-than-expected payroll growth can increase the amortization period of the unfunded actuarial accrued liability (UAAL), which occurs when a pension system's current actuarial value of assets is less than the present value of benefits earned by retirees, inactive members, and current employees as of the valuation date. However, the upward pressure on the UAAL may be partially or totally offset due to the decrease in the number of future liabilities resulting from a lower payroll amount than assumed in the actuarial model.

In addition, the October 2022 edition of the *Public Fund Survey* from the National Association of State Retirement Administrators (NASRA) states that when a plan's payroll grows at a rate less than expected, the base amount of funds used to amortize the plan's unfunded liability is smaller, meaning that the cost of amortizing the unfunded liability is larger. This is due to the fact that only part of the amount contributed to the PERS plan each year goes to the accrual of employee benefits. This component is called the normal cost.[4] The remainder of the contributions, which are not designated for the accrual of specific member future benefits, are held in the trust and utilized by the PERS plan to begin paying off the plan's UAAL.

For example, for FY 2022, total contributions were 26.40% of covered payroll (9% employee contribution and 17.40% employer contribution). The normal cost for FY 2022 was 10.60% (9% employee and 1.60% employer). The remainder of the employer contribution, 15.80%, is added to the assets of the plan for use in paying down the plan's UAAL. For FY 2022, for every dollar of covered payroll, the PERS plan received approximately 15.80 cents to be invested to help pay down the plan's UAAL. When the plan experiences less payroll growth than anticipated, the 15.80 cents per dollar of the difference between anticipated and actual covered payroll is not deposited into the PERS trust assets and is not able to grow at the utilized rate of 7.55% annually. Over a 30-year period, assuming all other assumptions are met, this 15.80 cents would grow to $1.40, an increase of approximately 788%.

The PERS Board should continue to analyze variation between actual and assumed wage growth.

Although the PERS Board has made changes to actuarial assumptions in the past, continued analysis of the difference between actual and assumed wage inflation is warranted. This is made more evident when PERS's experience is compared to the average experience of plans in NASRA's *Public Fund Survey*. The survey's October 2022 report indicates that the median experience for plans in the survey for FY 2021 was a positive change in annual payroll of approximately 1.84%, as compared to the PERS FY 2021 decrease of 0.66%. In addition, the survey indicates that the median annual payroll change has been above 2% for four of the past five fiscal years, FY 2017 through FY 2021, while PERS's average wage growth over the same period was 1.36%.

Active and Retired Member Assumptions

The PERS plan, and all other plans administered by the PERS Board, have three types of members: active, inactive, and retired (also referred to as a retiree).

Active Member	Inactive Member	Retired Member
Current employees who are contributing to the plan through monthly withholding from pay.	Members of PERS who are no longer working in a PERS-covered position and have not retired/received a refund of contributions.	Individuals who are no longer working in a PERS-covered position and have begun receiving payments based on his or her retirement calculations.

Each type of member is considered within the actuarial model of the plans; however, because liabilities associated with inactive members account for only 0.94% of the overall PERS plan's present value of future benefits, the ratio of active to retiree members is of primary importance. As shown in Exhibit 3 on page 8, the ratio of active to retiree members in the PERS plan decreased

[4] Normal cost is the annual cost of providing retirement benefits for services performed by current members. This is a shared responsibility between the member and employer.

from 1.81:1 in FY 2012 to 1.24:1 in FY 2022, or approximately 31.49%.[5] The declining ratio is attributable to a decrease in the number of active members and an increase in the number of retiree members.

Exhibit 3: PERS System Active and Retiree Members for FY 2012 through FY 2022 (in Thousands)*

Member Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Active	163	162	162	158	155	153	151	151	151	146	145
Retiree	90	93	96	99	102	105	108	110	112	115	117
Ratio	1.81:1	1.74:1	1.69:1	1.60:1	1.52:1	1.46:1	1.40:1	1.37:1	1.35:1	1.27:1	1.24:1

*Calculations are based on rounding to the nearest hundredth.

SOURCE: Public Employees' Retirement System of Mississippi.

Exhibit 4 on page 9 provides more detailed information about the decline in active employee membership specific to the PERS plan. While not every employer group has seen a decline in active membership, the overall effect is a lower number of active employees from FY 2021 to FY 2022.

As a result of the decrease, the payroll of fewer active members must fund future pension obligations, a factor made more important because contributions from active members and their employers comprise approximately 45% of PERS revenues (as of FY 2022).

According to the October 2022 *Public Fund Survey*, the most recent nationwide information available, when examining the membership of the pension plans tracked by the database, the overall active to retiree ratio is 1.26:1 as of the end of FY 2021. While the PERS active to retiree member ratio has declined since FY 2012, the ratio of 1.27:1 at the end of FY 2021 was above the average ratio for other pension plans across the nation. This indicates that PERS has a higher active member to retiree ratio compared to the average pension plan in the United States.

> At the end of FY 2021, the active to retiree member ratio was 1.27:1, which is a higher ratio than the average U.S. pension plan.

In addition, the *Public Fund Survey* observed that a lower ratio of active members to retiree members results in funding future obligations over a smaller payroll base, although a declining active member to retiree member ratio does not automatically pose an actuarial or financial problem. However, when combined with an unfunded liability, a low or declining ratio of actives to retirees can cause financial distress for a pension system provider.

[5] The rate of decline in the ratio of active members to retired members between FY 2011 and FY 2021 was 34%.

Exhibit 4: PERS Plan Active Employee Change (by Employer) for FYs 2021 and 2022

Employers	Active Employees		Increase (Decrease)	Percentage Change
	FY 2021	FY 2022		
State Agencies	25,325	24,466	(859)	(3.39%)
State Universities	17,114	16,774	(340)	(1.99%)
Public Schools	60,108	60,787	679	1.13%
Community & Junior Colleges	5,959	5,761	(198)	(3.32%)
Counties	14,620	14,486	(134)	(0.92%)
Municipalities	15,471	15,404	(67)	(0.43%)
Other Political Subdivisions	7,076	6,738	(338)	(4.78%)
Total	**145,673**	**144,416**	**(1,257)**	**(0.86%)**

SOURCE: PEER analysis of the *Report on the Annual Valuation of the Public Employees' Retirement System of Mississippi* as of June 30, 2021, and June 30, 2022.

With a maturing plan,[6] increasing retirements are expected, and the model attempts to account for these changes through the use of demographic assumptions. Although the PERS ratio of active members to retirees is above the national average, PERS's experience does differ from the average plan of the *Public Fund Survey*. PERS active membership has continued to decline, whereas the national average plan's membership has grown in six of the last seven fiscal years (FY 2015 through FY 2021). The national average plan's membership did decline by a rate greater than 1% for FY 2021. As such, continued analysis of the assumptions for active and retiree members is warranted.

Differences between the Actuarially Recommended and Board-adopted Long-term Assumed Investment Rate of Return

The investment return assumption is a metric used in PERS's actuarial model to project and demonstrate the long-term perspective of investments in combination with the long-term perspective of the liabilities.

