PERFORMANCE AUDIT REPORT

Public School Employees' Retirement System

May 2017

Commonwealth of Pennsylvania
Department of the Auditor General

Eugene A. DePasquale • Auditor General

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EUGENE A. DePASQUALE
AUDITOR GENERAL

May 23, 2017

Mr. Glen R. Grell
Executive Director
Public School Employees' Retirement System
5 N 5th Street
Harrisburg, PA 17101

Dear Mr. Grell:

This report contains the results of the Department of the Auditor General's performance audit of the Public School Employees' Retirement System (PSERS). The audit covered the period July 1, 2013, through March 31, 2017, unless otherwise indicated, with updates through the report date.

This audit was conducted under the authority of Sections 402 and 403 of The Fiscal Code, 72 P.S. §§ 402 and 403, and in accordance with applicable generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our conclusions based on our audit objectives.

Our performance audit had four objectives, including to: (1) Determine if PSERS appropriately follows the Public Employee Pension Forfeiture Act (Act 140 of 1978, as amended) and its associated regulations for public school employees convicted of certain crimes relating to public office or public employment; (2) Determine if PSERS' governance structure, delineation of decision-making responsibility, investment expertise, and resources are adequate to provide effective oversight of investment operations; (3) Determine if PSERS' external investment advisors and consultants are properly procured and investment fees are reasonable and consistent with investment performance measures; and (4) Evaluate the diversity of PSERS' investment portfolio to determine if the investment strategy is prudent to minimize risk based on market conditions.

Our auditors found that PSERS failed to assess and document the investment knowledge and skills of each Board member and designee (hereinafter collectively referred to as trustees) to demonstrate the Board collectively possesses the abilities to oversee prudent investment decisions. Specifically, neither the Public School Employees' Retirement Code (PSERC) nor the PSERS Board bylaws require the trustees to each possess a minimum level of investment or financial knowledge and does not require a minimum amount of continued education hours that trustees must obtain annually. We noted several other state pension systems where similar legislative requirements exist. Additionally, the Board did not have its trustees conduct self-evaluations of their investment education needs to identify needed areas of training. Further, the Board did not adequately track trustee attendance at education and training events.

The Board's composition appears to adequately represent system members and was in compliance with the PSERC for our audit period. Additionally, the Board fulfilled its duties related to investment operations in accordance with the PSERC and its investment policy. However, we found that the Board places too much reliance on the individual trustees to self-report potential conflicts of interest. Also, the Board's policy, procedures, and training regarding ethics need strengthened.

During our audit period, PSERS and the Board appear to have properly procured investment consultants and external investment managers in accordance with its written procedures. However, PSERS failed to document its investment manager fee negotiations. Without adequate documentation evidencing PSERS' attempt to negotiate a lower fee structure, we were unable to determine if PSERS' negotiation procedures were sufficient to obtain the lowest fee possible.

PSERS and the Board also appear to have adequately monitored the external investment manager performance and reported performance measures to its members. PSERS appears to be more open in regards to reporting investment expenses and performance measures than most of its peer state systems. However, PSERS should strive to take a leadership role by improving the clarity of its reporting. Additionally, the procedures used to monitor external investment managers should be formalized in writing.

PSERS' procedures to ensure that it meets its diversified investment strategy appear adequate. PSERS analyzes it asset allocation annually. Additionally, PSERS' efforts to invest in multiple funds within each asset class to develop a diversified portfolio appear to be adequate.

Our auditors also found that the overly restrictive language within the Public Employee Pension Forfeiture Act, requiring that sex crimes be committed by a school employee against a student, needs significant changes. During our audit period, PSERS properly determined which convicted members should forfeit their pensions, but failed to seek recoupment of pension payments made after conviction. Further, we found that PSERS' potential pension forfeiture case discovery process needs to be strengthened.

In addition to our current audit objectives, we conducted procedures to determine the status of the implementation of our prior audit findings and recommendations as presented in the audit report released in September 2006. Of the 35 previous recommendations, we found that 28 have been implemented and 7 have not.

In closing, I want to thank PSERS for its cooperation and assistance during the audit. PSERS is in agreement or partial agreement with most findings. We will follow up at the appropriate time to determine to what extent all recommendations have been implemented.

Sincerely,

Eugene A. DePasquale
Auditor General

A Performance Audit

Public School Employees' Retirement System (PSERS)

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A Performance Audit

Public School Employees' Retirement System (PSERS)

Executive Summary

The Pennsylvania Public School Employees' Retirement System (PSERS) is the 20th largest state-sponsored defined benefit pension fund in the nation and is responsible for providing retirement benefits earned by public school employees in the Commonwealth of Pennsylvania. PSERS provides its members with a defined benefit pension plan, in which the employer guarantees a level of retirement benefits, as determined by formula, to employees who are members of the plan and meet eligibility requirements. PSERS' operations are governed by the Public School Employees' Retirement Code (PSERC). The 15-member Public School Employees' Retirement Board (Board) was established by law as an independent administrative board, which exercises control and management of PSERS, including the investment of assets. The Board members play a significant role in the investment of assets, acting as fiduciaries for the PSERS members, and are held to the prudent investor standard in overseeing the fund's investments. Also, the system is managed by an Executive Director, retains professional staff, and contracts for professional services.

Our performance audit had four objectives, including to: (1) Determine if PSERS appropriately follows the Public Employee Pension Forfeiture (Act of 140 of 1978, as amended) and its associated regulations for public school employees convicted of certain crimes relating to public office or public employment; (2) Determine if PSERS' governance structure, delineation of decision-making responsibility, investment expertise, and resources are adequate to provide effective oversight of investment operations; (3) Determine if PSERS' external investment advisors and consultants are properly procured and investment fees are reasonable and consistent with investment performance measures; and (4) Evaluate the diversity of PSERS' investment portfolio to determine if the investment strategy is prudent to minimize risk based on market conditions. Our audit period was July 1, 2013 through March 31, 2017, unless otherwise indicated, with updates through the report date.

As part of our audit procedures, we conducted a survey of all 33 Board members and designees (hereinafter collectively referred to as trustees) that served on the Board as of December 2016 or was new to the Board and participated in the March 2017 Board meeting. The blank survey can be found in Appendix B. It focused on whether the trustees consider PSERS' governance structure, investment expertise, and resources for decision-making adequate to provide effective oversight of investment operations. We received 25 completed surveys. Overall, the results were very favorable for PSERS; however, there were certain comments that we point out throughout the report that indicates PSERS can make improvements.

Our audit contains six issue areas, including 17 findings with 37 recommendations (26 are directed to PSERS, 10 are directed to the General Assembly, and 1 is directed to the Governor's Office of Administration). We also performed procedures to determine the status of the prior audit findings released in September 2006. PSERS is in agreement or partial agreement with most findings and is committed to implementing many of the PSERS-directed recommendations.

Issue Area 1 – PSERS failed to assess and document the investment knowledge and skills of each trustee to demonstrate the Board collectively possesses the abilities to oversee prudent investment decisions.

A fundamental tenet of public pension governance is to ensure the governing board receives adequate education and training to fulfill its fiduciary duties. Each trustee should have a familiarity with investments; however, they do not need to be experts. Based on our audit procedures, we found that the Board failed to demonstrate that each trustee possessed adequate knowledge and skills to prudently guide the investment of funds. We found several significant Board education weaknesses that contributed to this situation, including:

1. There are no statutory prerequisites (minimum level of investment or financial knowledge) for becoming a Board trustee. Further, the Board does not maintain biographies of each trustee. Therefore, while the experience of certain members may be known, the collective investment knowledge of the Board is unknown.

2. The Board does not assess the investment education needs of each trustee. Specifically, the Board does not have trustees conduct self-evaluations of their educational levels or needs.

3. There are no requirements for continual education sessions. PSERS organizes some training and provides a list of other educational conferences that trustees may attend, but attendance is not required.

4. The Board's tracking of trustee attendance at educational events is weak. Of the 43 educational sessions that occurred during the audit period, the attendance for 19, or 44 percent, were not tracked.

We offer five recommendations for the General Assembly to amend the PSERC and three recommendations for PSERS to rectify noted deficiencies.

Issue Area 2 – PSERS' management of investment expenses within its asset allocation strategy/policy appears standard however woefully unfair to the taxpayers. PSERS should take a leadership role in the public pension sector by continuing to improve its reporting of investment expenses and fund performance.

Part of PSERS' mission is to prudently invest its assets to maintain a financially-sound system in order to provide the promised benefit payments to its members. To achieve this mission, PSERS invests in a manner consistent with its long-term goals while maintaining adequate liquidity to meet required benefit payments to its members. One key decision to make is to what extent to use active or passive portfolio management. Based on our audit procedures, PSERS' strategic approach to key decision-making, specifically whether it is most prudent to use internal or external managers and to actively or passively manage portfolios in order to minimize investment expenses within its asset allocation policy, appears to be reasonable.

In order to determine whether investment fees charged to PSERS were reasonable and consistent with investment performance, we analyzed PSERS' investment expense and performance reporting practices. We found that PSERS' management of investment expenses within the constraint of its asset allocation policy appears to be standard; however we do believe that the lack of aggressive negotiations for lowering fees is woefully unfair to taxpayers. Additionally, although PSERS' reporting of its investment expenses surpasses its peer public pension systems and PSERS' reporting of fund performance is comprehensive, additional disclosure improvement can be made. Specifically, PSERS can improve its reporting by including all fund-level investment expenses, gross-of-fee fund performance and net-of-fee fund performance, and performance measures for a longer period of time than 10 years in its Comprehensive Annual Financial Reports, other reports, and public website.

We offer one recommendation for the Governor's Office of Administration to increase PSERS' investment office complement and five recommendations to improve PSERS reporting of investment fees and investment performance.

Issue Area 3 – PSERS failed to document its investment manager fee negotiations and lacked adequate written procedures for monitoring manager performance.

PSERS' procedures for contracting with investment consultants and external investment managers appear to be adequate and in compliance with Board policies. However, PSERS did not document its external investment manager fee negotiations or justification for the reasonableness of the fee structure. Due to this lack of documentation, auditors were unable to determine if PSERS' negotiation procedures were sufficient to obtain the lowest fees possible.

Additionally, we found that PSERS adequately monitors its external investment managers. However, PSERS needs to formally document in detail its procedures for monitoring to ensure consistent and comprehensive monitoring of external investment managers.

We offer four recommendations to improve investment fee negotiations and document monitoring procedures.

Issue Area 4 – Despite having an adequate governance structure with clearly outlined responsibilities, PSERS lacked adequate policies and procedures related to Board trustee adherence to ethics standards and attendance at meetings.

PSERS' Board is large compared to its peer state systems; however, this does not appear to hinder Board processes. The Board's composition appears to adequately represent system members and was in compliance with the PSERC for our audit period. The Board also appears to have fulfilled its investment-related duties as outlined in the PSERC and its Investment Policy.

However, we found there is inconsistent attendance between certain Board members and their multiple designees. Additionally, the Board does not have an attendance policy for trustees. If Board members and their multiple designees continuously alternate attendance at Board meetings or fail to consistently attend, the Board loses critical resources and multiple perspectives that contribute to better decision-making.

The Board has an established Ethics Policy that appears to be comprehensive. However, the implementation of the policy, including verifying the accuracy and completeness of self-reported information from Board members and designees regarding potential conflicts of interest, is lacking. The Board also does not require annual ethics trainings or its Board members and designees to certify compliance with the Ethics Policy annually.

Finally, we found that the PSERS Board lacks a comprehensive governance manual to unify its numerous policies and guidelines.

We offer three recommendations for the General Assembly to amend PSERC to improve Board attendance and offer five recommendations for PSERS to improve policies and create a governance manual.

Issue Area 5 – PSERS' procedures to ensure it is meeting its diversified investment strategy appear adequate.

There is no one asset allocation strategy that would address the specific characteristics and needs of all public pension systems. Therefore, it is most important that the decisions made by the system are based on the individualistic profile of the system, and that the decisions are reevaluated on a regular basis to adequately respond to market, demographic, or other changes.

We found that PSERS' General Investment Consultant annually reviews PSERS' asset allocation strategy and makes recommendations accordingly. Also, the PSERS' Investment Office professionals perform a comparison monthly to ensure the actual value for each asset class remains within the asset allocation strategy target policy range. Additionally, we found that PSERS' strategy to invest in different asset classes and numerous individual funds within each asset class appears to be adequate to minimize market risk.

We offer two recommendations to the Board to enable it to make prudent investment decisions.

Issue Area 6 – PSERS generally complied with the Public Employee Pension Forfeiture Act, but significant legislative changes and procedural improvements are needed.

Act 140 of 1978, as amended, or the Public Employee Pension Forfeiture Act (Act 140), provides that members of PSERS could be subject to pension forfeiture if the member pleads guilty or is sentenced/convicted of an Act 140 specified criminal offense and the member's public position was used to commit the crime. The pension benefits are to be forfeited upon conviction.

