

PA Public School Employees' Retirement System

# **BUDGET REPORT APPROPRIATIONS COMMITTEE**

Fiscal Year 2025-2026

**A Component Unit of the Commonwealth of Pennsylvania**



February 28, 2025

Honorable Jordan A. Harris  
Democratic Chairman  
House Appropriations Committee  
512 E. Main Capitol  
Harrisburg, PA 17120-2186

Honorable Scott Martin  
Republican Chairman  
Senate Appropriations Committee  
281 Main Capitol  
Harrisburg, PA 17120-3013

Honorable James B. Struzzi II  
Republican Chairman  
House Appropriations Committee  
245 Main Capitol  
Harrisburg, PA 17120-2062

Honorable Vincent J. Hughes  
Democratic Chairman  
Senate Appropriations Committee  
545 Main Capitol  
Harrisburg, PA 17120-3007

Chairmen and Members of the Appropriations Committees:

On behalf of the Board of Trustees, I am pleased to present the *Fiscal Year 2025-26 Budget Report* for the Public School Employees' Retirement System (PSERS). This report outlines the agency's budgetary recommendations for the upcoming fiscal year, along with detailed analyses of the system's actuarial, financial, and investment operations. Copies of this report, the *FY 2023-24 Annual Comprehensive Financial Report* (ACFR), actuarial valuation reports, and other key documents are available on our website at [www.pa.gov/PSERS](http://www.pa.gov/PSERS).

As we enter 2025 and approach the next fiscal year, I express my gratitude to the Governor and General Assembly for your ongoing budgetary commitment that helps PSERS accomplish its mission — *To be a partner with our members to fulfill the promise of a secure retirement.*

The 2025-26 fiscal year marks a significant milestone in our bipartisan partnership. It is the 10th consecutive fiscal year that the PSERS Board has certified the full employer contribution rate (ECR) as calculated by our actuary, and the Governor has recommended appropriating corresponding dollars. Since FY 2017, the General Assembly has consistently provided full employer contributions, a key factor in strengthening PSERS' financial position. Paired with strong investment performance, these contributions have led to marked improvements: PSERS' funded ratio is approaching 65%, its highest level in over a decade; net investment earnings more than doubled to \$5.7 billion, yielding an 8.14% net return; the system's total net position grew 6% to \$77.4 billion; and the unfunded actuarial liability declined by \$358 million to under \$42 billion.

PSERS' active membership is also rebounding, growing 3% to 255,652 members since the early COVID years, when membership dropped to a decade low of 247,873 in FY 2022. For its retired members, in FY 2024, PSERS disbursed \$7.6 billion in pension benefits to 253,896 annuitants, with the average annuitant benefit increasing to \$26,392 annually. Nearly 90% of retirees remain in Pennsylvania, keeping benefit dollars in the state and supporting jobs, wages, and local tax revenues.



In this report, you will find that for FY 2025-26, PSERS proposes a \$64.5 million spending authority for the Defined Benefit (DB) Administrative Budget and a \$1.4 million spending authority for the Defined Contribution (DC) Administrative Budget, both of which are funded entirely from system assets, not the Commonwealth's General Fund.

The budget proposal includes a 5% increase for the DB Plan and a 9.6% increase for the DC Plan, primarily due to higher personnel costs and service improvements. To enhance the member experience, PSERS is requesting five additional positions for our member services unit, which handles over 100,000 calls, emails, and counseling sessions annually.

I am also pleased to show in this report that through prudent asset management in the last fiscal year, the DB Plan exceeded the 7.00% actuarial return target and reached a fair market value of \$76.5 billion. Further, the DC Plan, established under Act 5 of 2017, now serves 80,000 participants and holds \$356.3 million in assets. PSERS continues to expand financial education and investment guidance resources to support the growing number of participants in this plan.

PSERS' voluntary Health Options Program (HOP), funded solely by participant premiums, also remains a valuable resource, serving over 123,000 retirees and dependents, including nearly 100,000 enrolled in its prescription drug plan, which has received national recognition for high-quality service. The Premium Assistance Program, funded through a portion of the ECR, provides a monthly subsidy of up to \$100 for 93,000 qualifying retirees.

All of these achievements would not be possible without your ongoing partnership and engagement. PSERS remains committed to its mission and the responsible management of retirement funds for more than 500,000 active and retired public school employees.

On behalf of the Board of Trustees, thank you for your dedication to Pennsylvania. We are available to assist as you work to craft the FY 2025-26 Commonwealth budget.

Sincerely,

Richard Vague  
Chairman

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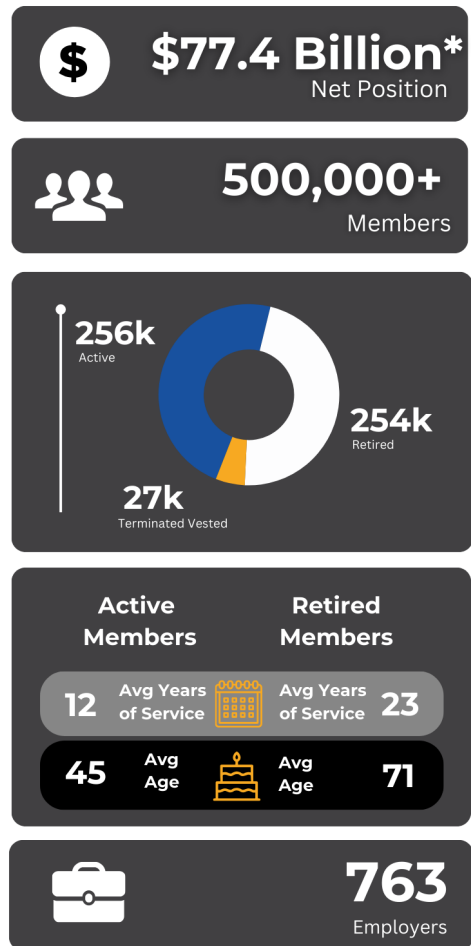
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# PSERS ORGANIZATION



## Agency Description



Data as of June 30, 2024

\*Net position includes pension, DC and postemployment healthcare benefits

The Public School Employees' Retirement System (PSERS) is one of the oldest pension plans in the United States. Established in 1917, PSERS began operations in 1919 to serve the public school employees of the Commonwealth of Pennsylvania (Commonwealth). PSERS is a governmental, cost-sharing, multiple-employer pension plan to which public school employers, the Commonwealth, and school employees (members) contribute. PSERS was created by statute through the Public School Employees' Retirement Code (Retirement Code) as a traditional defined benefit plan; a qualified trust under Section 401(a) of the Internal Revenue Service Code (DB Plan; Fund). Upon the passage of Act 5 of 2017, effective July 1, 2019 (Act 5), PSERS was expanded to include the School Employees' Defined Contribution Plan, a separate qualified 401(a) defined contribution plan (DC Plan; Trust). Members hired on or after this date, have the option to elect one of two membership classes that participate in the DB Plan and DC Plan or a membership class that participates only in the DC Plan.

PSERS is the 34th largest among U.S. corporate and public pension funds, and the 21st largest state-sponsored public pension fund in the nation based on total plan assets according to a February 10, 2025, *Pension & Investments* survey.

As of June 30, 2024, PSERS' fiduciary net position was approximately \$77.4 billion, which includes a DB Plan net position of \$76.5 billion and a DC Plan net position of \$356.3 million.

As of June 30, 2024, PSERS had approximately 256,000 active members in the DB Plan and 80,000 participants in the DC Plan. Additionally, the annuitant membership was comprised of approximately 254,000 retirees and beneficiaries, who received pension disbursements totaling \$7.6 billion, on a cash basis. The average yearly pension benefit paid to annuitants was \$26,392. As of June 30, 2024, PSERS had 763 participating school employers.

In addition to retirement benefits, PSERS administers a Premium Assistance Program and a PSERS Health Options Program (HOP). The Premium Assistance Program provides a health insurance premium subsidy of up to \$100 per month for those retirees who qualify. As of June 30, 2024, there were approximately 93,000 retirees who received this benefit. PSERS HOP is a voluntary, statewide plan that provides group health insurance coverage for school retirees, their spouses, and eligible dependents. PSERS HOP is entirely funded through participating member premiums with 123,000 annuitants and their dependents enrolled as of January 1, 2025.

## PSERS Membership Classes and Associated Plans

DB Plan only:	DB Plan and DC Plan:	DC Plan only:
<b>Class T-C</b> – 1,923 Members <b>Class T-D</b> – 124,664 Members <b>Class T-E</b> – 47,191 Members <b>Class T-F</b> – 12,046 Members	<b>Class T-G</b> – 68,628 Members <b>Class T-H</b> – 366 Members	<b>Class DC</b> – 834 Participants

Mission, Vision, Values, and Strategic Priorities

In August 2023, the Board formally adopted a strategic plan framework for our organization. To ensure that our strategic plan was created with a sense of purpose and built on a strong foundation, the Board revisited our mission, vision and values.

OUR MISSION

—

To be a partner with our members to fulfill the promise of a secure retirement.

OUR VISION

—

To be a trusted partner in delivering exceptional retirement services and benefits.

OUR VALUES

—

<b>P</b> ublic accountability and transparency	<b>S</b> taff growth and development	<b>E</b> xceptional levels of service	<b>R</b> espect for our members, stakeholders, and staff	<b>S</b> tewardship of resources and investments
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OUR STRATEGIC PRIORITIES

—

Guided by our functions, the Board identified six strategic priorities that are supported by 25 initiatives. These priorities and initiatives provide the focus needed to efficiently work together on the right things at the right time.

Enhance member satisfaction throughout the customer experience.	Enhance comprehensive and transparent financial reporting and forecasting.	Develop the organizational culture and staff/leadership competencies to meet the demands of the future.
Implement a robust enterprise risk management program.	Enhance communications, collaboration, and the education of all critical stakeholders.	Align all organizational units and functions with PSERS’ strategic priorities.

## Board of Trustees

The Public School Employees' Retirement Board ("Board") is established by state law as an independent administrative board of the Commonwealth responsible for the administration and oversight of the PSERS plans. The Board's 15 trustees stand in a fiduciary relationship to the members by exercising exclusive control and management of the DB Plan, including the investment of its assets and the payment of benefits, and the DC Plan within applicable state and federal laws.

### PSERS Board Members - February 2025

#### Chair

Richard Vague  
Governor Appointee

#### Vice Chair

Susan Lemmo  
Elected Retired Member

#### Members

The Honorable Matt D. Bradford  
Pennsylvania House of Representatives

Dr. Pamela Brown  
Elected Active Certified Member

The Honorable Jarrett Coleman  
Pennsylvania State Senate

Eric O. DiTullio  
Elected by Pennsylvania Public School Boards

The Honorable Torren Ecker  
Pennsylvania House of Representatives

The Honorable Stacy Garrity  
Treasurer of Pennsylvania

Nathan G. Mains  
Chief Executive Officer of the Pennsylvania School Boards Association, Inc.

Ann Monaghan  
Elected Active Non-Certified Member

The Honorable Katie J. Muth  
Pennsylvania State Senate

Brian A. Reiser  
Elected Active Certified Member

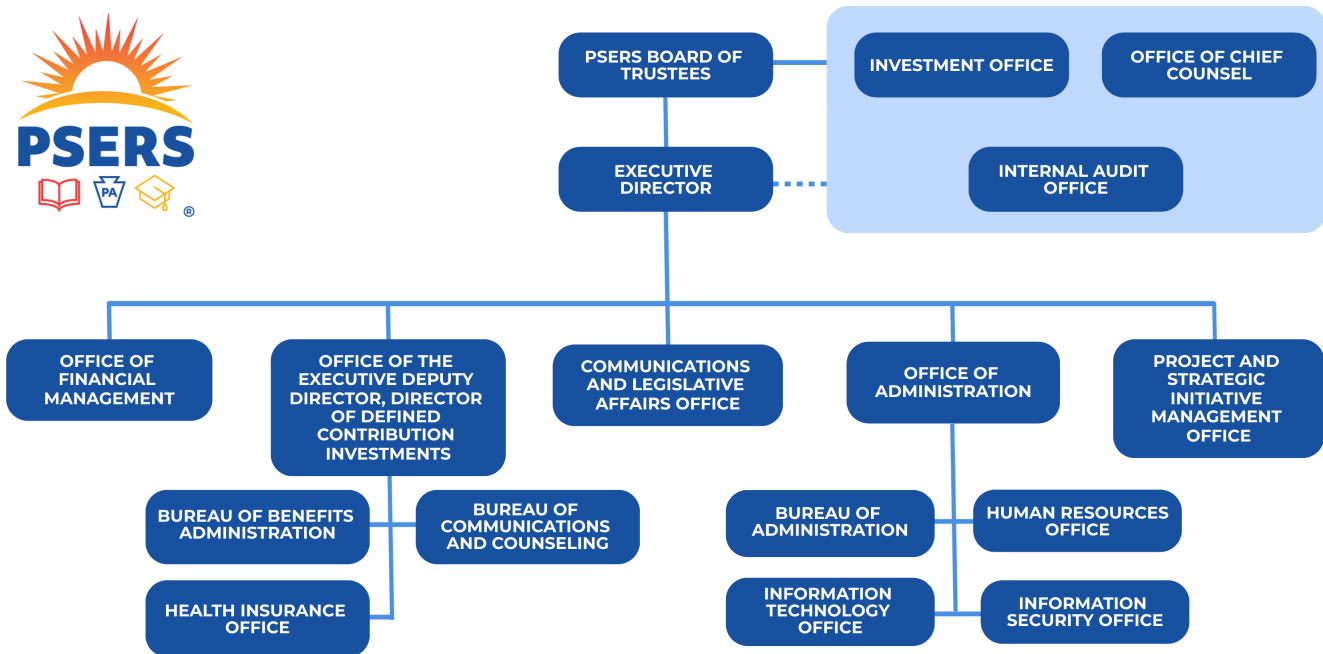
The Honorable Dr. Carrie Rowe  
Acting Secretary of Education

The Honorable Wendy Spicher  
Secretary of Banking & Securities

Vacant  
Elected Active Certified Member



## Organizational Structure



### Executive Office

The Executive Office is led by the Executive Director, who serves as the chief executive officer with overall responsibility for the management of the agency to achieve the objectives and strategic initiatives as established by the Board. The position's primary duty is to lead PSERS' employees in meeting the agency mission by partnering with our members to fulfill the promise of a secure retirement and being a trusted partner in delivering exceptional retirement services and benefits. This position is responsible for providing leadership, advice, and counsel to the Board, managing risk, and ensuring public trust and confidence in the agency.

### Investment Office

Led by the Chief Investment Officer (CIO), the Investment Office is responsible for the investment activities of the agency. In compliance with the investment policy established by the Board, PSERS' investment assets are diversified across several asset classes, managed both internally by the Investment Office professionals and by external investment managers. The CIO serves as the Board's liaison and senior staff administrator on managing and overseeing the investments of the System.

### Office of Chief Counsel

Led by the Chief Counsel, this office provides legal services through a team of professionals in collaboration with PSERS' Executive Director and the Board. The legal staff is responsible for representing the System in all administrative hearings and other litigation matters and providing counsel in a wide variety of matters, including the interpretation of the Retirement Code, form and legality of all contracts, corporate governance issues and the structure and implementation of the varied financial investments. Also under the oversight and direction of the Office of Chief Counsel, the Chief Compliance Officer leads the PSERS' Compliance Program to provide oversight and ensure compliance with applicable laws, regulations, policies, and ethical standards.

## **Organizational Structure (continued)**

### **Internal Audit Office**

Led by the Chief Audit Officer (CAO), the Internal Audit Office provides a wide range of independent internal auditing services for the Audit, Compliance and Risk Committee of the Board and executive management. It performs independent assessments of the systems of risk management, internal controls and operating efficiency, guided by professional standards and using innovative approaches.

### **Office of Financial Management**

Led by the Chief Financial Officer (CFO), this office oversees accounting and financial reporting for the agency in conformance with accounting principles generally accepted in the United States of America. The Office is also responsible for PSERS' budgetary matters, annuitant payroll, investment accounting, treasury-related operations, and taxation. This position oversees the General and Public Market Accounting Division, Investment Accounting and Budget Division, Annuitant Accounting Division, and Employer Accounting Division.

### **Communications and Legislative Affairs Office**

Led by the Director of Government Affairs and Stakeholder Engagement, this office is responsible for effective collaboration and engagement with PSERS' many key stakeholders, including the General Assembly, and oversight of agency internal and external communications, including coordination with the Bureau of Communications and Counseling to develop a member communication plan and strategy. Staff within this office also maintain the agency's external website as well as serve as a liaison to members of the General Assembly in responding to legislative inquiries, performing legislative research, and coordinating agency responses to proposed legislation.

### **Project and Strategic Initiative Management Office**

Led by the Director of Governance and Strategic Initiatives, this office oversees and facilitates projects that support the implementation of the agency's strategic plan. Leveraging a governance-based framework, the office assists the Executive Director in supporting Board governance; facilitating the development, evaluation, and revisions to Board and agency policies; and ensuring projects align with the agency strategic plan. Guided by the Executive Director and Board, the office also oversees agency risk and performance management functions, including identifying, evaluating, monitoring, reporting on, and mitigating risks.

### **Office of Administration**

Led by the Deputy Executive Director for Administration, this office provides comprehensive leadership to assist the Executive Director in accomplishing the agency's mission by maintaining oversight of PSERS' administrative and information technology and security-related services for the agency. This includes managerial responsibility for the following areas: information technology; information security; human resources; physical security; facilities; contracting and procurement; business continuity; safety; records management; and mail, imaging, and printing services.

## Organizational Structure (continued)

### Office of the Deputy Executive Director and Director of Defined Contribution Investments

Led by the Deputy Executive Director and Director of Defined Contribution Investments, this office provides comprehensive leadership and oversight to assist the Executive Director in accomplishing the agency mission by maintaining oversight of the Bureau of Benefits Administration, Bureau of Communications and Counseling, the Health Insurance Office, and the agency Appeals Coordinator. This includes managerial responsibility for PSERS' membership related benefit functions for the Defined Benefit (DB) plan, the Defined Contribution (DC) plan, and the post-employment healthcare programs, namely: member and employer communications; member retirement counseling; member and employer data administration; benefits determinations and processing; member appeals; knowledge management of benefit policies and procedures; health insurance retirement programs including premium assistance; third-party contractor administration, and defined contribution contract investment management. This office also oversees seven regional offices, as shown below, located throughout the Commonwealth that provide services to both active and retired PSERS members and over 763 public school employers. Among these services are regularly scheduled informational presentations on various topics relating to retirement benefits and programs.

#### Northwest

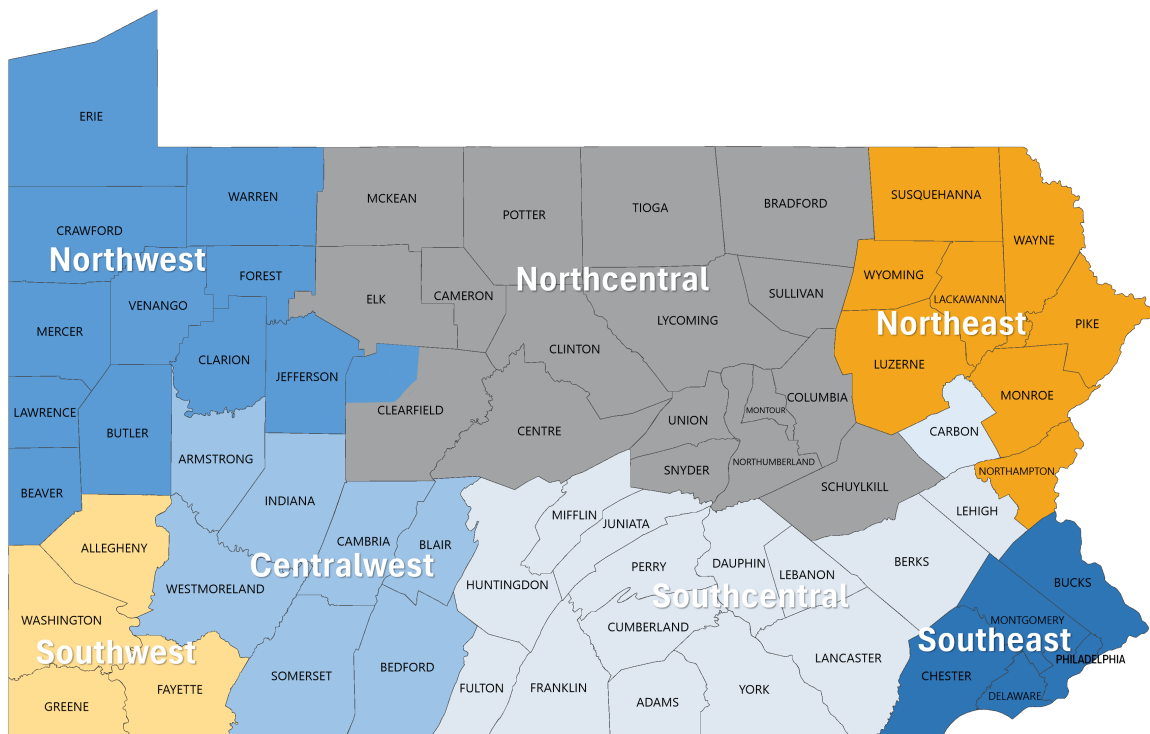
Franklin Penn Wood Center  
464 Allegheny Boulevard, Suite C  
Franklin, PA 16323-6210

#### Northcentral

300 Bellefonte Avenue, Suite 201  
Lock Haven, PA 17745-1903

#### Northeast

417 Lackawanna Avenue, Suite 201  
Scranton, PA 18503-2013



#### Southwest

300 Cedar Ridge Drive, Suite 301  
Pittsburgh, PA 15205-1159

#### Centralwest

219 West High Street  
Ebensburg, PA 15931-1540

#### Southcentral

5 North 5th Street  
Harrisburg, PA 17101-1905

#### Southeast

605 Louis Drive, Suite 500  
Warminster, PA 18974-2830

## Legislation

### Legislation Enacted During 2024

#### Act 6A of 2024 (Senate Bill 1006)

Act 6A of 2024 (Senate Bill 1006) appropriates \$61,403,000 from the Public School Employees Retirement System (PSERS) Fund for expenses incurred by the PSERS Board to administer the DB Plan for the 2024-25 fiscal year beginning July 1, 2024, and for the payment of any remaining unpaid bills incurred up to June 30, 2024, the close of the 2023-24 fiscal year.

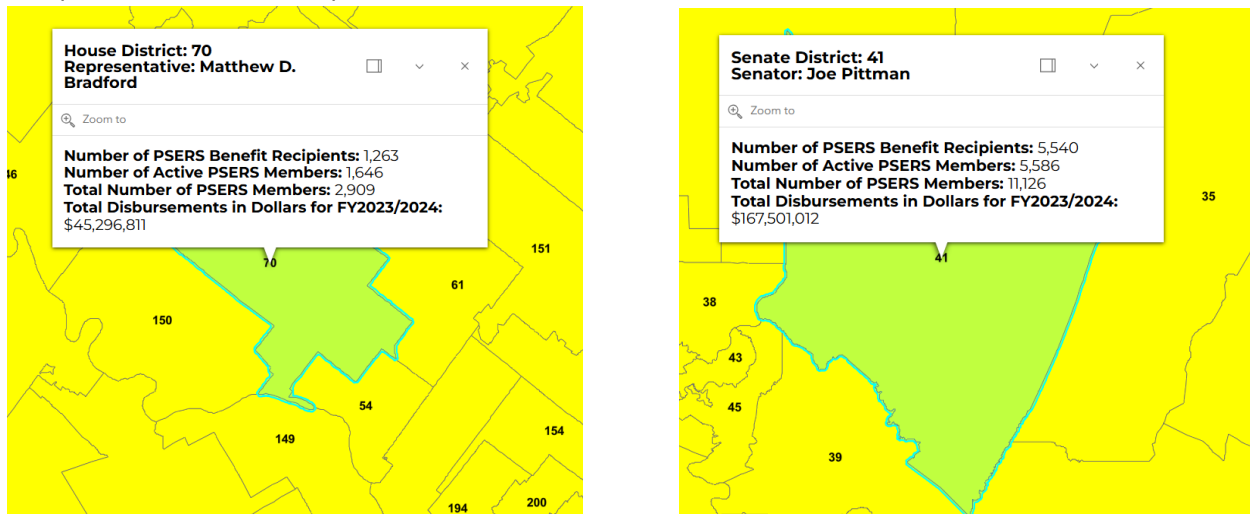
Additionally, the act appropriates \$1,282,000 from the PSERS Defined Contribution Fund restricted revenue account for expenses incurred by the PSERS Board for the administration of the DC plan for the fiscal year beginning July 1, 2024, and for the payment of any remaining unpaid bills incurred up to June 30, 2024, the close of the 2023-24 fiscal year.