The plan's consulting actuary recommends an investment return assumption to the Board during its biennial experience studies. This recommendation is based on several factors such as forward-looking asset models created by the actuary, consideration of the investment assumptions of other state and local pension systems in the United States, and the plan's inflationary environment. The

[6] According to Zacks Investment Research, a maturing pension plan is a plan where the number of employees and retirees is approaching equality.

PERS Board, at its August 2021 meeting, set the plan's current investment return assumption target at 7.00%.

However, while the plan's actuary makes recommendations to the Board regarding what rates should be used for the investment return assumption, it is ultimately the responsibility of the Board to set the rate utilized. Currently, the PERS plan utilizes an investment return assumption of 7.55%.

The difference between these two figures is the result of the PERS Board's current funding policy. The plan's funding policy outlines the overall funding goals and objectives for the plan and documents both the metrics that will be used to measure progress toward achieving those goals and the methods and assumptions that will be employed to develop the metrics.

The PERS Board's investment return assumption target is 7.00%. Due to the Board's funding policy, the current investment assumption rate will be reduced over time from its current rate, 7.55%, until it reaches the target rate of 7.00%.

In the plan's funding policy, the Board also outlines how it will consider and potentially implement any changes to the investment return assumption recommended by the plan's actuary. According to the amended funding policy, upon approval of the Board, the plan's investment assumption rate will be reduced until it reaches the rate recommended by the actuary in the most recent experience study. The specific parameters for this reduction are outlined by the funding policy which can be found in its entirety on PERS's website.

The Board's use of its current methodology could be considered an attempt to address the financial health of the plan while potentially reducing the impact that a more aggressive adoption of the recommended rate of return would impose on one or more of the plan's funding policy assessment metrics, or the state and other PERS-covered employers. For more information on the PERS funding policy metrics, see Appendix B on page 27.

Since the implementation of this methodology in its October 2019 meeting, the PERS plan has only experienced excess returns sufficient to reduce the plan's utilized investment return assumption rate from 7.75% to 7.55%. This rate is still in excess of the targeted 7.00% rate recommended by the plan's actuary.

While PERS's actuary did provide the methodology for assumption changes utilized by the Board in the PERS funding policy, the PERS Board's choice to utilize this methodology could continue to be a cause of concern. Selection of this methodology has delayed implementation of the assumption reduction and exacerbated the impact of the plan's lower-than-projected investment returns.

While adoption of any future changes under the current methodology may lessen the impact on the plan, any delays in the implementation of the discounted rate may cause any future needed adjustments, such as to the plan's employer contribution rate, to be larger than was first necessary.

Due to the method adopted by the Board for recognition of the actuary's recommendations, it is imperative that the PERS Board and its consulting actuary continue to monitor the investment return assumption in future years to ensure that the investment return assumption accurately reflects market conditions and the PERS investment allocation model.

Sustainability

According to NASRA, a pension plan funding policy is a set of guidelines adopted by a pension plan that determines how much should be contributed each year by the employers and active participants to provide for the secure funding of benefits in a systematic fashion. The PERS Board continues to operate the PERS plan under the funding policy that was implemented during FY 2019. The plan's funding policy defines several goals and objectives, including contribution rate stability and the maintenance of an increasing trend in the plan's funded ratio (over the projection period) with the target of a 100% funding level.

Review of Funding Policy Metrics

Based on the results of the evaluation metrics in the funding policy as of June 30, 2022, all three of the plan's metrics are at red signal-light status.

Included in the policy are three metrics that will be utilized to track the plan's progress in achieving the funding goals and objectives set by the PERS Board and a course of action should any of these metrics fall below certain thresholds. These new metrics will be evaluated through the use of a "signal light" approach (green indicating goals and objectives achieved; yellow representing a warning that future negative actions may lead to a failure of the goals and objectives; and red suggesting that the Board must consider making changes to the employer contribution rate).

Based on the results of the evaluation metrics in the funding policy as of June 30, 2022, all three of the plan's metrics are at red signal-light status. Exhibit 5 on page 11 illustrates the status of these three metrics as assessed through the annual valuation and projection report as of June 30, 2022.

Exhibit 5: PERS Funding Policy Metric Results as of June 30, 2022

Metric	Result	Status
Funded Ratio (in FY 2047)	48.6%	Red
Cash Flow as a Percentage of Assets	-7.8%	Red
ADC/FCR Ratio*	124.8%	Red

* The plan's actuarially determined contribution (ADC) is the potential payment to the plan as determined by the actuary using a contribution allocation procedure that, if contributed consistently and combined with investment earnings, would be sufficient to pay promised benefits in full over the long term. The plan's fixed contribution rate (FCR) is the employer contribution rate set by the Board.

SOURCE: *Report on Thirty-Year Projections of the Mississippi Retirement Systems*, prepared as of June 30, 2022.

As highlighted above, one of the plan's funding policy metrics analyzes the plan's projected funded ratio as of FY 2047. For the fiscal year ended June 30, 2022, the plan's projected funding level was 48.6%, decreased from 93.5% for the year ended June 30, 2021.

Prospective Changes to PERS's Employer Contribution Rate

The PERS plan's actuary presented the results of the plan's valuation and projection reports, for the fiscal year ended June 30, 2022, to the PERS Board at its December 2022 meeting. As highlighted previously, this report showed that all of the PERS plan's funding policy metrics reached a red signal-light status. According to the PERS funding policy, if any one metric is in the red signal-light status in conjunction with the annual valuation report and the projection report, the actuary will determine and recommend to the Board an employer contribution rate increase to consider that is sufficient enough to get all three funding policy metrics back into the green signal-light status.

Based on these results, and the negative investment experience of the plan for FY 2022, the plan's actuary recommended increasing the plan's employer contribution rate from 17.40% to 22.40%, an increase of 5.00%.

In its December 2022 meeting, the Board voted to increase the employer contribution from 17.4% to 22.4%.

Under MISS. CODE ANN. § 25-11-123 (1972), the PERS Board is given the authority to determine biennially the employee and employer contribution rate that will be paid on members' earned compensation and has the ability to make changes to these rates. However, because Mississippi is a "California Rule" state[7] (once a retirement benefit is vested, it cannot be taken away), any changes to the employee contribution rate would require the provision of comparable benefits to plan members, which would require changes to state law by the Legislature. Any changes recommended to the contribution rates of the plan must be applied to the employer contribution rate.

As seen in Exhibit 6 on page 12, the recommendation provided by the actuary is projected to be sufficient to place all three metrics of the plan's funding policy into a green signal-light status within one fiscal year.

Exhibit 6: PERS Funding Policy Metric Results with the Change in Employer Contribution Rate to 22.40% Projected for June 30, 2024

Metric	Result	Status
Funded Ratio (in FY 2047)	86.1%	Green
Cash Flow as a Percentage of Assets	-5.4%	Green
ADC/FCR Ratio*	100%	Green

*The plan's actuarially determined contribution (ADC) is the potential payment to the plan as determined by the actuary using a contribution allocation procedure that, if contributed consistently and combined with investment earnings, would be sufficient to pay promised benefits in full over the long term. The plan's fixed contribution rate (FCR) is the employer contribution rate set by the Board.

SOURCE: *Report on Thirty-Year Projections of the Mississippi Retirement Systems*, prepared as of June 30, 2022.