We found the language of Act 140 is overly restrictive regarding the victims of sex crimes. The Act mandates that the victim of certain sex crimes committed by the "school employees" in the "public school" within the course of his/her employment is limited to a "student" in order for pension forfeiture to occur. This stipulation is incongruous given that sex crimes can victimize all individuals that are present in a public school or involved in school-related business. Additionally, we note that the definition of "school employee" in the PSERC should be broadened to ensure that the provision covers anyone who performs any services directly benefiting a public school and receives pension benefits.

Although PSERS' procedures for identifying potential pension forfeiture cases are useful, we found that PSERS did not use its statutory authority to require public school employers to report employees convicted of criminal offenses listed in Act 140. Additionally, we found that PSERS did not use police records to identify potential pension forfeiture cases. As a result, some pension forfeiture cases might never be detected.

Auditors also found that PSERS did not adequately document its monthly review of disciplinary actions taken against certified teachers, and PSERS' pension forfeiture written procedures regarding discovering cases through the Pennsylvania Department of Education disciplinary actions, tracking cases, and maintaining case documents were insufficiently detailed.

Further, we found that PSERS properly determined which convicted members should forfeit their pensions, but failed to seek recoupment of pension payments made after conviction. We selected 10 of the 44 cases in which the pension was forfeited from July 1, 2013, through October 31, 2016, and 10 of the 62 cases in which the pension was not forfeited from the same time period. Our testing found that the conclusion as to whether the pensions should be forfeited was accurate for all 20 cases. However, we found that two of the ten cases tested that were subject to pension forfeiture were already receiving pension benefit annuity payments, but PSERS did not seek recoupment totaling $1,709.

We offer two recommendations to the General Assembly to strengthen the provisions of Act 140 and seven recommendations to PSERS to improve its case discovery process and correct deficiencies noted.

Status of Prior Audit Findings

Our prior audit of PSERS covered the period January 1, 2001, through December 31, 2004, and contained six chapters with a total of 15 findings. Three of the 15 prior year findings did not offer recommendations. For the remaining 12 prior year findings, which contained 35 recommendations, we conducted limited procedures to determine the status of these findings. Of the 12 findings, we found that 9 were resolved and 3 were partially resolved. Two of the three partially resolved prior year findings were addressed as part of the current audit. The remaining finding related to PSERS Internal Auditor Office lacking organizational independence and staff resources necessary to effectively complete audits.

We offer four additional recommendations to PSERS to correct deficiencies and one recommendation to the Governor's Office of Administration to evaluate the need for a complement increase for the PSERS Internal Auditor Office.

Introduction and Background

This report presents the results of our performance audit of the Public School Employees' Retirement System's (PSERS) administration of the investment program[1] and the Public Employee Pension Forfeiture Act.[2]

Underfunded government pension liabilities have grown enormously and have caused a public pension crisis throughout the nation. For example, two of the lowest funded systems, the State Employees' Retirement System of Illinois and the New Jersey Public Employees' Retirement System, were both only 31% funded as of June 30, 2016.[3]

Part of the reason things have progressed to this alarming point is that employers and governments have been severely underfunding their pension programs for years. This, in combination with unpredictable investment returns, has raised serious concerns over the sustainability of state retirement systems and their ability to fulfill future retirement payouts.

Another crisis facing the country is an extreme rise in the number of reported instances of inappropriate conduct perpetrated by teachers and other school staff against their minor students. Across the country, there are hundreds of cases reported in the media each year where school employees are sexually abusing the children they are supposed to be enriching and protecting. As members of PSERS, public employees convicted of certain sex crimes against a student must forfeit their pension benefits. The underfunded pension liability leaves no room for error in readily identifying and promptly processing these pension forfeitures.

Both of these topics directly affect the lives of thousands of Pennsylvania citizens. We are conducting this audit to ensure that PSERS is operating as efficiently, effectively, and transparently as possible in order to protect the long-term interests of the system's beneficiaries, the school employers, and the taxpayers who support them. Further, we are hopeful that our audit will help clarify and enhance the Public Employee Pension Forfeiture Act to broaden the category of, among others, the victims of sex crimes for whom the perpetrator would face pension forfeiture, including not only a "student" as referenced in the act but against <u>any individual present in a public school or involved in school-related business.</u>

[1] *See* in particular 24 Pa.C.S. §§ 8521-8527.
[2] 43 P.S. § 1311 *et seq.*
[3] State Employees' Retirement System of Illinois and the New Jersey Public Employees' Retirement System Comprehensive Annual Financial Reports for the fiscal year ended June 30, 2016 (srs.illinois.gov, page 14 and state.nj.us, page 32, respectively).

We conducted our work under the authority of Sections 402 and 403 of The Fiscal Code[4] and in accordance with applicable *Government Auditing Standards* as issued by the Comptroller General of the United States.[5]

As discussed further in Appendix A, *Objectives, Scope, and Methodology*, our audit serves as an independent assessment of PSERS and the administration of its investment program and the Public Employee Pension Forfeiture Act. Our audit objectives were as follows:

- Determine if the PSERS appropriately follows the Public Employee Pension Forfeiture Act (Act 140 of 1978, as amended) and its associated regulations for public school employees convicted of certain crimes relating to public office or public employment.

- Determine if PSERS' governance structure, delineation of decision-making responsibility, investment expertise, and resources are adequate to provide effective oversight of investment operations.

- Determine if PSERS' external investment advisors and consultants are properly procured and investment fees are reasonable and consistent with investment performance measures.

- Evaluate the diversity of PSERS' investment portfolio to determine if the investment strategy is prudent to minimize risk based on market conditions.

Background of PSERS

PSERS, the 20th largest state-sponsored defined benefit pension fund in the nation[6], was established 100 years ago, on July 18, 1917,[7] to provide retirement benefits earned by public school employees of the Commonwealth of Pennsylvania. PSERS provides its members with a defined benefit pension plan, in which the employer guarantees a level of retirement benefits, as determined by formula, to employees who are members of the plan and meet eligibility requirements.

PSERS' operations are governed by the Public School Employees' Retirement Code.[8] The 15-member Public School Employees' Retirement Board (Board) was established by law as an

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[4] 72 P.S. §§ 402-403.
[5] *Government Auditing Standards*, December 2011 revision, issued by the Comptroller General of the United States, United States Government Accountability Office, Washington D.C.
[6] *See* http://www.psers.pa.gov/About/PFR/Documents/20161207%20FY%202017-2018%20ECR%20fact%20sheet%20FINAL.pdf (accessed May 1, 2017).
[7] Act 343 of 1917 which was later repealed by current Act 96 of 1975, as amended, which established a "new" retirement code.
[8] 24 Pa.C.S. § 8101 *et seq.*

independent administrative board[9] and it exercises control and management of PSERS, including the investment of its assets.[10] The system is also managed by an executive director, retains professional staff, and internally manages assets and contracts for professional services.

According to PSERS' Mission Statement,[11] the Board of Trustees and the employees of PSERS serve the members and stakeholders of the system by:

- Providing timely and accurate payment of benefits
- Maintaining a financially sound System
- Prudently investing the assets of the System
- Clearly communicating members and employers rights and responsibilities
- Effectively managing the resources of the System

PSERS serves 781 employers throughout the Commonwealth, including school districts, intermediate units, charter schools, community colleges, and career/technology schools.[12]

Teachers and other public school employees are eligible to participate in PSERS' retirement plan. As of June 30, 2016, there were approximately 505,000 PSERS members, as outlined in the table below.

Type of Member	Number of Members
Active Members	257,000
Vested Members*	23,000
Retired Members	225,000
Total	505,000

**Excludes 120,000 inactive and non-members.*
Source: PSERS' Actuarial Valuation Report for fiscal year ended June 30, 2016.

In order to fund members' retirement benefits and PSERS' administrative costs, it receives member contributions and employer contributions,[13] and earns investment income. Member contributions range from 5.25% to 10.3% of payroll depending on the class of membership.[14] During the fiscal year ended (FYE) June 30, 2017, members will contribute an average of 7.52%

[9] 24 Pa.C.S. § 8501(a).
[10] 24 Pa.C.S. § 8521(a).
[11] PSERS Comprehensive Annual Financial Report Fiscal Years Ended June 30, 2016 and 2015.
[12] Ibid,
[13] On December 7, 2016, the Board certified an employer contribution rate of 32.57% for fiscal year 2017-2018. Further, PSERS' total employer contributions for FY 2017-2018 are estimated at $4.4 billion. See http://www.psers.pa.gov/About/PFR/Documents/20161207%20FY%202017-2018%20ECR%20fact%20sheet%20FINAL.pdf (accessed May 1, 2017).
[14] http://www.psers.pa.gov/Active-Members/NewToPSERS/Pages/Contributions.aspx (accessed April 7, 2017).

of their pay.[15] All pension contributions and pension income of the system is deposited into the Public School Employees' Retirement Fund.[16]

History of the Unfunded Pension Liability

In the late 1990's, the market was thriving, so the Commonwealth enacted legislation to increase employee retirement benefits for new employees and retroactively for active employees.[17] Then a significant downturn of the economy began in March 2000 and lasted until October 2002, which led to investment losses within the retirement fund. Typically, the employer contribution rate would have been increased to offset these losses. However, Act 40 of 2003 was passed to delay the impending rise of employer contributions (see table below).

Fiscal Year Ending June 30	Total Annual Contribution Rate %
2005	4.23
2006	4.69
2007	6.46
2008	7.13
2009	4.76
2010	4.78
2011	5.64
2012	8.65
2013	12.36
2014	16.93
2015	21.40
2016	25.84
2017	30.03
2018	32.57

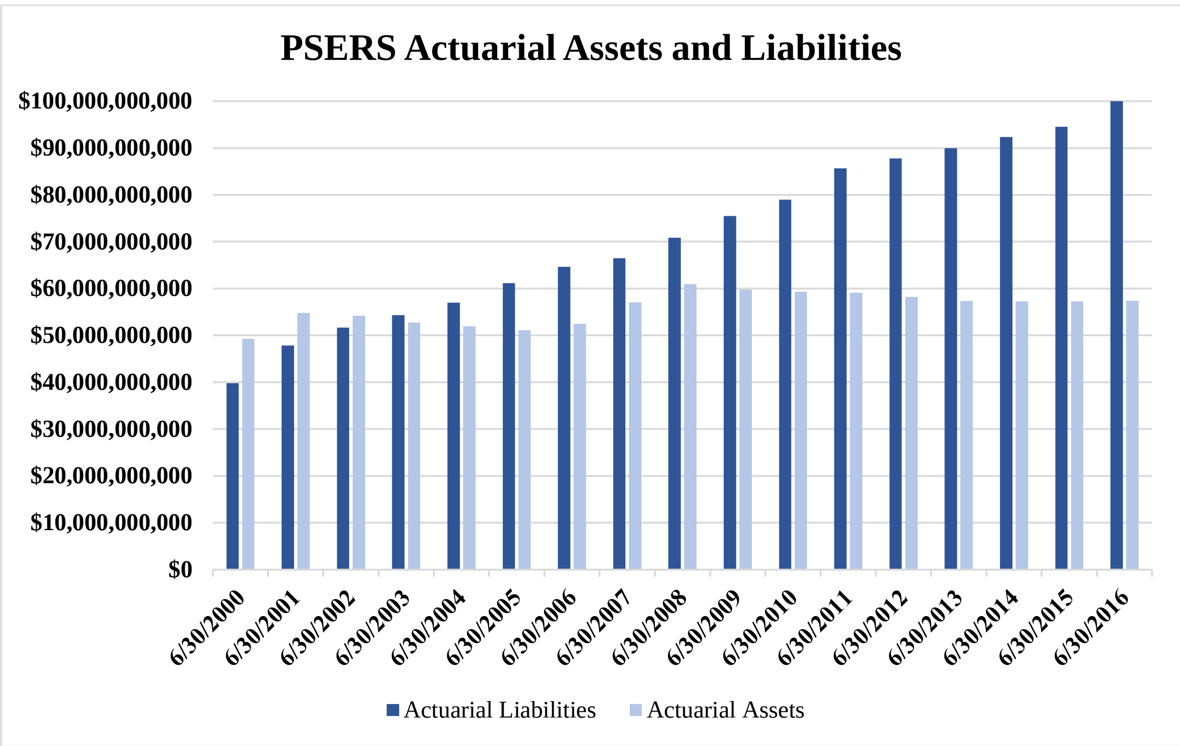
Source: PSERS' Actuarial Valuation Report for fiscal years ended June 30, 2015 and 2016.

Then the economy crashed in 2008[18] and was in a severe recession in 2009,[19] causing a decline in PSERS' assets and consequently a rise in PSERS' unfunded liabilities — from $9.9 billion as of June 30, 2008 to $19.7 billion as of June 30, 2010. In response, Act 120 of 2010 was enacted

[15] PSERS' Actuarial Valuation Report for fiscal year ended June 30, 2015.
[16] 24 Pa.C.S. § 8522.
[17] Act 9 of 2001 added a new class of membership providing a multiplier of 2.5% in the basic benefit formula and reduced vesting requirement from 10 to 5 years. Act 38 of 2002 included a cost-of-living increase payable upon the attainment of normal retirement age and a change in the valuation methodology of smoothing PSERS asset gains and losses from three to five years, enabling the employer contribution rate to be decreased from 5.64% to 1.15% of payroll. (Source: http://www.psers.pa.gov/About/History/Pages/2001-2002.aspx).
[18] https://www.thebalance.com/2008-financial-crisis-3305679 (accessed May 1, 2017).
[19] http://money.cnn.com/2009/03/25/news/economy/depression_comparisons/ (accessed May 1, 2017).

which reduced retirement benefits for individuals who became new members of PSERS and a long-term plan was put into place to pay off the existing pension liabilities.