### Statistics by Legislative Districts

PSERS provides benefit payment and membership data by legislative and congressional districts at [pa.gov/PSERS](https://pa.gov/PSERS), About>Legislative Maps.

PSERS' data is updated on a fiscal year (July 1-June 30) basis. PSERS partnered with the Governor's Office of Administration, Office of Information Technology, Geospatial Services to create interactive, web-based maps that visualize PSERS benefit payments and membership by location.

The interactive maps utilize the latest geospatial technology to present several statewide views of PSERS' positive economic impact on the Commonwealth.



## Litigation

The System is subject to various threatened and pending lawsuits. These lawsuits include issues related to benefit calculations and eligibility. The System is also exposed to various other liabilities and risks related to fiduciary responsibilities of directors and officers. It is the opinion of management that the ultimate liability arising from such threatened, pending litigation and investigations will not have a material effect on the financial position of the System.





## 2024 Statement of Fiduciary Net Position

### As of June 30, 2024 (Dollar Amounts in Thousands)

	Pension	Defined Contribution (DC)	Postemployment Healthcare		Totals
			Premium Assistance	Health Options Program	
Assets:					
Receivables:					
Members	\$ 374,663	\$ 751	\$ 1,518	\$ 126	\$ 377,058
Employers	1,449,523	591	27,426	—	1,477,540
Investment income	320,934	23	491	1,189	322,637
Investment proceeds	326,159	—	—	—	326,159
CMS Part D and prescriptions	—	—	—	58,742	58,742
Interfund receivable	3,670	—	—	—	3,670
Total Receivables	2,474,949	1,365	29,435	60,057	2,565,806
Investments, at fair value:					
Short-term	6,572,484	13,713	109,873	457,617	7,153,687
Fixed income	17,155,399	—	—	—	17,155,399
Equity	24,356,583	—	—	—	24,356,583
Collective trust funds	905,424	342,535	—	—	1,247,959
Real estate	8,146,596	—	—	—	8,146,596
Alternative investments	18,436,145	—	—	—	18,436,145
Total Investments	75,572,631	356,248	109,873	457,617	76,496,369
Capital assets (net of accumulated depreciation \$72,272)	54,831	—	—	—	54,831
Miscellaneous	33,702	—	—	242	33,944
Total Assets	78,136,113	357,613	139,308	517,916	79,150,950
Liabilities:					
Accounts payable and accrued expenses	90,764	114	230	5,742	96,850
Benefits payable	789,804	—	50	89,899	879,753
HOP participant premium advances	—	—	—	35,552	35,552
Investment purchases and other payables	567,751	483	—	—	568,234
Interfund payable	—	696	2,580	394	3,670
Other liabilities	194,800	—	—	—	194,800
Total Liabilities	1,643,119	1,293	2,860	131,587	1,778,859
Net position restricted for pension, DC and postemployment healthcare benefits					
	\$ 76,492,994	\$ 356,320	\$ 136,448	\$ 386,329	\$ 77,372,091

## 2024 Statement of Changes in Fiduciary Net Position As of June 30, 2024 (Dollar Amounts in Thousands)

	Pension	Defined Contribution (DC)	Postemployment Healthcare		Totals
			Premium Assistance	Health Options Program	
Additions:					
Contributions:					
Members	\$ 1,197,871	\$ 69,748	\$ —	\$ —	\$ 1,267,619
Employers	5,262,714	53,796	102,211	—	5,418,721
Total contributions	6,460,585	123,544	102,211	—	6,686,340
HOP participant premiums	—	—	—	421,491	421,491
Centers for Medicare & Medicaid Services premiums	—	—	—	89,270	89,270
Investment income:					
From investing activities:					
Net appreciation in fair value of investments	4,312,722	44,304	—	—	4,357,026
Short-term	303,821	248	6,233	17,171	327,473
Fixed income	594,978	—	—	—	594,978
Equity	502,176	—	—	—	502,176
Collective trust funds	—	386	—	—	386
Real estate	119,403	—	—	—	119,403
Alternative investments	277,795	—	—	—	277,795
Total investment activity income	6,110,895	44,938	6,233	17,171	6,179,237
Investment expenses	(410,354)	(523)	(49)	(44)	(410,970)
Net income from investing activities	5,700,541	44,415	6,184	17,127	5,768,267
From securities lending activities:					
Securities lending income	90,050	—	—	—	90,050
Securities lending expense	(86,320)	—	—	—	(86,320)
Net income from securities lending activities	3,730	—	—	—	3,730
Total net investment income	5,704,271	44,415	6,184	17,127	5,771,997
Total Additions	12,164,856	167,959	108,395	527,888	12,969,098
Deductions:					
Benefits	7,683,019	—	111,659	487,975	8,282,653
Refunds of contributions	45,726	—	—	—	45,726
Distributions	—	9,982	—	—	9,982
Administrative expenses	55,447	3,538	1,004	40,598	100,587
Total Deductions	7,784,192	13,520	112,663	528,573	8,438,948
Net increase (decrease)	4,380,664	154,439	(4,268)	(685)	4,530,150
Net position restricted for pension, DC and postemployment healthcare benefits:					
Balance, beginning of year	72,112,330	201,881	140,716	387,014	72,841,941
Balance, end of year	\$76,492,994	\$ 356,320	\$ 136,448	\$ 386,329	\$77,372,091

# PROPOSED FY 2025-26 BUDGETS





## Proposed FY 2025-26 Administrative Budget

Table 2.1 displays the PSERS Administrative Budget Request for FY 2025-26, which consists of the personnel services, operating expenses, and fixed asset costs associated with administering the Defined Benefit Plan. The \$64,523,000 administrative budget is not funded from the Commonwealth's General Fund, but rather from the earnings of the Fund itself. Historically, PSERS has maintained a conservative approach to its spending, keeping more funds available to invest for PSERS members.

The PSERS Administrative Budget Request for FY 2025-26 results in an increase of \$3,120,000 or 5.08% above the FY 2024-25 available budget. The majority of the increase is in personnel costs due largely to the Commonwealth's new collective bargaining agreement, which includes a 2.00% general pay increase effective July 1, 2025 and a step increase of 2.25% effective January 1, 2026. Also included in this budget proposal is a request for an additional five (5) positions for the Member Service Center and Regional Offices of the Bureau of Communications and Counseling in accordance with PSERB Resolution 2023-22, which authorizes up to twenty (20) full-time positions. The first five positions were reclassified from existing vacancies at the beginning of FY 2024-25. The FY 2025-26 complement request is for five (5) positions that will assist in addressing the extremely high call abandonment rate, provide more personalized attention to our members, improve user experience, increase the quality and timeliness of communications, and increase member satisfaction and confidence in the agency.

PSERS continues to be a leader among large U.S. public pension funds in its effective control of expenses while providing necessary services to its membership. During the last several years, the growing number of active and retired members electing to receive electronic newsletters, statements of account, Form 1099-Rs, and other publications annually saves the agency over \$275,000 in postage, printing, and paper costs. During FY 2024, the agency reduced real estate rental and electricity expenses, decreased postage costs, and lowered consultant and legal fees, all of which preserved more of PSERS' assets for the benefit of its members.

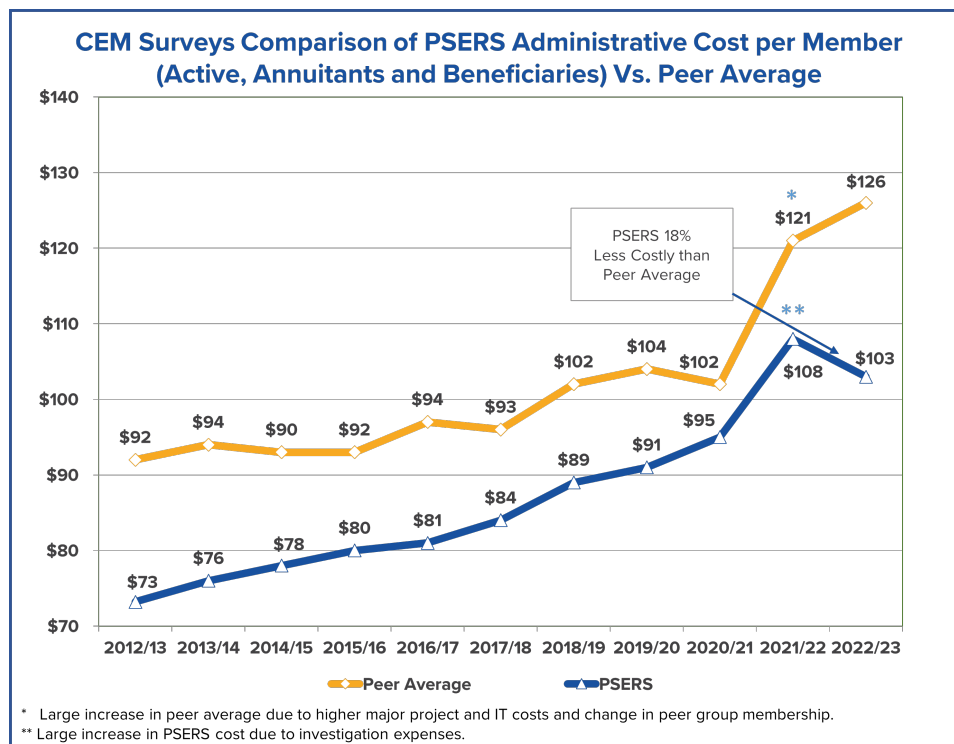
Table 2.1			
	<u>Enacted Budget FY2023-24</u>	<u>Enacted Budget FY2024-25</u>	<u>Budget Request FY2025-26</u>
<b>Total Personnel Services</b>	\$ 33,141,000	\$ 36,618,000	\$ 39,416,000
<b>Operating Expenses and Fixed Assets</b>			
Travel	\$ 163,300	\$ 178,600	\$ 188,300
Training & Conference Registration	196,200	227,300	202,000
Telecomm	409,300	408,000	415,000
Electricity	25,900	25,900	24,900
Consultant Services - Non EDP	1,412,500	1,728,500	1,230,700
Consulting - Maint & Support - (Post Implementation)	400	65,000	65,000
IT Con Mng Srvcs SW	50,000	75,400	2,800
Consulting - General IT Support	1,026,600	1,364,600	1,941,100
Consulting - Outsourced Infrastructure Svcs (PACS)	2,357,100	2,055,800	2,085,800
Subscription Based IT Arrangements	—	276,300	265,400
Legal Services/Fees	1,379,700	1,390,700	1,332,100

Table 2.1	Enacted Budget FY2023-24	Enacted Budget FY2024-25	Budget Request FY2025-26
Specialized Services (includes HR Shared Svcs)	781,200	785,900	836,700
Other Specialized Services	419,800	404,000	430,700
Advertising	10,000	10,000	12,500
Medical, Mental & Dental Services	6,500	6,500	9,400
IT Shared Services	686,000	615,800	700,000
Software Licensing - Maintenance	1,895,400	1,370,700	1,037,300
Hardware - Maintenance	74,000	73,300	18,400
Contracted Maintenance Non EDP	169,700	169,700	174,200
Telecomm Data Services	28,000	—	—
Contracted Repairs - Non EDP	15,500	15,500	15,500
Real Estate Rental	1,982,500	1,986,800	1,968,000
Vehicle Rental	6,900	7,200	14,700
Office Equipment Rental	149,400	149,400	150,000
Other Rentals	3,500	3,500	3,700
Office Supplies	117,300	129,100	129,600
Educational & Medical Supplies	5,500	5,400	4,900
Software License Non-Recurring	234,400	191,300	241,300
Software Licensing - Proc. - Recurring	457,200	537,000	551,800
Hardware Desktop	55,500	80,600	195,600
Furniture and Fixtures	56,000	54,000	38,300
Other Equipment	10,000	10,000	6,000
Motorized Equipment Supplies	17,500	22,500	22,500
Postage and Freight	665,000	615,000	606,000
Printing	167,500	210,900	225,700
Subscriptions	37,400	33,300	34,700
Member Dues	63,100	67,100	64,100
Conference Expense	62,300	76,200	80,200
Insurance, Surety & Fidelity Bonds	314,000	318,000	374,400
Other Operational Expenses	2,093,700	2,072,200	2,320,700
HW Network and Server	—	197,500	500,000
Automobiles	—	24,400	70,000
Software License	6,710,500	6,714,300	6,483,600
Office Equipment	31,700	31,800	33,400
<b>Total Operating Expenses and Fixed Assets</b>	<b>\$ 24,348,000</b>	<b>\$ 24,785,000</b>	<b>\$ 25,107,000</b>
<b>Total Administrative Budget</b>	<b>\$ 57,489,000</b>	<b>\$ 61,403,000</b>	<b>\$ 64,523,000</b>

## CEM Benchmarking: DB Plan Administrative Costs are Significantly Below Peers

PSERS participates in an independent, international benchmarking survey evaluating its costs and service performance in comparison to other similar public pension funds. Based on the results of the most recent survey, PSERS has 30% fewer full-time equivalent staff per member than the peer group average. Chart 2.1 below illustrates that PSERS had an 18% lower pension administration cost per member than the average cost for its peer group. By running a lean and efficient operation, PSERS saves the Commonwealth and school employers approximately \$11.5 million annually in administrative expenses compared to its peers.

Chart 2.1



## Waiver of Prior Year Remaining Budgets

PSERS received approval to waive all available balances from the FY 2023-24 Administrative Appropriation by extending the lapse date until June 30, 2025. PSERS also received approval to waive all open commitments from the FY 2020-21, FY 2021-22, and FY 2022-23 Administrative Appropriations by extending the lapse date until June 30, 2025, in order to ensure adequate funding for vendor payments related to those time periods.

## Proposed FY 2025-26 Defined Contribution (DC) Administrative Budget

Table 2.2 displays the PSERS Defined Contribution Administrative Budget Request for FY 2025-26. The requested \$1,405,000 amount represents an increase of 9.6% above the FY 2024-25 available budget. Personnel Services costs are expected to rise due to the pay and benefit increases in the current collective bargaining agreement. Operating and Fixed Assets expenditures are projected to rise slightly because of higher anticipated usage of legal services and higher fiduciary insurance costs.

**Table 2.2**

	<u>Enacted Budget FY2023-24</u>	<u>Enacted Budget FY2024-25</u>	<u>Budget Request FY2025-26</u>
<b>Total Personnel Services</b>	\$ 887,000	\$ 1,080,000	\$ 1,192,000
<b>Operating Expenses and Fixed Assets</b>			
Travel		3,000	3,000
Consultant Services - Non EDP	175,000	103,000	103,000
Legal Services/Fees	50,000	24,000	35,000
Insurance, Surety & Fidelity Bonds	30,000	32,000	32,000
Other Operational Expenses & Specialized Svcs	40,000	40,000	40,000
<b>Total Operating Expenses and Fixed Assets</b>	\$295,000	\$202,000	\$213,000
<b>Total Administrative Budget</b>	<u>\$ 1,182,000</u>	<u>\$ 1,282,000</u>	<u>\$ 1,405,000</u>



## Directed Commissions Recapture Program

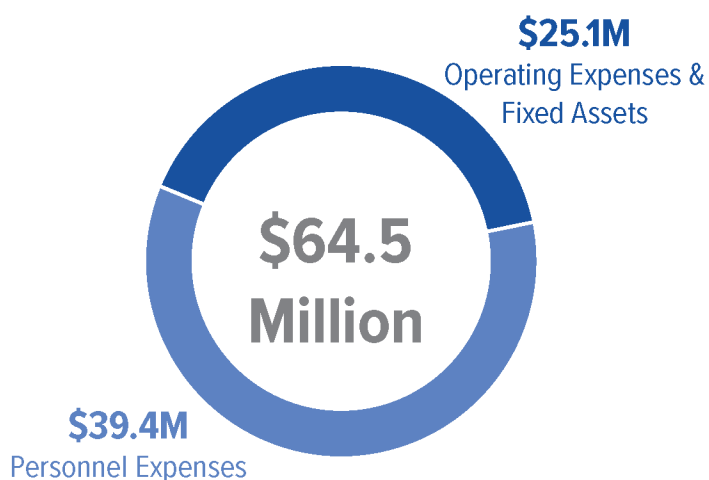
Directed Commissions Recapture is a program whereby a portion of commissions incurred by the DB Plan through investment trading activity is returned to PSERS. These funds can be used for the administration of the Fund or can be reinvested back into the asset allocation through a transfer to PSERS Retirement Account. Expenditures paid from the Directed Commissions Recapture Program Budget have the same internal approval process as any other expenditure made by the agency. There are no proposed expenditures to be paid through the use of directed commissions in FY 2025-26, and there were no actual expenditures from the past year paid through the use of directed commissions.

**Table 2.3**

	<u>Budget</u> <u>FY2023-24</u>		<u>Budget</u> <u>FY2024-25</u>		<u>Budget Request</u> <u>FY2025-26</u>	
Budgetary Reserve	\$	2,000,000	\$	2,000,000	\$	2,000,000
<b>Total</b>	\$	2,000,000	\$	2,000,000	\$	2,000,000

# DEFINED BENEFIT (DB) PLAN

## PROPOSED FY 2025-26 BUDGET



### Operating Expenses Excerpts

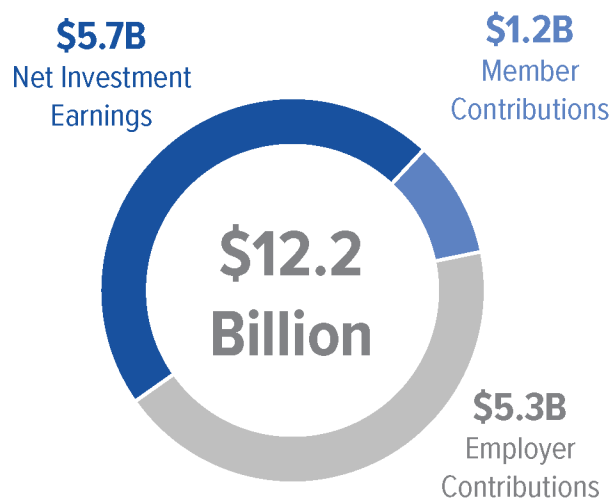
Software License:	\$6.5M
Consulting (Outsourced Infrastructure):	\$2.1M
Real Estate Rental:	\$2.0M
Consulting (General IT):	\$1.9M
Consultant Services (Non EDP):	\$1.2M
Software Licensing Maint.:	\$1.0M

## FY 2023-24 NET INVESTMENT PERFORMANCE

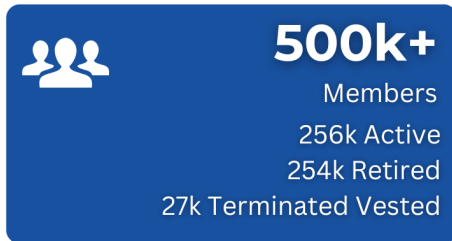
**Total Fund: 8.14%**

U.S. Equity <b>22.9%</b>	Non-U.S. Equity <b>15.8%</b>	Private Equity <b>6.0%</b>
Public Fixed Income <b>1.8%</b>	Private Credit <b>7.1%</b>	Public Real Estate <b>8.14%</b>
Public Infrastructure <b>5.5%</b>	Public Commodities <b>12.9%</b>	Private Real Estate <b>-4.3%</b>
Private Infrastructure <b>17.4%</b>	Private Commodities <b>2.4%</b>	Absolute Return <b>7.7%</b>

## FY 2023-24 TOTAL ADDITIONS



### Defined Benefit (DB) Plan Description



Data as of June 30, 2024

The DB Plan provides a guaranteed monthly pension for members who are vested. A member's maximum annual pension is calculated using their final average salary, membership class multiplier, and years of credited service.

The average yearly DB benefit paid to PSERS annuitants in FY 2024 was \$26,392, a benefit earned through a career averaging 23 years in public education. Notably:

- Approximately three-quarters of PSERS retirees receive less than \$40,000 per year in benefits.
- Six-figure pensions are rare, with fewer than one-half of 1% of PSERS retirees receiving an annual benefit over \$100,000. Retirees earning over \$100,000 have spent an average of 38 years working in their careers and contributing to their retirement accounts.

PSERS membership class is defined by statute and is used to determine the member's benefit structure, including the member contribution rate. A member may only have one "active" membership class with PSERS and, by law, may have a one-time opportunity to elect to change their membership class within a statutory time frame.

The following membership classes have a DB component to their PSERS retirement:

- Class T-C
- Class T-D
- Class T-E
- Class T-F
- Class T-G\*
- Class T-H\*

*\*Class T-G and Class T-H consists of DB and DC components.*

### Fiscal Year 2024 DB Member Service Highlights

Answered <b>150,243</b> Member Calls	Responded to <b>65,183</b> Member Emails/Secure Messages	Counseled <b>6,674</b> Members for Retirement	Issued <b>2.9</b> <b>Million</b> Benefit Payments	Processed <b>8,894</b> Retirement Applications	<b>735,779</b> Member Self- Service (MSS) Logins	Members Completed <b>20,843</b> Transactions in MSS
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# DB PLAN FUNDING



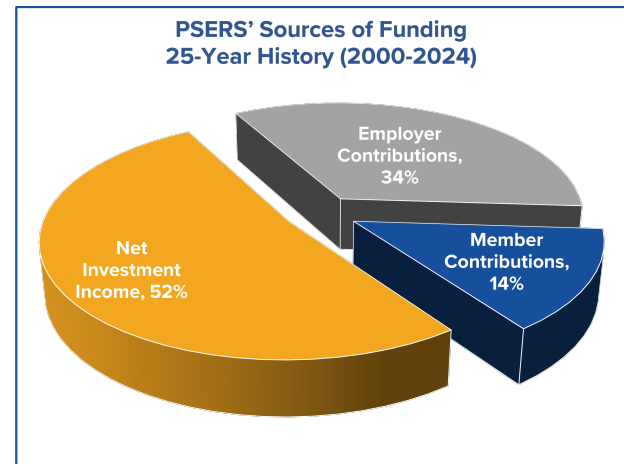
### Funding

The DB Plan is funded through three sources:

1. Employer contributions (including the Commonwealth portion)
2. Member contributions, and
3. Investment earnings.

As depicted in Chart 3.1, for the 25-year period ended June 30, 2024, investment earnings provided 52% of DB Plan funding followed by 34% from employer contributions and 14% from member contributions.

Chart 3.1



### Actuarial Valuation

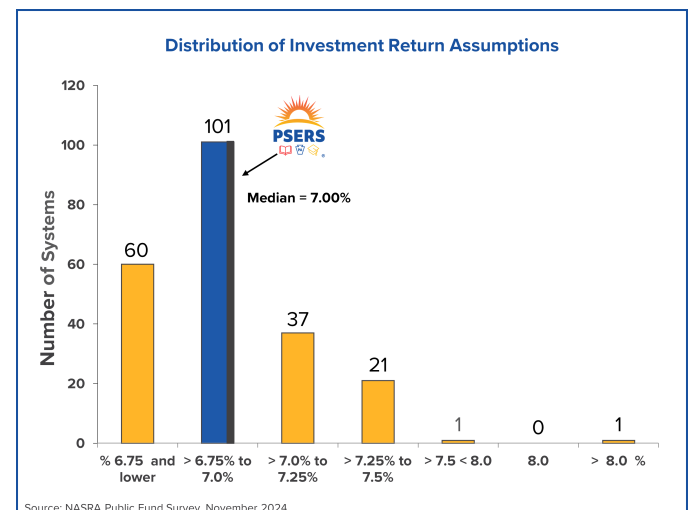
An independent actuarial valuation is performed annually to calculate the actuarial assets and liabilities of the DB Plan. The valuation also measures the progress of the pension system toward funding pensions for its active and retired members and determines the employer contribution rate.

The actuarial formula presumes that there will be a systematic flow of contributions at a specified level to pay for plan benefits and that the flow of contributions, together with investment earnings, will be sufficient to meet all benefit and expense requirements of the plan. The actuarial cost method for funding the DB plan is set forth in the Retirement Code and includes a five-year review of economic and demographic experience. The five-year actuarial experience study tests the validity of the underlying actuarial assumptions versus the actual experience of the DB Plan. That experience study is also used as a basis for formulating actuarial assumptions about what will occur in the future with respect to salary growth, investment returns, and demographic factors such as rates of retirement and death.