In its December 2022 meeting, the PERS Board voted to adopt the employer contribution rate change recommended by the plan's actuary with an effective date of October 1, 2023.

In light of concern expressed by multiple employer groups, the PERS Board voted in its February 2022 meeting to amend the effective date of the prospective rate change to July 1, 2024.

[7] See *Attorney General's Opinion to Robertson*, February 22, 2010.

According to PERS staff, an increase of five percent in the employer contribution rate will represent an estimated $345 million increase in PERS employers' personnel costs. While these additional costs will be spread across all PERS-covered employer groups, PERS staff estimates that approximately $265 million will come from entities receiving state funds, with approximately $88 million coming from state general funds.

Other Metrics of Sustainability

As highlighted previously, the PERS Board operates the PERS plan under a funding policy that uses three metrics to track the plan's progress in achieving the funding goals and objectives set by the PERS Board. While not a part of the funding policy, there are other metrics that can be viewed to help assess the sustainability of the plan. One of these is the plan's anticipated accrued liability payment period.

The anticipated accrued liability payment period is the estimated length of time under current actuarial assumptions that is required to pay the UAAL. As of June 30, 2022, PERS's anticipated accrued liability payment period was 48.8 years, a decrease from 50.9 years as of June 30, 2021.[8] The PERS Board's actuary attributes the decrease primarily to higher-than-expected wage growth experienced by the plan during FY 2022. Higher-than-expected mortality experience also contributed to the reduction in the payment period.

Conversely, current-year realization of investment losses from three of the past five fiscal years contributed to an increase in the anticipated accrued liability payment period. By using the accepted practice of "smoothing," PERS recognizes actuarial investment gains and losses over a five-year period. This allows the calculation of the anticipated accrued liability payment period and the accrued liability funding percentage to be based on a five-year period rather than on a one-year period, reducing the chance of large fluctuations in these figures.

In FY 2022, actuarially smoothed investment returns were approximately $54 million lower than the actuarially projected returns for FY 2018 through FY 2022. The plan's anticipated accrued liability payment period may also be impacted by the PERS Board's adopted funding policy. The PERS Board's funding policy seeks to lower the plan's investment return assumption through the use of future excess investment gains. This policy has contributed to the plan's use of an investment return assumption that remains higher than the target assumption recommended by the plan's actuary.

Because the investment return assumption remains higher, any impact due to lower-than-expected investment returns may be exacerbated.

The PERS plan did not make progress in lowering its investment return assumption to the actuarial recommendation in FY 2022. As no progress was made toward the target rate assumption, it is critical that the PERS Board and its actuary continue to monitor this assumption and the experience of the plan.

The PERS plan's actuary will evaluate the plan's investment return assumption in the plan's next experience study (which will be presented to the Board at its April 2023 meeting). Based on recommendations from this report, the PERS Board will have to consider whether the current method for adopting changes to the plan's investment return assumption is sufficient or if additional changes will need to be made to the plan's funding policy.

[8] PERS's anticipated liability payment period, as of June 30, 2020, was 37.1 years.

While adoption of any future changes under the current methodology may lessen the impact on the plan, any delays in their implementation may cause adjustments to be larger than initially necessary.

Risk Management and Investment Management

Risk management and investment management should provide a long-term framework for the structure that will control the plan's long-term risk environment and allow it a reasonable opportunity to collect or earn sufficient assets to meet its benefit obligations.

Risk management and investment management represent the other major components of financial soundness. These concepts are utilized to provide a framework for the structure that will manage the plan's long-term risk environment in ways that allow it a reasonable opportunity to collect or earn sufficient assets to meet its benefit obligations.

Risk Management

To determine the funding ratio, or funding level, of a plan, the current value of all projected future obligations of the plan (such as future pension payments) is calculated. In other words, the cost of all of the plan's future obligations is calculated in today's dollars. The total of the current value of future obligations is compared to the plan's assets on hand today and a funding ratio is derived.

The calculation of a plan's funding ratio is an accounting measure that quantifies the plan's ability to meet its projected future obligations based on service already performed with assets currently available. However, this measure, like most accounting measures, assesses the plan in a conservative manner and does not take into account items such as future investment gains and losses and/or loss of contributions from employees and participating employers. This measure also does not reflect the ability of the plan to meet its current obligations.

For FY 2022, the actuarial value of assets in PERS remained flat in relation to the actuarial value of its liabilities—61.3% for both FY 2021 and FY 2022.[9] The relationship between these two valuations remained flat because gains and losses due to actuarial experience variations from expected experience regarding investment returns, member mortality, and salary growth produced offsetting effects.[10] The actuarial gain on investments for FY 2022 was 8.49%, which represents the actuarial smoothing of gains and losses from FY 2017 through FY 2021.[11]

Primarily due to lower-than-expected investment returns, the PERS plan has a projected future funding ratio of 48.6% as of 2047.

According to projections prepared by PERS's consulting actuary as of June 30, 2022, the plan's funding ratio was projected to be 48.6% by 2047, as compared to 93.5% reported in the FY 2021 projection reports.[12] The decrease in the future funding level is primarily due to less-than-expected investment gains.

[9] For the fiscal year ended on June 30, 2020, the PERS plan had a funding level of 60.5%.

[10] Member mortality refers to mortality estimates for pre- and post-retirement mortality rates for retirees and their beneficiaries.

[11] The PERS plan's actuarial gain on investments as of June 30, 2021, was 12.47%.

[12] For the period ended on June 30, 2020, the PERS plan's projected funding level in 2047 was 67.7%.

Although an 80% funding ratio is frequently cited as a measure of an adequately funded pension system, there is no industry statement or requirement for a pension plan's funding level to be at 80% to be defined as "healthy." Neither the Governmental Accounting Standards Board[13] nor the American Academy of Actuaries uses an 80% funded ratio to define a plan as financially healthy.

For any projected funding level information to be accurate, all actuarial assumptions must be met exactly for all fiscal years forecasted. As past performance indicates, results can exceed or fall short of this mark, creating variability from the model.

Investment Management

Having realized a loss of approximately 8.54% in the PERS plan's combined investment portfolio, the market value of assets decreased from approximately $35.6 billion to $31.2 billion during FY 2022, a decrease of approximately $4.4 billion.

As presented in Exhibit 7 on page 15, according to investment consultant Callan LLC, PERS's investment performance for FY 2022 was below the current actuarial model's utilized investment return rate of 7.55%, placing it below the median return for its peer group[14] of -5.64%. Additionally, PERS's investment performance has exceeded its peer group median for each of the past 3-, 5-, and 10-year periods.

Exhibit 7: Comparison of PERS Investment Performance to Peer Group of Public Pension Plans with Assets of More than $10 Billion

Category	FY 2022	3-Year Return	5-Year Return	10-Year Return
PERS Return	-8.54%	7.85%	7.97%	9.02%
Peer Group Median (midpoint)	-5.64%	7.27%	7.64%	8.21%
PERS Percentile Rank	78*	40	35	16
25th Percentile*	-2.30%	8.85%	8.48%	8.85%
10th Percentile	1.18%	9.77%	8.83%	9.18%

* In this example, 78th percentile means PERS outperformed 22% of peer group funds; 25th percentile means these returns were greater than 75% of peer group funds.