The unfunded status of pension plans is measured by comparing the actuarial value of assets with the actuarially-determined liabilities. PSERS reached a high of almost 124% funded in 2000 (overfunded by 24%), but the legislation changes to increase benefits and allow underfunding of employer contributions coupled with the economic downturns reduced the fund to an underfunded position. As of June 30, 2016, the PSERS fund was $43 billion underfunded and had a funded ratio of 57.3% percent. The increase of the unfunded pension liabilities is shown in the graph below.



Actuarial assets less actuarial liabilities equals unfunded liabilities.
Source: PSERS' Actuarial Valuation Report for fiscal years ended June 30, 2015 and 2016.

As seen in the graph above, PSERS' total assets exceeded total liabilities until the FYE June 30, 2003, when the liabilities began to surpass the assets. Since that time, the total assets have remained fairly constant, but the total liabilities have continued to increase with the unfunded portion growing each year.

Employers are required to pay an annual contribution, a percentage of payroll, as established by the PSERS Board. Both school employers and the commonwealth pay a portion of the annual contribution. When the school employers and the commonwealth fail to pay their full actuarially required contribution amount, or when investment returns fall below the assumptions used in actuarial calculations, it contributes to the system's unfunded liability.

Background of the PSERS' Board and the Prudent Investment Standard

The Public School Employees' Retirement Code (PSERC) states that the Board, which is an independent administrative board, will consist of 15 members as follows:

- Secretary of Education, ex officio
- State Treasurer, ex officio
- Executive Secretary of the Pennsylvania School Boards Association, ex officio
- Two persons appointed by the Governor, at least one of whom shall not be a school employee or an officer or employee of the Commonwealth
- Three persons elected by the active professional members of the System from among their number
- One person elected by the active nonprofessional members of the System from among their number
- One person elected by the annuitants of the System from among their number
- One person elected by members of the Pennsylvania public school boards from among their number
- Two Senators (one member from the majority and one member from the minority)
- Two members of the House of Representatives (one member from the majority and one member from the minority)[20]

The appointments made by the Governor are subject to confirmation by the Senate. The members from the Senate are appointed by the President pro tempore of the Senate and the members from the House of Representatives are appointed by the Speaker of the House of Representatives.[21]

The Board has a significant role in ensuring the health of the investment program, through its responsibilities of setting the employer contribution rates as required by the PSERC and controlling the investment of the fund assets in order to maximize returns.

As fiduciaries, the members of the Board must act solely in the interests of PSERS' members and for their exclusive benefit. These duties of loyalty and good faith prohibit Board members from acting for their own profit or to serve the interests of their constituents or appointing authorities.[22]

[20] 24 Pa.C.S. § 8501(a).
[21] Ibid.
[22] 24 Pa.C.S. § 8521(a).

According to PSERS management, in regards to overseeing the fund's investments, the Board members are held to the prudent investor standard. In general, this standard requires fiduciaries to invest as a prudent investor would, by considering the needs of the system's members, providing regular income, and preserving the fund assets.[23]

This standard requires that Board members have a familiarity with investing.[24] They do not have to be experts, but their oversight duties require them to understand a broad range of investment vehicles and the risks and costs associated with them. Absent such an understanding, Board members may commit the fund to investments and practices that leave it unable to pay out the retirement benefits PSERS' members depend on.

Background of the Investment Program

PSERS seeks to provide benefits to its members through a carefully planned and well-executed investment program. Its "Investment Policy Statement, Objectives, and Guidelines" establishes criteria for the management of the fund assets and delegation of investment responsibilities to the Investment Office, general investment consultant, other consultants and external investment managers.

The Board adopts several demographic and economic assumptions as developed by its actuary and general investment consultant. These assumptions include forecasting salary growth, member population growth, inflation rates, and the investment rate of return. The investment rate of return is the return PSERS expects its investments will produce to help fund the retirements of its members. In June 2016, PSERS lowered its investment rate of return from 7.5% to 7.25%. The general investment consultant reported that under the current 30-year capital market assumptions, the current expected annual return is 7.12% plus any additional returns on active management of the liquid asset classes.

In a February 2017 Issue Brief, the National Association of Retirement System Administrators (NASRA) reported the average return assumption of the 127 public pension plans measured was 7.52%. In December 2016, the California Public Employees' Retirement System, the largest state pension system, decided to lower its rate from 7.5% to 7.0% from fiscal year 2017-2018 to fiscal year 2019-2020. The table below outlines the assumed rates for additional state pension systems.

[23] Investopedia.org (accessed May 2, 2017).
[24] 24 Pa.C.S. § 8521(a).

State Public Pension System	Investment Return Assumption Rate
Florida Retirement System	7.6%
New York State Teachers	7.5%
North Carolina Teachers and State Employees	7.25%
Ohio Public Employees Retirement System	7.5%
Texas Teachers	8.0%

Source: National Association of State Retirement Administrators February 2017 Issue Brief.

A fundamental part of an investment program is making key decisions as to whether assets should be managed by internal staff or by external investment management companies and whether to adopt active or passive investment strategies. As of January 2017, PSERS internal staff managed about 35% of its investments, including all investments in U.S. Equity. The remaining 65% of investments were managed by external investment managers.

Another key investment decision is to what extent to use passive or active investment management strategies. Passive management, or indexing, is an investment management approach based on investing in the same securities, and in the same proportions, as an index such as the S&P 500. It is called passive because portfolio managers do not make decisions about which securities to buy and sell; the managers merely follow the same methodology of constructing a portfolio as the index uses. The managers' goal is to replicate the performance of an index as closely as possible.[25]

On the other hand, active management attempts to outperform the market. This is achieved through analyzing potential investments, market trends, the economy, and other factors. Active managers are constantly searching for information and gathering insights to help them make their investment decisions. As of January 2017, PSERS' investment strategy consisted of 21% passively managed investments and 79% actively managed investments.

The costs of these different strategies must be analyzed as part of the decision-making process. In general, external investment managers and active managing result in higher investment fees. For the fiscal year ended June 30, 2015, investment management fees totaled $441 million and declined to $416 million in fiscal year ended June 30, 2016. In order to minimize investment management fees, emphasis must be placed on selecting quality investment managers and consistently monitoring the performance of investments.

[25] www.investopedia.com (accessed March 10, 2017).

Background of Structuring a Portfolio to Minimize Risk

Most people view risk as the chance of loss. Investment professionals, however, measure risk through the use of volatility, which is the fluctuation of the investment return. The volatility of investments decline as the time horizon extends, although it will never eliminate all the risk of an asset class. Two methods to address volatility include portfolio diversification and an asset allocation strategy. Diversification is holding multiple securities within an asset class, and asset allocation is constructing a portfolio with multiple asset classes.[26]

Trustees should periodically review its asset allocation policy and, if necessary, adjust the portfolio mix. The trustees are ultimately responsible for establishing and reviewing the asset allocation policy, but often delegate these duties to investment staff or an investment consultant. One method of reviewing the asset allocation strategy is to perform an Asset-Liability Study. This method focuses on structuring the portfolio so the assets and liabilities are matched to the best extent possible. The study is extremely complex and evaluates the probable growth and structure of the liabilities in order to develop asset allocation recommendations that best meet the liabilities over time. Data from the actuarial report is used to construct a projection of future liabilities. The firm performing the study will develop various portfolio asset allocations and, using specialized actuarial software, model the assets against the liabilities. The firm then typically evaluates thousands of potential future inflation scenarios and a wide range of market conditions. The results of this analysis are used to determine the mix of asset classes most likely to meet expected future spending needs while minimizing the risk that those needs will not be met.

For the purpose of our audit, we categorized investments into 5 asset classes as follows, and an additional class to incorporate all other assets:

1. <u>Cash Equivalents (including cash and short-term securities)</u>
   Cash equivalents are investment vehicles such as Treasury bills, repurchase agreements, certificates of deposit, commercial paper, or a commingling of these vehicles, such as local government investment pools and money market mutual funds. Cash equivalents are typically a low risk investment used to balance other riskier asset classes.

2. <u>Fixed Income</u>
   Fixed income investments provide pension plans with a fixed rate of return, a nearly certain return of principal, and help to offset the long-term liabilities of the plan. They act as a portfolio diversifier since they generally have a low correlation[27] with the return of

[26] *Beginner's Guide to Asset Allocation, Diversification, and Rebalancing*, sec.gov (accessed March 29, 2017).
[27] Correlation, in the finance and investment industries, is a statistic that measures the degree to which two securities move in relation to each other. Having a low correlation means the two securities typically do not move in relation to each other.

stocks. These investments may include Treasury notes and bonds, Treasury Inflation Protected securities, and other bonds (domestic and international).

3. Public Equity
   Public equity consists of domestic and foreign stocks. These investments are primarily used by pension systems to seek real returns in excess of inflation. However, this increase in returns corresponds to an increase in volatility. Additionally, foreign stocks may add another dimension of risk due to trading securities in different currencies.

   Foreign currency risk is the risk that fluctuations in exchange rates will adversely affect the fair value of an investment. To address this risk, PSERS' has an external manager mandated to hedge[28] foreign currency exposure. The foreign currency exposures (net of the currency hedge) at June 30, 2016 are listed in the table below.

Currency	Total Fair Value (in thousands)
Euro	$ 955,316
British pound sterling	$ 295,666
South Korean won	$ 123,819
Taiwan new dollar	$ 98,881
Indian rupee	$ 84,594
South African rand	$ 66,114
Danish krone	$ 61,931
Mexican new peso	$ 57,123
Brazil real	$ 35,554
Other foreign currencies	$ 74,357
Total	**$1,853,355**

Source: PSERS' Comprehensive Annual Financial Report as of June 30, 2016.

4. Alternatives
   Alternatives encompass a variety of instruments that are either non-traditional assets or non-traditional methods, like hedge funds, private debt, private equity, or venture capital. These investments may play a role in offsetting the volatility of traditional assets classes. However, they present unique risks and oversight challenges that need extreme prudence and care in their use.

[28] A hedge is an investment to reduce the risk of adverse price movements in an asset.

5. Real Assets
   Real estate represents an ownership position but also the economic value is predominantly in the form of a stream of payments. Therefore, its functionality can be viewed as a hybrid of stocks and bonds. In addition to real estate, real assets also include commodities and infrastructure.

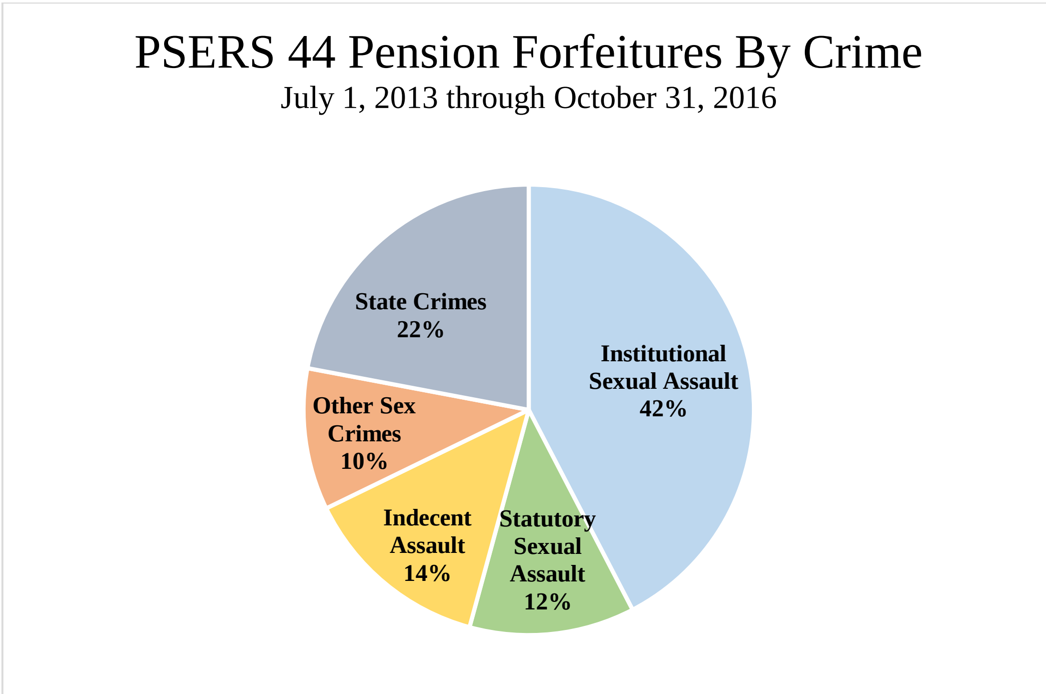
Numerous studies have concluded that the single most important component determining overall performance of an investment portfolio is how that portfolio is allocated among different types of investments.[29] Following the tenets of Modern Portfolio Theory, asset allocation is the key to managing risks, as well as driving returns. Modern Portfolio Theory relies on asset classes that move in opposite directions over time, thereby cancelling each other's volatility. Taken together, in theory, the overall portfolio would increase in value at a steady rate.