### Actuarial Experience Study - June 30, 2020

Effective with the June 30, 2021, actuarial valuation, PSERS adopted several new demographic and economic assumptions as a result of the five-year actuarial experience study completed by PSERS actuary. PSERS investment rate of return assumption was changed from 7.25% to 7.00%; the salary growth assumption was changed from 5.00% to 4.50%; the inflation assumption was reduced from 2.75% to 2.50%; the payroll growth assumption was reduced from 3.50% to 3.25%; and the rates of withdrawal, disability, and retirement from employment among active members were updated and mortality rates were revised. Chart 3.2 displays PSERS 7.00% return assumption in comparison to other funds in the public pension universe.

Chart 3.2



### Funding (continued)

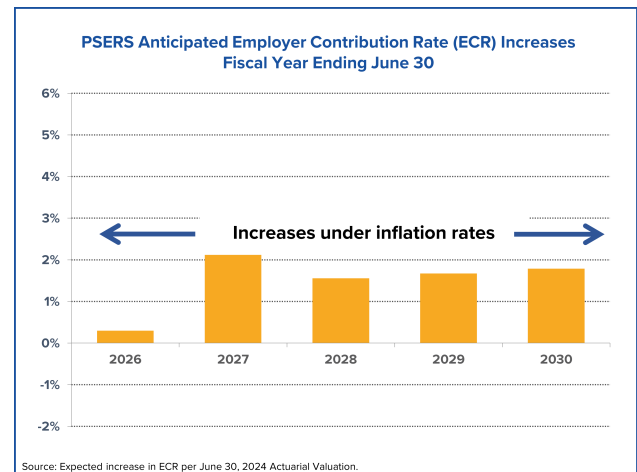
#### Employer Contributions

The Retirement Code vests the Board with the authority to certify the employer contribution rate (ECR) based on the actuarial formula. The Board certifies the ECR annually as part of the annual actuarial valuation performed by the actuary. The ECR is expressed as a percentage of payroll and is composed of three items: (1) the pension rate, including the pension normal cost and unfunded accrued liability; (2) the defined contribution rate; and (3) the premium assistance rate.

At its December 2024 meeting, the Board certified the ECR for fiscal year ending June 30, 2026, at 34.00%, an employer contribution estimate of \$5.492 billion. This rate consists of a 32.96% DB Plan rate, 0.42% DC Plan average rate, and 0.62% Premium Assistance rate. The ECR for the fiscal year ending June 30, 2025, is 33.90%, which consists of a 32.92% DB Plan rate, 0.35% DC Plan average rate, and 0.63% Premium Assistance rate. The estimated total employer contributions for the fiscal year ending June 30, 2025, is \$5.285 billion, reflective of the 33.90% contribution rate.

The FY 2025-2026 rate is increasing by 10 basis points or .3% of the FY 2024-25 ECR. The small uptick in the ECR is primarily caused by actuarial experience losses which are partially offset by PSERS' employers strong payroll growth. As displayed in Chart 3.3 the anticipated growth in the ECR is expected to be less than the actuarially-assumed inflationary rate of 2.5% for the next several years.

Chart 3.3



The Commonwealth allocates its contributions to PSERS as part of the Department of Education budget. Approximately 55% of the total employer contributions come from the Commonwealth, while employers contribute the remaining 45%. Table 3.1 shows the actual amount appropriated by the Commonwealth for FY 2024-25, along with the projected requested amounts for FY 2025-26 through FY 2028-29.

Table 3.1

#### Commonwealth's Department of Education School Employees Retirement Appropriation (Dollar Amounts in Billions)

	2024-25	Projected			
		2025-26	2026-27	2027-28	2028-29
School Employees Retirement	\$ 3.089	\$ 3.239	\$ 3.377	\$ 3.500	\$ 3.607

As depicted, the Commonwealth's share of contributions is expected to remain fairly level next fiscal year due to the increase in the ECR from 33.90% in FY 2024-25 to 34.00% in FY 2025-26 being offset by a small increase in anticipated payroll.

## Funding (continued)

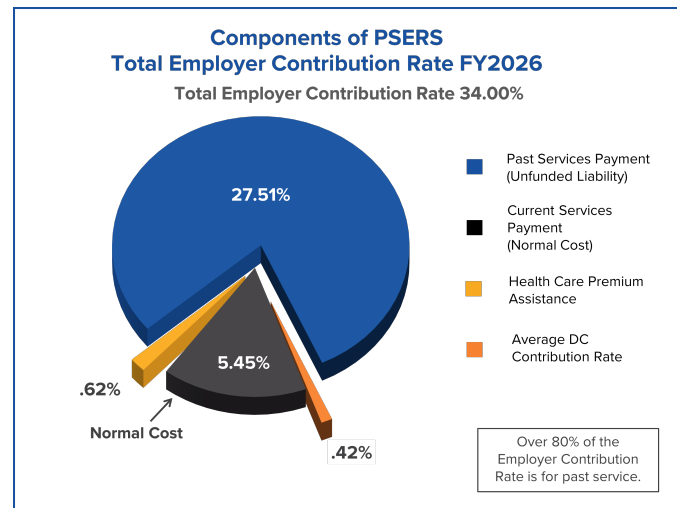
### Employer Contributions (continued)

#### Components of ECR

Chart 3.4 displays the components of 34.00% ECR in FY 2025-26. The majority of the rate, over 80%, is dedicated toward paying the cost of debt payments for past service (unfunded liability).

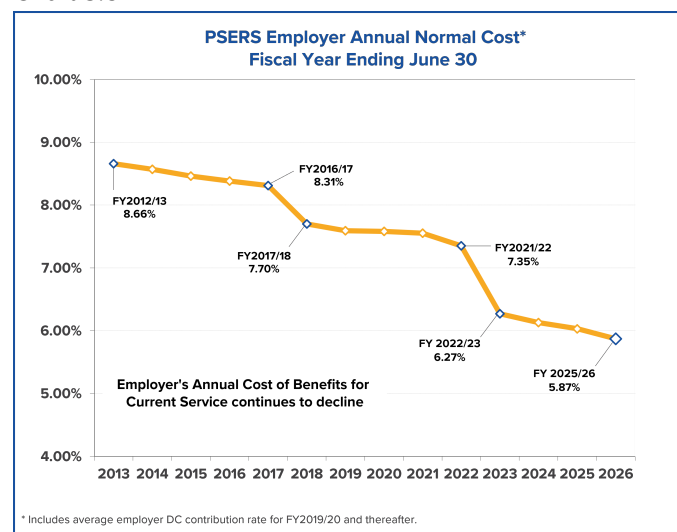
The employers' cost for current service, or the normal cost, is a much smaller portion of the contribution rate.

Chart 3.4



The cost of post-Act 120 of 2010 and post-Act 5 members is lower than pre-Act 120 members. As Chart 3.5 depicts, the employer normal cost decreases over time as Act 120 and Act 5 members replace retiring pre-Act 120 members. The employer normal cost of current benefits earned by Act 120 and Act 5 members is less than 3% of payroll, which is less than 65% of the normal cost for pre-Act 120 members. Additionally, Chart 3.5 projects the employer normal cost to be 5.87% in FY 2025-26, which is a 32% reduction from the 8.66% normal cost in FY 2012-13. The substantial decline from 7.35% in FY 2021-22 to 6.27% in FY 2022-23 was mainly due to the enrollment of Act 120 and Act 5 members and the new actuarial assumptions adopted by the Board.

Chart 3.5





### Funding (continued)

#### Member Contributions

Most PSERS members contribute between 7.5% and 10.8% of their pay depending on their class of membership to help fund their own DB retirement benefit. The average contribution rate paid by the members for the current year (FY 2024-25) is 7.37%.

According to recent National Association of State Retirement Administrators (NASRA) data from November 2024, PSERS member contribution rate is one of the highest among U.S. public pension plans that participate in Social Security.

Pursuant to Act 120 and Act 5, Class T-E, Class T-F, Class T-G, and Class T-H members are subject to a shared risk/shared gain contribution rate for the DB Plan. With a shared risk/shared gain contribution rate, Class T-E, Class T-F, Class T-G, and Class T-H members benefit when investments of the Fund are doing well and share some of the risk when investments underperform. Thus, the member contribution rate may increase or decrease by 0.50% or 0.75% within the specified range once every three years depending on the investment performance of PSERS. Because PSERS' investment performance exceeded the target range for the ten-year evaluation period ending June 30, 2023, the total DB member contribution rates decreased by 0.50% or 0.75%, depending on a member's membership class within PSERS for the period July 1, 2024 to June 30, 2027. This decrease brought the rate back to the base rate for these membership classes.

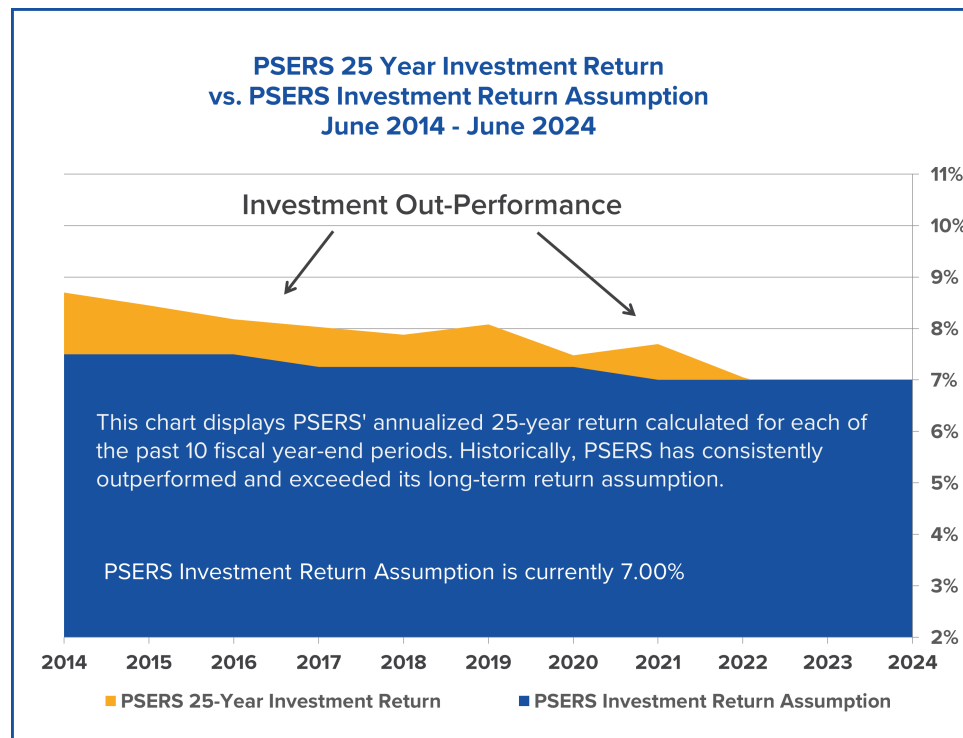
PSERS members contributed \$1.198 billion of pension contributions for FY 2023-24. Total member contributions are estimated to be \$1.211 billion for the fiscal year ending June 30, 2025 and \$1.222 billion for the fiscal year ending June 30, 2026.

## Funding (continued)

### Investment Returns

PSERS investment rate of return (net of fees) for the fiscal year ended June 30, 2024, was 8.14%. The investment rates of return for the fiscal years ended June 30, 2023, and 2022 were 3.54% and 2.23%, respectively. PSERS' 25-year return, as shown in Chart 3.6, has historically outperformed the actuarial investment rate of return. However, the most recent 25-year period return through June 30, 2024, was 6.41%, which is 59 bp below this assumption. PSERS' investments still outperformed a blended 60% ACWI (IMI) Index and 40% Bloomberg Bond Index benchmark by .95% annualized (5.46% vs. 6.41%) over the same period. Overall, long-term investment performance has resulted in declining employer contribution rates and/or contribution rates lower than the annual normal cost of benefits.

Chart 3.6



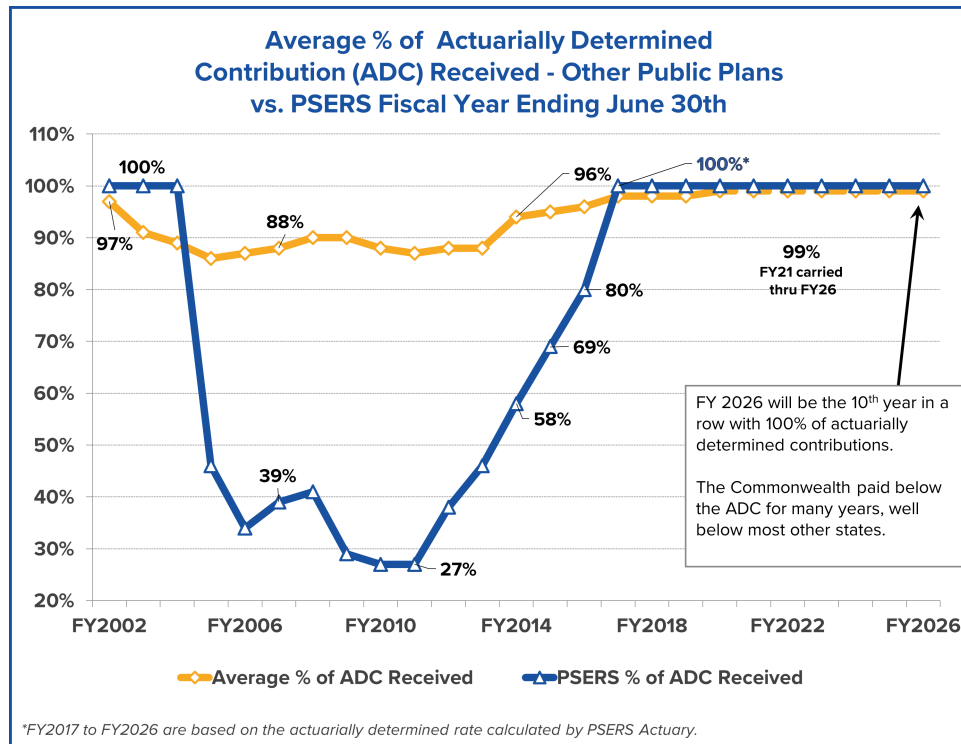
## Funded Ratio and History

PSERS funded ratio is measured by comparing the actuarial value of assets with the accrued liability. The accrued liability is the present value of benefits accumulated to date for both active and retired members.

The total funded ratio of the DB Plan, including Premium Assistance, is 64.8% as of June 30, 2024, an increase from 63.6% as of June 30, 2023. This funded ratio is based on an actuarial value of assets of \$77.32 billion and a total accrued liability of \$119.30 billion which equates to a \$41.98 billion unfunded liability.

Since July 1, 2016, employers have contributed 100% of the actuarially required contributions. As depicted in Chart 3.7, the gradual rate increases since 2011 have raised the ECR to the 100% annual required contribution (ARC) goal, now referred to as the actuarially determined contributions (ADC), starting in FY 2016-17. An ADC includes both the employer's normal cost and the amount required to amortize the unfunded actuarial accrued liability (UAAL) in an actuarially sound manner. This was the first major step needed for the DB Plan funded ratio to begin to improve. As a result of receiving 100% of the actuarially required contributions, PSERS funded ratio began to increase in FY 2017-18 and has steadily improved through FY 2023-24.

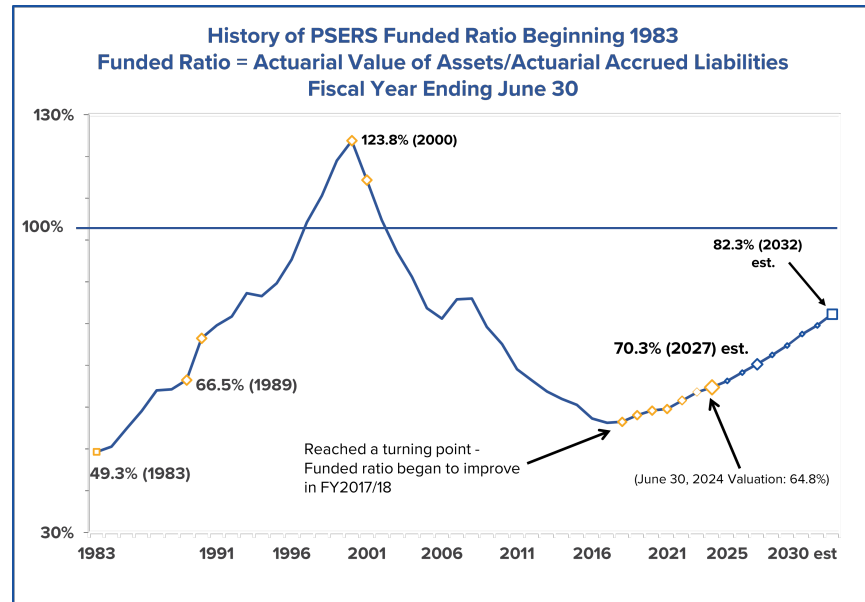
Chart 3.7



## Funded Ratio and History (continued)

Strong payroll growth among PSERS employers and gains from actuarial data, coupled with sustained actuarial ECR funding, have contributed to a \$0.4 billion decrease in the System's long-term unfunded actuarial liability in FY 2023-24.

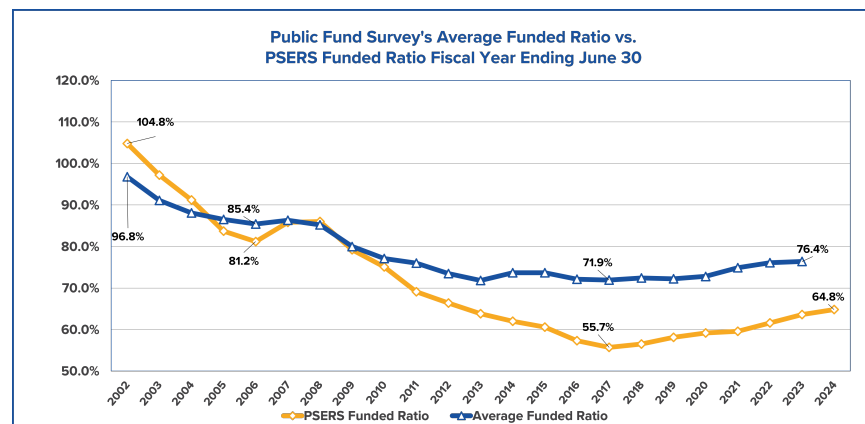
Chart 3.8



The decrease in the funded ratio from 2000 to 2017 as depicted in Chart 3.8 was the result of several factors including: the unfavorable investment markets from 2001-2003 and 2007-2009; funding changes enacted in Act 38 of 2002 and Act 40 of 2003 which resulted in the employer underfunding of the DB Plan; benefit enhancements from Act 9 and Act 38; the adoption of new demographic and economic assumptions in FY 2015-16; funding collars in Act 120, which continued the employer underfunding of the DB Plan; and actuarial losses.

PSERS funded ratio began to slowly improve in FY 2017-18 after declining for many years. Future projections now reflect a steadily increasing funded ratio reaching 82.3% in less than a decade. A comparison of PSERS funded ratio to the public fund projected weighted average funding ratio provided by NASRA is shown in Chart 3.9 below. The gap between PSERS funded ratio and the public fund average is shrinking.

Chart 3.9



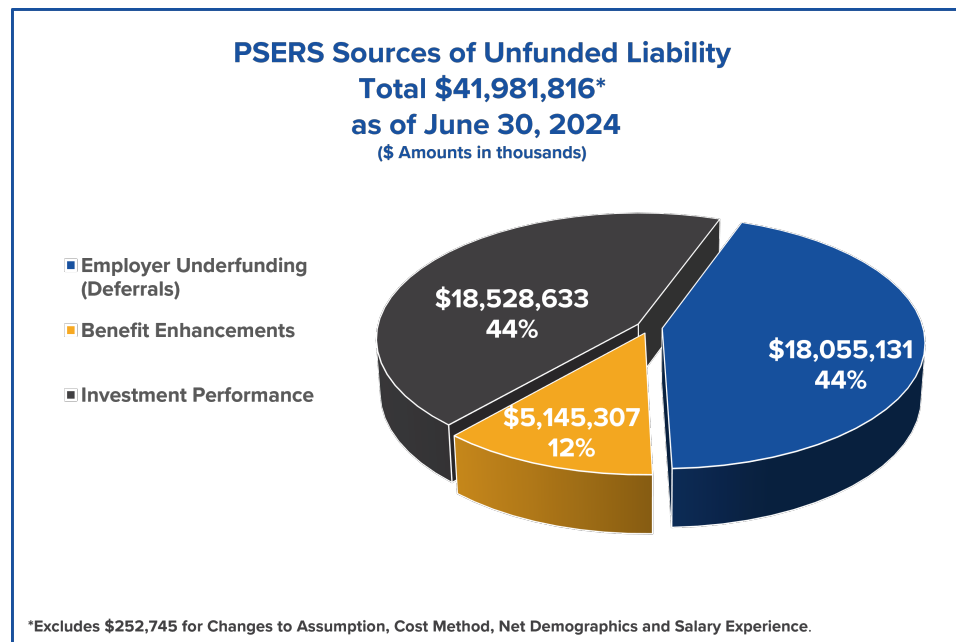
## Funded Ratio and History (continued)

### Sources of Unfunded Liability

Chart 3.10 depicts the sources of the unfunded liability. The sources of unfunded liability in order of magnitude are employer funding deferrals (44%), investment performance (44%), and benefit enhancements (12%), which include Act 9, cost of living increases and early retirement incentives that were not prefunded.

Approximately 56% of PSERS June 30, 2024, unfunded liability is due to employer funding deferrals and benefit enhancements.

Chart 3.10

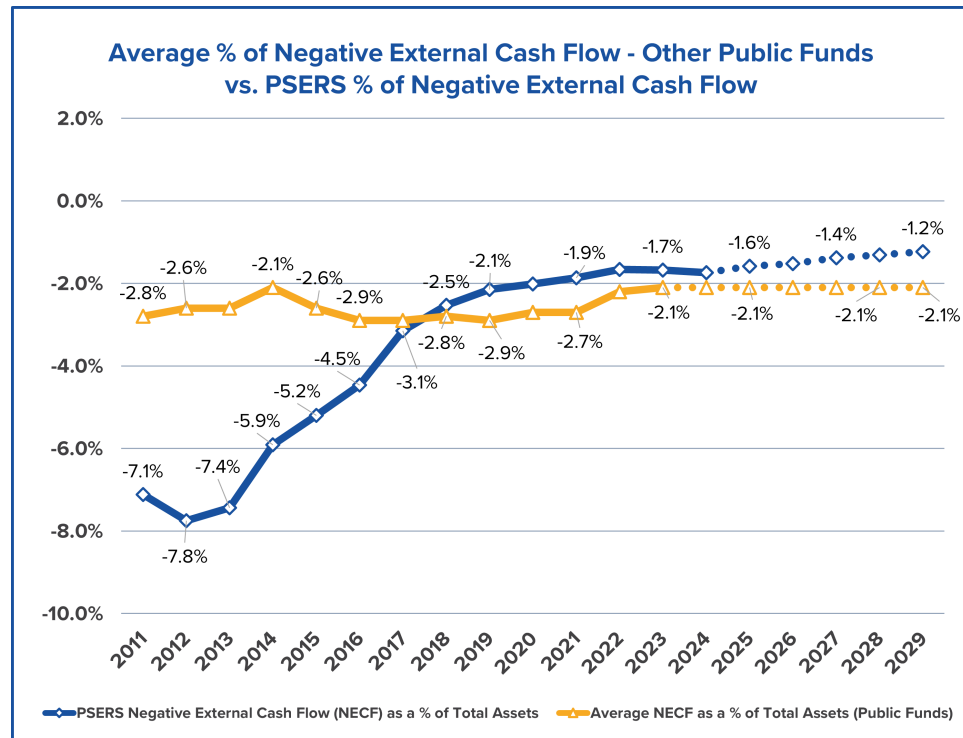


## Financial Information

### Negative External Cash Flow

Although negative cash flow (comprised of total deductions less member and employer contributions) is not uncommon for a mature pension plan, PSERS negative cash flow has been exacerbated by the previous underfunding and was significantly worse than our peers. Due to receiving 100% of actuarially determined contributions, PSERS cash flow shortfall has now stabilized and is more favorable than the public fund average. If PSERS meets or exceeds its investment return assumptions, total assets are projected to grow in excess of total liabilities and will continue to pay down the unfunded liability

Chart 3.11



# DB PLAN INVESTMENTS





# Investment Guidelines, Philosophy, and Risk Management

## Investment Guidelines In Summary

The Board has established investment objectives for the Fund as follows:

- To generate returns to support the System's actuarial soundness so it may provide its members with benefits as required by law.
- To earn a long-term total return, net of fees and investment expenses, that equals or exceeds the Actuarial Assumed Rate approved by the Board.
- To earn a long-term total return, net of fees and investment expenses, that equals or exceeds the Policy Index approved by the Board.
- To prudently manage investment risks that are related to the achievement of investment goals.