SOURCE: Callan LLC, *Investment Performance Review*, as of June 30, 2022.

According to the *Public Fund Survey*, the median public pension annualized investment 10-year return for the period ending December 31, 2021, was 9.6% and the 30-year return was 8.5%.[15] Over the past 10 years, PERS's investment return on assets averaged 9.02%. Investment returns ranged from 1.16% during FY 2016 to 32.71% during FY 2021. The volatility of the recent years'

[13] The Governmental Accounting Standards Board is an independent organization that establishes standards of accounting and financial reporting for state and local governments in the United States.

[14] The PERS peer group is composed of other nationally based large pension plans (plans having greater than $10 billion in assets).

[15] At the time of publication of this report, the *Public Fund Survey* for the period ending June 30, 2022, had not been released.

returns reinforces the principle of viewing investment returns over a long period and comparing long-term returns to investment return goals rather than focusing on a single year's returns or returns over a short period.

Historically, PERS's investment returns have averaged 6.37% over the past 15 years, 7.60% over the past 20 years, 6.98% over the past 25 years, and 7.95% over the past 30 years. PERS's investment returns have exceeded the median for other public pension plans for the past 10-year period.

Because investment returns are the largest piece of a pension's funding source, when actual returns fall below projections, over time the plan must rely on other sources (i.e., contributions) to provide for the difference, which could lead to decreases in the plan's assets.

The PERS Board and its consulting actuary plan to continue to monitor the investment return assumption in future years to ensure that the investment return assumption accurately reflects market conditions and the System's investment allocation model.

Asset Allocation Model

The PERS independent investment consultant periodically performs an asset/liability allocation study that considers projected future liabilities of the System, expected risk, returns of various asset classes, and statutory investment restrictions. For FY 2022, the PERS Board continued to adhere to the overall asset allocation model adopted in June 2015. The asset allocation model determines the mix of asset classes in which PERS will invest and the overall weight of each asset class within the whole portfolio.

The PERS Board and PERS staff use this model to mitigate investment risk through diversification and to establish risk and rate of return expectations for the adopted target asset allocation mix. On a quarterly basis, the PERS Board and its staff, in consultation with its investment advisers, review the performance of each investment manager relative to the asset class's target performance level.

Exhibit 8 on page 16 presents the actual FY 2022 investment allocation compared to PERS's overall asset allocation model.

Exhibit 8: PERS FY 2022 Actual Asset Allocation Compared to PERS Overall Asset Allocation Model

Year	U.S. Equity	Non-U.S. Equity	Debt Investments	Real Estate	Private Equity	Global Equity	Cash
Model	27%	22%	20%	10%	8%	12%	1%
FY 2022	24%	19%	20%	12%	13%	10%	1%

SOURCE: Callan LLC, *Investment Performance Review*, as of June 30, 2022.

PERS's assets are being invested in accordance with the asset allocation model. Instances in which current investment levels do not agree with the model do not automatically constitute a cause for alarm or present the need for an immediate change in investment levels. The investment model represents targeted investment levels designed to prevent the investment portfolio from becoming too heavily weighted in a certain investment type. Market conditions may, at times, cause a prudent manager to call for slight departures from target goals. For these reasons, the PERS Board monitors investment performance, strategies, and weights throughout the year and manages the investment portfolio based on input from professional money managers, advisers, and its professional staff.

Investment Managers

In FY 2022, the PERS Board had investment management contracts with 58 managers.

In addition to PERS's efforts to mitigate investment risk for plan assets through asset diversification, the PERS Board's decision to utilize numerous investment managers also minimizes investment risk, as it prevents a large portion of plan assets from being under the management of any one investment manager. For FY 2022, the PERS Board had investment management contracts for 58 portfolios (including four that were added and one that was terminated in FY 2022) and paid management fees to investment managers on 53 of these portfolios.

According to the PERS plan's *Investment Policy Statement,* external investment managers are retained because of their skill and expertise within a specialized part of the PERS portfolio. Investment managers are charged with managing the assets and the allocation of the assets within his or her control in compliance with the policies, guidelines, and objectives included in the Investment Management Agreement with PERS.

Investment managers are required to act as trustees to PERS and construct and manage investment portfolios that are consistent with the investment philosophy and disciplines (asset classes) for which they were hired.

Callan LLC, the PERS Board's investment consultant, assists the Board in selecting investment managers.

Selection of investment managers is ultimately the responsibility of the PERS Board. The process for selection of an investment manager begins with the plan's investment consultant, Callan LLC, vetting potential options and assisting the PERS staff with creating a list of candidates that meet the search criteria. These criteria include a wide range of qualitative and quantitative factors such as:

- asset class;
- investment style;
- assets under management relative to the size of PERS's prospective investment;
- manager's staff size;
- management structure and experience; and,
- manager's historical performance and risk tolerance.

The list of candidates is discussed by a manager search committee that selects a group of finalists to be interviewed by the PERS Board. After conducting interviews with the finalists, the Board will select the best option as an investment manager for the PERS plan.

Once a manager is selected and engaged, the PERS Board, with the assistance of Callan LLC and the PERS staff, monitors the performance of investment managers within the plan. This monitoring is also based on both qualitative and quantitative factors, as outlined in the plan's *Investment Policy Statement.*

The Statement lists qualitative assessment factors such as a manager's adherence to his or her stated investment objectives, organizational structure and stability, and changes in investment policy. Quantitative factors include underperformance over a full market cycle, material changes to the risk profile, and portfolio characteristics that are inconsistent with expectations.

Based on the assessment of these factors, the Board can vote to place managers deemed to be underperforming on the PERS Watchlist. The Watchlist assists in monitoring performing funds relative to benchmarks and peers. Any fund that fails to outperform its benchmark or peer group median for the specified time period may be placed on the Watchlist for further review. Improvement relative to long-term objectives will allow for a fund's removal from the Watchlist while continued underperformance could prompt the Board to terminate the fund. The Board has the authority at any time to terminate or replace an investment manager.

For FY 2022, PERS paid $105.8 million to investment managers on PERS plan assets of $31.2 billion, a combined investment management expense rate of 0.34% (the expense rate for the fiscal year ending June 30, 2021, was 0.31%).

In FY 2022, PERS paid $105.8 million to investment managers on PERS plan assets of $31.2 billon, a 0.34% investment management expense rate.

As of June 30, 2022, Principal Capital, a manager in the core real estate sector, had the most assets under management as a percentage of the total portfolio by any one active investment manager[16] with 3.70% (approximately $1.15 billion of the PERS plan's $31.2 billion in assets).

For more information on investment management fees, see Appendix C on page 32.

[16] Active investment management refers to a portfolio management strategy by which the manager uses various investment research approaches, models, and systems to select the fund's specific investments with the goal of outperforming the fund investment's benchmark index.

Prospective Changes in Asset Allocation Model for the PERS Plan

This chapter discusses the following questions:

- How are PERS plan assets currently invested?
- What are private credit and private infrastructure investments?
- Why did the PERS Board change the asset allocation model for the plan?

How are PERS plan assets currently invested?