Background of the Public Employee Pension Forfeiture Act

Act 140 of 1978, the Public Employee Pension Forfeiture Act (Act),[30] provides for the forfeiture of the pensions of certain public officials and employees, including school employees, and authorizes the Commonwealth to forfeit pension benefits upon conviction of certain criminal offenses related to their office or position of employment. These state crimes include theft, forgery, bribery, perjury, tampering with public records, or intimidation of witnesses/victims. When a member forfeits his or her pension benefits, no employee contributions are included in the forfeiture. The court can, however, order the contributions, as well as the interest earned on employee contributions, to be used for restitution.

In September of 2004, the Act was amended to include certain sex crimes committed by a school employee against a student, including rape, statutory sexual assault, involuntary deviate sexual intercourse, sexual assault, aggravated indecent assault, indecent assault, and indecent exposure.[31] Between July 1, 2013 and October 31, 2016, PSERS processed and closed 44 cases that resulted in pension forfeiture. Approximately 78% of these cases were the result of school employees committing sex crimes against students, as presented in the chart below:

[29] *Pension Investing: Fundamentals and Best Practices*, Government Finance Officers Association, gfoa.org, page 15.
[30] 43 P.S. § 1311 *et seq.* (Act 140 of 1978, as amended.)
[31] Act 86 of 2004, effective September 13, 2004. The specific language added was as follows: "Any of the criminal offenses set forth in Subchapter B of Chapter 31 (relating to…[Sexual] offenses) [of the Crimes Code] when the criminal offense is committed by a school employee as defined in 24 Pa. C.S. § 8102 (relating to definitions) against a student." *See* 43 P.S. § 1312.


PSERS 44 Pension Forfeitures By Crime
July 1, 2013 through October 31, 2016
State Crimes 22%
Institutional Sexual Assault 42%
Other Sex Crimes 10%
Indecent Assault 14%
Statutory Sexual Assault 12%

Issue Area 1 – PSERS failed to assess and document the investment knowledge and skills of each trustee to demonstrate the Board collectively possesses the abilities to oversee prudent investment decisions.

Retirement systems must define the key elements necessary for trustees to fulfill their responsibilities in accordance with fiduciary standards. The Government Finance Officers Association[32] (GFOA) states that one fundamental of public pension governance is to ensure the governing board receives adequate education and training to fulfill its fiduciary duties.[33] Additionally, a public pension board should be comprised of a mix of individuals with a variety of professional skills, a wide range of knowledge and an assortment of experiences so that collectively the knowledge base is sufficient for the board as a whole to be responsive and responsible for such areas as investing, insurance, and benefits. The objectives of this audit focus only on the responsibility of the board to guide investment of the system assets; and therefore, not on any of the other services provided by PSERS.

Based on the results of our audit, the most problematic area related to PSERS Board governance is its ability to ensure each trustee of the system possesses the knowledge and skills to prudently make decisions on investing the system's $47.7 billion of assets. There are no statutory prerequisites for any trustees to have investment knowledge and no minimum amount of annual investment training each trustee must receive. Additionally, neither PSERS management, nor the board provided any type of interview or evaluation of trustees to assess their level of investment knowledge or what training should be provided on investment topics to be sure that they have an adequate level of investment knowledge to serve as a trustee.

The PSERS' Board of Trustees (Board) is bound by fiduciary duties, which can be divided into three categories:[34]

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[32] The Government Finance Officers Association (GFOA) represents public finance officials throughout the United States and Canada. **GFOA's mission is to promote excellence in state and local government financial management.** To meet the many needs of its members, the organization provides best practice guidance, consulting, networking opportunities, publications including books, e-books, and periodicals, recognition programs, research, and training opportunities for those in the profession.

[33]GFOA Best Practice "*Governance of Public Employee Post-Retirement Benefits Systems*."

[34] Ibid.

Duty of Loyalty	Duty of Care	Duty of Prudence
• The obligation to act for the exclusive benefit of the plan participants and beneficiaries. • The trustees must put the interest of all plan participants and beneficiaries above their own interests or those of any third party. • As a fiduciary, the trustee does not represent a specific constituency or interest group.	• The responsibility to administer the plan efficiently and properly. • The trustee must consider and monitor the financial sustainability of the plan design and funding practices.	• The obligation to act prudently in exercising power or discretion over the interests subject to the fiduciary relationship. • A trustee should act in a way that a reasonable person acts in a similar situation or in the conduct of his or her own affairs.

As a result of these fiduciary duties, each trustee must carefully assess investment goals, risk versus return, and diversification of assets.[35] Under the duty of prudence, to be considered a *prudent investor*, a trustee must only acquire investments or expose the fund to risks that a person of reasonable intelligence would consider wise with a low probability of permanent loss. In other words, each trustee should take a reasonable approach to investing that meets the needs of beneficiaries while preserving fund assets.

The Board's Education Policy serves as guidelines in order to help provide each **Board member and designee (hereinafter collectively referred to as trustees)** with the "knowledge and understanding of complex issues and topics necessary to administer a large governmental pension plan and prudently manage its significant investment assets." The Education Policy consists of a new member orientation program, continuous in-house training, and continuous industry educational events/conferences. Although each individual Board member and designee is not expected to be an expert in investing, they are to be familiar with investment topics to aide in decision-making.

[35] 24 Pa.C.S. § 8521(a). PSERS Board members are held to "exercise…that degree of judgment, skill and care under the circumstances then prevailing which persons of prudence, discretion and intelligence who are familiar with such matters exercise in the management of their own affairs not in regard to speculation, but in regard to the permanent disposition of the fund, considering the probable income to be derived therefrom as well as the probable safety of their capital…."

We utilized the Clapman Report 2.0[36] published by the Stanford Institutional Investors' Forum Committee on Fund Governance as a model for board education. The report was developed in the aftermath of several well-publicized governance failures at both public and private pension funds and endowments. The report was based on the premise that good governance practices help to ensure better organizational performance, fewer conflicts of interest, a higher probability that goals and objectives will be attained, and to ensure less opportunity for misuse of fund assets.

The Clapman Report 2.0 states in part "This is not to say that public pension systems should require expertise in areas such as investments, actuarial matters, or auditing as a precondition to serve as a board member. The principal function of a public pension fund trustee is to work with his/her peers on the board to establish the strategic direction of the system, to hire the necessary staff and consultants with the expertise to carry out the direction and administer the system on a day-to-day basis, and then to oversee the work being done to ensure that the direction is carried out." The report goes on to say that "For the most part, board competency involves a completely different skill set than those of professional investment manager, actuary or auditor. And, experience has shown that getting such experts to serve on a board that is regularly in the public eye, requires public disclosure of personal financial interests (including client relationships), and pays little or nothing can be difficult. As such, it is incumbent upon all board members to develop the requisite expertise to fulfill their responsibilities and meet their core competencies [to be effective]. This assumes that the new board member is fundamentally ***capable*** and requires the development of an educational regimen that allows a quick transition to ***able***."

Additionally, the Research Foundation of the CFA Institute notes that "In essence, you and other trustees are responsible for the overall success of the investment program. However, because you have no hands-on involvement in implementing the Fund's investments, you fulfill your responsibility by determining an appropriate direction for the investment program, by empowering experienced people to carry the Fund in that direction, and finally, by monitoring and evaluating investment results. Specifically, the trustees hold the responsibility for setting broad investment policy and overseeing its implementation."

Understanding the point made by the Clapman Report and the CFA Institute and as part of our audit procedures, we conducted a survey of all 33 trustees that served on the Board as of December 2016 or was new to the Board and participated in the March 2017 Board meeting (See Appendix B). Our survey focused on whether the trustees consider PSERS' governance structure, investment expertise, and resources for decision-making adequate to provide effective oversight on investment operations. We received 25 completed surveys and have incorporated the results throughout the audit report.

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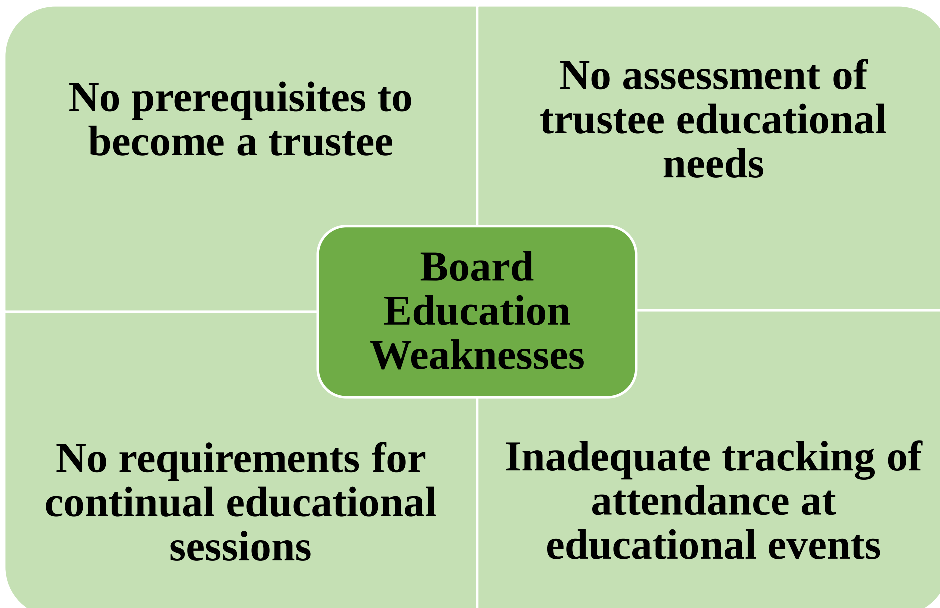
[36] *Clapman Report 2.0*, published by the Stanford Institutional Investors' Forum Committee on Fund Governance, *available at* http://law.stanford.edu/wp-content/uploads/sites/default/files/event/392911/media/slspublic/ClapmanReport_6-6-13.pdf (accessed December 9, 2016).

While extensive investment experience is not required to serve on the board, a working knowledge of basic investment principles and concepts will help a trustee fulfill his/her duties. Based on our audit procedures, we found that the Board failed to demonstrate that each trustee possessed adequate knowledge and skills to prudently guide the investment of funds. We found several significant Board education weaknesses that contributed to this situation as noted in the chart below.



There are no prerequisites to becoming a Board trustee.

The PSERC does not require each trustee to possess a minimum level of investment or financial knowledge. PSERS' Board Bylaws are also silent on the minimum amount of knowledge a trustee should possess or obtain. Further, the Board does not maintain biographies of each trustee to evidence the individual's educational, career, or personal experience with investments. Therefore, while the experience of certain members may be known the collective investment knowledge of the Board is unknown. Additionally, without knowing the investment knowledge of every board member/designee it is more difficult to determine whether each has sufficient investment knowledge.

According to PSERS management, the Board Bylaws do not include a prerequisite of investment knowledge and the Board does not maintain trustee biographies because several of the Board members are appointed by the Governor or the General Assembly. The Board is not able to impose, or enforce, any further restrictions on qualifications upon the trustee, and any additional restrictions would have to come from the General Assembly. While the Board may not be able to impose qualifications on Board members, they can opt to collect and retain biographies/resumes from each board member in order to determine knowledge level and to post the biographies/resumes on their website to assure PSERS members that the fund is being handled by capable individuals.

Although one would expect the individuals who selected the trustees[37] considered investment knowledge and experience as a qualification, reliance on an individual's judgement does not alleviate the need for a legal requirement. As noted in the table below, there are several other state public pension systems that require some form of investment knowledge or experience within its statutory law.

State Public Pension System	Statutory Investment Knowledge Requirements of Board
Iowa Public Employees Retirement System	"Three public members, appointed by the governor, who are not members of the retirement system and who each have substantial institutional investment experience or substantial institutional financial experience."[38]
Virginia Retirement System	"The gubernatorial appointees shall be as follows: two shall have a minimum of five years of experience in the direct management, analysis, supervision, or investment of assets…"[39]
Arizona State Retirement System	"B. Four of the members shall have at least ten years' substantial experience as any one or a combination of the following: 1. A portfolio manager acting in a fiduciary capacity. 2. A securities analyst. 3. An employee or principal of a trust institution, investment organization or endowment fund acting either in a management or an investment related capacity. 4. A chartered financial analyst in good standing as determined by the CFA institute. 5. A professor at the university level teaching economics or investment related subjects. 6. An economist. 7. Any other professional engaged in the field of public or private finances."[40]

[37] This excludes the Board members required to serve on the Board by way of his/her job position (also known as "ex officio member"), including the Secretary of Education, State Treasurer, and Executive Secretary of the Pennsylvania School Boards Association.
[38] Iowa Code 97B.8A, Section 4.a.(1)(a).
[39] VA Code Title 51.1, § 51.1-124.20G.
[40] AZ Rev Stat § 38-713(b).