## Investment Philosophy

The PSERS Board of Trustees believes PSERS assets should be managed in accordance with PSERS unique liability stream, funding sources, cash flows, and portfolio size, focusing on the prudent accumulation of wealth over the long term to meet the retirement benefit obligations established by the plan sponsor to its members.

PSERS assets should be managed based on the following beliefs:

### 1. Uncertainty

The future is difficult to forecast with any accuracy or certainty, particularly changes in the economic and market environment.

### 2. Asset Allocation

The strategic asset allocation mix, more than implementation or any other factor or decision, largely determines the portfolio's overall risk and return.

### 3. Diversification

Diversification is the best approach to addressing future uncertainty and therefore meeting PSERS long-term investment objectives. Diversification should be across multiple dimensions: by and within asset classes, by geography, by strategy, and by vintage year for Private Investments. Over any given period, any number of asset classes, geographies, strategies, and vintages will underperform others; that is to be expected and accepted.

### 4. Risk

For an underfunded plan or for a plan with negative cash flow (benefits paid exceed contributions received), peak-to-trough declines transform unrealized losses into permanent ones. This heightens the importance of managing drawdown risk and liquidity should be managed to ensure the Fund can meet its obligations during periods of market dislocations.

### 5. Leverage

Leverage at the total fund level can be an effective tool to increase or decrease total fund risk in a diversified manner.

# Investment Guidelines, Philosophy, and Risk Management (continued)

## 6. Rebalancing

Disciplined rebalancing enhances long term returns as it is an inherently contrarian process. Rebalancing restores strategic asset allocation as the primary driver of return and risk.

## 7. Portfolio Size

Managing a large pool of assets provides investors unique access to investment opportunities not available to smaller institutional investors or individual investors. PSERS should use its size to its advantage to enhance its net-of-fees return and diversification opportunities.

## 8. Private Investments

Allocations to private markets may provide exposure to sectors, businesses, and governance oversight not generally available through public markets. Such investments may also involve a illiquidity risk premium.

## 9. Active Management

Passive investing, rather than active management, is the default choice to be used for any asset class that is highly efficient or where skilled active managers are less likely to be identified.

Certain asset classes continue to exhibit information inefficiency, where skilled active management and well-resourced investors such as PSERS can potentially persistently outperform peers and the benchmark for that asset class.

## 10. Internal Management

PSERS has developed skilled internal investment managers; as such internal investment management is preferred over external investment management in cases where internal management most likely can match or exceed the long term, net of fees, risk-adjusted returns provided by external managers, provided the internal investment and operational resources are available to do so.

## 11. Investment Fees

Investment management fees for external management are one of the few aspects of investment management that are certain and over which the investor has control. Investment management and performance fees should be managed to (i) maximize long term, net of fees, risk-adjusted returns, (ii) split the value added fairly between the investment manager and PSERS, and (iii) align the interests of the investment manager with PSERS.

## Risk Management

Risk management is essential to the entire investment process. The goal of investment risk management is to find the appropriate balance between expected returns and the risks taken to generate those returns. An entirely risk-free investment portfolio that has a high probability of meeting all investment goals does not exist. Therefore, PSERS does not attempt to eliminate all risk but instead seeks to limit the possibility of permanent loss. Risk itself is neither good nor bad, but it is necessary that the System expose itself to some appropriate level of risk if it is to generate the long-term investment returns required to maintain stable and cost-effective contribution rates.

The investment related policies of the Board can be found on the Investment page on PSERS' website.

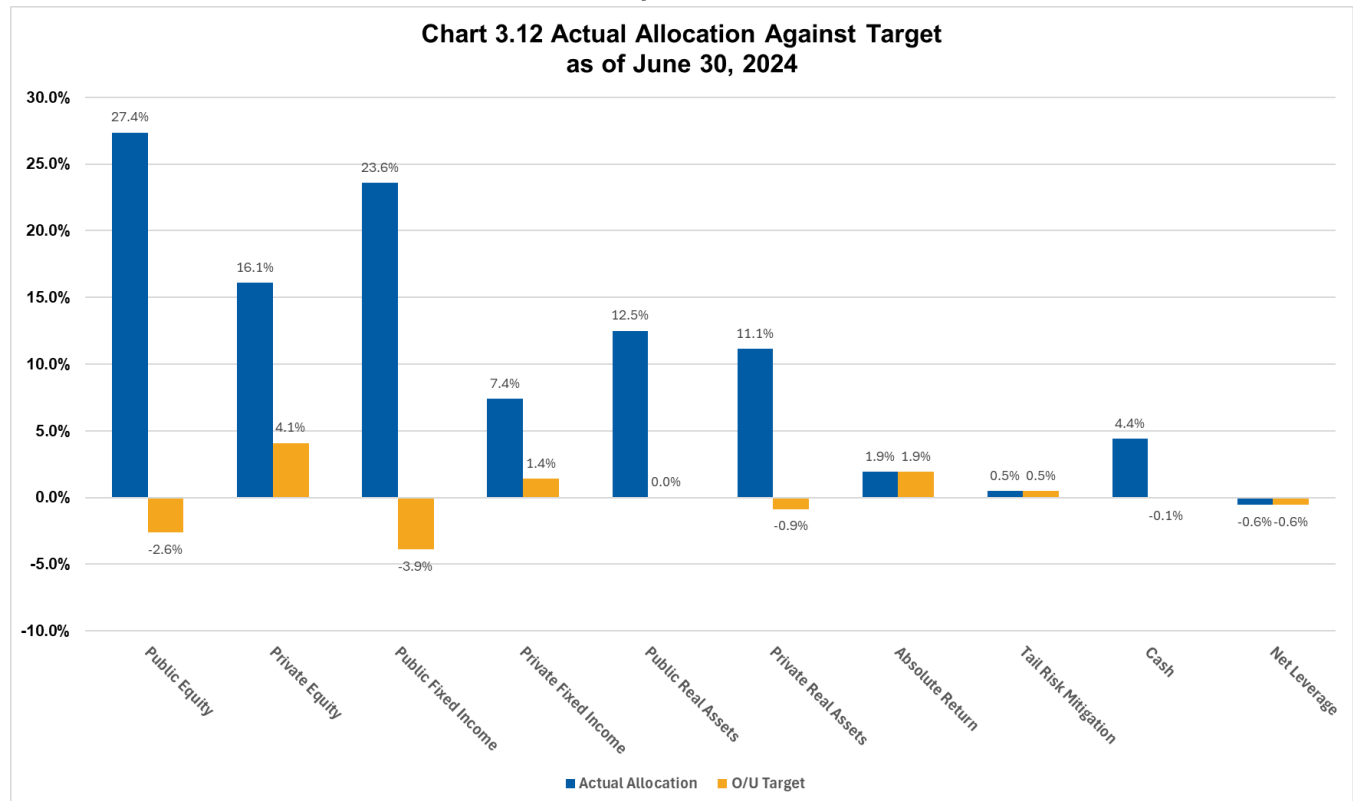
## Asset Exposure

(as of June 30, 2024)

The Board maintains a disciplined and thorough process to establish a new asset allocation policy presently every three years while monitoring the implementation of any related adjustments ongoing. This process begins following the Board's review and acceptance of the actuary's annual report, as described in Tab 5. PSERS' investment professionals and general investment consultant collaborate to analyze potential asset allocations (using actuarial as well as capital market return assumptions) in order to identify those potential asset allocations that meet the long-term return and risk objectives of the Fund. The Board is then presented with various asset allocations choices with detailed analysis of probable long-term return and risk characteristics from which it will select a new Asset Allocation Policy for further implementation by staff.

The Board reassesses the long-term asset allocation targets of the System not less than every three years. In establishing the asset allocation plan, the Board will consult with its actuary, consultants, investment staff, and other sources of information it deems appropriate in formulating this allocation. The purpose of the asset allocation is to align strategic investment objectives with the long-term financial needs of the System.

**Chart 3.12 illustrates PSERS' asset allocation exposure as of June 30, 2024:**



## Asset Exposure (continued)

Table 3.2 represents PSERS asset exposure and target allocation plan that became effective December 1, 2023, and was in effect on June 30, 2024.

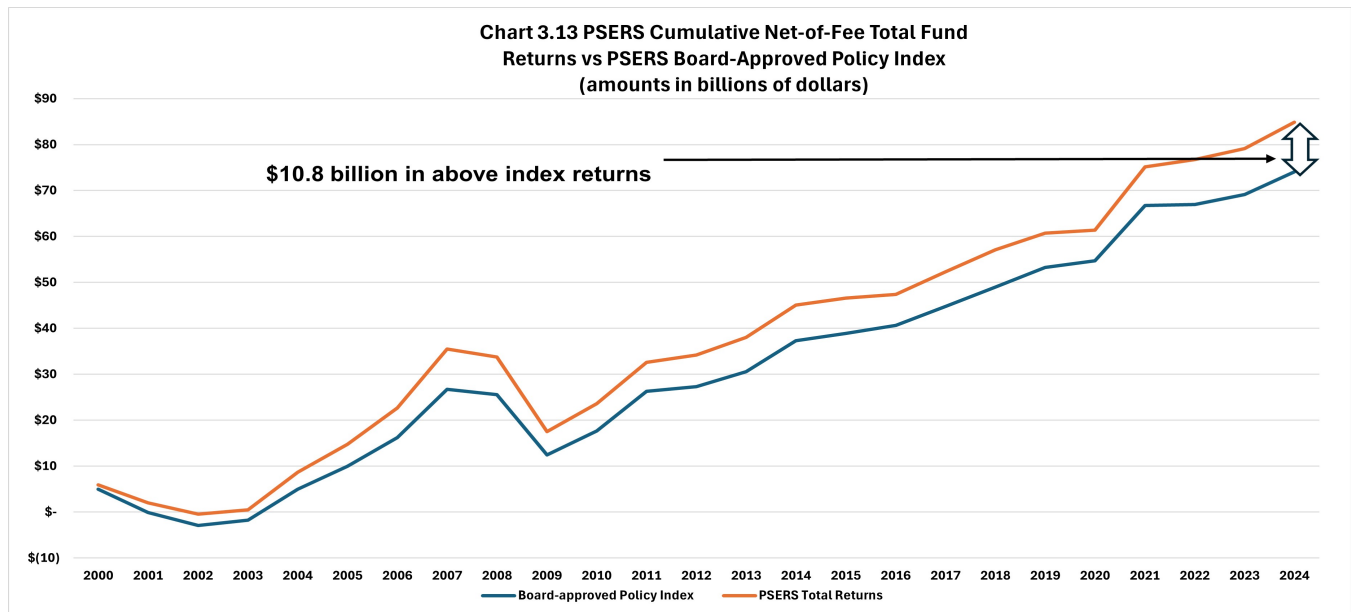
<b>Table 3.2</b> <b>PSERS Asset Exposure and Target Asset Allocation Plan</b> <b>(as of June 30, 2024)</b>					
<b>Asset Class</b>	<b>Market Value (in millions)</b>	<b>Percentage of Gross Asset Exposure</b>	<b>Percentage of Net Asset Exposure</b>	<b>Target Allocation %</b>	<b>Target Allocation Range</b>
Public Equity	\$ 20,593.6	27.2 %	27.4 %	30.0 %	
Private Equity	12,107.4	16.0 %	16.1 %	12.0 %	
<b>Total Equity</b>	<b>\$ 32,701.1</b>	<b>43.2 %</b>	<b>43.4 %</b>	<b>42.0 %</b>	<b>± 5%</b>
Public Fixed Income*	\$ 17,771.5	23.5 %	23.6 %	27.5 %	
Private Credit	5,583.4	7.4 %	7.4 %	6.0 %	
<b>Total Fixed Income</b>	<b>\$ 23,354.9</b>	<b>30.9 %</b>	<b>31.0 %</b>	<b>33.5 %</b>	<b>± 5%</b>
Public Real Asset*	9,411.3	12.4 %	12.5 %	12.5 %	
Private Real Asset	8,378.9	11.1 %	11.1 %	12.0 %	
<b>Total Real Asset</b>	<b>\$ 17,790.2</b>	<b>23.5 %</b>	<b>23.6 %</b>	<b>24.5 %</b>	<b>± 3%</b>
<b>Tail Risk Mitigation</b>	<b>\$ 371.4</b>	<b>0.5 %</b>	<b>0.5 %</b>	<b>— %</b>	
<b>Absolute Return</b>	<b>\$ 1,466.8</b>	<b>1.9 %</b>	<b>1.9 %</b>	<b>— %</b>	<b>0 to 5%</b>
<b>Gross Asset Exposure</b>	<b>\$ 75,684.5</b>	<b>100.0 %</b>	<b>100.6 %</b>	<b>100.0 %</b>	
Cash	\$ 3,312.1	4.4 %	4.4 %	4.5 %	
Explicit Leverage	(3,730.9)	(4.9)%	(5.0)%	(4.5)%	
<b>Net Leverage</b>	<b>(418.8)</b>	<b>(0.6)%</b>	<b>(0.6)%</b>	<b>— %</b>	<b>10 to -10%</b>
<b>Net Asset Exposure</b>	<b>\$ 75,265.6</b>		<b>100.0%</b>	<b>100.0%</b>	

\*PSERS uses leverage to achieve increased economic exposure to diversifying asset classes to manage the overall portfolio risk while maintaining an allocation designed to achieve the long-term return goals of the System. Increased economic exposure is generally achieved through the use of either derivative positions or higher volatility funds. As of June 30, 2024, PSERS had total increased economic exposure of \$3.7 billion related to the following asset classes: Fixed Income (\$0.9 billion); Infrastructure (\$0.4 billion); Real Estate (\$0.4 billion) and Commodities (\$2.0 billion). An allocation of 4.5% to Cash is included in the Target Allocation.

Asset Class Definitions are included in the Investment Advisory Fee Section along with the relevant manager fee details. **Note: PSERS asset allocation was updated December 1, 2024 and is available on PSERS' website at [www.pa.gov/PSERS](http://www.pa.gov/PSERS)**

### Performance

Chart 3.13 below demonstrates that over the past 24 fiscal years, PSERS has earned \$10.8 billion in additional investment returns above the Board-approved Policy Index, net of fees.



PSERS general investment consultant calculates the total investment return of the System as well as the performance of each external investment management firm and each internal investment manager retained by the Board to invest the System's assets. Performance is calculated using a time-weighted return methodology. For the one-year period ended June 30, 2024, the System generated a total net of fee return of 8.14%. This return was above the Total Fund Policy Index return of 7.07% by 107 basis points. Annualized total net of fee returns for the three-, five-, and ten- year periods ended June 30, 2024 were 4.61%, 7.60%, and 6.82%, respectively. The three-, five-, and ten-year returns ended June 30, 2024 exceeded the Total Fund Policy Index returns by 108, 95, and 43 basis points, respectively.

The past fiscal year was positive for the System with a net of fee return of 8.14%, exceeding the Total Fund Policy Index by 1.07%. The following asset classes were significant contributors to asset class returns this past fiscal year:

- U.S. Equity, as represented by a blended policy index currently comprised of the S&P 1500 Index, was up 23.23%.
- Non-US Equity, as represented by a blended policy index currently comprised of the MSCI ACWI ex US IMI with Developed Market Currencies (50% Hedged) benchmark, was up 14.10%.
- Public Commodities, as represented by the Bloomberg Commodity Total Return Index, were up 11.14%.
- Private Credit, as represented by a blended policy index currently comprised of the Morningstar LSTA Leveraged Loan Total Return Index +200 basis points (Quarter-Lagged), was up 10.67%.

Significant detractors from performance this past fiscal year included:

- Private Real Estate, as represented by a blended benchmark of NCREIF ODCE and MSCI Burgiss Custom Blend (Quarter-Lagged), was down 7.62%.
- U.S. Long Treasuries, as represented by the Bloomberg Barclays U.S. Long Treasury Index, were down 5.61%.

## Performance (continued)

As noted, two of the best performing asset classes this past fiscal year were U.S. Equity and Non-U.S. Equity, which were up 23.23% and 14.10%, respectively, while two of the worst performers were Private Real Estate and U.S. Long Treasuries, returning -7.62% and -5.61%, respectively, for FY 2024. This illustrates the importance of diversification. Many investment professionals discuss diversification using terms such as standard deviation, correlation, and co- variance. However, at its most basic level, diversification is insurance against bad outcomes.

Table 3.3 provides the System's total time-weighted investment returns for each major asset class and the total portfolio, including, where applicable and available, respective benchmark indexes used by asset class and median performance by asset class:

	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>
<b>PSERS Total Fund</b>	<b>8.14</b>	<b>4.61</b>	<b>7.60</b>	<b>6.82</b>
Total Fund Policy Index	7.07	3.53	6.65	6.39
Median Public Defined Benefit Plan (DBP) Fund Universe (Aon	9.82	3.89	7.88	6.83
60% Global Equity / 40% Barclays U.S. Aggregate Bond Index	12.49	2.15	6.52	5.78
<b>Total Equity</b>				
<b>Public and Private Equity Exposure</b>	<b>14.19</b>	<b>6.78</b>	<b>12.50</b>	<b>N/A</b>
Blended Policy Index	13.93	6.91	11.82	N/A
<b>PSERS Public Global Equity Composite</b>	<b>19.52</b>	<b>4.14</b>	<b>10.63</b>	<b>9.29</b>
Blended Policy Index	19.78	4.80	9.77	8.53
<b>PSERS Total Private Equity Composite</b>	<b>6.04</b>	<b>9.55</b>	<b>14.64</b>	<b>12.02</b>
Burgiss Private Equity (1Q Lag)	5.62	8.90	13.83	12.50
<b>Total Fixed Income</b>				
<b>PSERS Fixed Income Portfolios</b>	<b>2.99</b>	<b>-0.75</b>	<b>2.14</b>	<b>3.93</b>
Fixed Income Policy Index	3.11	-1.61	1.39	2.54
<b>PSERS Public Fixed Income Composite</b>	<b>1.76</b>	<b>-3.31</b>	<b>0.35</b>	<b>N/A</b>
Blended Policy Index	0.90	-4.13	-0.39	N/A
<b>PSERS Private Fixed Income Composite</b>	<b>7.08</b>	<b>7.74</b>	<b>7.80</b>	<b>7.08</b>
Blended Policy Index	10.67	7.41	7.09	5.89
<b>Total Real Assets</b>				
<b>PSERS Real Assets Portfolios</b>	<b>4.99</b>	<b>6.68</b>	<b>5.91</b>	<b>N/A</b>
Real Assets Policy Index	3.12	4.91	4.68	N/A
<b>PSERS Public Real Assets</b>	<b>8.87</b>	<b>4.92</b>	<b>3.96</b>	<b>N/A</b>
Blended Policy Index	7.53	4.69	3.76	N/A
<b>PSERS Private Real Assets</b>	<b>0.89</b>	<b>11.88</b>	<b>10.70</b>	<b>N/A</b>
Blended Policy Index	N/A	N/A	N/A	N/A
<b>PSERS Financing Composite</b>	<b>5.36</b>	<b>3.17</b>	<b>2.18</b>	<b>N/A</b>
<b>Financing Composite Policy Index</b>	<b>5.48</b>	<b>3.40</b>	<b>2.46</b>	<b>N/A</b>
PSERS Cash and Cash Equivalents	5.58	3.69	2.72	1.85
<b>Cash and Cash Equivalents Policy Index</b>	<b>5.45</b>	<b>3.10</b>	<b>2.16</b>	<b>1.49</b>
Footnotes to the Total Portfolio are available on page 97 of PSERS Annual Comprehensive Financial				

### Performance (continued)

The System diversifies simply because it is difficult to predict how actual events in the future will transpire relative to what is priced into the market. Diversification is a prudent approach to investing.

Over the past fiscal year, the U.S. equity market outperformed international developed and emerging market counterparts. The total U.S. equity market, as represented by the Russell 3000, returned 23.1% overall. The growth side of the market, which was up 33.5% significantly outpaced value stocks (up 13.1%) over the 1-year period. Domestic stocks continued to perform well as investment in artificial intelligence (AI) boosted earnings expectations, and lower inflation led to expectations for several interest rate cuts.

Within the non-U.S. equity markets, developed market stocks represented by the MSCI EAFE Index were up 11.5% for the fiscal year, while emerging market stocks, represented by the MSCI EM Index, were up 12.5%. In Europe, falling inflation and an interest rate cut in June lifted the equity market that had been hindered by low growth. Japan was the strongest performer within developed markets, driven by a boost in exports, high earnings growth, and the end of negative interest rate policy. Technology was responsible for much of the growth in emerging markets. Taiwan, which is the second largest weight within the MSCI EM Index, holds a 70% weight to Information Technology and returned 41.4% for the fiscal year.

Fed policy expectations continued to dominate risk asset behavior over the past year. At the end of 2023, the market expected four rate cuts to occur in the first half of 2024, with two more in the second half of the year. Instead, there were no rate cuts through the fiscal year end. Core fixed income (Bloomberg U.S. Aggregate) saw a 2.6% gain over the fiscal year. In terms of duration, short maturity U.S. treasuries outperformed, with the Bloomberg U.S. Treasury 1-3 Year Index gaining 4.5% over the one-year period. Interest rates staying higher for longer were a headwind for long-duration assets over the past year. The U.S. Treasury Long Index returned -5.6% during the fiscal year.

The Bloomberg Commodity Index rose 5.0% over the fiscal year, a notable turnaround from the -9.6% decline in FY 2023. A large driver of these gains was an increase in Energy prices, with Brent Crude Oil contracts increasing +21.6% over the past year. Industrial and Precious Metals also provided a boost to the overall commodity complex.

PSERS annualized net of fee return for the ten-year period ended June 30, 2024, was 6.82%. The System seeks to achieve a long-term rate of return of 7% while taking prudent risk and has built a diversified allocation to allow it to meet that goal over the long-term. Over short-term periods the System can experience periods when annual returns are both below and above 7%. The System continues to believe the best way to achieve its long-term objectives is to maintain a well-diversified portfolio which includes all asset classes available to it, such as equities, fixed income, and real assets. The future is uncertain, but PSERS believes it is well positioned to accomplish its objectives.



## Performance (continued)

Table 3.4 demonstrates that over the past 25 fiscal years, on average, every dollar PSERS has spent in investment fees and expenses has resulted in investment earnings of \$2.10 above the Policy Benchmark's dollar returns.

Table 3.4

### PSERS Investment Earnings over Policy Benchmark Fiscal Years Ended June 30

Fiscal Year	Total Investment Expenses *	PSERS Net Return over Policy Benchmark (AFTER Payment of all Expenses)	PSERS Investment Earnings over Policy Benchmark Net of Total Investment Expenses *	\$'s of Gross Alpha for every \$1 of Investment Expenses
2024	\$411	1.07%	\$711	\$2.73
2023	406	0.33%	208	1.51
2022	525	2.41%	1,332	3.54
2021	618	3.50%	1,827	3.96
2020	515	(1.46)%	(816)	(0.58)
2019	450	(1.20)%	(653)	(0.45)
2018	468	1.11%	545	2.16
2017	474	1.80%	821	2.73
2016	416	(1.95)%	(1,006)	(1.42)
2015	455	0.04%	10	1.02
2014	482	0.50%	222	1.46
2013	558	1.25%	579	2.04
2012	481	1.10%	518	2.08
2011	515	1.01%	413	1.80
2010	522	2.19%	890	2.70
2009	478	(5.22)%	(3,131)	(5.55)
2008	399	(0.98)%	(618)	(0.55)
2007	314	4.36%	2,360	8.52
2006	211	3.26%	1,635	8.75
2005	193	2.36%	1,090	6.65
2004	191	3.51%	1,388	8.27
2003	179	(0.42)%	(140)	0.22
2002	163	0.56%	316	2.94
2001	144	2.13%	1,200	9.33
2000	125	1.85%	934	8.47
Total	\$9,693		\$10,635	\$2.10

\*Dollar amounts in millions.