During its June 2022 Board meeting, the PERS Board adopted changes to the asset allocation model utilized by the System. This change expanded the asset classes utilized by the plan to include investment capacity in private credit and private infrastructure investments.

As outlined under MISS. CODE ANN. § 25-11-101 (1972), the PERS Board is responsible for the administration of PERS and for all other state retirement systems. A component of this responsibility is the investment of assets held in trust for System members and beneficiaries. These investments must conform to specific guidelines for allowable investments codified in MISS. CODE ANN. § 25-11-121 (1972).

To help mitigate risk, the PERS Board invests the assets of the System through the use of an asset allocation model. This model determines the mix of asset classes in which the System invests and the overall weight of each asset class within the portfolio.

The model detailed on page 20 provides a broad overview of the general asset classes utilized by the System. Most of these asset classes are further broken down by sector or other various investment factors (e.g., style, capitalization, or region).

For example, as of June 30, 2022, the real estate sector made up 10% of the total System asset allocation. This means that the goal of PERS staff is to invest approximately 10% of the plan's total investable dollars in assets associated with real estate. The PERS plan's *Investment Policy Statement* further defines this goal and outlines three component areas for investment. Exhibit 9 on page 20 illustrates the components of the real estate asset class.

Exhibit 9: PERS Real Estate Asset Class Investment Strategy

Asset Allocation Model

U.S. Equity	Non-U.S. Equity	Debt Investments	Real Estate	Private Equity	Global Equity	Cash
27%	22%	20%	10%	8%	12%	1%

Real Estate Investment Strategy

Component	Component Weight	Total Portfolio Weight	Component Description
Core	70%	7%	Core investments include existing substantially leased income-producing properties held within a portfolio that exhibits reasonable economic diversification.
Non-Core	15%	1.5%	Non-core investments represent those properties and/or investment strategies that require specialized acquisition and management expertise or skill to mitigate the business and leasing risks that may be associated with individual investments.
Public Real Estate Securities	15%	1.5%	Public real estate securities include both public real estate investment trusts and public real estate operating companies.
Total	100%	10%	

SOURCE: PERS Plan, *Investment Policy Statement*, adopted August 22, 2022.

Each of the main asset classes, as well as their components, are periodically reviewed by PERS staff and Callan LLC. Callan LLC periodically performs an asset/liability allocation study that considers projected future liabilities of the System, expected risk, returns of various asset classes, and statutory investment restrictions.

Callan's *2021 Asset Liability Study* recommended that PERS consider inclusion of two new asset classes within its asset allocation model: private credit and private infrastructure.

During its June 2021 meeting, the PERS Board presented the results of Callan LLC's *2021 Asset Liability Study*. One of the results of this study was the recommendation that the PERS Board consider inclusion of new asset classes within its asset allocation model. In addition to adjustments to the existing asset class weightings, Callan LLC suggested that the PERS Board consider expanding into two new asset classes: private credit and private infrastructure.

To implement these new investment strategies, During the 2022 Legislative Session, the PERS Board sought legislative approval to amend the law that governs the plan's available investment options. According to PERS staff:

Based on the recommendation of investment consultants and staff after an extensive asset and liability study, PERS would like the flexibility to consider allocating assets to private credit, private infrastructure, or other investments not specifically authorized in statute. The flexibility provided with this expansion of the basket clause would possibly achieve greater returns while mitigating risk by providing additional diversifiers to the portfolio.

In response to this request, the Legislature passed House Bill 252 during the 2022 Legislative Session extending the "basket clause" of PERS investment authority from 10% to 20% of the total book value of system assets.[17]

During its June 2022 meeting, the PERS Board included private credit and private infrastructure investments in its overall asset allocation model.

During its June 2022 meeting, the PERS Board, on the recommendation of Callan LLC, adopted changes to the overall asset allocation model utilized by the System to include private credit and private infrastructure.

In addition to these changes, as seen in Exhibit 10 on page 21, the adopted changes also addressed the overall investment allocation in U.S. equities, non-U.S. equities, traditional debt, and private equity investments. These changes were formalized at the PERS Board August 2022 meeting and included in the corresponding update to the plan's *Investment Policy Statement.*

Exhibit 10: Changes in PERS Actual Asset Allocation Model

Model	U.S. Equity	Non-U.S. Equity	Debt Investments	Real Estate	Private Equity	Private Credit	Private Infrastructure	Global Equity	Cash
FY 2015	27%	22%	20%	10%	8%	0%	0%	12%	1%
FY 2022	25%	20%	18%	10%	10%	2%	2%	12%	1%
Change	(2%)	(2%)	(2%)	0%	2%	2%	2%	0%	0%

SOURCE: Callan LLC, *Preliminary 2023 Capital Market Assumptions and Asset Allocation Review.*

[17] The "basket clause" is a catch-all term used to describe provisions within PERS's investment authority that grant the PERS Board the ability to invest plan assets in investments not specifically authorized by other areas of the plan's investment directive. These assets must be in the form of a separate account managed by a Securities and Exchange Commission registered investment advisory firm retained as an investment manager by the Board or a limited partnership or commingled fund approved by the Board.

What are private credit and private infrastructure investments?

Private credit investments are investment strategies in non-bank issued credit through illiquid investment types. Private infrastructure investments are long-lived assets that are essential for the economic productivity of society and facilitate the movement of people, goods, and ideas (i.e., utilities, water treatment, and toll roads).

Private Credit

Private credit investments are an asset class of privately negotiated loans and debt financing from non-bank lenders. These investments are issued through illiquid investment types. According to Callan LLC:

Definition: illiquid
Not easily converted into cash.

> *the prevalence of these investment types developed in the aftermath of the global financial crisis. As the oversight on traditional banking establishments increased, the types and amounts of loans able to be issued decreased. This reduction in the availability of funds created a niche for non-bank lending.*

Returns from these types of investments can be generated through a combination of coupon payments, capital appreciation, and in some cases, equity participation.

coupon payment
An annual interest payment received by a bondholder.

capital appreciation
The increase of market price or value of assets.

equity participation
Ownership of shares.

This type of private credit investment can take several forms, including (but not limited to):

- Direct lending: Direct lending is the origination or purchase of commercial loans used to finance general business operations, specific projects, or growth opportunities.
- Real asset lending: Real asset lending is the origination or purchase of loans backed by traditional (core) real assets, including land and buildings.
- Specialty financing: Specialty financing is the origination or purchase of loans backed by less traditional forms of collateral (e.g., franchise lending).
- Asset-based lending: Asset-based lending is the origination or purchase of loans backed by assets utilized for the transportation of people and goods (e.g., aircraft or rail cars).

Benefits of Private Credit Investments

Private credit investments have the following benefits:

- the ability to generate cash flow quickly through the receipt of coupon payments;
- generally, a higher expected return than more traditional debt instruments (e.g., bonds); and,
- better downside protection than private equity investments.

Definition: downside protection
Ability to limit the impact of potential losses from market downturns.

Risks of Private Credit Investments

As with all investments, private credit investments can come with some inherent risks. Some of these risks include:

- implementation of this type of investment is more difficult than traditional debt instruments;
- investments are illiquid, and therefore not easily sold; and,
- many of these investments utilize leverage (i.e., using debt to invest).