New York State Teachers Retirement System	"Two members who are not employees of the state, each of whom shall be or shall have been a trustee or member of the board of education of a school district in this state, and at least one of whom shall be or shall have been an executive officer of an insurance company, elected by the board of regents of The University of the State of New York to serve for a term of three years, from a list of five or more persons having broad experience and ability in the fields of finance and investment to be presented to the regents by the board of directors of the New York State School Boards Association, Inc."[41]
Ohio Public Employees Retirement System	"Two members, known as the investment expert members, who shall be appointed…and each of whom shall have…direct experience in the management, analysis, supervision, or investment of assets."[42]
Teacher Retirement System of Texas	"The governor shall appoint to the board: (1) three persons who have experience in the fields of securities investment, pension administration, or pension law…"[43]

Although trustees need to have experience in several areas, investment knowledge is crucial given these individuals are being entrusted with over $47.7 billion of fund assets.

Additionally, as part of the governance structure of PSERS, all Board members are part of the Finance Committee, therefore the Finance Committee and the Board are one in the same. A Finance Committee being comprised of all the Board members is not common. The more traditional approach is having the Finance Committee be made up of a smaller number of board members who have both depth or knowledge and experience in investment issues who then provide input and guidance to the full Board.

Because PSERS has all the Board members also serve as the Finance Committee, the need for every board member/designee, to be subject to mandatory continuing education becomes even more important to be certain that all Board members/designees are fully informed on all the important issues and aspects of the PSERS investing strategy. The Finance Committee being comprised of the full board simply highlights the potential deficiencies in knowledge of each board member. Therefore, if PSERS were to obtain the biographies/resumes of all board members the board would be better situated to determine which members are suited to serve on the Finance Committee.

[41] NY Education Law § 1-504.2.b.
[42] Ohio Code Title 1, § 145.04(A)(5)(a)(iii).
[43] Texas Government Code Title 8, § 801.103(b).

The Board does not assess the investment education needs of each trustee.

In addition to lacking biographical information for each trustee, the Board also did not have trustees conduct self-evaluations of their educational levels or needs. The Clapman Report states that board members are responsible for self-evaluating their educational needs and obtaining knowledge in specifically needed areas. The report suggests each member annually complete a knowledge self-assessment form and discuss the results with the Executive Director. Specific areas in which trustees should develop and maintain useful levels of knowledge should include governance, asset allocation, investment markets, actuarial process, fiduciary responsibility, ethics, conflicts and disclosures, financial controls, and the vendor selection process.

PSERS management stated that they have not done this in the past because trustees are provided the opportunity to request educational events based on his or her specific needs at the end of each Board meeting. Any topics requested are presented at the following Board meeting.

Our trustee survey results indicated that the majority of trustees feel they have sufficient knowledge regarding investments to assist the Board in making decisions. However, some trustees disagreed that the amount of education sessions provided on specific topics were sufficient. For instance, one trustee indicated he or she had insufficient knowledge in investment fee structures, risk, performance benchmarks, asset allocations, and portfolio diversity. Additionally, three trustees indicated the amount of educational sessions related to investment fees is insufficient. Further, two trustees stated that the education session topics are too driven by the PSERS staff and consultants, and should be determined by the trustees.

As noted above, the Board is not aware of the experience and knowledge each trustee possesses in relation to investments. Without establishing a self-evaluation for trustees, the Board is relying on trustees to request educational sessions. Trustees may not be aware of all the specific topics they should understand to make informed investment decisions and therefore do not know what areas to ask for any additional education.

There are no requirements for continual education sessions.

In addition to not requiring prerequisites to become a trustee, the PSERC also does not include a minimum amount of hours of education sessions trustees must obtain throughout each year. The Board's Education Policy states that PSERS' staff will organize semi-annual educational sessions for the Board to discuss topics of special importance or relevance and may organize additional presentations periodically. Typically, one semi-annual educational session is in-house and one is the Pennsylvania Association of Public Employee Retirement Systems (PAPERS) conference.[44]

The Chair and Secretary of the Board provide a list of educational industry meetings/conferences that trustees may attend. The policy, however, does not require the trustees to attend these events in order to receive a minimum number of hours of training each year. Also, the policy does not require trustees to participate in annual fiduciary and ethics trainings to continuously improve skill sets.

There are several state pension systems that have ongoing training requirements for trustees with the retirement codes, including:

- The California Public Employees' Retirement System board members are required to receive a minimum of 24 hours of education within the first two years of assuming office and for every subsequent two-year period the member continues to hold membership on the board. Each member must attend an annual training on the fiduciary duties applicable to trustees of a public pension system.[45]

- The Texas retirement code directs the pension review board to establish minimum training requirements, which resulted in the requirements of a minimum of 7 hours of training within the first year of service and 4 hours of training every two years after that.[46]

- The Maryland State Retirement Code also requires each member to annually participate in at least eight hours of investment and fiduciary training.[47]

According to PSERS management, the Board could only require its members to attend training events if such requirements were added to the PSERC. However, the Board provides several opportunities for learning from which trustees can benefit. Additionally, the PSERS' staff conducts its training sessions during the Finance Committee meetings or the Board meeting.

From July 1, 2013, through June 30, 2016, the Board received five educational presentations from the PSERS' staff, 17 educational presentations from a consultant/investment manager, and 21 industry trainings/conferences as detailed in the table below.

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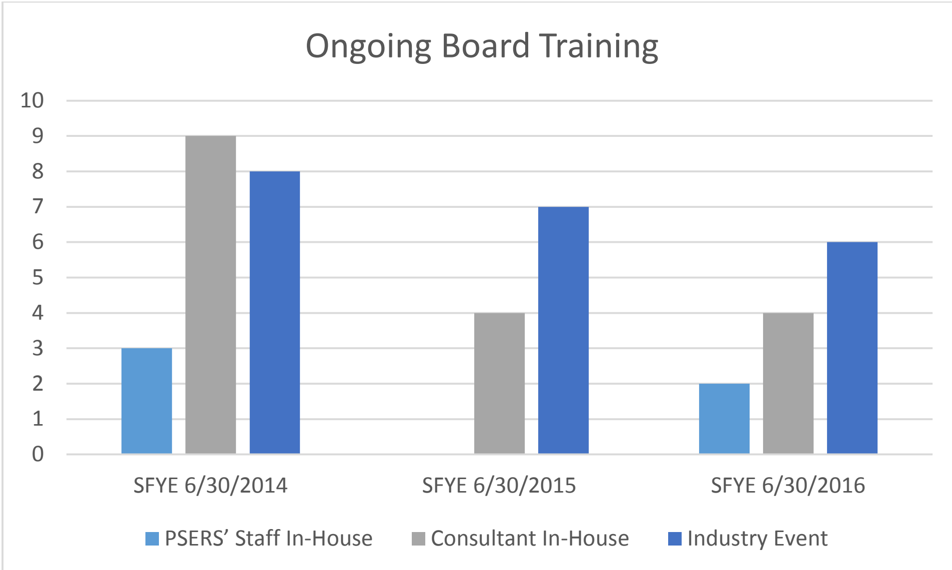
[44] PAPERS functions as a central resource for public pension education. Its primary purpose is to offer educational conferences and training opportunities to improve performance of the public employee retirement systems in Pennsylvania.
[45] California PERL, Title 2, Div. 5, Part 3, § 20100.
[46] Texas Government Code Title 8, § 801.211.
[47] MD SPP Code § 21-108(a)(3).



However, the amount of trainings offered to trustees is irrelevant if their attendance is not required and not adequately tracked.

The results of our trustee survey appear to correspond with our findings. One trustee indicated the ability to communicate complex technical financial theory and practice in a clear and concise manner is challenging, but the staff are very good at providing this information. Another trustee stated that PSERS provides many opportunities for Board members to receive education. This statement was echoed by a third trustee who stated the amount and quality of the educational sessions are sufficient; however, the problem is that there are some individual Board members who do not believe they need to attend them. This comment supports our conclusion that there are attendance issues at Board meetings/educational sessions as reported in Finding 4.1.

The Board's tracking of trustee attendance at educational events is weak.

Beyond criteria needed to become a trustee, each trustee must become acclimated with Board procedures and gain at minimum, adequate knowledge of a prudent investor[48] prior to voting on investment decisions. The Clapman Report outlines the best practices regarding new trustee

[48] A guideline that requires a fiduciary to invest trust assets as if they were his own. The managing investor should consider the needs of the trust's beneficiaries, the provision of regular income, and the preservation of trust assets and should avoid investments that are excessively risky. The prudent investor rule states that the decision-making process must follow certain guidelines, even if the final result does not satisfy the original intent (investopedia.org).

orientation. The report lists vital topics that should be included in an orientation session, including:

- Roles and expectations of trustees.
- Organizational structure and roles of staff and key service providers.
- Laws and policies governing the system.
- Fiduciary responsibilities.
- Conflicts of interest and ethics.
- Board's strategic plan.
- Current or emerging issues before the board.

The Board's Education Policy outlines comparable elements and states the trustees are expected to attend the orientation program prior to his or her first Board meeting.

The Board's new member orientation is a series of live presentations delivered by the Executive Director, Deputy Executive Director, Assistant Deputy Director, Chief Investment Officer, Chief Finance Officer, Chief Counsel, and a representative from an investment consultant. At this time, the member is granted access to the Diligent Resource Center which is a secure website used by board members and contains the laws, policies, meeting minutes, and other important shared information.

We obtained the presentation slides for the new member orientation sessions from July 1, 2013 through September 30, 2016. There were four orientation sessions that occurred within this time frame: September 2013, January 2014, August 2015, and August 2016. The content of the presentations appeared to be in compliance with the elements outlined in the policy. Additionally, the PSERS' Investment Office presented investment-related information on public markets, private markets, investment operations and risk, and asset/liability management.

Although the topics within the Board's Education Policy are aligned with the referenced model, and the actual presentations appear to be in compliance with Board policy, the Board does not retain documentation evidencing who attended these sessions. Therefore, we were unable to determine if the Board's new orientation program was being delivered within a timely manner to all new trustees.

Further, the Board inadequately tracked attendance for the ongoing educational sessions. PSERS management stated that during our audit period, the Board liaison was only required to track attendance at the semi-annual sessions and industry sessions. Consequently, that means attendance at 19 of the 43 educational sessions, or 44 percent, were not tracked. These additional educational sessions throughout the year accounted for almost half of the ongoing training trustees could attend. Therefore, it is imperative that the Board liaison track all educational sessions. Otherwise, the Board cannot evidence trustees attended a sufficient amount of educational events each year.

Trustees need investment education in order to make informed decisions. PSERS staff and hired consultants/managers provide the majority of the training and are also responsible for proposing investment opportunities to the Board. Typically, presentations to the Board contain the reasons why the firm would be a good fit for the portfolio and focus on the positive merits of the firm. Trustees that lack an adequate investment knowledge base would not have the ability to independently analyze information presented or to perform additional research for potential risks. This increases the risk of trustees voting in favor of recommendations made to the Board without fully understanding each aspect of the investment decision.

Materials related to investment decisions are presented to the trustees prior to the Board meetings. According to our survey results, all respondents indicated that the trustees receive adequate information from the PSERS investment staff or the investment consultants to allow for informed decision making. One trustee noted that the CIO and investment staff have been consistently available to answer questions prior to the meetings. Another trustee commented that the staff has always taken the necessary amount of time to answer questions within the meetings.

Based on our survey results, it appears the PSERS investment staff is dedicated to assisting the trustees in obtaining investment related knowledge. However, the responsibility to ask questions and gain adequate information and knowledge to make prudent investment decisions still remains with the individual trustees. According to our survey results, discussions regarding investment decisions may not be a priority for some trustees. One respondent stated that it is frustrating when trustees are not prepared for the investment decisions or are impatient with taking the time to allow trustees to ask questions and discuss concerns. Similarly, another respondent indicated some trustees appear to be at the Board meetings because they have to be, have no interest or drive to fully engage, and push to speed through investment issues instead of taking the time to fully understand the decisions being made.

Recommendations for Issue Area 1

We recommend that the General Assembly amend the Public School Employees Retirement Code to:

1. Include a minimum amount of investment knowledge or experience the Board, as a collective whole, must possess in order to guide informed investment decisions and promote effective oversight of investment operations.

2. Require that all new board members or designees be mandated to attend a board orientation session when appointed to the board.

3. Mandate a minimum amount of continuing education or training each Board member/designee must obtain annually, specifying the minimum amount of hours of training and the core subject matters the trainings must encompass.

4. Clarify that designees are subject to the same mandated training and education as members.

5. Include a clarification of Board trustees' fiduciary duties and the standard to which they are subject under Section 8521(a) of the PSERC, 24 Pa.C.S. § 8521(a).

We recommend that PSERS:

6. Obtain and maintain biographies of each Board member/designee to evidence educational, career, or other experience related to key Board processes, including institutional investments.