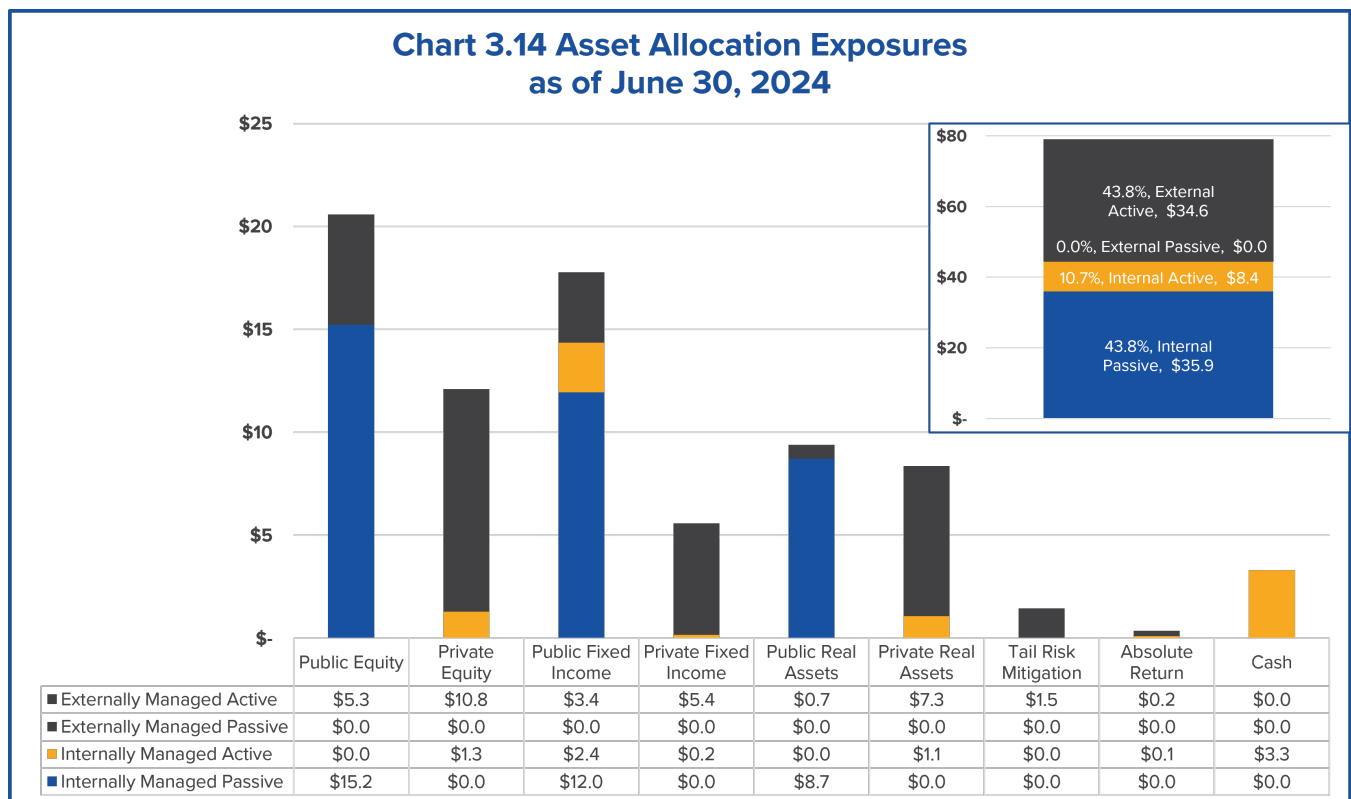
## Managing Investment Fees, Expenses, and Carried Interest

PSERS investment professionals formulate an Asset Allocation Policy every three years with input from the general investment consultant, and work on an ongoing basis to implement the Policy through identification of attractive investment strategies and well-qualified investment managers. The Board reviews and reconfirms the long-term asset allocation targets of the System every three years unless there has been a materially change in the underlying assumptions supporting those targets.

A fundamental part of this implementation process is making key decisions with regard to use of active or passive strategies implemented by internal professionals or external investment managers. Management of investment fees and expenses is integrated into the process of making these key decisions.

PSERS ability to select a prudent combination of both internal and external managers, and both active and passive strategies, can help generate excess risk-adjusted, net of fee returns relative to the Policy Benchmarks.

**Chart 3.14 displays the Asset Allocation as of June 30, 2024 split between internally and externally managed assets.**



## Internal vs. External Investment Management

PSERS investment staff managed 26 portfolios internally, with a total estimated net asset value of over \$44 billion on June 30, 2024. We estimate that this has resulted in net savings for the entire fiscal year of approximately \$66 million. PSERS investment staff also oversee external managers, manage the asset allocation, oversee risk, and perform other tasks in managing the overall investment program.

As shown in Table 3.5 below, managing these assets externally would have cost PSERS over \$92 million in fees (\$ amounts in thousands).

**Table 3.5**

### Internally Managed Accounts as of June 30, 2024

Asset Class	Market Value *	Estimated Annual Fee %**	Estimated Cost to Manage Externally
Public Equity	\$ 15,235,975	0.06%	\$ 9,074
Private Equity	1,304,610	1.50%	19,569
Public Fixed Income	14,358,727	0.07%	10,596
Private Fixed Income	183,283	1.38%	2,529
Public Real Assets	8,732,232	0.39%	33,884
Private Real Assets	1,089,259	1.25%	10,823
Tail Risk Mitigation	122,634	0.00%	—
Cash	3,312,056	0.10%	3,312
<b>Total</b>	<b>\$ 44,338,775</b>	<b>0.21%</b>	<b>\$ 92,580</b>
<b>Internal Management Costs</b>		<b>(0.06%)</b>	<b>\$ (27,029)</b>
<b>Net Savings</b>		<b>0.15%</b>	<b>\$ 65,551</b>

\*Market values include cash and derivatives exposure

\*\*Represents consultants peer cost comparisons

## Investment Advisory Fees

As depicted in Table 3.6, “Total External Management” includes all fees paid to external investment managers as either a base fee or a share of profits earned (performance fee). “Total Internal Management” includes all staff salaries related to PSERS Investment Office as well as costs needed to support their work (e.g., vendor services, hardware and software, office supplies). “Total Other Expenses” include fees paid to the custodian bank, consultants, and legal services providers.

**Table 3.6 summarizes total investment expenses for the fiscal year ended June 30, 2024.**

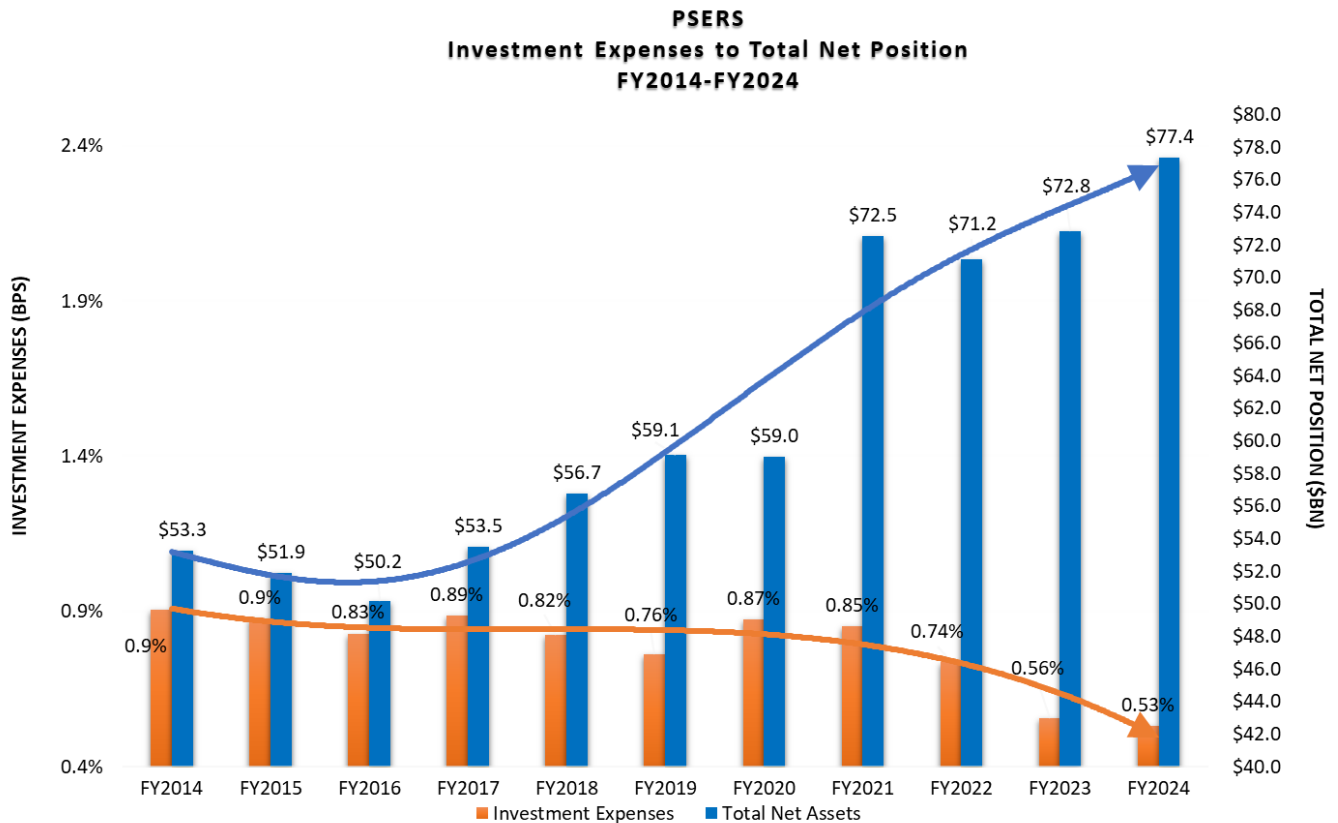
<b>Table 3.6</b> <b>Investment Related Fees and Expenses*</b> <b>Fiscal Year Ended June 30, 2024</b> <b>(Dollar Amounts in Thousands)</b>					
	<u>Base Fees</u>	<u>Performance Fees</u>	<u>Total Fees</u>	<u>Basis Points</u>	
<b>External Management</b>					
Public Equity	\$ 22,148	\$ 32,152	\$ 54,300	105	
Private Equity	110,916	—	110,916	103	
Public Fixed Income	13,087	8,719	21,806	75	
Private Fixed Income	58,108	—	58,108	111	
Public Real Asset	6,105	—	6,105	93	
Private Real Asset	79,290	—	79,290	111	
Absolute Return	24,480	15,987	40,467	243	
Tail Risk Mitigation	3,363	—	3,363	145	
Defined Contribution	519		519	12	
<b>Total External Management</b>	<b>318,016</b>	<b>56,858</b>	<b>374,874</b>		
Internal Management			27,029	6	
<b>Total Investment Management</b>			<b>401,903</b>		
Custodian Fees			2,702		
Consultant & Legal Fees			6,365		
<b>Total Investment Expenses</b>			<b>\$ 410,970</b>	<b>53</b>	

*\*Includes Defined Benefit Pension Plan, Premium Assistance, DC, & Health Options Program.*

Increasing the number and size of portfolios managed internally has resulted in reducing PSERS Total Investment Expenses in recent years. As Chart 3.15 illustrates, Total Investment Expenses have declined from FY 2014 to FY 2024, while Total Net Position has increased significantly from \$49.3 billion to \$77.4 billion.

## Investment Advisory Fees (continued)

Chart 3.15 shows the total investment expenses against total net position from fiscal year ended June 30, 2014 to June 30, 2024.



## Investment Advisory Fees (continued)

The tables that follow summarize fees and profit share paid by PSERS to investment managers where applicable over the fiscal year ending June 30, 2024. This does not include carried interest, which is reported separately, on a calendar year end basis starting from Table 3.15

### Asset Class Definition

An asset class is a group of investments having similar financial characteristics and behaving similarly in the marketplace. An asset class is homogeneous and exhibits different risk and return characteristics from other asset classes with varying degrees of correlations (i.e., diversifying). PSERS seeks to diversify the assets of the Fund across regions, sectors, maturity segments, credit quality, geography, industry focus, vintage year, property sectors, regional footprints, market capitalization segments, and investment styles.

### Public Market Investments

Instruments used to invest in public markets may be exchange-traded or non- exchange-traded and may be physical securities or derivatives and leverage may be employed. Public market asset classes generally have high liquidity and low transaction costs.

### Public Equity Investments

Public Equity provides a return premium over inflation, thereby preserving and enhancing the real value of the Fund, and by performing well when economic growth is stronger than expected or inflation is lower than expected.

**Table 3.7**

**Public Equity Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Public Market Managers</b>				
<b>Public Equity</b>				
Acadian Asset Management, LLC	\$ 1,532	\$ —	\$ 1,532	\$ 440,252
Baillie Gifford Overseas LTD.	1,969	—	1,969	783,247
BlackRock (Emerging Mkts Alpha Adv Fund) Class D Shares*	908	26	935	—
BlackRock (Emerging Mkts Alpha Adv Fund) Class P Shares	629	(186)	444	441,507
ECM Feeder Fund 2 LP	—	30,076	30,076	683,213
Insight Investment International Limited - Everest	489	—	489	20,685
Insight Investment International Limited - Wilson	261	—	261	5,800
Marathon Asset Management, LLP	2,543	—	2,543	747,254
Oberweis Asset Management, INC.	1,837	—	1,837	246,487
Steadview Capital Partners LP	1,783	—	1,783	250,655
The Children's Investment Fund LP	8,051	2,235	10,286	897,675
Wasatch Advisors, Inc (Non-US Small Cap Equity Inv)	798	—	798	332,282
Wasatch Advisors, Inc. (Emerging Markets Small Cap)	1,347	—	1,347	390,105
<b>Total - Public Equity</b>	<b>\$ 22,148</b>	<b>\$ 32,152</b>	<b>\$ 54,300</b>	<b>\$ 5,239,162</b>
*Terminated				

## Public Fixed Income Investments

Nominal bonds serve as a hedge against lower inflation and weak economic growth, produce current income in the form of periodic interest payments, and provide liquidity to meet the Fund's obligations. Inflation protected bonds serve as a hedge against higher inflation and weaker economic growth and provide liquidity. Higher quality bond returns have also served as a diversifier relative to equity returns. Credit-related securities such as emerging market debt and public high yield bonds generate higher current income relative to investment grade debt and tend to do well when economic growth is stronger than expected.

**Table 3.8**

**Public Fixed Income Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Public Fixed Income</b>				
Bain Capital Credit Managed Account (PSERS), L.P.	\$ 1,565	\$ —	\$ 1,565	\$ 496,440
BlackRock FIGA High Yield	4,529	4,156	8,684	945,555
Bridgewater Associates, LP*	2,661	—	2,661	—
Caspian Select Credit International, Ltd.	1,865	4,083	5,948	514,111
Franklin Templeton Institutional, LLC	1,795	—	1,795	451,205
Garcia Hamilton & Associates, L.P.	47	—	47	507,090
Insight Investment International Limited - Oxygen	60	—	60	839
Radcliffe Capital Management, L.P.	566	480	1,046	232,717
<b>Total - Public Fixed Income</b>	<b>\$ 13,087</b>	<b>\$ 8,719</b>	<b>\$ 21,806</b>	<b>\$ 3,147,957</b>

\*Terminated



### Public Real Asset

### Public Commodities Investments

Commodity investments consist of energy, precious metals, industrial metals, and agricultural. The prices of commodities are determined primarily by near-term events in global supply and demand conditions and are positively related with both the level of inflation and changes in the rate of inflation. Public Commodities provide a hedge against unanticipated inflation and diversification.

### Public Infrastructure Investments

Public Infrastructure investments target stable, defensive investments with steady cash flows primarily within the energy, power, water, and transportation sectors. Public Infrastructure provides steady returns and cash yields, defensive growth, inflation protection, capital preservation, liquidity and diversification benefits.

### Public Real Estate Investments

Public Real Estate provides steady returns and cash yields, inflation protection, defensive growth, capital preservation, liquidity and diversification benefits.

**Table 3.9**

**Public Real Assets Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Public Real Asset</b>				
Denham Mining Fund, L.P.	\$ 1,709	\$ —	\$ 1,709	\$ 171,253
Gresham Investment Management LLC	1,365	—	1,365	471,936
Insight Investment International Limited - Nevada	389	—	389	8,030
Insight Investment International Limited - Sierra	76	—	76	2,846
Insight Investment International Limited - Yellow	58	—	58	913
NGP Natural Resources XII, L.P.	2,508	—	2,508	124,865
<b>Total - Public Real Asset</b>	<b>\$ 6,105</b>	<b>\$ —</b>	<b>\$ 6,105</b>	<b>\$ 779,843</b>

## Absolute Return and Other

The most recent strategic asset allocation direction from the Board reduced targets to absolute return and tail risk mitigation to zero, while allowing up to 5% for Opportunistic investment against an expected target allocation of zero. The Opportunistic investments are assets that are not otherwise included other asset classes but present compelling risk reduction / return enhancing opportunities for the fund.

**Table 3.10**

**Absolute Return & Other Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Absolute Return and Other</b>				
Aeolus Property Catastrophe Fund LP	\$ 8	\$ 18	\$ 26	\$ 40,108
Bridgewater Pure Alpha Fund II, Ltd.*	3,181	—	3,181	—
Capstone Commonwealth Fund, LP	3,363	—	3,363	248,803
Capula Tail Risk Fund Limited Class C*	1,533	—	1,533	—
Cassiopeia Fund Ltd. - Class B	1,086	—	1,086	8,211
Falko Regional Aircraft Opportunities Fund II L.P.	11	—	11	69,809
Fourier Fund Ltd.	2,771	91	2,862	183,468
Garda Fixed Income Relative Value Opportunity Fund, Ltd.	7,794	11,306	19,100	527,200
HS Group Sponsor Fund II	898	—	898	232,035
OWS Credit Opportunity Offshore Fund III, Ltd.	3,412	4,572	7,984	172,357
RenaissanceRe Upsilon Diversified Fund	103	—	103	11,679
SASOF III, LP	78	—	78	10,794
SASOF IV, LP	1,098	—	1,098	47,279
SASOF V, L.P.	1,012	—	1,012	108,120
Venor Capital Offshore Ltd.	1,494	—	1,494	56,981
<b>Total - Absolute Return and Other</b>	<b>\$ 27,843</b>	<b>\$ 15,987</b>	<b>\$ 43,830</b>	<b>\$ 1,716,844</b>

\*Terminated

### Private Asset Classes

Private investments are intended to provide exposure to higher potential returns and better alignment of interests. Private Asset Classes provide access to investment opportunities not available in Public Asset Classes. Private Asset Classes will achieve diversification by investing in funds, co-investments, separate accounts, joint ventures, partnerships, limited liability companies, closed- end and evergreen funds. PSERS will only consider investment structures that limit PSERS losses to the amount committed.

### Private Equity Investments

Private Equity provides access to investment opportunities not available in Public Equity markets. Although estimates vary on the number of private versus public companies, there are approximately three times as many private backed as compared to public companies. This opportunity set enhances the pool of diverse companies otherwise available through public markets only.

**Table 3.11**

**Private Equity Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Private Market Managers</b>				
<b>Private Equity</b>				
Actis Global 4, L.P.	\$ 734	\$ —	\$ 734	\$ 51,647
Aisling Capital IV, L.P.	831	—	831	94,176
Apax Digital II, L.P.	2,349	—	2,349	32,893
Apax Digital, L.P.	1,492	—	1,492	125,961
Apax X USD, L.P.	1,589	—	1,589	157,429
Apollo Investment Fund IX, L.P.	976	—	976	217,342
Apollo Investment Fund VIII, L.P.	215	—	215	65,363
Bain Capital Asia Fund II, L.P.	207	—	207	34,246
Bain Capital Asia Fund III-A, L.P.	679	—	679	87,175
Bain Capital Asia Fund IV-B, L.P.	1,215	—	1,215	112,531
Bain Capital Fund XI-A, L.P.	241	—	241	59,602
Bain Capital Fund XII-A, L.P.	927	—	927	168,564
Blue Point Capital Partners III (B), L.P.	334	—	334	21,101
Blue Point Capital Partners IV, L.P.	812	—	812	87,501
Bridgepoint Development Capital III, L.P.	503	—	503	121,180
Bridgepoint Development Capital IV, L.P.	1,786	—	1,786	116,809
Bridgepoint Europe IV, L.P.	240	—	240	63,159
Bridgepoint Europe V, L.P.	683	—	683	78,396
Bridgepoint Europe VI, L.P.	1,103	—	1,103	145,865
Capital International Private Equity Fund VI, L.P.	27	—	27	4,895
Catterton Growth Partners II, L.P.	884	—	884	47,696
Catterton Partners VII, L.P.	896	—	896	43,789
Cerberus Institutional Partners V, L.P.	74	—	74	76,171
Cerberus Institutional Partners VI, L.P.	1,784	—	1,784	176,814
Clayton, Dubilier & Rice Fund XII, L.P.	1,462	—	1,462	20,240
Clearlake Capital Partners IV, L.P.	244	—	244	38,829

## Defined Benefit (DB) Plan

**Table 3.11**

**Private Equity Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
Clearlake Capital Partners V, L.P.	580	—	580	117,481
Clearlake Capital Partners VI, L.P.	1,154	—	1,154	238,690
Clearlake Capital Partners VII, L.P.	998	—	998	54,237
Collier International Partners VI, L.P.	16	—	16	9,259
Collier International Partners VII, L.P. - Series A	771	—	771	45,058
Crestview Partners II, L.P.	541	—	541	76,432
Crestview Partners III, L.P.	816	—	816	114,911
Crestview Partners, L.P.	250	—	250	17,428
Crown CG Private Equity Fund 2019, L.P.	1,129	—	1,129	58,122
DCPF VI Oil and Gas Co-Investment Fund, L.P.	12	—	12	63
Denham Commodity Partners Fund VI, L.P.	419	—	419	38,013
Equistone Partners Europe Fund V E, L.P.	575	—	575	37,330
Equistone Partners Europe Fund VI E, SCSp	1,044	—	1,044	61,823
Gasherbrum Fund II, L.P.	13	—	13	—
Greenoaks Capital Opportunities Fund III	2,000	—	2,000	109,008
Greenoaks Capital Opportunities Fund V LP	1,567	—	1,567	30,622
Hahn & Company III L.P.	1,735	—	1,735	150,106
Hahn & Company III-S L.P.	521	—	521	64,177
Hg Genesis 9 L.P.	1,496	—	1,496	111,756
Hg Saturn 2 A L.P.	671	—	671	107,372
Hg Saturn 3 A L.P.	1,003	—	1,003	40,779
HgCapital 7 A, L.P.	96	—	96	9,947
HgCapital 8 D, L.P.	1,228	—	1,228	139,708
HGGC Fund II, L.P.	113	—	113	85,137
HGGC Fund III, L.P.	1,270	—	1,270	151,396
Incline Elevate Fund II, L.P.	1,194	—	1,194	19,526
Incline Elevate Fund, L.P.	695	—	695	75,053
Incline Equity Partners IV, L.P.	749	—	749	54,290
Incline Equity Partners V, L.P.	2,325	—	2,325	119,344
Insight Opportunities Fund I, L.P.	955	—	955	92,049
Insight Partners XI, L.P.	2,319	—	2,319	221,746
Insight Partners XII Buyout Annex Fund, L.P.	522	—	522	55,003
Insight Partners XII, L.P.	1,245	—	1,245	60,945
Insight Venture Partners X, L.P.	1,501	—	1,501	203,932
Interactions Corporation	100	—	100	5,299
K4 Private Investors, L.P.	1,703	—	1,703	164,551
L Catterton Growth Partners III, L.P.	1,286	—	1,286	147,144
L Catterton VIII, L.P.	1,314	—	1,314	77,479
Landmark Equity Partners XIV, L.P.	91	—	91	1,852
Lindsay Goldberg V, L.P.	2,573	—	2,573	143,378

## Defined Benefit (DB) Plan

**Table 3.11**

**Private Equity Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
LLR Equity Partners IV, L.P.	815	—	815	91,996
LLR Equity Partners V, L.P.	2,790	—	2,790	289,723
LLR Equity Partners VI, L.P.	3,020	—	3,020	180,636
Milestone Partners FS 2, L.P.	617	—	617	17,934
Milestone Partners III, L.P. *	(2,234)	—	(2,234)	7,835
Milestone Partners IV, L.P.	156	—	156	13,772
New Mountain Partners IV, L.P.	148	—	148	22,245
New Mountain Partners V, L.P.	1,047	—	1,047	196,409
New Mountain Partners VI, L.P.	2,789	—	2,789	261,411
NGP Natural Resources X, L.P.	110	—	110	8,160
NGP Natural Resources XI, L.P.	821	—	821	50,970
North Haven Private Equity Asia IV, L.P.	365	—	365	74,102
Oak HC/FT Partners IV, L.P.	2,109	—	2,109	114,171
Oak HC/FT Partners V, L.P.	1,940	—	1,940	18,257
OceanSound Partners Fund II	1,505	—	1,505	48,502
Odyssey Investment Partners Fund V, L.P.	533	—	533	57,744
Orchid Asia V, L.P.	77	—	77	5,965
Orchid Asia VI, L.P.	698	—	698	45,874
Orchid Asia VII, L.P.	984	—	984	53,932
PA Portfolio Advisors Secondary Fund, L.P.	535	—	535	50,461
PAI Europe VI, L.P.	934	—	934	47,901
PAI Europe VII, L.P.	1,323	—	1,323	125,895
Palladium Equity Partners IV, L.P.	293	—	293	86,602
Partners Group Secondary 2011 (USD), L.P. Inc.	166	—	166	11,938
Partners Group Secondary 2015 (USD) A, L.P.	888	—	888	61,206
Pennsylvania Co-Investment Fund, L.P.	182	—	182	26,662
Platinum Equity Small Cap Fund, L.P.	1,600	—	1,600	183,652
Portfolio Advisors Secondary Fund III, L.P.	1,248	—	1,248	94,024
Portfolio Advisors Secondary Fund IV, L.P.	1,752	—	1,752	149,371
Sante Health Ventures III	1,136	—	1,136	119,466
Sante Health Ventures IV	2,123	—	2,123	52,171
Searchlight Capital II, L.P.	519	—	519	45,889
Searchlight Capital III, L.P.	2,150	—	2,150	160,509
Strategic Partners Fund V, L.P.	14	—	14	234
Strategic Partners Fund VI, L.P.	210	—	210	19,840
Strategic Partners Fund VII, L.P.	1,178	—	1,178	96,034
Summit Partners Growth Equity Fund IX-A, L.P.	838	—	838	129,180
Summit Partners Growth Equity Fund X-A, L.P.	2,440	—	2,440	170,273
Summit Partners Growth Equity Fund XI-A, L.P.	2,921	—	2,921	47,222
Summit Partners Venture Capital Fund IV-A, L.P.	556	—	556	87,863
<b>*Fee Credit from partnership</b>				

## Defined Benefit (DB) Plan

**Table 3.11**

**Private Equity Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
TDR Capital V L.P.	1,800	—	1,800	2,288
Tenaya Capital VI, L.P.	381	—	381	29,139
Tenaya Capital VII, L.P.	1,261	—	1,261	201,561
The Energy & Minerals Group Fund III, L.P.	750	—	750	52,228
Trilantic Capital Partners V (North America), L.P.	320	—	320	31,907
Trilantic Capital Partners VI (North America), L.P.	1,763	—	1,763	165,715
Venor Special Situations Fund II, L.P.	301	—	301	28,714
Versa Capital Fund II, L.P.	789	—	789	13,315
Versa Capital Fund III, L.P.	1,377	—	1,377	76,718
<b>Total - Private Equity</b>	<b>\$ 110,916</b>	<b>\$ —</b>	<b>\$ 110,916</b>	<b>\$ 9,525,922</b>

## Private Credit Investments

Private Credit typically provides enhanced yields over publicly-traded fixed income markets and serves as a diversifier to the overall portfolio by providing exposure to a variety of underlying collateral types not easily accessed through traditional publicly traded markets.