Private Infrastructure

Private infrastructure investments are long-lived assets that are essential for the economic productivity of society and facilitate the movement of people, goods, and ideas.

Definition: long-lived asset
An asset that is expected to provide economic benefits over a future period of time, typically greater than one year.

Investment in private infrastructure can take many forms including:

- investment in debt related to these types of projects;
- purchase and operation of existing assets;
- enhancement and operation of existing assets; and,
- development of new assets.

Benefits of Private Infrastructure Investments

Some of the benefits of private infrastructure investments include:

- Traditionally, these assets are physical (i.e., real) assets.
- They are often in monopolistic (or near-monopolistic) industries.
- They often have high barriers to entry (i.e., investments would be protected because it would be difficult for other parties to invest, even if the industry was not monopolistic).
- They often have little change in demand (e.g., utilities, water/wastewater treatment, toll roads).
- They usually produce a stable cash flow.

Risks of Private Infrastructure Investments

As with all investments, private infrastructure investments can come with some inherent risks. Some of these risks include the following:

- Because these investments are illiquid and long-term, changes in interest rates can greatly impact their value.
- These investments often involve interaction with the public sector (e.g., obtaining a permit, rate setting oversight).
- These investments can face political risk. For example, if an investment in a water treatment facility is in the beginning stages of development and is approved

under one administration but cancelled by the next, costs already associated with the investment could represent a loss on the investment.

Why did the PERS Board change the asset allocation model for the plan?

The new PERS asset allocation model is projected to provide a higher investment return relative to the risk associated with its investment. This means that the new model is more likely to provide the assets needed to meet PERS obligations.

As the custodian for the PERS plan, it is the responsibility of the PERS Board to invest the plan's assets to ensure that PERS meets its financial responsibilities to provide stable benefits for its members.

When asked why the PERS Board adopted changes to the plan's asset allocation model, the PERS Board responded:

> *The driving reason for the addition of the new asset classes is that they are expected to provide further diversification to a portfolio heavily weighted in public equities. The benefits that both private credit and infrastructure can provide to the PERS portfolio are (but are not limited to) cash flow generation, expected return premiums, higher downside protection, and volatility dampening.*

> The PERS Board's decision to adjust the plan's asset allocation model will decrease the plan's allocation to equity from 61% to 57%, which is closer to the average for all plans in the U.S.

While all pension plans are unique due to their mixture of members, provided benefits, contribution requirements, and legal climates, comparisons with these differences in mind can be used to assess particular facets of PERS. For example, this change will decrease the plan's allocation to equity from its current 61% to 57%, which is closer to the average for all plans in the Public Plans Data.[18] The October 2022 *Public Fund Survey* reports the weighted average plan exposure to equities to be 47.4%. The benefit of this adjustment is that it moves funds previously allocated to equity into other investment classes with lower levels of expected risk or volatility.

Prudent financial management dictates that any investment decision balances the risk associated with the investment and the return expected from the investment. Callan LLC's *2023 Capital Market Projections* provides the most recent information from PERS's investment consultant on projected returns and risk levels for assets within the PERS plan. The information provided projected investment return and investment risk assessments for the PERS plan's old and new asset allocation matrices.

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[18] Public Plans Data is an online, interactive resource containing public retirement system information. The database is sponsored and maintained by the Center for Retirement Research at Boston College, NASRA, MissionSquare Research Institute, and the Government Finance Officers Association.

Using a ratio derived from the comparison of the projected returns and the projected levels of risk inherent in both models, the new asset allocation model is projected to provide more return per expected level of risk than the historic model.

> The PERS Board's implementation of the new investment strategy will take place over the next two years depending on market conditions and performance.

This means that when the PERS Board has fully implemented its new investment strategy, these investments better equip the PERS Board to potentially satisfy its mandates to the plan. However, according to the PERS Board, the full implementation of the new model will take place over the next two years depending on market conditions and performance. As of its February 2023 meeting, the PERS Board had not approved the investment of any plan assets into private credit or private infrastructure strategies.

It must be noted that all information related to the asset allocation model's performance is based on future estimates which could differ from the actual investment experience of the plan. As such, continued monitoring by the PERS Board and its investment consultants is imperative.

Appendix A: PERS Payroll Growth for FY 2017 through FY 2022

	Payroll for the Fiscal Year Ending June 30 (in thousands) †						Percentage Change
Employer Group	2017	2018	2019	2020	2021	2022	2017-2022
State Agencies	$1,094,366	$1,052,316	$1,063,711	$1,114,860	$1,076,040	$1,098,269	0.36%
State Universities	$963,344	$974,096	$1,006,586	$1,020,097	$996,451	$1,020,005	5.88%
Public Schools	$2,264,502	$2,247,354	$2,315,173	$2,387,606	$2,403,327	$2,522,339	11.39%
Community/Junior Colleges	$296,504	$294,536	$302,705	$299,391	$300,435	$298,907	0.81%
Counties	$480,694	$493,220	$506,733	$520,773	$572,144	$587,889	22.30%
Municipalities	$583,092	$587,108	$595,249	$600,156	$595,147	$626,517	7.45%
Other Political Subdivisions	$355,728	$350,602	$354,758	$344,559	$302,533	$300,834	-15.43%
Total Payroll Reported to PERS	$6,038,230	$5,999,232	$6,144,915	$6,287,442	$6,246,077	$6,454,760	3.71%
Actuarial Assumed Rate of PERS Plan Salary Growth	*	3.25%	3.00%	3.00%	2.65%	2.65%	
Actual Rate of PERS Plan Salary Growth	*	-0.65%	2.43%	2.32%	-0.66%	3.34%	

† Payroll totals reported here have been rounded and may be different from the payroll figures reported on page 6.
* 2017 payroll data is for baseline comparisons only.

SOURCE: PERS annual valuations for years ending June 30, 2017, through June 30, 2022.

Appendix B: PERS Funding Policy Technical Appendix

Progress of the PERS plan's funding policy is tracked through the use of three metrics:

- the funded ratio;
- cash flow as a percentage of assets; and,
- the actuarially determined contribution.

These metrics are tracked through a tiered method called the "signal light" approach, in which each level of the predefined metric tranches is assigned a color and a definition (Exhibit B1).

Exhibit B1: PERS Funding Policy "Signal Light" Levels and Definitions

Status	Definition
Green	Plan passes metric and PERS funding goals and objectives are achieved.
Yellow	Plan passes metric but a warning is issued that negative experience may lead to failing status.
Red	Plan fails metric and PERS must consider contribution increases.

SOURCE: PERS Board of Trustees policy.

The new funding policy, like its most recent predecessor, also includes a provision that serves as a safety net for the plan. If any one of the metrics is in red signal-light status in conjunction with the annual valuation report and the projection report, the actuary will determine and recommend to the Board for its consideration an employer contribution rate increase that is sufficient to get all three metrics back into green signal-light status.[19]

Funded Ratio

The calculation of a plan's funding level is an accounting measure that quantifies the plan's ability to meet its projected future obligations, based on service already performed, with assets currently available.

This metric uses information from the 30-year projection reports developed by the plan's actuaries to assess the plan's funding level at a defined point in the future (for now, FY 2047).