7. Include Board member biographies on the PSERS website to increase transparency.

8. Establish and implement provisions within the Board's Education Policy to require:

    a. Each Board member/designee complete a self-evaluation, on a Board-provided form, of their educational needs at least annually to assist in identifying topics for training.

    b. The Board to determine the subject matters addressed at education sessions and to what extent each topic needs to be discussed.

    c. A minimum amount of mandatory education or training each Board member/designee must obtain each year, specifying the minimum amount of hours of training and the core subject matters the trainings must encompass.

    d. The Board Liaison document and retain when each new Board member/designee completes the new member orientation program.

    e. The Board Liaison track every educational session by Board member/designee noting the length of the training in hours and the subject matter of each session.

Issue Area 2 – PSERS' management of investment expenses within its asset allocation strategy/policy appears standard however woefully unfair to the taxpayers. PSERS should take a leadership role in the public pension sector by continuing to improve its reporting of investment expenses and fund performance.

Issue Area Summary: Findings 2.1, 2.2, and 2.3

The majority of public pension fund investment expenses are created through the use of external investment managers and non-traditional investments, such as private equity, real estate, or absolute return. These investments tend to have higher investment fees and more complex fee structures. However, investment expenses cannot be viewed in isolation to determine if they are too high. Higher costs may be justified if the investment managers are top quality and are able to produce higher returns than the general market.

In order to determine if investment fees charged to PSERS were reasonable and consistent with investment performance, we analyzed PSERS' investment expense and performance reporting practices. Based on our procedures, we found that PSERS' management of investment expenses within the constraint of its asset allocation policy appears to be logical and reasonable. Additionally, although PSERS' reporting of its investment expenses and fund performance is better than the majority of other state pension systems, it should strive to take a leadership role by improving the clarity of its reporting.

Finding 2.1 – Although PSERS' reporting of investment expenses surpasses its peer public pension systems, additional disclosure improvement can still be made.

All external investment managers charge fees to their investment clients. The cost of managing these investments has significantly increased over the past decade, and one reason for the increase is the correlation to the increased use of alternative investment options, such as private equity, real estate, and hedge funds.[49] And one of the ongoing issues has been the current

[49] February 2016, The PEW Charitable Trusts *"Making State Pension Investments More Transparent."* http://www.pewtrusts.org/~/media/assets/2016/02/making_state_pension_investments_more_transparent.pdf, page 3.

accounting and disclosure practices do not address how to report the expenses for complex investments like private equity.[50]

There are several types of expenses involved in alternative investments including:

1. **Management fees –** The General Partner (GP), or private equity firm, charges a percent per year on the dollar of assets under their management. This fee could be based on the amount of money committed to the GP or the amount of money actually invested by the GP.

2. **Performance fees/carried interest –** A percent fee based on gains above a preferred rate of return over the life of the investment.

3. **Fund expenses –** Fees at the fund-level, such as legal costs, audit costs, and taxes, paid by the GP and passed on to the Limited Partners (LPs), or pension funds.

4. **Portfolio-company[51] charges –** Fees paid by the portfolio company to the GP for advisory services, which the LP is typically entitled a portion. Often the LP portion of the fee is not explicitly transferred but is kept by the GP and used as a payment of the management fee. Typically, only the residual fee amount, which is the management fee less the LP share of the portfolio company fees, is disclosed to LPs.[52]

State pension funds, at a minimum, are required to follow *Government Accounting Standards and Financial Reporting Standards*, issued by the Governmental Accounting Standards Board, which sets the standards for financial reporting. These standards require investment-related costs to be reported as investment expense "if they are separable from (a) investment income and (b) the administrative expense of the pension plan." [53] This standard does not provide specific guidance to determine what costs are "separable," which allows pension funds to determine what costs are separable and allows significant costs to be netted from returns and not separately presented in financial statements.[54]

In addition to state pension funds lacking clear guidance on reporting investment expenses, there are no standardized rules regulating how private equity firms should disclose investment fees and

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[50] April 2017, The PEW Charitable Trusts "*State Public Pension Funds Increase Use of Complex Investments*" http://www.pewtrusts.org/~/media/assets/2017/04/psrs_state_public_pension_funds_increase_use_of_complex_investments.pdf, page 1.

[51] A portfolio company is a single investment in the GP's overall portfolio.

[52] April 2015 CEM Benchmarking *"The Time Has Come for Standardized Total Cost Disclosure for Private Equity."* http://www.cembenchmarking.com/Files/Documents/CEM_article_-_The_time_has_come_for_standardized_total_cost_disclosure_for_private_equity.pdf, page 2.

[53] Statement No. 67 of the Government Accounting Standards Board *"Financial Reporting for Pension Plans."*

[54] April 2015 CEM Benchmarking *"The Time Has Come for Standardized Total Cost Disclosure for Private Equity."* http://www.cembenchmarking.com/Files/Documents/CEM_article_-_The_time_has_come_for_standardized_total_cost_disclosure_for_private_equity.pdf, page 2.

expenses to its investors. This lack of rules often creates an inability for pension funds, as an LP in the private equity fund, to obtain detailed reports on investment expenses from the GP, or private equity firm.[55]

Therefore, typically, only directly-billed management fees are easily segregated and regularly disclosed by pension plans. Though private equity firms generally disclose information on all types of fees, it is often reported deep in an annual financial statement and is not reported or not clearly reported directly to LPs. However, performance fees, other fund-level fees, and portfolio company fees often represent more than half of the total private equity investment expenses.[56] This lack of clarity and openness has led to pension funds often reporting investment fees that often do not depict the total investment fees accrued by private equity firms. In the absence of clearly defined standards, states that voluntarily disclose more comprehensive accounts of total investment fees may be put at a disadvantage in state-to-state comparisons.[57]

For instance, the South Carolina Retirement System (SCRS) has been widely criticized for being subject to some of the highest fees in the country, but CEM Benchmarking[58] found that South Carolina was "simply reporting more costs than other funds rather than incurring more costs."[59] See the SCRS investment expense ratios, or total investment expenses divided by total investments, in the table below.

South Carolina Retirement System	
Fiscal Year Ended June 30	Investment Expense Ratio
2013	1.59%
2014	1.66%
2015	1.26%
2016	0.95%

Source: The expense ratios were calculated based on information reported in the South Carolina Retirement System Comprehensive Annual Financial Reports as of June 30, 2013 through 2016. The data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding, conclusions, and recommendations.

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[55] Ibid., page 2.
[56] Ibid., page 3.
[57] http://comptroller.nyc.gov/wp-content/uploads/documents/SEC_SignOnPDF.pdf.
[58] CEM Benchmarking is an independent provider of objective benchmarking information for large pools of capital including pension funds, endowments/foundations, and sovereign wealth funds. They specialize in benchmarking cost and performance of investments, making 'apples-to-apples' comparisons, and providing insights into best practices.
[59] April 2015 CEM Benchmarking *"The Time Has Come for Standardized Total Cost Disclosure for Private Equity."* http://www.cembenchmarking.com/Files/Documents/CEM_article_-_The_time_has_come_for_standardized_total_cost_disclosure_for_private_equity.pdf, page 1.

Unlike most of the other state pension plans, the SCRS reports net management fees, performance fees, and other fund-level expenses in the plan's Comprehensive Annual Financial Report.[60] It also identifies which fees have been directly invoiced by the manager and which fees were deducted from the fund on a net basis by individual manager.[61]

Similarly, PSERS reports management and performance fees in its annual financial statement, which also portrays a higher investment expense ratio as seen in the table below. According to management, PSERS investment staff must manually collect data from statements that are provided by the private equity firm and calculate the performance fees it paid each quarter in order to report these fees in its financial statements. PSERS management chooses to perform this time-consuming task each year in order to make the fees more transparent. Other pension funds may not undertake this detailed validation process because it is time consuming and they may not have enough resources.[62]

PSERS	
Fiscal Year Ended June 30	Investment Expense Ratio
2013	1.15%
2014	0.93%
2015	0.90%
2016	0.85%

Source: The expense ratios were calculated based on information reported in the PSERS Comprehensive Annual Financial Reports as of June 30, 2013 through 2016.

Although PSERS is reporting management fees and performance fees, which account for the majority of investment expenses, it does not report fund-level expenses or portfolio company fees as investment expenses in its annual financial statements. According to PSERS management, it does not view these other costs as investment fees, but rather fund expenses, since they are not paid to the investment manager. Additionally, each GP may categorize the same type of expense in a different way which makes it difficult to categorize expenses across funds and to report accurate detail. However, PSERS is currently working towards gathering a standard breakout of these expenses using the ILPA Fee Reporting Template,[63] which will be a

[60] February 2016, The PEW Charitable Trusts *"Making State Pension Investments More Transparent."* http://www.pewtrusts.org/~/media/assets/2016/02/making_state_pension_investments_more_transparent.pdf, page 4.
[61] South Carolina Retirement System Comprehensive Annual Financial Report as of June 30, 2016. https://www.peba.sc.gov/assets/cafr.pdf, page 110.
[62] April 2015 CEM Benchmarking *"The Time Has Come for Standardized Total Cost Disclosure for Private Equity."* http://www.cembenchmarking.com/Files/Documents/CEM_article_-_The_time_has_come_for_standardized_total_cost_disclosure_for_private_equity.pdf, page 5.
[63] The Institutional Limited Partners Association (ILPA) Fee Reporting Template was released in January 2016 in order to encourage uniformity in these disclosures, both to provide LPs with an improved baseline of information to streamline analysis and drive decision making, and to reduce the compliance burden on general partners being asked to report against a range of disparate formats from LPs. (https://ilpa.org/best-practices/reporting-template/).

required side letter requirement in all agreements moving forward. Management also indicated that after obtaining full compliance from all its investment managers, PSERS would be better situated to report the most common fund expenses.

Without reporting all investment manager expenses in annual financial reports, the system members and other stakeholders cannot obtain a full picture of investment performance and costs. We believe that all investment manager expenses should be reported in an easily understood manner in order to provide accountability.

There are challenges with collecting the full array of costs associated with private equity investments, but doing so can yield benefits beyond improved disclosure and transparency. Understanding true costs could lead to negotiating lower fees with private equity managers or more efficient investment selections since high fees can significantly affect performance.

Finding 2.2 – PSERS' reporting of fund performance is comprehensive, but does not directly or clearly show the true costs associated with the investment returns.

In February 2016, the PEW Charitable Trusts[64] published a report discussing state public pension funds and transparency of investment manager performance. In order to help stakeholders develop a more complete understanding of both the returns and costs of different investment strategies, it recommended the following steps to improve transparency:

- Make investment policy statements transparent and accessible.
- Disclose bottom-line performance, both gross (before fees are subtracted) and net of fees (after fees are subtracted).
- Expand reporting to include long-term performance results.
- Report results by asset class.[65]

Some information PSERS reports on its public website regarding its investment program includes:

- "Investment Policy Statement, Objectives, and Guidelines."
- A listing of current investment managers.

[64] PEW Charitable Trusts is an independent nonprofit organization which performs detail analysis and research in order to improve public policy in matters relating to public opinion research, arts and culture, state and consumer policy initiatives.
[65] February 2016, The PEW Charitable Trusts *"Making State Pension Investments More Transparent."* http://www.pewtrusts.org/~/media/assets/2016/02/making_state_pension_investments_more_transparent.pdf, page 2.

- Quarterly fund performance (net-of-fees).
- Comprehensive Annual Financial Reports (CAFRs), which contain the annualized total portfolio returns (net-of-fees) for the past 1-Year, 3-Years, 5-Years, and 10-Years by asset class as compared to the established policy index/benchmarks.[66] See the table below.

Fiscal Year Ended June 30	Annualized Total Returns (%) Net-of-Fees	1-Year	3-Year	5-Year	10-Year
2014	Total Portfolio	14.91	8.66	12.09	7.28
	Policy Index	12.05	6.14	9.20	5.81
2015	Total Portfolio	3.04	8.52	9.73	6.31
	Policy Index	2.02	6.24	7.27	4.86
2016	Total Portfolio	1.29	6.24	6.01	4.94
	Policy Index	2.00	5.19	4.51	3.92

Source: PSERS Comprehensive Annual Financial Reports as of June 30, 2014 through 2016.

According to the three CAFRs covering our audit period, it appears the total portfolio has been outperforming its policy index in all but the 2016 1-Year return as seen in the table above.

Additionally, in the 2017-2018 Budget Hearing Report, PSERS reported that for the fiscal years ended June 30, 2000 through June 30, 2016, after investment expenses were paid, on average, each dollar of expense produced $3.05 in excess of the policy benchmark.[67] A simplified example of this is presented below.

EXAMPLE	
EXAMPLE	➢ Investor A passively invests $100 in the index funds (policy benchmark) and earns $2.00 in returns. Investor A ends with $102 in total. ➢ Investor B hires an investment manager to actively invest the $100 in funds. Investor B would earn $3.05 in excess of the $2.00 that Investor A earned from the policy benchmark less $1.00 in investment fees paid to the manager. Investor B ends with $104.05 in total.

A similar figure for each of the three fiscal years ended within our audit period is noted in the table below.

[66] PSERS Investment Policy outlines the market index or combination of indices that each asset class is to be measured against. This is known as the policy index or policy benchmark.
[67] PSERS 2017-2018 Budget Hearing Report, http://www.psers.pa.gov/FPP/Publications/General/Pages/Budget.aspx, page 51.