**Table 3.12**

**Private Credit Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Private Fixed Income</b>				
Apollo European Principal Finance Fund II (Dollar A), L.P.	\$ 15	\$ —	\$ 15	\$ 5,269
Apollo European Principal Finance Fund III (Dollar A), LP	1,583	—	1,583	110,295
Avenue Europe Special Situations Fund III (U.S.), L.P.	374	—	374	140,061
Bain Capital Distressed and Special Situations 2016 (A), L.P.	1,681	—	1,681	153,148
Bain Capital Distressed and Special Situations 2019 (A), L.P.	2,561	—	2,561	258,805
Bain Capital Middle Market Credit 2014, LP	292	—	292	23,799
Bain Capital Special Situations Asia II, LP	616	—	616	88,438
Carlyle Energy Mezzanine Opportunities Fund II, L.P.	413	—	413	29,640
Cerberus PSERS Levered Loan Opportunities Fund, L.P.	10,488	—	10,488	513,573
Clearlake Opportunities Partners (P) II, L.P.	1,032	—	1,032	63,188
Clearlake Opportunity Partners III, L.P.	544	—	544	22,779
Dawson Partners (Independence), L.P.	2,899	—	2,899	238,493
Galton Onshore Mortgage Recovery Fund IV, L.P.	180	—	180	31,998
Hayfin SOF II USD Co-Invest, L.P.	67	—	67	24,241
Hayfin SOF II USD, L.P.	1,589	—	1,589	81,664
ICG Europe Fund V, L.P.	20	—	20	13,629
ICG Europe Fund VI, L.P.	238	—	238	29,872
ICG Europe Fund VII Feeder SCSp	1,226	—	1,226	132,727
ICG Europe Fund VIII SCSp	2,817	—	2,817	121,922
International Infrastructure Finance Company Fund, L.P.	509	—	509	11,145
Keystone Partners, L.P. Series A	1,020	—	1,020	108,482
Latitude Management Real Estate Capital IV, Inc.	864	—	864	59,092
LBC-P Credit Fund, L.P.	6,293	—	6,293	297,823
Park Square - PSERS Credit Opportunities Fund, L.P.	5,646	—	5,646	710,509
PIMCO BRAVO Fund III Onshore Feeder, LP	1,605	—	1,605	247,547
PSERS TAO Partners Parallel Fund, L.P. - (TAO 2.0)	5,215	—	5,215	574,283
Sixth Street Fundamental Strategies Partners (A), L.P.	1,345	—	1,345	131,402
Sixth Street Lending Partners	59	—	59	83,525
Sixth Street Opportunities Partners III (A), L.P.	144	—	144	22,677
Sixth Street Opportunities Partners IV (A), L.P.	1,275	—	1,275	111,454
Sixth Street Opportunities Partners V (A), L.P.	2,253	—	2,253	97,359
Sixth Street Specialty Lending Europe II, L.P.	802	—	802	70,069
SSG Capital Partners V Sidecar, L.P.	755	—	755	59,471
SSG Capital Partners V, L.P.	1,448	—	1,448	49,674
TCI Real Estate Partners Fund IV LP	209	—	209	75,525
Varde Scratch and Dent Feeder I-A, L.P., The	31	—	31	11,693
<b>Total - Private Fixed Income</b>	<b>\$ 58,108</b>	<b>\$ —</b>	<b>\$ 58,108</b>	<b>\$ 4,805,271</b>

## Private Real Asset

### Private Infrastructure Investments

While providing a current income return and a potential hedge against inflation, Private Infrastructure also provides access to investment opportunities not available in publicly traded infrastructure markets.

### Private Real Estate Investments

Private Real Estate typically provides current income, appreciation, and a potential hedge against inflation, and serves as a diversifier to the overall portfolio. Private Real Estate also provides access to investment opportunities not available in the publicly traded real estate markets.

**Table 3.13**

**Private Real Assets Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
<b>Private Real Asset</b>				
AG Core Plus Realty Fund IV, L.P.	\$ 793	\$ —	\$ 793	\$ 33,552
AG Europe Realty Fund II, L.P.	1,179	—	1,179	82,448
AG Europe Realty Fund III, L.P.	998	—	998	85,531
AG Realty Value Fund X, L.P.	1,341	—	1,341	99,051
Almanac Realty Securities VI, L.P.	146	—	146	10,888
Almanac Realty Securities VII, L.P.	750	—	750	65,214
Almanac Realty Securities VIII, L.P.	1,279	—	1,279	147,576
Ares European Real Estate Fund IV, L.P.	263	—	263	13,458
Ares U.S. Real Estate Fund IX, L.P.	530	—	530	43,351
Ares U.S. Real Estate Fund VIII, L.P.	123	—	123	11,300
Avenue Real Estate Fund (Parallel) L.P.	107	—	107	22,339
Bell Institutional Fund VI, L.P.	892	—	892	87,083
Bell Institutional Fund VII, L.P.	1,370	—	1,370	110,977
Bell Value-Add Fund VIII, L.P.	2,252	—	2,252	23,017
Blackstone Infrastructure Partners L.P.	6,998	—	6,998	739,948
Blackstone Real Estate Debt Strategies III, L.P.	232	—	232	10,442
Blackstone Real Estate Partners Europe IV, L.P.	269	—	269	14,465
Blackstone Real Estate Partners VIII, L.P.	1,910	—	1,910	208,788
Brookfield Global Transition Fund, L.P.	3,105	—	3,105	158,137
Brookfield Strategic Real Estate Partners II, L.P.	1,234	—	1,234	111,596
Brookfield Strategic Real Estate Partners III, L.P.	1,967	—	1,967	239,390
Brookfield Strategic Real Estate Partners IV, L.P.	3,673	—	3,673	206,713
Brookfield Strategic Real Estate Partners V, L.P.	709	—	709	—
Brookfield Strategic Real Estate Partners, L.P.	426	—	426	22,361
Cabot Industrial Core Fund II, L.P.	1,000	—	1,000	121,662
Cabot Industrial Value Fund VI, L.P.	1,449	—	1,449	108,768
Cabot Industrial Value Fund VII, L.P.	2,603	—	2,603	41,593



## Defined Benefit (DB) Plan

**Table 3.13**

**Private Real Assets Investment Fees by Manager**  
**Fiscal Year ended June 30, 2024**  
**(Dollar amounts in Thousands)**

	<u>Base Fees</u>	<u>Profit Share</u>	<u>Total</u>	<u>NAV</u>
Carlyle Realty Partners IX, L.P.	2,064	—	2,064	58,215
Carlyle Realty Partners VI, L.P.	20	—	20	16,792
Carlyle Realty Partners VII, L.P.	232	—	232	21,592
Carlyle Realty Partners VIII, L.P.	1,053	—	1,053	95,246
CIM Infrastructure Fund III, L.P.	1,212	—	1,212	191,731
DIF Infrastructure Fund VII SCSp	4,316	—	4,316	64,024
DRA Growth and Income Fund IX, LLC	1,256	—	1,256	61,888
DRA Growth and Income Fund VIII, LLC	548	—	548	10,546
DRA Growth and Income Fund X, LLC	1,565	—	1,565	95,656
DRA Growth and Income Master Fund XI, LLC	1,171	—	1,171	13,518
EQT Exeter Industrial Core-Plus Fund IV, L.P.	185	—	185	30,658
EQT Exeter Industrial Value Fund VI, LP	1,050	—	1,050	23,238
Exeter Core Industrial Club Fund II, L.P.	984	—	984	238,341
Exeter Industrial Core Fund III, L.P.	887	—	887	101,077
Exeter Industrial Value Fund IV, L.P.	55	—	55	10,072
Exeter Industrial Value Fund V, L.P.	1,113	—	1,113	143,217
GCM Grosvenor Customized Infrastructure Strategies II, LP	233	—	233	47,914
GCM US Partnership Opportunities, L.P.	1,012	—	1,012	124,494
GF Management, LLC	131	—	131	63,742
International Infrastructure Finance Company II, L.P.	629	—	629	44,188
ISQ Global Infrastructure Fund III, L.P.	5,200	—	5,200	238,073
L&B Realty Advisors	68	—	68	30,092
LEM Multifamily Fund V, L.P.	718	—	718	77,626
LEM Multifamily Fund VI, L.P.	900	—	900	30,965
LS Power Equity Partners V, L.P.	1,997	—	1,997	3,009
O'Connor Real Estate Advisors, LLC	900	—	900	124,017
PGIM Real Estate	900	—	900	156,635
PGIM Real Estate Capital VII, SCSp	388	—	388	49,812
Pramerica Real Estate Capital VI, L.P.	330	—	330	23,772
Property Management, Inc.	95	—	95	7,772
RCG Longview Debt Fund VI, L.P.	309	—	309	11,659
Security Capital Preferred Growth	1,626	—	1,626	195,864
Senior Housing Partnership Fund V, L.P.	605	—	605	82,426
Stockbridge Real Estate Fund III, LP	299	—	299	731,233
Stockbridge Real Estate Fund, L.P.	6,261	—	6,261	98,226
Strategic Partners Real Assets II, L.P.	1,212	—	1,212	136,720
UBS (US) Trumbull Property Fund, L.P.	171	—	171	17,473
<b>Total - Private Real Asset</b>	<b>\$ 79,290</b>	<b>\$ —</b>	<b>\$ 79,290</b>	<b>\$ 6,291,171</b>

## Private Market Analysis

PSERS has utilized three methodologies to assess the relative performance of PSERS private markets asset classes compared to public market equivalents (PME) for the 10-year period ending June 30, 2024: (1) Direct Alpha; (2) KS PME; and (3) the Excess Value Method (EVM).

Direct Alpha (% rate) – Annualized excess return / loss achieved by an investor compared to an investment in the equivalent public index (>0.0% = Good)

KS PME (multiple) – Ratio which represents how many dollars an investor has earned compared to an investment in the equivalent public index (>1.0x = Good)

Excess Value Method “EVM” (\$ value) – How many more / less dollars will an investor have compared to an investment in the equivalent public index, expressed in dollars (Positive \$ = Good)

For the 10-year period ending June 30, 2024, all three measures are in the “Good” range for PSERS private markets asset classes, demonstrating that value has been added above the respective PME benchmarks.

**Table 3.14 Private Market versus Public Markets analysis for year ending June 30, 2024.**

<b>Table 3.14</b> <b>Private Market versus Public Markets Analysis</b> <b>Calendar Year June 30, 2024</b>					
<u>10-Year</u> <u>Performance (as</u> <u>of 6/30/24)</u>	<u>Total Private</u> <u>Markets</u>	<u>Private Equity</u>	<u>Private Credit</u>	<u>Real Estate</u>	<u>Infrastructure</u> <u>FTSE</u> <u>Developed Core</u> <u>50/50</u>
<u>PME</u> <u>Benchmark*</u>	<u>60/40</u>	<u>PSERS Index</u>	<u>LLI + 200</u>	<u>FTSE NAREIT</u>	
NAV (\$B)	\$26	\$12	\$6	\$6	\$2
Direct Alpha (%)	4%	3%	3%	4%	10%
KS PME	1.14x	1.10x	1.09X	1.14x	1.26x
EVM (\$M)	\$9,904	\$3,606	\$1,435	\$2,505	\$625
<u>NAV</u> <u>Sensitivities</u>	<u>Resulting EVM</u> <u>(\$M)</u>	<u>Resulting EVM</u>	<u>Resulting EVM</u>	<u>Resulting EVM</u>	<u>Resulting EVM</u>
1.10X	12,539	4,819	2,005	3,074	869
1.00X	9,904	3,606	1,435	2,505	625
0.90X	7,268	2,394	865	1,935	380
<b>*PME Benchmarks: Total Private Markets – 60% MSCI ACWI IMI with USA Gross, Non-US Net Index and 40% Bloomberg US Aggregate; Private Equity - MSCI ACWI IMI with USA Gross Net Total Return USD EOD Index; Private Credit - Morningstar LSTA Leveraged Loan Index + 200 basis points; Real Estate – FTSE NAREIT REIT TR Index; Infrastructure - FTSE Developed Core Infrastructure 50/50 Net Index (Hedged to USD).</b>					

## Private Market Analysis (continued)

As of June 30, 2024, PSERS Total Private Markets portfolio generated a 10-year net IRR of 10.1% (net of all fees and expenses). As can be observed in the middle section of the above table, over same time period (assuming the same timing of cash flows in and out of the PME benchmark as PSERS portfolio), PSERS Total Private Markets portfolio generated Direct Alpha of 4.1%, a KS PME ratio of 1.14x, and excess value (EVM) of approximately \$9.9 billion compared to a US 60/40 portfolio (MSCI ACWI IMI / Barclays Agg). It is important to note that individual asset class EVM's do not sum to Total Private Markets since each sub-asset class is being presented against their unique PME benchmark.

The next section of the table presents a new financial metric (EVM in NAV) that measures how much alpha (i.e., relative over/underperformance versus the respective PME benchmark) was still at risk (i.e., unrealized) as of June 30, 2024. More specifically, the metric seeks to quantify how much excess value would be lost if both portfolio NAV and the PME benchmark went to zero, and this highlights how reliant we are on marked performance today versus realized returns in the past.

The bottom section of the table presents resulting excess value, based on modeled changes in net asset value (NAV) over this same 10-year period. PSERS actual excess value is highlighted in blue based on the 10-year ending NAV of \$26.4 billion. However, for illustrative purposes, also displayed is resulting excess value assuming both a plus/minus 10% change in PSERS June 30, 2024, ending NAV. As you can see, excess value is positive under both scenarios.

Table 3.15

### Private Market Fees and Profits Calendar Year December 31, 2023 (\$ amounts in millions)

External Private Markets	Managers Fees	Manager Operating Expenses	Total Managers Fees and Operating Expenses	Total Profits Including Carried Interest	PSERS Share of Profits	PSERS Percent of Profits	Paid Carried Interest	Accrued Carried Interest*
Private Equity	\$119	\$66	\$185	\$1,029	\$898	87%	\$131	\$164
Private Fixed Income	65	40	105	560	530	95%	30	76
Private Real Estate	54	36	90	203	192	94%	11	(29)
Private Infrastructure**	27	22	49	119	100	84%	19	23
External Private Markets Total	\$265	\$164	\$429	\$1,911	\$1,720	90%	\$191	\$234

\* Represents an accounting accrual based on unrealized accounting gains. The manager does not receive this accrued carry unless the gains are realized.

\*\* Infrastructure includes both Private Infrastructure (\$2.1B NAV) and Private Commodities (\$0.4B NAV).

Table 3.15 summarizes the fees, operating expenses, and profits for PSERS Private Markets for calendar year 2023. As shown above, PSERS share of profits was \$1.7 billion for the calendar year ending December 31, 2023. The percentage of profits PSERS earned over this time period from Private Markets 90%.

## Defined Benefit (DB) Plan

**Table 3.16 Summarizes fees, operating expenses, and profits for PSERS Private Markets for the preceding five calendar years.**

<u>External Private Markets</u>	<u>Managers Fees</u>	<u>Manager Operating Expenses</u>	<u>Total Managers Fees and Operating Expenses</u>	<u>Total Profits Including Carried Interest</u>	<u>PSERS Share of Profits</u>	<u>PSERS Percent of Profits</u>	<u>Paid Carried Interest</u>	<u>Accrued Carried Interest*</u>
2023	\$264	\$164	\$428	\$1,911	\$1,720	90%	\$191	\$233
2022	249	128	377	2,861	2,629	92%	231	(44)
2021	238	95	333	4,008	3,426	85%	582	776
2020	238	77	315	1,892	1,641	87%	252	128
2019	229	74	303	2,033	1,707	84%	325	55
5-Year Total	\$1,218	\$538	\$1,756	\$12,705	\$11,123	88%	\$1,581	\$1,148

As Table 3.16 details the preceding five calendar years of expenses and profits for PSERS Private Markets. PSERS share of profits over this five-year period was \$11.1 billion, representing 88% of the total profits earned by the Private Market asset classes. PSERS earned approximately 7.0x for every profit dollar earned by a General Partner.

<u>Manager (\$ in Millions)</u>	<u>Mgmt Fees</u>	<u>Expenses</u>	<u>Total Carried Interest</u>	<u>Accrued Carried Interest</u>	<u>Paid Carried Interest</u>	<u>Total Profits Paid Out</u>	<u>Retain by GP</u>	<u>Retain by PSERS</u>
<b>Private Equity:</b>								
Actis GP LP	\$ 0.84	\$ 0.27	\$ —	\$ —	\$ —	\$ 1.61	\$ —	\$ 1.61
Adams Capital Management Inc	—	0.01	—	—	—	—	—	—
Aisling Capital Management LP	0.90	0.27	5.35	5.35	—	0.63	—	0.63
Aksia LLC	0.07	0.18	—	—	—	—	—	—
Apax Partners	5.66	5.20	7.31	7.31	—	4.25	—	4.25
Apogem Capital LLC	0.06	0.20	(0.11)	(0.18)	0.07	13.41	0.07	13.35
Apollo Global Management Inc.	1.28	1.52	5.78	0.36	5.42	31.59	5.42	26.18
Ares Management LLC	0.12	0.04	0.05	(0.22)	0.27	2.73	0.27	2.46
Arrowhead Investment Management LLC	—	—	0.32	—	0.32	0.32	0.32	—
Avenue Capital Group	—	0.01	—	—	—	—	—	—
Bain Capital LLC	3.56	0.64	47.18	33.33	13.85	124.54	13.85	110.70
Black Diamond Capital Management LLC	—	—	—	—	—	—	—	—
Blackstone Group LP	1.50	2.13	4.03	0.16	3.87	25.41	3.87	21.54
Blue Point Capital Partners LLC	1.01	0.35	13.70	13.70	—	—	—	—
BPEA EQT Asia	—	—	(0.69)	(0.69)	—	(15.54)	—	(15.54)

## Defined Benefit (DB) Plan

**Table 3.17**

Calendar Year 2023	Paid or Accrued to Manager					Distribution of Profits		
Manager (\$ in Millions)	Mgmt Fees	Expenses	Total Carried Interest	Accrued Carried Interest	Paid Carried Interest	Total Profits Paid Out	Retain by GP	Retain by PSERS
Bridgepoint Advisors Ltd	5.28	4.52	51.33	49.13	2.20	27.14	2.20	24.94
Bryn Mawr Capital Management Inc	—	—	—	—	—	—	—	—
Capital International	0.24	0.13	—	—	—	6.47	—	6.47
Cerberus Capital Management LP	2.09	1.65	5.84	(3.36)	9.20	104.41	9.20	95.21
Cinven	—	—	—	—	—	—	—	—
Clayton Dubilier & Rice	1.02	0.95	—	—	—	—	—	—
Clearlake Capital Group LP	3.11	2.48	11.87	7.07	4.80	27.27	4.80	22.47
Coller Capital Limited	1.06	1.36	0.36	(0.17)	0.53	12.44	0.53	11.92
Crestview Partners	2.31	2.92	(4.97)	(10.52)	5.55	41.28	5.55	35.73
Cross Atlantic Capital Partners	—	—	—	—	—	—	—	—
CVC Capital Partners	—	0.07	1.63	1.39	0.24	1.75	0.24	1.51
Denham Capital Management LP	0.46	0.10	0.17	0.17	—	(0.07)	—	(0.07)
Energy & Minerals Group, The	0.77	0.02	—	—	—	2.69	—	2.69
Equistone Partners Europe Limited	1.79	1.62	(1.25)	(1.25)	—	30.31	—	30.31
First Reserve	—	0.16	—	—	—	—	—	—
Gold Hill Capital Management LLC	—	0.03	(0.06)	(0.07)	—	0.38	—	0.38
Greenoaks Capital Partners	4.88	0.42	(7.12)	(7.12)	—	—	—	—
Hahn & Company	2.52	1.60	7.34	7.34	—	1.00	—	1.00
HgCapital	4.51	11.86	24.12	13.58	10.54	44.32	10.54	33.78
HGGC	1.29	0.32	17.11	14.84	2.28	18.28	2.28	16.00
Incline Equity Partners	5.08	1.93	2.14	(6.41)	8.54	40.80	8.54	32.26
Insight Venture Management LLC	6.50	2.27	20.05	17.49	2.56	14.02	2.56	11.47
Irving Place Capital Management LP	—	—	—	—	—	2.08	—	2.08
K1 Investment Management	1.74	0.16	2.30	2.30	—	—	—	—
L Catterton	4.64	1.11	19.89	6.82	13.07	66.70	13.07	53.63
Lindsay Goldberg	2.59	2.88	5.05	4.94	0.11	0.23	0.11	0.12
LLR Partners	7.22	2.62	12.67	11.92	0.75	6.36	0.75	5.61
Mid Atlantic Venture Funds	—	—	—	—	—	0.11	—	0.11
Milestone Partners	(2.08)	0.22	(9.58)	(9.58)	—	4.50	—	4.50
Morgan Stanley	0.81	0.18	—	—	—	9.65	—	9.65
New Mountain Capital LLC	5.29	2.90	10.55	(14.64)	25.19	126.78	25.19	101.59
NGP Energy Capital Management LLC	1.12	0.20	0.31	0.31	—	18.28	—	18.28
Oak HC/FT	4.13	0.33	4.15	4.15	—	—	—	—