Exhibit B2 presents the funding policy's defined channels for the funded ratio signal lights.

[19] Any resulting contribution rate increase would be effective for July 1, 18 months following the completion of the associated projection report. The delay allows the state, counties, municipalities, and political subdivisions ample time to incorporate the increase into their operating budgets.

Exhibit B2: Signal Light Definitions for Funded Ratio

Funded ratio above 80% in 2047.
Funded ratio between 65% and 80% in 2047.
Funded ratio below 65% in 2047.

SOURCE: PERS Board of Trustees policy.

For the year ended on June 30, 2022, the projected funding ratio in FY 2047 is 48.6%, placing the PERS System in the red signal-light status. This is one of the contributing factors that led to the actuary's recommendation to increase the employer contribution rate.

As noted on page 11, one of the policy's goals is to maintain an increasing trend in the funded ratio over the projection period with an ultimate goal of being 100% funded. However, the use of a 100% funded ratio can be seen differently when used as a target of financial health versus a goal of a pension's funding policy.

Even with the assignment of being 80% funded as the threshold for green status, there is no industry statement or requirement for a pension plan's funding level to be at 80% to be defined as "healthy." Neither the Governmental Accounting Standards Board or the American Academy of Actuaries uses an 80% funded ratio to define a plan as financially healthy.

Cash Flow as a Percentage of Assets

The PERS funding policy defines "cash flow as a percentage of assets" as the difference between total contributions coming into the trust and the benefit payments made to retirees and beneficiaries withdrawn from the trust as a percentage of beginning year market value of assets. The formula for cash flow as a percentage of assets also can be defined as follows:

$$\frac{\textit{Total Annual Contributions} - \textit{Benefit Payments}^{20}}{\textit{Beginning of Year Market Value of Assets}}$$

For example, computing the cash flow as a percentage of assets for FY 2022 (in thousands) is calculated as follows:

$$\frac{(1{,}826{,}424 - 3{,}255{,}666)}{35{,}216{,}597} \times 100 = -4.06\%$$

PERS testing of cash flow as a percentage of assets is not only a point-in-time comparison for the current fiscal year, but it also will be evaluated over the entirety of the period reviewed during the actuary's 30-year projection report, with the lowest current or projected cash flow as a percentage of assets used as the metric result.

Exhibit B3 defines signal-light statuses for cash flow as a percentage of assets.

[20] For purposes of this calculation, PEER included any refunds made to inactive members as benefit payments.

Exhibit B3: Signal Light Definitions for Cash Flow as a Percentage of Assets

Net Cash Flow Percentage above –5.80% during the projection period.
Net Cash Flow Percentage between –5.80% and –7.55% during the projection period.
Net Cash Flow Percentage below –7.55% during the projection period.

NOTE: The targets utilized in this metric were adjusted during the April 2022 Board meeting to correspond with the approved changes in the plan's utilized investment return rate.

SOURCE: PERS Board of Trustees policy.

For the projection period, the lowest cash flow rate is –7.78% in FY 2039, which places the PERS plan in the red signal-light status for this metric.

The *Public Fund Survey* also provides data on cash flow as a percentage of assets. According to the October 2022 report, nearly all systems in the survey had a negative cash flow, and the median cash flow as a percentage of assets for plans in its survey, as of FY 2021, was –2.2%.[21] While this can be compared to the PERS result of –5.65% for FY 2021, it must also be noted that this is not a direct comparison. As discussed on page 28, PERS cash flow as a percentage of assets metric is not a point-in-time comparison (like the *Public Fund Survey*) but a measure over its full projection period, and the *Public Fund Survey* metric accounts for administrative expenses, while the PERS metric excludes administrative expenses from the calculation.

ADC/FCR Ratio

The ADC/FCR ratio is a comparison of the plan's actuarially determined contribution (ADC) and the plan's fixed contribution rate (FCR).

The plan's funding policy defines the ADC as the potential payment to the plan as determined by the actuary based on the following principal elements disclosed in the funding policy:

- actuarial cost method;
- asset valuation method; and,
- amortization method.

The purpose of the ADC is to provide a measure of the potential contribution rate necessary to allow the PERS plan to reach its funding goals within a 30-year period under the prescribed methods outlined in the Board's funding policy.

The plan's funding policy defines the FCR as the employer contribution rate set by the Board.[22]

The ADC/FCR ratio is determined by dividing the ADC calculated during the actuarial valuation for the fiscal year (typically released during the Board's December meeting) by the FCR set by the Board for the

[21] The *Public Fund Survey* cash flow as a percentage of assets figure also includes administrative expenses within plan outflows in its methodology.

[22] To help potentially limit annual fluctuations to members' and employers' contribution expenditures, the Board adopted funding policies that "fix" the employer contribution rate as a percentage of covered payroll.

same period. The results of this calculation will be compared to the signal-light levels described in Exhibit B4.

Exhibit B4: Signal Light Definitions for Actuarially Determined Contribution/Fixed Contribution Rate

ADC/FCR ratio at or below 100% of fixed contribution rate at valuation date.
ADC/FCR ratio between 100% and 110% of fixed contribution rate at valuation date.
ADC/FCR ratio above 110% of fixed contribution rate at valuation date.

SOURCE: PERS Board of Trustees policy.

For the fiscal year ended on June 30, 2022, the plan's ADC/FCR ratio was 124.83%, placing it in red signal-light status.[23] This indicates that the FCR set by the Board is smaller than the ADC, and the difference between these two figures, in the opinion of the plan's actuary, is outside the range established.

According to the PERS funding policy, if any one metric is in the red signal-light status in conjunction with the annual valuation report and the projection report, the actuary will determine and recommend to the Board an employer contribution rate increase to consider that is sufficient enough to get all three funding policy metrics back into the green-light status.

Amortization Method Assumptions for the Actuarially Determined Contribution

A plan's amortization period is the length of time necessary for a plan's unfunded liabilities to be paid if all actuarial assumptions are met over that period. Under the Board's prior funding policy, the amortization period fluctuated, which was not an uncommon practice among plans. To help align the plan with actuarial standards of practice, the PERS Board, as advised by its actuarial consultants, adopted a layered amortization[24] for use in calculating the actuarially determined contribution.

Under a layered amortization approach, the Board has elected to amortize the plan's existing unfunded actuarial accrued liability balance (as of June 30, 2018) over a closed[25] 30-year amortization period and any future changes to the unfunded balance (i.e., actuarial gains/losses, assumption changes, and plan changes) over a closed 25-year amortization period. These amortization assumption methods pertain to the calculation for the ADC only.

Actuaries must have a component of the funding model that can be adjusted to account for asset changes. The PERS Board, in attempting to maintain its goal of a stable contribution rate (17.40% as of July 1, 2019), has elected to continue using the plan's amortization period as this variable. As discussed

[23] For the year ended on June 30, 2022, the plan's ADC was 21.72% and the plan's FCR was 17.40%.

[24] Layered amortization is the amortization of components of the UAAL over a separate fixed period as they emerge.

[25] A closed amortization period is a type of amortization period utilized by pension plans that results in the full amortization of specific items within a finite (or predefined) period (i.e., a traditional 30-year mortgage on a home).

previously, on page 13, the PERS plan's projected UAAL payment period, as of June 30, 2022, is 48.8 years.