Fiscal Year Ended June 30	Amount of Earnings Produced by $1 of Investment Expense in Excess of Policy Benchmark Net-of-Fees
2014	$4.15
2015	$2.09
2016	$0.19

Source: 2017-2018 PSERS Budget Hearing Report. The data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.

Although information on its fees and performance is readily available to the public, PSERS does not display the information in a comprehensive manner depicting just how much of the percent return is being consumed by investment fees. A direct comparison of returns on a net and gross basis is a clear and easy method for examining the impact of fees on fund performance. However, PSERS only reports performance on a net-of-fee basis. According to PSERS management, PSERS prefers reporting net-of-fee performance since those returns are actually experienced by the fund. Additionally, management stated calculating the gross-of-fee returns would create additional work for the investment staff with no added benefit. Although we agree that solely reporting net-of-fee returns is better than solely reporting gross-of-fee returns, reporting both returns shows to what extent expenses affect the returns on those investments.

PSERS only reports performance measures for up to 10 years in its annual financial statements. PSERS management stated that, on an individual account basis, the returns since the inception of the investment are used internally to monitor performance, and generally, the 10-year cycle is sufficiently long enough to capture a full market cycle. However, we believe reporting returns on a longer time period would more accurately reflect PSERS' long-term investment performance versus strategy. Otherwise, the focus may be placed on examining the impact of short-term results instead of returns better aligned with fund long-term investment strategies.

Finding 2.3 – PSERS' management of investment expenses within its asset allocation policy appears standard, yet woefully unfair to taxpayers.

Part of PSERS' mission is to prudently invest its assets to maintain a financially-sound system[68] in order to provide the promised benefit payments to its members. To achieve this mission, PSERS invests in a manner consistent with its long-term goals while maintaining adequate liquidity to meet required benefit payments to its members. One key decision to make is to what extent to use active or passive portfolio management.

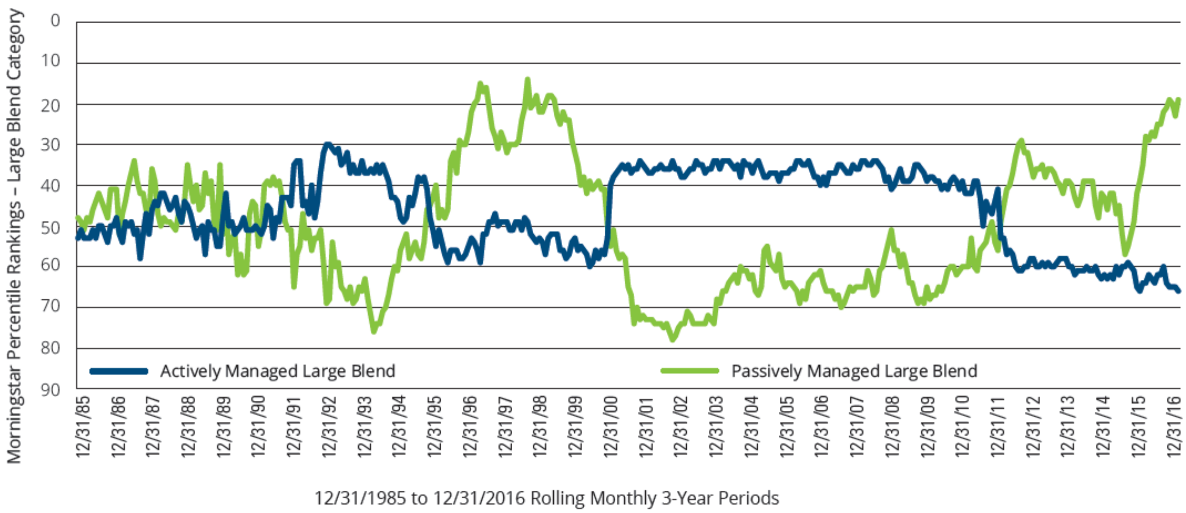
[68] 24 Pa.C.S. § 8521(a); PSERS "*Investment Policy Statement, Objectives and Guidelines*," http://www.psers.pa.gov/About/Investment/Documents/Guide/Inv%20Policy%20Stmt%20(approved%202017-03-10)2.pdf, page 4.

There are considerable debates in investing over the benefits of active versus passive portfolio management. Passive portfolio management, commonly referred to as indexing, attempts to match the performance of a given benchmark index. There is no research required to select securities and infrequent trading, causing investment costs to remain low. This approach is based on the efficient market concept, which theorizes that because all investors have access to all the necessary information about a company and its securities, it is difficult, if not impossible, to gain an advantage over any other investor over the long term. As new information becomes available, market prices adjust in response to reflect a security's true value, which means that reducing investment costs should be a key to improving net returns.[69]

On the other hand, in active portfolio management, a manager tries to beat the performance of a given benchmark index by using judgement in selecting individual securities and deciding when to buy and sell them. Proponents of active management reason that by picking the right investments, taking advantage of market trends, and attempting to manage risk, a skilled investment manager can generate returns that outperform a benchmark index. Active strategies are more expensive to implement and include the risk that they may underperform the benchmark index.[70]

An example of passive and active performance from 1985 to 2016 is presented in the below chart. The "Active Managed Large Blend" is made up of funds from the Morningstar Large Blend Category that are not indexed or enhanced index funds, and the "Passively Managed Large Blend" is the Morningstar S&P 500 tracking category.[71]

[69] https://www.aicpa.org/InterestAreas/PersonalFinancialPlanning/Resources/PracticeCenter/ForefieldAdvisor/DownloadableDocuments/FFActiveversuspassiveconceptpiece.pdf.
[70] Ibid.
[71] https://www.hartfordfunds.com/dam/en/docs/pub/whitepapers/WP287.pdf, page 2.

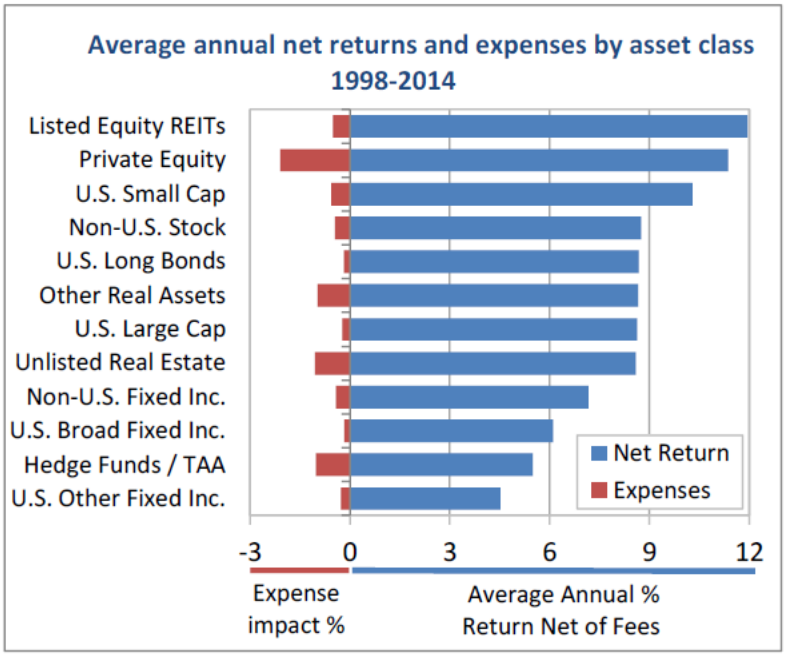


Source: Hartford Funds First Quarter 2017 "The Cyclical Nature of Active and Passive Investing."[72] *We did not verify the accuracy of the data; therefore, the data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.*

As seen in the chart above, there have been periods in history where either active or passive management has been beneficial. However, over the past five years, passive management has outperformed active management in this particular asset class.

Investors can succeed using both passively and actively managed funds; however, the main determinate of the success is the cost of the strategy. A CEM Benchmarking study released in June 2016, shows a comparison of average annual net returns and expenses by asset classes for the period of 1998 through 2014. As seen in the chart below, the private equity asset class, which must be actively managed, clearly has the highest investment expense. However, it also has the second highest net returns.[73]

[72] Ibid., page 3.
[73] http://www.cembenchmarking.com/Files/Documents/Asset_Allocation_and_Fund_Performance_June_2016.pdf, page 2.



Source: CEM Benchmarking "Asset Allocation and Fund Performance of Defined Benefit Pension Funds in the United States, 1998-2014."[74] We did not verify the accuracy of the data; therefore, the data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.

The above chart also demonstrates there are other asset classes, such as Non-U.S. Stocks, U.S. Long Bonds, or U.S. Large Cap Stocks, that earned almost a 9 percent average annual return net-of-fees without the higher investment expenses.

PSERS strategically diversifies its assets to minimize the risk of losses within any one asset class, investment type, industry or sector distribution, maturity date, or geographic location. PSERS objective is to invest its assets to maximize returns within its defined risk policy.

Based on these objectives, the PSERS Board, in consultation with its advisors, establishes its strategic asset allocation annually. A strategic asset allocation is essentially a long-term approach which incorporates financial goals, time horizon, risk tolerance, and expected future returns for various asset classes in determining how a portfolio should be diversified among multiple asset classes. The Investment Office is responsible for determining the optimal way to implement this plan. Two key decisions involved in implementation of the plan is whether investments are internally or externally managed and whether an active or passive investment strategy is employed.

[74] Ibid., page 2.

PSERS' first decision is whether (1) the asset class is already considered efficient and there is no opportunity to outperform a benchmark index or (2) if inefficiencies exist within the asset class that may present an opportunity to outperform the benchmark index. If the asset class is determined to be efficient, PSERS will employ a passive strategy using internal staff to perform the investing. These investments would have very low associated costs but, also, little to no chance of outperforming the benchmark index. However, if the asset class is determined to be inefficient, PSERS will use internal staff or, if internal staff lacks the needed skills, hire external investment managers to actively manage the assets. Actively managing investments creates an opportunity to outperform the benchmark index, but employing external firms to do so results in higher costs.

Based on our audit procedures, PSERS attempts to take a strategic approach to key decision-making, specifically whether it is most prudent to use internal or external managers and to actively or passively manage portfolios, in order to minimize investment expenses within its asset allocation policy. While being able to meet its objectives using this strategy is highly dependent upon hiring high-quality external investment managers and monitoring the performance of these managers on a regular basis, it is woefully unfair to taxpayers and PSERS retirees when every fee paid is not the absolute lowest fee that can be negotiated. Every effort should be made, on a regular and consistent basis, to continue to negotiate for lower and lower fees to allow more of the taxpayers funds to remain in the retiree accounts instead of being paid to investment bankers and calling for more and more retirement contributions. PSERS hiring and monitoring of external investment managers are discussed in Issue Area 3.

Recommendations for Issue Area 2

We recommend that the Governor's Office of Administration:

1. Increase PSERS' investment office complement to allow for increased internal management of investments and lessen the multi-million dollar fees paid to external investment managers.

We recommend that PSERS:

2. Report all investment expenses, including management fees, performance fees, fund expenses, and portfolio-company charges, in its Comprehensive Annual Financial Reports, other reports, and public website.

3. Contractually require investment managers to distinctly identify and report all investment fees and expenses incurred by PSERS.

4. Report investment performance on both a gross-of-fee and net-of-fee basis in its Comprehensive Annual Financial Reports, other reports, and public website.

5. Report investment performance on time periods greater than ten years to coincide with its long-term investment strategies.

6. Continue to advocate increasing the number of investment professionals at PSERS to allow for increased internal management of investments and lessen the multi-million dollar fees to external investment managers.

Issue Area 3 – PSERS failed to document its investment manager fee negotiations and lacked adequate written procedures for monitoring manager performance.

Issue Area Summary: Findings 3.1, 3.2, and 3.3

In order to determine if PSERS investment fees were reasonable and consistent with investment performance, we analyzed PSERS' procedures for contracting with investment consultants and external investment managers, as well as how PSERS monitors the performance of the external investment managers. We compared PSERS' procedures for hiring and monitoring external investment managers to best practices in the industry. We found that though PSERS' procedures to sufficiently research and hire external investment managers and investment consultants appear to be adequate, its lack of documentation prevents us from being able to evaluate fee negotiations. PSERS failed to document its fee negotiations in order to demonstrate that management made a prudent effort to obtain the most advantageous fee structure for each manager. Due to this lack of documentation, we were unable to determine the extent to which PSERS negotiated its fees.

Additionally, we found PSERS' written procedures for monitoring the performance of its external investment managers were inadequate to ensure investment managers were monitored regularly, consistently, and in accordance with PSERS' policies. Although PSERS lacked written procedures for monitoring external investment managers, we were able to obtain sufficient documentation evidencing that comprehensive monitoring was performed for the managers selected for testing.

Finding 3.1 – PSERS appears to have properly procured investment consultants in accordance with its written procedures which are consistent with the DGS' *Procurement Handbook*.

PSERS utilizes investment advisory consultants who provide a wide range of services to PSERS, including recommending investment objectives, assisting in the development of investment policies, evaluating investment managers, and monitoring investment portfolios. PSERS relies heavily on the expertise and guidance of its investment advisors. During our audit period, PSERS approved three new contracts with advisory consultants, including a general investment advisory consultant who provides advice on PSERS' overall investments and two specialty advisory consultants who provide more specific investment advice relating to alternative and real estate investments.