## Defined Benefit (DB) Plan

**Table 3.17**

Calendar Year 2023		Paid or Accrued to Manager				Distribution of Profits		
Manager (\$ in Millions)	Mgmt Fees	Expenses	Total Carried Interest	Accrued Carried Interest	Paid Carried Interest	Total Profits Paid Out	Retain by GP	Retain by PSERS
Oaktree Capital Management LP	—	0.02	(0.01)	(0.01)	—	—	—	—
Odyssey Investment Partners LLC	0.64	0.05	—	—	—	2.25	—	2.25
Orchid Asia Group Management Limited	1.84	0.32	(3.57)	(3.57)	—	—	—	—
PAI Partners	2.31	0.19	1.68	0.18	1.50	16.31	1.50	14.81
Palladium Equity Partners LLC	0.35	0.14	8.85	8.84	0.01	1.57	0.01	1.56
Partners Group	1.43	0.23	0.44	—	0.44	6.93	0.44	6.50
Platinum Equity Advisors LLC	2.28	1.47	(5.71)	(13.13)	7.42	85.45	7.42	78.03
Polaris Capital Group Co Ltd	1.20	0.26	4.73	4.73	—	—	—	—
Portfolio Advisors LLC	3.57	0.49	0.06	0.06	—	4.40	—	4.40
Sante Ventures	3.51	0.49	21.81	21.81	—	22.70	—	22.70
SCP Private Equity Management Company LLC	—	0.08	—	—	—	—	—	—
Searchlight Capital Partners	3.29	0.46	4.36	2.80	1.56	12.96	1.56	11.40
Soros Fund Management LLC	—	—	—	—	—	0.93	—	0.93
StarVest Partners	0.05	0.03	—	—	—	4.37	—	4.37
StepStone Group LP	—	—	—	—	—	—	—	—
Sterling Partners	—	0.04	(0.09)	—	(0.09)	(0.09)	(0.09)	—
Summit Partners	6.64	1.95	5.23	3.50	1.72	7.30	1.72	5.57
TDR Capital	1.84	0.50	—	—	—	—	—	—
Tenaya Capital	1.68	0.54	(3.03)	(8.20)	5.17	8.03	5.17	2.86
Trilantic Capital Partners	2.53	1.60	(0.59)	(4.04)	3.45	58.74	3.45	55.29
Tulco LLC	—	—	—	—	—	1.10	—	1.10
Valar Ventures	—	0.04	—	—	—	—	—	—
Venor Capital Management LP	0.35	0.22	—	—	—	—	—	—
Versa Capital Management LP	2.15	0.91	—	—	—	0.08	—	0.08
Webster Equity Partners LLC	(0.32)	0.04	3.23	3.23	—	—	—	—
<b>Private Credit:</b>								
Apollo Global Management Inc.	\$ 1.69	\$ 1.87	\$ (2.75)	\$ (4.97)	\$ 2.22	\$ 5.06	\$ 2.22	\$ 2.85
Ares Management LLC	2.25	10.00	4.40	4.37	0.03	12.54	0.03	12.51
Avenue Capital Group	0.41	1.34	13.85	11.19	2.66	4.74	2.66	2.08
Bain Capital LLC	4.86	10.49	5.44	5.44	—	11.68	—	11.68
Carlyle	0.42	0.56	—	—	—	27.84	—	27.84

## Defined Benefit (DB) Plan

**Table 3.17**

Calendar Year 2023		Paid or Accrued to Manager				Distribution of Profits		
Manager (\$ in Millions)	Mgmt Fees	Expenses	Total Carried Interest	Accrued Carried Interest	Paid Carried Interest	Total Profits Paid Out	Retain by GP	Retain by PSERS
Cerberus Capital Management LP	10.58	66.63	5.04	(1.48)	6.52	6.52	6.52	—
Clearlake Capital Group LP	1.89	2.54	1.40	1.40	—	3.53	—	3.53
Dawson Partners	8.38	5.96	6.99	6.99	—	187.79	—	187.79
Hayfin Management Limited (Cayman)	1.82	1.26	(6.04)	(6.04)	—	20.69	—	20.69
Intermediate Capital Group PLC	4.18	7.51	9.21	6.29	2.92	8.45	2.92	5.52
LaSalle Investment Management	0.91	8.96	—	—	—	6.36	—	6.36
LBC Credit Management LP	7.25	44.34	16.73	8.16	8.57	10.68	8.57	2.11
Mariner Investment Group LLC	0.37	0.33	—	—	—	5.53	—	5.53
NewMarket Investment Management LP	1.54	1.82	3.46	3.15	0.31	31.00	0.31	30.69
Pacific Investment Management Company	1.57	45.20	8.98	8.81	0.18	0.18	0.18	—
Park Square Capital LLP	5.59	76.45	9.93	9.93	—	27.99	—	27.99
Sixth Street Advisers LLC	10.90	9.01	28.13	21.39	6.74	172.03	6.74	165.29
Summit Partners	—	—	—	—	—	1.85	—	1.85
TCI Fund Management Limited	0.08	0.19	0.91	0.91	—	6.24	—	6.24
Varde Management LP	0.14	0.38	—	—	—	8.96	—	8.96
<b>Real Estate:</b>								
Angelo Gordon & Co LP	\$ 4.76	\$ 3.48	\$ (0.74)	\$ (1.54)	\$ 0.79	\$ 7.86	\$ 0.79	\$ 7.07
Ares Management LLC	1.03	0.72	(0.37)	(0.61)	0.24	4.70	0.24	4.46
Avenue Capital Group	0.25	0.26	—	—	—	—	—	—
Bell Partners Inc	4.67	(2.82)	(5.43)	(5.44)	0.01	13.01	0.01	13.00
BlackRock Inc	—	—	—	—	—	—	—	—
Blackstone Group LP	2.55	3.13	(10.76)	(10.96)	0.20	9.66	0.20	9.46
Brookfield Asset Management	8.18	2.65	(0.16)	(4.60)	4.44	63.65	4.44	59.20
Cabot Properties LP	4.56	11.38	(2.47)	(2.47)	—	5.27	—	5.27
Carlyle	3.36	8.81	0.46	(2.75)	3.21	15.47	3.21	12.27
CenterSquare Investment Management	0.27	1.21	0.04	0.04	—	0.88	—	0.88
DRA Advisors LLC	5.32	1.97	1.58	0.25	1.33	17.09	1.33	15.76
EQT Partners AB	4.59	—	(1.59)	(2.58)	0.99	17.07	0.99	16.08
Fortress Investment Group LLC	—	0.23	—	—	—	—	—	—
GF Management LLC	0.13	—	—	—	—	3.29	—	3.29
Island Capital Group LLC	—	—	—	—	—	0.03	—	0.03
L&B Realty Advisors LLP	0.16	—	—	—	—	2.26	—	2.26

## Defined Benefit (DB) Plan

**Table 3.17**

Calendar Year 2023		Paid or Accrued to Manager				Distribution of Profits		
Manager (\$ in Millions)	Mgmt Fees	Expenses	Total Carried Interest	Accrued Carried Interest	Paid Carried Interest	Total Profits Paid Out	Retain by GP	Retain by PSERS
LaSalle Investment Management	—	0.04	—	—	—	0.47	—	0.47
LEM Capital LP	1.65	0.68	(2.15)	(2.29)	0.14	2.19	0.14	2.04
Neuberger Berman	2.03	0.23	(2.87)	(3.00)	0.13	12.14	0.13	12.01
O'Connor Capital Partners	—	—	—	—	—	—	—	—
O'Connor Real Estate Advisors LLC	0.90	—	—	—	—	—	—	—
Paramount Group Inc	—	0.03	—	—	—	—	—	—
PGIM Real Estate	2.84	2.39	(0.11)	(0.11)	—	2.25	—	2.25
Property Management Inc	0.04	0.06	—	—	—	—	—	—
Silverpeak Real Estate Partners LP	—	—	—	—	—	—	—	—
Stockbridge Capital Group LLC	6.23	1.21	6.71	6.71	—	25.51	—	25.51
UBS Financial Services Inc	0.19	—	—	—	—	0.68	—	0.68
<b>Infrastructure:</b>								
Blackstone Group LP	\$ 7.60	\$ 8.92	\$ —	\$ —	\$ —	\$ 24.27	\$ —	\$ 24.27
Brookfield Asset Management	3.11	2.54	—	—	—	0.23	—	0.23
CIM Group LLC	0.95	1.90	—	—	—	—	—	—
DIF Capital Partners	3.63	0.30	—	—	—	0.03	—	0.03
Grosvenor Capital Management LP	0.88	0.24	—	—	—	5.40	—	5.40
I Squared Capital Advisors (US) LLC	5.29	3.43	—	—	—	2.21	—	2.21
LS Power Equity Advisors LLC	0.49	0.94	—	—	—	—	—	—
NewMarket Investment Management LP	0.66	0.18	—	—	—	9.15	—	9.15
<b>Commodities:</b>								
Denham Capital Management LP	\$ 1.57	\$ 3.36	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
NGP Energy Capital Management LLC	2.74	0.17	—	—	—	58.52	—	58.52



## Commitment to Pennsylvania Financial Services Firms (as of June 30, 2024)

PSERS has shown a strong commitment to Pennsylvania's financial services industry by having assets managed by firms based in Pennsylvania or by firms with offices in Pennsylvania. In FY 2023-24, investment management fees paid to external firms managing PSERS assets from offices located in Pennsylvania amounted to \$20.9 million, or 5.6% of the total external investment manager fees.

Table 3.18 is a list of assets managed by external managers with headquarters or offices located in Pennsylvania, as of June 30, 2024.

Table 3.18 Pennsylvania-Based External Managers	
<b>Public Fixed Income:</b>	<b>Private Equity:</b>
Radcliffe Capital Management, L.P.	Adams Capital Management, L.P.
	Co-Investment 2000 Fund, L.P.
<b>Private Credit:</b>	Co-Investment Fund II, L.P.
International Infrastructure Finance Co Fund, L.P.	Cross Atlantic Technology Fund II
Keystone Partners, L.P. Series A	Cross Atlantic Technology Fund, L.P.
Keystone Partners, L.P. Series B	Incline Elevate Fund II, L.P.
	Incline Elevate Fund, L.P.
<b>Private Real Estate:</b>	Incline Equity Partners III (PSERS), L.P.
EQT Exeter Industrial Core-Plus Fund IV, L.P.	Incline Equity Partners IV, L.P.
EQT Exeter Industrial Value Fund VI, LP	Incline Equity Partners V, L.P.
Exeter Core Industrial Club Fund II, L.P.	Incline Equity Partners VI, L.P.
Exeter Core Industrial Club Fund II, LP (Secondary Mkt Acquisition)	LLR Equity Partners III, L.P.
Exeter Industrial Core Fund III, L.P.	LLR Equity Partners IV, L.P.
Exeter Industrial Value Fund II, L.P.	LLR Equity Partners V, L.P.
Exeter Industrial Value Fund III, L.P.	LLR Equity Partners VI, L.P.
Exeter Industrial Value Fund IV, L.P.	Milestone Partners FS 2, L.P.
Exeter Industrial Value Fund V, L.P.	Milestone Partners III, L.P.
GF Management	Milestone Partners IV, L.P.
LEM Multifamily Fund V, L.P.	SCP Private Equity Partners II, L.P.
LEM Multifamily Fund VI, L.P.	Versa Capital Fund II, L.P.
LEM Multifamily Senior Equity Fund IV, L.P.	Versa Capital Fund III, L.P.
Property Management, Inc.	
<b>Private Infrastructure:</b>	
International Infrastructure Finance Co Fund II, L.P.	

### Investments in Pennsylvania-Based Companies

Pennsylvania Private Equity and Private Equity Co-Investments are sourced from funds where PSERS or its consultant is an investor. The Board, in managing the investment portfolio, will also be cognizant of concentration risk to any one region, including Pennsylvania. The Fund will continue to seek investments in Pennsylvania-based companies when the investment characteristics are equivalent to other favorable investments, subject to diversification considerations.

### U.S. Equities

PSERS invests in the stock of Pennsylvania-based companies through the various U.S. Equity portfolios managed by internal portfolio managers. PSERS has always had investments in large national firms located in Pennsylvania.

### Fixed Income Securities

PSERS invests in the debt of Pennsylvania-based companies through the various Fixed Income portfolios managed by external and internal portfolio managers. PSERS has always had investments in large national firms located in Pennsylvania.

### Private Infrastructure

From the program inception to June 30, 2024, PSERS has committed capital to one partnership headquartered in Pennsylvania totaling \$100 million in commitment.

### Private Real Estate

From the program inception to June 30, 2024, PSERS has committed capital to 30 investments headquartered in Pennsylvania totaling \$2.3 billion in commitments.

### Private Equity

From the program inception to June 30, 2024, PSERS has committed capital to 56 investments headquartered in Pennsylvania totaling \$3.6 billion in commitments.

### Private Markets Pennsylvania In-House Co-Investment Program

In April 2015, PSERS Board approved a \$250 million commitment for PSERS to co-investment in portfolio companies based in Pennsylvania. The portfolio companies are sourced from funds where PSERS or its consultant is an investor. As of June 30, 2024, PSERS has invested \$59.9 million and has a total value of \$128 million, resulting from \$102.2 million in distributions and \$25.8 million of net assets. The number of employees, payroll, and market value are included within their respective asset class in Table 3.17.

### Private Credit

From the program inception to June 30, 2024, PSERS has committed capital to seven investments headquartered in Pennsylvania totaling \$1.4 billion in commitments.

## Defined Benefit (DB) Plan

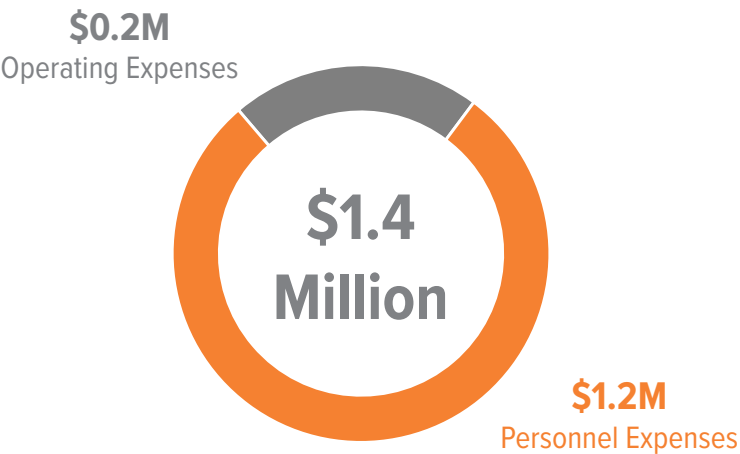
Table 3.19 displays Pennsylvania-based investments and other statistics as of December 31, 2023 (\$'s in millions):

Table 3.19

Statistics of Pennsylvania-Based Investments				
<u>Asset Class</u>	<u>Total PA Market Value (PSERS Portion)</u>	<u>Total PA Market Value (Total Invested)</u>	<u># of People Employed</u>	<u>Payroll</u>
U.S. Equities	\$ 410.7	\$ 410.7	*	*
Fixed Income	38.1	38.1	*	*
Private Credit	107.2	2,187.0	4,609	1.8
Private Real Estate	67.3	1,258.9	523.0	18.9
Private Equity	2,232.1	76,511.6	124,884	724.9
Private Infrastructure	298.6	1,993.7	1,833.0	22.7
Total	3,153.9	82,399.9	131,849	768.3
* Statistics for publicly traded companies not reported				

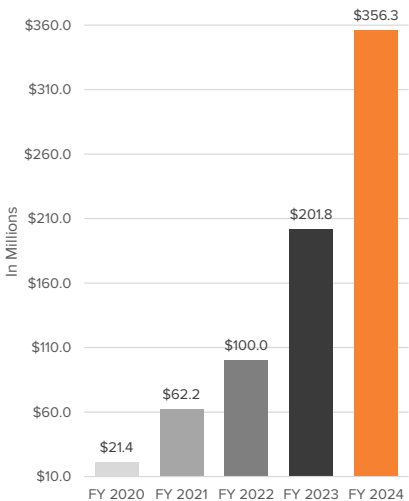
# DEFINED CONTRIBUTION (DC) PLAN

## PROPOSED FY 2025-26 BUDGET



### Operating Expenses Excerpts

Consultant Services (Non EDP):	\$103k
Insurance, Surety, & Fidelity Bonds:	\$35k
Legal Services/Fees:	\$32k



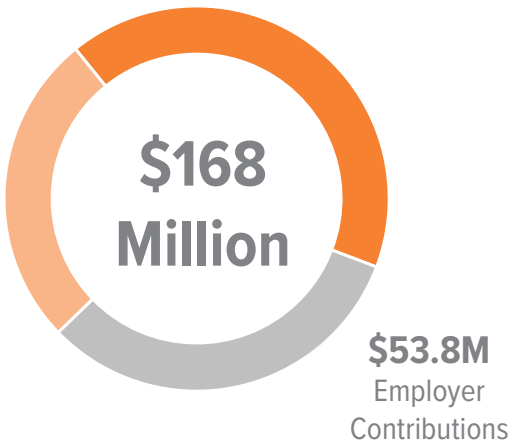
**\$356.3 Million**

DC Net Position  
as of June 30, 2024


## FY 2023-24 TOTAL ADDITIONS

**\$44.4M**  
Net Investment  
Earnings


**\$69.7M**  
Member  
Contributions




## Defined Contribution (DC) Plan Description



**80,000**  
 Participants  
 75k Active  
 5k Inactive



**\$356.3 Million**  
 Total DC Plan Balance



**\$342.5 Million**  
 Total DC Investment  
 Balance

Target Date \$335.3M  
 Stocks \$6.6M  
 Bonds \$235.2k  
 Stable Value \$184.5k  
 Balanced \$216.2k



**\$44.4 Million**  
 Net Investment Income

Data as of June 30, 2024

Following the passage of Act 5, members hired on or after July 1, 2019, have the option to elect one of two membership classes that participate in the DB Plan and DC Plan (Class T-G and Class T-H) or a membership class that participates only in the DC Plan (Class DC).

The DC Plan retirement benefit is based on the amount of contributions made by the member and the employer, the investment performance on those contributions, and the fees, costs, and expenses deducted from the DC Plan account. Contributions have the potential to grow based on investment earnings but are not guaranteed against loss in declining investment markets.

Upon termination of service, members may request a lump-sum distribution of some or all of their vested balance in the DC Plan at any time. If the member's vested balance is greater than \$5,000, the member may delay distribution of their account, which will continue to be invested, or purchase an annuity.

Participation in the DC Plan continues to grow. Over 30% of PSERS active members have a DC component to their retirement benefit.

### Funding

Members contribute between 2.75% to 7.5% to the DC Plan based on their membership class. The employer also contributes mandatory contributions based on the membership class. In addition to mandatory contributions, members may voluntarily contribute, on an after-tax basis, an additional percentage of their retirement-covered compensation to the DC Plan. Members may stop or change the percentage of after-tax voluntary contributions at any time.

	Member DC Contribution	Member DB Contribution	Total Member Contribution	Employer DC Contribution
Class T-G (default)	2.75%	5.50% base rate with shared risk/shared gain contribution rate	8.25%	2.25%
Class T-H (elective)	3.00%	4.50% base rate with shared risk/shared gain contribution rate	7.50%	2.00%
DC Only (elective)	7.50%	N/A	7.50%	2.00%

### Calendar Year 2024 Participant Highlights

Answered <b>10,324</b> Participant Calls	<b>87,446</b> Website Logins	<b>17,792</b> Mobile Logins	<b>4,800</b> Viewed myOrange Money	<b>92</b> Age of Oldest Participant
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## DC Investment Options and Expenses as of June 30, 2024

### DC Investment Options

The Board is responsible for overseeing the administration of the DC Plan, including establishing investment guidelines and limits on the types of investments that participants may make, consistent with the Board's fiduciary obligations. The Board adopted an Investment Policy Statement for the DC Plan that provides guidance on the selection and monitoring of investment offerings and identifies areas and scope of delegation. The Board is required by law to provide not less than ten investment options by three (3) or more providers.

At enrollment, member and employer contributions are automatically invested in a target date investment based on the member's estimated normal retirement age (67) as determined by their date of birth. A member may remain in the default target date investment or change how all or part of their DC account balance is invested at any time. Members may select different target date investments and/or choose from among nine additional investment options. The DC Plan offers a stable value account, eight mutual funds, and a 10-trust target date series. Three of the mutual funds are passively managed and the remaining five are actively managed. The DC Plan's largest holding is the 2060 Trust with 28.9% of plan assets.

Investment Elections	Expense Ratio	Fund Balance As of 6/30/24	# of Part. As of 6/30/24	Average Balance	Average Age	Percentage of Plan Assets
American Funds Europacific Growth R6 (1G)	0.470 %	\$ 483,375.50	236	\$ 2,048.20	37.24	0.14 %
BlackRock High Yield Bond K (1B)	0.480 %	\$ 120,900.50	127	\$ 951.97	36.35	0.04 %
Calvert Balanced Fund - Class R6 (1J)	0.620 %	\$ 216,214.61	78	\$ 2,771.98	44.23	0.06 %
Fidelity 500 Index Premium (1D)	0.015 %	\$ 5,168,540.42	777	\$ 6,651.92	38.84	1.51 %
Fidelity Extended Market Index Premi (1E)	0.035 %	\$ 808,068.68	308	\$ 2,623.60	37.68	0.24 %
Fidelity Real Estate Index Premium (1I)	0.070 %	\$ 124,126.77	106	\$ 1,171.01	39.17	0.04 %
ICMA-RC VT Plus R10 (1K) (MissionSquare PLUS)	0.520 %	\$ 184,458.48	76	\$ 2,427.09	44.78	0.05 %
PIMCO Real Return Instl (1F)	0.67% (0.45%)*	\$ 42,264.29	71	\$ 595.27	34.35	0.01 %
PIMCO Total Return Instl (1A)	0.46% (0.46%)*	\$ 72,065.80	80	\$ 900.82	34.24	0.02 %
T. Rowe 2020	0.200 %	\$ 3,097,677.77	1,484	\$ 2,087.38	71.64	0.90 %
T. Rowe 2025	0.200 %	\$ 6,153,652.67	2,112	\$ 2,913.66	65.22	1.80 %
T. Rowe 2030	0.200 %	\$ 12,959,950.73	3,517	\$ 3,684.94	60.34	3.78 %
T. Rowe 2035	0.200 %	\$ 18,754,285.52	4,701	\$ 3,989.42	55.33	5.48 %
T. Rowe 2040	0.200 %	\$ 22,923,604.29	5,856	\$ 3,914.55	50.45	6.69 %
T. Rowe 2045	0.200 %	\$ 28,798,421.47	7,464	\$ 3,858.31	45.38	8.41 %
T. Rowe 2050	0.200 %	\$ 34,994,223.37	8,483	\$ 4,125.22	40.57	10.22 %
T. Rowe 2055	0.200 %	\$ 44,590,770.90	9,236	\$ 4,827.93	35.46	13.02 %
T. Rowe 2060	0.200 %	\$ 99,061,624.76	14,870	\$ 6,661.84	29.55	28.92 %
T. Rowe 2065	0.200 %	\$ 63,980,347.05	21,007	\$ 3,045.67	24.43	18.98 %
<b>Total</b>		<b>\$ 342,534,573.58</b>	<b>80,589</b>			

\*The figure in parenthesis represents the portion of fees participants pay directly to PIMCO for investment management. This fee excludes other investment expenses (i.e. interest expense from borrowing) incurred during investment transactions.

### DC Investment Options and Expenses as of June 30, 2024 (continued)

#### DC Fees and Expenses

There are fees and expenses associated with all retirement plans and investment programs. These fees help pay for the administration and operation of the DC Plan, which includes a host of services provided to participants such as account maintenance, quarterly statements, online and phone-based account access, DC Plan communications, investment education, and many more. The main categories for fees are as follows:

- **Record keeping fees** pay for operation of the DC Plan by its contracted record keeper, Voya. \$31.90 - Voya's annualized fee (\$7.975 charged per quarter) is assessed to the participant's account within the DC Plan.
- **PSERS' administrative fees** pay for services provided by PSERS for the DC Plan, such as demographic and beneficiary maintenance, qualification, eligibility points, class elections and more. PSERS' administrative fees are covered by previously-appropriated funds and non-vested employer contributions, as authorized by the Retirement Code.
- **Investment fees** cover ongoing charges for operating expenses and managing the assets of the investment funds. Fees for each individual investment option are paid directly from participant accounts and are allocated daily. The total market value of the investment's portfolio and the net dollar value of each investment share or unit is calculated by the investment manager on a daily basis at the close of the stock market. Participants pay a portion of their annual cost daily through a reduction in the investment's rate of return before the share or unit price is declared. Approximately \$519,000 was charged in investment fees, primarily from target date investments which hold 98% of DC Plan assets.

The amount of any fees deducted from a participant's account will be shown on their quarterly statement from the third-party administrator.

#### Entities that Service the PSERS DC Plan

##### **PSERS**

provides oversight and management of the PSERS DC Plan's service contractors, plan design, administration, and governance, and assistance to participants in understanding their retirement benefits.