Because the new amortization assumptions apply to the calculation of the ADC only, it is possible for the projected payment period of the plan to extend past the 30-year target included in the ADC calculation. To help ensure that the plan's projected payment period does not deviate too far from these assumptions, the Board's funding policy includes a metric that requires the comparison of the plan's fixed contribution rate to the ADC annually.

SOURCE: PEER analysis.

Appendix C: PERS Investment Management Fees, FY 2022 and FY 2021

CLASS	MANAGER	$ FY 22 (thousands)	$ FY 21 (thousands)
U.S. Equity	ARTISAN PARTNERS (LARGE CAP GROWTH)	2,382	3,238
U.S. Equity	DIMENSIONAL FUND ADVISORS (SMALL CAP VALUE)	1,258	1,388
U.S. Equity	EAGLE CAPITAL (LARGE CAP CORE)	5,755	6,753
U.S. Equity	NORTHERN TRUST (RUSSELL MID CAP - PASSIVE) — Terminated Q2 FY 2019	(24)	28
U.S. Equity	NORTHERN TRUST (S&P 500 - PASSIVE)	272	264
U.S. Equity	RIVERBRIDGE (SMALL CAP GROWTH)	2,511	3,275
U.S. Equity	WELLINGTON (MID CAP VALUE)	2,544	2,345
U.S. Equity	WELLINGTON (SMALL CAP CORE)	2,313	2,739
Non-U.S. Equity	ARROWSTREET CAPITAL (ALL COUNTRIES X-US)	4,133	4,176
Non-U.S. Equity	BAILLIE GIFFORD (ALL COUNTRIES X-US)	3,002	3,500
Non-U.S. Equity	FISHER INVESTMENTS (EMERGING MARKETS)	4,027	4,492
Non-U.S. Equity	LAZARD ASSET MANAGEMENT (EMERGING MARKETS)	2,293	2,114
Non-U.S. Equity	MARATHON (ALL COUNTRIES X-US)	4,979	4,831
Non-U.S. Equity	MONDRIAN (SMALL CAP DEVELOPED MARKETS)	2,476	2,544
Non-U.S. Equity	NORTHERN TRUST EAFE (DEVELOPED MARKETS – PASSIVE)	214	218
Non-U.S. Equity	NORTHERN TRUST (ALL COUNTRIES X-US) — Hired Q4 FY 2019	33	–
Non-U.S. Equity	PRINCIPAL GLOBAL (SMALL CAP INTERNATIONAL)	1,660	1,926
Debt Investments	ALLIANCEBERNSTEIN (GLOBAL FIXED INCOME)	1,977	1,706
Debt Investments	LOOMIS SAYLES (CORE PLUS)	2,068	1,851
Debt Investments	MANULIFE (CORE)	1,051	926
Debt Investments	NORTHERN TRUST (CORE – PASSIVE)	147	118
Debt Investments	PACIFIC INVESTMENT MANAGEMENT CO. (CORE)	1,011	852
Debt Investments	PACIFIC INVESTMENT MANAGEMENT CO. (GLOBAL)	2,008	1,758
Debt Investments	PRUDENTIAL (CORE PLUS)	1,575	1,446
Debt Investments	WELLINGTON (EMERGING MARKETS)	3,100	2,810

CLASS	MANAGER	$ FY 22 (thousands)	$ FY 21 (thousands)
Real Estate	AEW PARTNERS VI, LP*	–	–
Real Estate	AEW PARTNERS VII, LP	122	150
Real Estate	AEW PARTNERS VIII, LP	190	267
Real Estate	AEW Partners IX, LP	600	723
Real Estate	AG CORE PLUS FUND II LP*	–	–
Real Estate	AG CORE PLUS FUND III LP	64	115
Real Estate	AG CORE PLUS FUND IV LP	528	661
Real Estate	AG CORE PLUS VALUE X LP	1,108	764
Real Estate	CENTERSQUARE	1,031	935
Real Estate	COHEN & STEERS	1,429	1,398
Real Estate	HANCOCK TIMBER FUND	781	1,064
Real Estate	HEITMAN VALUE PARTNERS III LP	1	43
Real Estate	HEITMAN VALUE PARTNERS IV LP	301	261
Real Estate	HEITMAN VALUE PARTNERS V LP	88	–
Real Estate	INVESCO VALUE ADD FUND IV LP	149	356
Real Estate	INVESCO VALUE ADD FUND V LP	722	610
Real Estate	JP MORGAN STRATEGIC PROPERTY FUND	3,769	3,312
Real Estate	PRINCIPAL GLOBAL INVESTORS	7,372	6,247
Real Estate	TA REALTY ASSOCIATES FUND X LP	13	68
Real Estate	TA REALTY ASSOCIATES FUND XI LP	543	1,023
Real Estate	TA REALTY ASSOCIATES FUND XII LP	942	864
Real Estate	UBS TRUMBULL PROPERTY FUND	1,545	1,900
Real Estate	UBS TRUMBULL PROPERTY GROWTH & INCOME FUND	1,995	2,202
Real Estate	WESTBROOK X LP	270	364
Real Estate	WESTBROOK XI LP	2,137	823
Private Equity	GROSVENOR & PATHWAY CAPITAL MAN – PRIVATE EQUITY	14,685	14,750
Global Equity	ACADIAN	3,805	3,817
Global Equity	EPOCH	4,513	5,230
Global Equity	HARDING LOEVNER	3,975	4,377
Global Equity	LONGVIEW PARTNERS — Terminated Q2 FY 2021	–	2,281
Global Equity	NORTHERN TRUST (GLOBAL – PASSIVE) — Hired Q2 FY 2021	342	127
		105,785	110,030

* While PERS paid no investment management fees to this manager during FY 2022, PERS's relationship with this manager/investment is still ongoing.

SOURCE: PERS staff and PERS FY 2022 and FY 2021 *Annual Comprehensive Financial Report*.

Agency Response

Providing Benefits for Life

May 3, 2023

Mr. Ted Booth
Executive Director
Joint Committee on Performance Evaluation and Expenditure Review
Woolfolk Building, Suite 301-A
501 North West St.
Jackson, MS 39201

Dear Mr. Booth:

Thank you for the opportunity to review the draft of the PEER Report titled 2022 Update on Financial Soundness of the Public Employees' Retirement System (PERS). Overall I think it is a good review and consistent with PERS information and previously published reports.

While the report accurately mentions that we have experienced market volatility in recent years and compares PERS to other similar state retirement systems, it would also be informative to note that PERS continues to outperform its benchmark when analyzed over one-year, three-year, five-year, and ten-year periods. Given that states often vary in their legal requirements, benefit structures, liabilities, and asset allocations, a comparison to a custom benchmark (i.e., appropriate market index) that is designed based on the specific requirements and asset allocation of PERS of MS is important as well. As a suggestion for this year or future reports, adding this data to the charts on investment performance or elsewhere in the report would be beneficial to the reader.

We respect the professional way the review was conducted, and we appreciate your continued support of PERS. Please contact me at 601-359-2241 if you need further information. Thank you.

Sincerely,

H. Ray Higgins, Jr.
Executive Director

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