##### **Trustee/Custodian, Voya Institutional Trust Company and State Street Bank and Trust Company**

ensure that assets are held in a trust for the benefit of PSERS DC Plan participants and investments are bought and sold within portfolios, then calculated as a share or unit value for each investment option in the PSERS DC Plan.

##### **Record keeper, Voya®**

provides record keeping services, processes after-tax elections, tracks and processes investment elections directed by participants, accounts for contributions and distributions, produces participant statements, and assists with any other PSERS DC Plan administration directed by PSERS. Voya® also provides plan tools and resources including a customer service line, participant website, and mobile app and plan communication to help educate members about PSERS DC Plan participation, retirement planning, and benefits.

##### **Actuaries and Auditors**

perform actuarial work and experience studies and annual financial audit and regular compliance audits.

##### **CAPTRUST Financial Advisors**

advise PSERS on PSERS DC Plan design, governance, investment policies, and investment selection.

##### **PSERS Office of Chief Counsel**

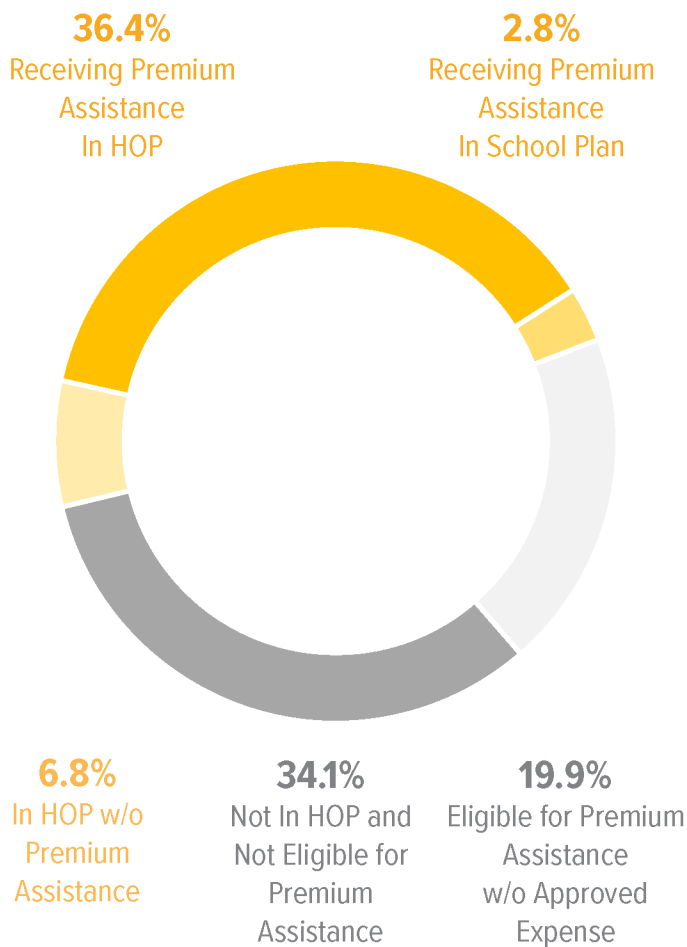
provides legal advice to the PSERS DC Plan and specialized expertise, and may contract with outside counsel.

##### **Investment managers**

invest a certain percentage of the participants' assets, for each investment option, according to specific objectives, strategies and limits set forth in the PSERS DC Plan's adopted investment policy statement.

# POSTEMPLOYMENT HEALTHCARE PROGRAMS

## RETIREE POPULATION BY PREMIUM ASSISTANCE STATUS



## HEALTH OPTIONS PROGRAM (HOP) FINANCIAL VITALS

2025 Budgeted Administrative Expenses  
**1.3% of Retiree Contributions**  
Excluding Medicare Part D

2025 Budgeted Self-Insured Plan Reserves  
**11.6 Months**  
of Fully Insured Benefit Expenses

2023 Prescription Drug Plan Medical Loss Ratio  
**102.2%**

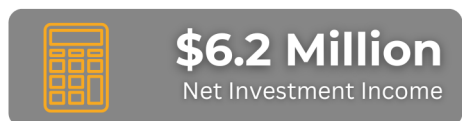
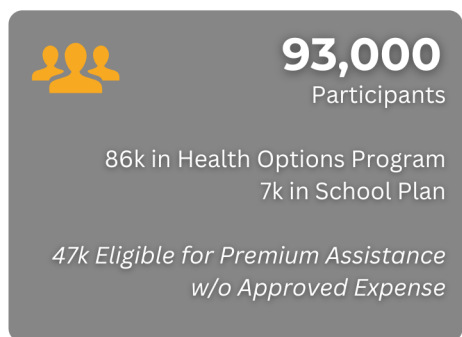
## MEMBER SATISFACTION WITH HOP OPTIONS

2024 Member Satisfaction with Plan Options  
**90%**  
Response "Just the Right Amount"

2023 New Enrollment  
**45%**  
of New Retirees Turning 65



## Premium Assistance Program Description



Data as of June 30, 2024

By law, PSERS provides up to \$100 per month in Premium Assistance to eligible annuitants to help cover the cost of their out-of-pocket health care costs. The Premium Assistance program began on July 1, 1992. The eligibility requirements for premium assistance are as follows:

- 24.5 eligibility points (for Class DC members, Medicare eligibility with at least 24.5 eligibility points and receipt of all or part of their vested DC account), or
- For all classes of membership except Class DC, 15 eligibility points if employment is terminated on or after attaining superannuation age and retirement occurs after superannuation age, or
- For Class DC, 15 eligibility points if employment is terminated on or after reaching age 67 and receipt of all or part of their vested DC account.
- Receiving a disability annuity from PSERS; and
- Have an out-of-pocket premium expense from their former school employer's health plan or the PSERS sponsored HOP.

## Funding

The Premium Assistance Program is funded by employer contributions. The contribution rate is calculated by PSERS actuary in accordance with the formula set forth in the Retirement Code. The contribution needed during FY 2025-26 is 0.62% of payroll.

For the year ended June 30, 2024, employers contributed \$102.2 million to the Premium Assistance Program, which earned a net investment income of \$6.2 million. During this period, PSERS paid Premium Assistance benefits equaling \$111.7 million and incurred administrative expenses of \$1.0 million.


## Premium Assistance Program Enrollment

As of June 30, 2024, there were 92,638 annuitants receiving premium assistance benefits, 85,884 were enrolled in HOP and 6,754 were participating in their former school employer's health plan and had an out-of-pocket premium expense. Of the 236,100 total annuitants receiving a monthly benefit from PSERS, 155,640 meet the service and age at termination of school service, or retirement type (disability) eligibility requirements for the premium assistance program. Of the annuitants meeting these requirements, 63,002 are not receiving premium assistance payments because they do not have an out-of-pocket premium expense from an approved plan.

A breakdown of annuitants by their premium assistance status is displayed below:

June 30, 2024	Number	Percentage
Eligible for Premium Assistance w/o Approved Expense	46,918	19.9%
Receiving Premium Assistance In School Plan	6,754	2.8%
Receiving Premium Assistance In HOP	85,884	36.4%
In HOP w/o Premium Assistance	16,084	6.8%
Not in HOP and Not Eligible for Premium Assistance	80,460	34.1%
Total Retiree Population	<b>236,100</b>	100.0%

## Health Options Program (HOP) Description



**123,000\***  
Participants


102k Retirees  
21k Dependents




Nearly **100K**  
Participants in the  
Prescription Drug Plan




**36k**  
Participants in the  
Dental Program &  
Vision Plan




**\$386.3 Million**  
Net Position




**\$457.6 Million**  
Investments




**4.5 star rating** on HOP's  
Prescription Drug Employer  
Group Waiver Plan



**1 of 6 plans** evaluated by the  
Centers for Medicare and  
Medicaid Services (CMS) at  
4.5 stars or higher



**Pharmacy Quality Alliance** in  
Excellence in Quality Award



Near **perfect customer-**  
**services rating** from the  
federal government

Data as of June 30, 2024

\*Participants as of January 1, 2025

The Board sponsors a group health insurance program called the Health Options Program (HOP) for individuals who are annuitants, survivor annuitants, or the spouse or dependent of an annuitant or survivor annuitant, as authorized by the Retirement Code. The HOP commenced on January 1, 1994. As of January 1, 2025, there were 123,092 participants (102,356 retirees plus their dependents) in the HOP. The HOP is funded solely by and for eligible participants.

The HOP offers PSERS annuitants a variety of health benefits and insurance plans. Annuitants and their dependents may select among plans supplementing original Medicare, Medicare prescription drug plans, and dental insurance. Annuitants also may select a Medicare Advantage plan that provides prescription drug coverage and may include a dental and vision benefit. All plans offered through the HOP provide a Pre-65 plan for individuals not yet eligible for Medicare. Each year participants of the HOP may change their health benefit coverage to meet changing needs.

The following is a summary of the standard Medicare Part D plans:

Standard Benefit	2025	2024
Deductible	\$ 590	\$ 545
Initial Coverage Limit*	N/A	\$ 5,030
Out of Pocket Threshold	\$ 2,000	\$ 8,000
<b>Minimum Cost sharing in Catastrophic Coverage Portion of the Benefit*</b>		
Generic	\$ —	\$ —
Other	\$ —	\$ —

*\*Prior to January 1, 2025, once an annuitant's out-of-pocket spending reached \$8,000 (including certain payments made by other people or entities), the annuitant received "catastrophic coverage." This means the annuitant did not have any co-payment or coinsurance for covered Part D drugs for the remainder of the calendar year. The Inflation Reduction Act (IRA) will eliminate the Prescription Drug coverage Gap. Starting in 2025, all Medicare Part D plans will include a \$2,000 cap on out-of-pocket expenses. Retirees will pay 25% coinsurance for covered Part D drugs.*

*These plan design limits and thresholds are tied to specific indices, including the average per capita Part D spending and the annual percentage increase in the Consumer Price Index.*

## Plans Available Through HOP

The HOP offers participants a choice among supplements to Medicare, various Medicare prescription drug plans, and Medicare Advantage plans. Participants under age 65 and not eligible for Medicare may elect to enroll in a high deductible health insurance plan with or without prescription drug coverage or a managed care plan.

As approved by the Board in May 2024, a \$50 deductible on Part B services was added for the HOP Medical Plan. In addition, the Board approved two new Medicare prescription drug options effective January 1, 2025. The previous options (Enhanced, Basic, and Value Medicare Rx Options) are no longer be available in 2025. These new options incorporate 2025 CMS Part D thresholds and mandated benefit changes required by the Inflation Reduction Act. Additionally, an Invitation for Application (IFA) is issued annually for qualified insurance carriers to apply to offer a fully insured Medicare Advantage Prescription Drug (MAPD) group insurance plan and accompanying Pre-65 group insurance plan to PSERS' retirees who participate in the HOP. These options were available to new enrollees or HOP participants electing to change coverage during the 2025 option selection period conducted in the fall of 2024.

The following is a list of HOP plans as of January 1, 2025:

For Individuals Eligible for Medicare:	For Individuals Not Eligible for Medicare:
HOP Value Medical Plan (Medicare supplement)	HOP Pre-65 Medical Plan
HOP Medical Plan (Medicare supplement)	
Medicare Standard Rx Option (Medicare Part D)	HOP Pre-65 Medical Plan w/ Rx coverage
Medicare Plus Rx Option (Medicare Part D)	
Medicare Advantage Plans	Companion Pre-65 Managed Care Plans
Aetna Medicare P01 PPO	Aetna Premier Open Choice PPO
CBC PPO	CBC PPO
Highmark FreedomBlue PPO	Highmark PPO Blue (80-70 Plan)
Independence Blue Cross Personal Choice 65 PPO	Independence Blue Cross POS (\$20-\$40/\$250)
UPMC PSERS HOP Custom PPO	UPMC Business Advantage

## Funding

HOP income is projected to be \$597.6 million during the 2025 Plan (calendar) Year. A majority of this income comes from premium payments from participants. HOP premiums are typically deducted from the retiree's monthly retirement benefit and transferred to the plan (claims administrator for the self-funded Options). Approximately 4,330 retirees submit monthly premium payments to the HOP Administration Unit, as their monthly retirement benefits, if any, are insufficient to cover the premium cost.

Other sources of funding are Medicare prescription drug payments (for participants enrolled in a Medicare prescription drug plan) from CMS and interest income. Table 5.1 displays the breakdown of these sources of income (Dollar amounts in millions):

<b>Table 5.1 Income</b>	<b>Calendar Year 2025</b>
Participant Premium Payments	\$436.0
CMS - Medicare Prescription Drug Payments	\$150.4
Performance Guarantee Receipts	\$1.2
Interest Income	\$10.0
<b>Total</b>	<b>\$597.6</b>

The HOP income pays for the benefits provided to HOP participants and expenses. Table 5.2 displays the breakdown of benefit expenses (Dollar amounts in millions):

<b>Table 5.2 Benefit Expense</b>	<b>Calendar Year 2025</b>
Self-funded Hospital, Medical & Major Medical Benefits	\$268.7
Self-funded Prescription Drug Benefits	\$246.7
Insured Managed Care and Dental Premiums	\$63.2
<b>Total</b>	<b>\$578.6</b>

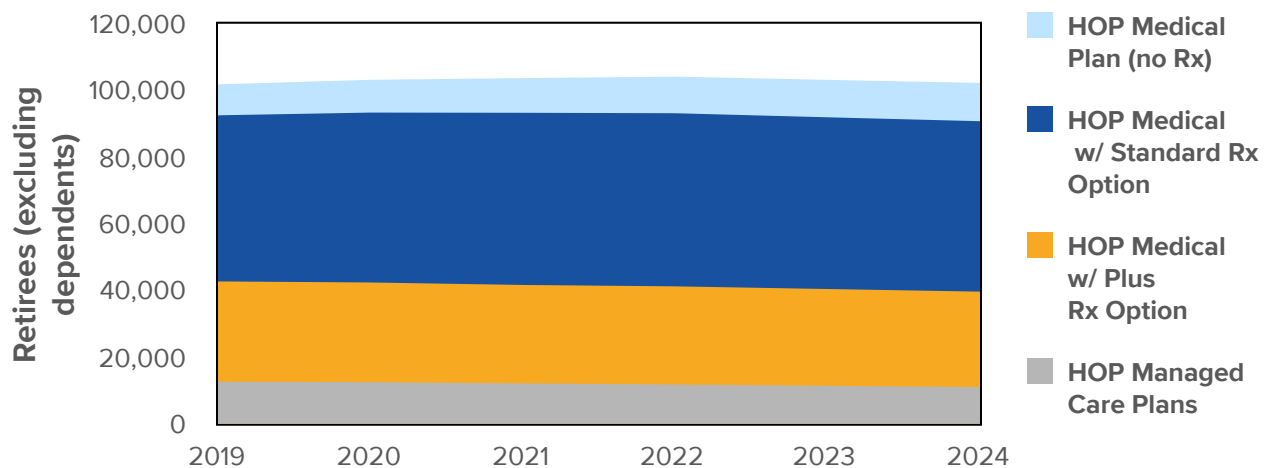
In addition to the benefit expenses identified above, the HOP will pay \$12.2 million in enrollment and administrative expenses including reimbursing PSERS for its expenses. As of June 30, 2024, HOP had net assets of \$386.3 million held in trust to pay the expenses of HOP for the exclusive benefit of participants.

## HOP Enrollment

As of January 1, 2025, there are 123,092 participants (102,356 retirees plus their dependents) in the HOP. The total numbers of retirees by Option are:

Individuals Eligible for Medicare	Retirees	Participants
HOP Medical w/ Medicare Standard Rx Option	50,702	61,915
HOP Medical w/ Medicare Plus Rx Option	28,603	33,971
HOP Medical Plan (no Rx)	11,153	12,450
HOP Plus Rx Only	78	97
HOP Standard Rx Only	173	214
HOP Value Medical Only	82	105
HOP Value Medical w/ Medicare Plus Rx Option	12	15
HOP Value Medical w/ Medicare Standard Rx Option	414	543
Highmark PPO/Legacy HMO	8,890	11,035
Keystone East HMO/IBC Legacy PPO	434	495
CBC PPO/Keystone Central Legacy HMO	656	831
UPMC PPO/Legacy HMO	818	1,047
Aetna PPO/Legacy HMO	227	259
<b>Total Medicare Eligible</b>	<b>102,242</b>	<b>122,977</b>
<b>Individuals Not Eligible for Medicare</b>		
HOP Pre-65 Medical Plan w/ Rx Coverage	80	80
HOP Pre-65 Medical Plan	23	24
Highmark PPO	3	3
CBC PPO/Keystone Central Legacy HMO	7	7
Keystone East HMO/IBC Legacy PPO	1	1
<b>Total Not Eligible for Medicare</b>	<b>114</b>	<b>115</b>
<b>Total in HOP</b>	<b>102,356</b>	<b>123,092</b>

Chart 5.3 HOP Enrollment of Retirees Eligible for Medicare



## **HOP Plan Premiums**

### **Paid By Individuals ELIGIBLE for Medicare**

The premiums paid by participants eligible for Medicare generally vary by geographical area. The exceptions are the premiums for the HOP Medicare Rx Options. The tables showing the standard monthly premium rates for 2025 compared to the 2024 rates in Pennsylvania for single coverage are available on PSERS' website. HOP and Value Medicare Plans are generally competitively priced with Medigap Plans with similar benefit designs. With Premium Assistance, premiums for HOP's Medicare Advantage Plans compare favorably to premiums of "commercial" Medicare Advantage plans.

HOP participants may select Standard or Plus Medicare Rx Option coverage without enrolling in the HOP Medical Plan or Value Medical Plan. The monthly premium rates for the Medicare Rx Options do not vary by region. Stand-alone prescription drug coverage does not qualify for Premium Assistance. HOP Medicare Rx options are competitively priced with commercial prescription drug plans (PDPs) with similar benefit designs. HOP Medicare Rx Options have a higher CMS Star rating than all options available to individual consumers in Pennsylvania.

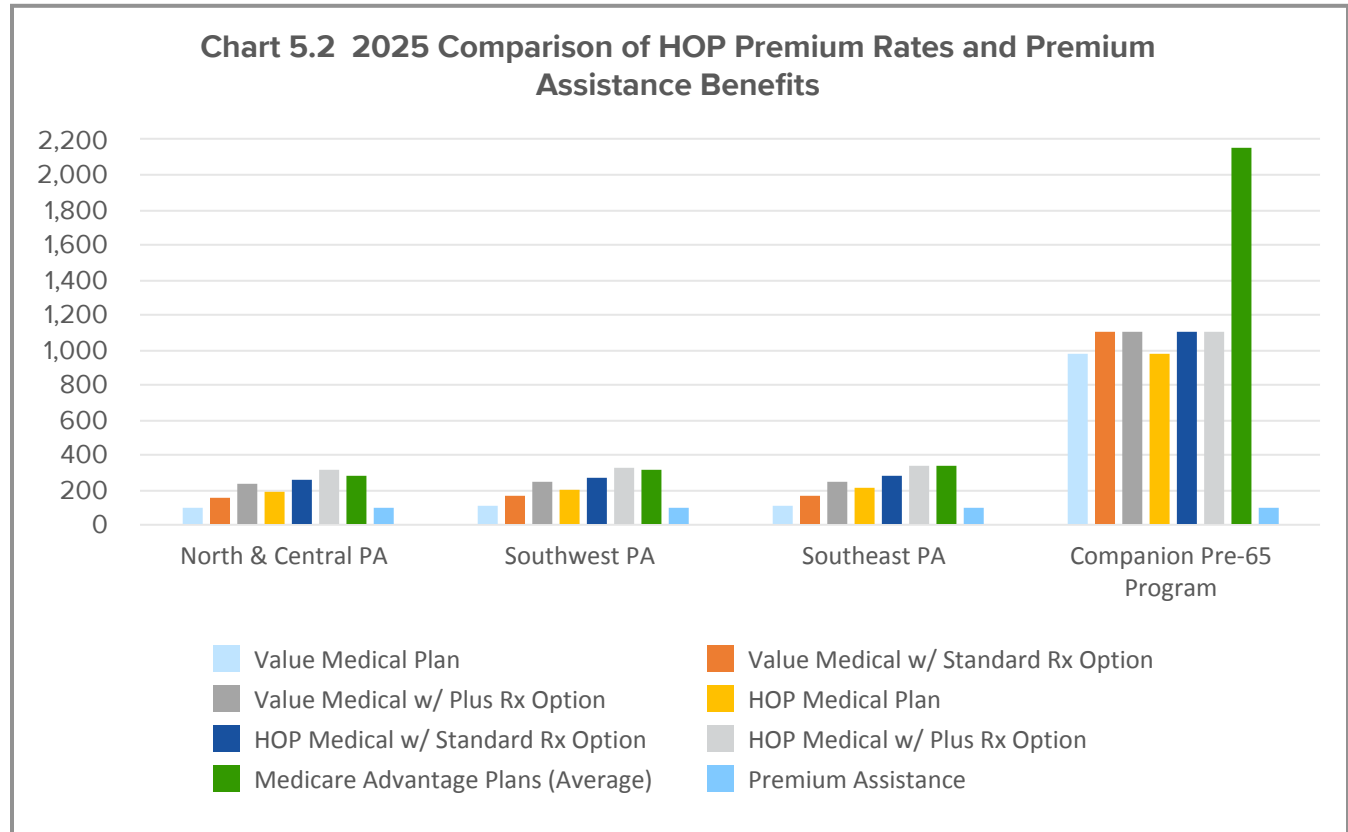
### **Premiums Paid By Individuals NOT ELIGIBLE for Medicare**

The premiums paid by participants not eligible for Medicare generally do not vary by geographical area. The exceptions are the regional managed care plans. The tables showing the monthly premium rates for 2025 compared to the 2024 rates in Pennsylvania for single coverage are available on PSERS' website.

## HOP Plan Premiums (continued)

### HOP Premiums Compared to the PSERS Premium Assistance Benefit

Chart 5.2 displays the HOP monthly premiums paid by PSERS retirees for single coverage compared with the PSERS Premium Assistance benefit. Participating eligible annuitants are entitled to receive Premium Assistance payments equal to the lesser of \$100 per month or their out-of-pocket monthly health insurance premium. The premiums for 2-person and family coverage would be at least twice the cost of single coverage. Premium Assistance is an offset for the PSERS retiree's premium only.



As shown in the table below, the percentage of Premium Assistance benefit coverage varies by region and plan.

2025	North & Central PA	Southwest PA	Southeast PA	Companion Pre-65 Program
Value Medical Plan	\$102	\$115	\$117	\$990
Value Medical w/ Standard Rx Option	\$159	\$172	\$174	\$1,115
Value Medical w/ Plus Rx Option	\$239	\$252	\$254	\$1,115
HOP Medical Plan	\$203	\$216	\$225	\$990
HOP Medical w/ Standard Rx Option	\$260	\$273	\$282	\$1,115
HOP Medical w/ Plus Rx Option	\$340	\$353	\$362	\$1,115
Medicare Advantage Plans (Average)	\$287	\$318	\$347	\$2,160
Premium Assistance	\$100	\$100	\$100	\$100

## HOP Voluntary Dental and Vision Programs

Beginning January 1, 2016, HOP offered a voluntary MetLife Dental Plan to members and dependents enrolled in the HOP Medical Plan or the Value Medical Plan (those enrolled in a Medicare Advantage Plan are not eligible for this program as most of these plans have dental coverage). Beginning January 1, 2021, HOP began offering the MetLife Dental and EyeMed Vision Option. As with the previous dental program, dental and vision coverage is not available on a stand alone basis and participants must be enrolled in either the HOP Medical Plan or the Value Medical Plan.

Enrollment is limited to the initial offering or upon a qualifying event.

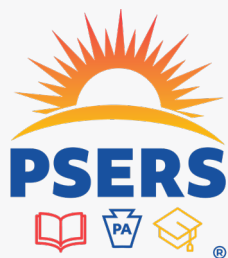
As of January 1, 2025 there are 39,464 participants (33,060 retirees plus their dependents) in the HOP voluntary dental and vision program. The total numbers of retirees by year since program inception:

Dental Enrollment Per Year (As of January 1)	Retirees	Participants	Increase (Participants)
2025**	33,060	39,464	9%
2024**	30,946	36,126	7%
2023**	28,973	33,614	16%
2022**	25,249	28,927	27%
2021*	17,456	22,829	21%
2020*	16,729	18,864	15%
2019*	14,482	16,436	25%
2018*	11,535	13,099	35%
2017*	8,497	9,701	N/A

\*Includes Dental Enrollment

\*\*Includes Dental & Vision Enrollment





## CONTACT



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