PSERS follows the PA Department of General Services' (DGS) *Procurement Handbook* to issue a Request for Proposal (RFP) when a need for an investment consultant is identified. Interested consultants submit technical proposals to PSERS, which are scored by a selection committee. For consultants that meet a minimum technical score, the cost proposals are opened and evaluated. The selection committee presents a summary of the scoring results along with its recommendation to the Board, which votes on whether to contract with the firm. Prior to the RFP being issued, the selection committee is determined and generally consists of the CIO, Deputy CIO, Investment Office Directors, investment staff, and some Board members.

We selected two of the three investment consultants that contracted with PSERS during the audit period for testing, and verified that:

- The work statement within the RFP contained key provisions related to the fiduciary duties of the consultants, including reporting potential conflicts of interest with the Board or its external investment managers.
- The RFP was reviewed and approved by appropriate management prior to publishing and that the RFP was properly advertised.
- The selection committee completed individual scoring sheets and interviewed the qualifying firms.
- The scores/results were accurately summarized and reported to the Board.
- The Board approved the firm per its Board meeting minutes.
- The required signatures were on the contract evidencing the final contract was reviewed and approved.[75]

Based on our audit procedures, we found that PSERS appears to have properly procured its investment consultants in accordance with its written procedures which are consistent with the DGS' *Procurement Handbook.*

Finding 3.2 – PSERS failed to document its investment manager fee negotiations.

According to the Government Finance Officers Association (GFOA), selecting the proper investment manager is a crucial part of managing a pension fund and it requires a detailed, logical, and disciplined investment manager selection process.[76] Due diligence is a process designed to mitigate risks and other factors involved in making investment decisions. Thorough

[75] Consultant contracts are approved and signed by a senior member of the investment staff, a member of PSERS' executive office, PSERS' Office of Chief Counsel, the Governor's Office of General Counsel, and the Office of the Attorney General.

[76] "Pension Investing: Fundamentals and Best Practices," http://www.gfoa.org/sites/default/files/PensionInvesting_FundamentalsAndBestPractices.pdf, page 39.

due diligence investigations are essential for a pension plan to fulfill its fiduciary duties in carrying out its investment obligations. For investments, due diligence includes the process of research and analysis that takes place in advance of any investment commitment.

PSERS' investment professionals and investment consultants independently perform due diligence on each potential investment manager. At the end of the due diligence process, PSERS investment staff and the consultant must be in unanimous agreement before presenting their recommendation to the Board. The Board then publicly votes on whether to proceed with general contract negotiations with the manager.

The procedures used in the due diligence process are detailed in PSERS' Investment Policy and include:

- Conducting face-to-face meetings at PSERS and at the investment manager's offices.
- Reviewing completed due diligence questionnaires submitted by the managers.
- Analyzing the investment manager's performance, team members, and investment strategy.
- Evaluating the results of stress tests and sensitivity analyses.

Additionally, the Investment policy addresses ethics and potential conflicts of interest of investment managers. In November 2013, the due diligence process began to require the managers to submit information to PSERS on whether any relationships exist between the manager being considered and the consultants prior to contracting. PSERS also contractually requires its consultants and investment managers to provide a copy of any campaign contribution reports filed with the Department of State annually during the period under contract. Also, it appears PSERS' procedures to identify potentially conflicting relationships between consultants and managers and to report these relationships to the Board prior to contracting and during the contract period are adequate. If a significant conflict exists, the manager will not be utilized; and if a minor conflict exists, the Board determines the effect on contracting.

Between July 1, 2013 and October 20, 2016, the PSERS Board approved 19 new advisory agreements with external investment managers. We selected 4 of the 19 agreements for testing. We found for each of the four agreements that PSERS and its consultant performed and documented an adequate amount of due diligence in compliance with its investment policy and recommended the manager to the Board with adequate justification. We also found that the required signatures for each agreement were present evidencing the review and approval of each final agreement.

However, we did not find consistent evidence that PSERS negotiated for lower investment fee structures with the managers. To minimize the impact of investment management fees on portfolio returns, the GFOA recommends that retirement systems adopt an investment fee policy that will allow the system to negotiate the lowest competitive fee possible while looking out for the system's long-term earning potential. The policy should detail its measures and techniques such as determining what fees similar investors are paying and making these fee comparisons part of the negotiation process. The GFOA also recommends including a "Most Favored Nation" clause in the agreement, which ensures the type and size of fees are at the level that is being made available to other similar investors.[77] This type of clause would ensure that even after the contract is in place, if a similar investor receives a lower fee structure, the firm is contractually required to offer the same rate to PSERS.

According to PSERS management, it aggressively negotiates with external investment managers to obtain a reasonable fee structure. However, PSERS did not document its fee negotiations or justify the reasonableness of the fee structure if a lower fee could not be negotiated. PSERS management stated that its documentation of fee negotiations is only evidenced if there is a difference between the manager's initially-presented fee structure and the fee structure in the final agreement. Negotiations were not formally documented due to staffing constraints. For the four agreements reviewed, the results of PSERS' negotiations are shown in the table below.

Manager	Type of Investment	Investment Amount (in millions)	Fees in Initial Offer[78]	Fees in Final Agreement	"Most Favored Nation" Clause
A	Emerging Markets	$350	0.7% management	0.7% management	Yes
B	Global Equity	$740	0.67% management, 20% performance	0.67% management, 20% performance	Yes
C	Specialty Finance Debt	$300	0.75% management	0.50% management, 15% performance	Yes
D	Passive Currency Hedging Overlay	$80	0.02% management	0.02% management	Yes

Source: Auditor General staff compiled from manager advisory agreements and other supporting documentation provided by PSERS.

As seen in the table above, PSERS negotiations resulted in a lower fee structure for one of the four agreements tested. PSERS management stated there are situations where it is nearly impossible to negotiate lower fees. For instance, if the manager is known as being high quality

[77] "Best Practice: Investment Fee Policies for Retirement Systems", http://gfoa.org/investment-fee-policies-retirement-systemsgfoa.org (accessed March 20, 2017).

[78] See explanation of management and performance fees in Issue Area 2.

and is in great demand, the manager may have more investors than it needs who are willing to pay the offered (higher) rate.

Without adequate documentation evidencing PSERS' attempts to negotiate a lower fee structure or justify the offered fee structure as reasonable, we were unable to determine if PSERS' negotiation procedures were sufficient to obtain the lowest fees possible.

Finding 3.3 – PSERS' written procedures for monitoring investment managers need to be strengthened.

The GFOA states that investment manager performance evaluation is similar to the process of manager selection in that pension systems must make judgements about the future performance of managers based on a combination of quantitative and qualitative information.[79] Pension systems need to develop specific procedures for performance analysis and response.

These procedures should include establishing benchmarks which have been customized to evaluate managers, verifying the accuracy of data self-reported by the manager, and identifying which ratios or performance measures on which to focus.[80] Further, these procedures should identify the individuals responsible for completing the monitoring and the expected time frame for monitoring. Due to the long-term measures of some asset classes, deciding on whether to retain or terminate a manager could be measured over a full-market cycle (3 to 5 years).[81]

In addition to these quantitative factors, the GFOA states qualitative measures should also be reviewed on a regular basis, including whether assigned objectives are being accomplished, whether the manager maintains a consistent investment approach, the quality of reports produced by the manager, and any turnover of key personnel.[82]

PSERS maintains written review and oversight procedures for each category of external traditional investments, including U.S. equities, Non-U.S. equities, risk parity, and fixed income/commodities. In general, these written procedures state PSERS investment managers should review the performance of the managers by comparing performance to benchmarks and historical returns, market exposure, and risk profile. These written procedures are fairly general and do not address all aspects of the monitoring process as outlined above. Additionally, PSERS does not have written procedures for monitoring non-traditional investments.

[79] "Pension Investing: Fundamentals and Best Practices," http://www.gfoa.org/sites/default/files/PensionInvesting_FundamentalsAndBestPractices.pdf, page 45.
[80] Ibid., pages 44-47.
[81] Ibid., pages 47-48.
[82] Ibid., page 45.

PSERS management stated that each job position has instructions on how to perform the duties of the job, which includes monitoring, and each portfolio has its own set of guidelines which have a section regarding the monitoring of each portfolio. However, these documents fail to adequately detail the comprehensive procedures needed to monitor external investment managers. Without adequate written procedures, the risk of inconsistent application of processes or a loss of procedural knowledge exists, particularly when experienced staff leave the agency.

As of June 30, 2016, PSERS had advisory agreements with 169 external investment managers. We selected 8 of the 169 external investment managers and reviewed related monitoring documents and communications for the quarters ended December 31, 2015, March 31, 2016, June 30, 2016, and September 30, 2016.

For each of the eight external managers, we verified the following for each of the quarters tested without exception:

- A quarterly performance report was received from both the investment manager and the PSERS' consultant, ensuring the performance measures in the reports agreed.
- Performance measures were compared to appropriate benchmarks.
- Adequate evidence of qualitative monitoring was documented, including notes from telephone conversations and meetings between the manager, consultant, and PSERS investment staff and management.

For the same four quarters noted above, we also reviewed the following reports that were provided to the Board members and contained information relating to the performance of all external investment managers:

- Chief Investment Officer's Fund & Market Review Overview Report.
- Portfolio Managers' Asset Class Performance Reports.
- General Investment Consultant's Performance Review Report and Investment Review Report for the Fund.
- Specialized reports for the fund's absolute return, high yield, private markets, and real estate divisions.

Based on our review of these documents and discussions with PSERS management, it appears PSERS is adequately monitoring the performance of external investment managers. However, its procedures need to be formalized in writing to ensure consistent and comprehensive monitoring of external investment managers.

Recommendations for Issue Area 3

We recommend that PSERS:

1. Adopt an investment fee policy which details the measures and techniques to use to obtain lower fees, such as determining what fees similar investors are paying and making these fee comparisons part of the negotiation process.

2. Take an aggressive position when negotiating fee structures with investment managers to obtain the lowest fees possible.

3. Document all fee structure discussions and negotiations between PSERS and the investment manager, including why the fee structure was determined to be reasonable and a justification if the initial fee schedule was unable to be altered/lowered.

4. Strengthen written monitoring procedures for the processes used to monitor both quantitative and qualitative measures for both traditional and non-traditional investments, including specific aspects to review, a list of the individuals responsible for reviewing, how monitoring results are to be reported to management, and how to address issues that may affect manager retention.

Issue Area 4 – Despite having an adequate governance structure with clearly outlined responsibilities, PSERS lacked adequate policies and procedures related to Board trustee adherence to ethics standards and attendance at meetings.

Issue Area Summary: Findings 4.1 through 4.4

A retirement system's governance structure is the framework of rules and practices by which a board of trustees ensures accountability and transparency to its members. This framework consists of:

- Contracting with vendors to assist the board in fulfilling its responsibilities.
- Procedures for identifying and reconciling conflicting interests.
- Policies and procedures utilized for decision-making.
- Proper supervision and control over monitoring and assessing performance.

The establishment of policies and continuous monitoring of their proper implementation assists the board to enhance the prosperity and viability of the retirement system.[83]

Retirement systems must define the key elements necessary for trustees to fulfill their responsibilities in accordance with fiduciary standards. The Government Finance Officers Association[84] (GFOA) states that the fundamentals of public pension governance are ensuring the governing board and governance policies are in place and functioning properly and adopting and maintaining a written governance manual.

Although the size of PSERS' Board is large compared to its peer states, it does not appear to hinder Board processes. The Board's composition appears to adequately represent system members and was in compliance with the Public School Employees Retirement Code (PSERC) for our audit period. However, we found the Board's use of designees for certain members to be an area of concern. As noted in Issue Area 1, designees are not evaluated for their level of investment knowledge and therefore may not be prepared to address investment decisions. Also, if Board members and their multiple designees continuously alternate attendance at Board meetings, it may lead to a lack of continuity and hinder the trustee's ability to make informed decisions and participate in educational sessions.

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[83] Businessdictionary.com (accessed March 7, 2017).

[84] The Government Finance Officers Association (GFOA) represents public finance officials throughout the United States and Canada. **GFOA's mission is to promote excellence in state and local government financial management.** To meet the many needs of its members, the organization provides best practice guidance, consulting, networking opportunities, publications including books, e-books, and periodicals, recognition programs, research, and training opportunities for those in the profession.

Further, there is too much reliance placed on the individual trustees to self-report potential conflicts of interest. There is no independent body or, at minimum, a PSERS division or staff member assigned to act as an impartial monitor to verify that trustees do not have potential conflicts of interest with investment firms vying for a Board contract. Trustees need to be held to higher ethical standards than other public employees, should attend ethics training regularly, and need to annually acknowledge the understanding of their ethical duties and compliance with the Public Official and Employee Ethics Act[85] and policies.

The Board has adopted 16 policies to guide the governance process. With minor changes to address the issues noted above, we found the investment-related policies appear to be thorough and provide a strong foundation for good governance. However, these policies are not aggregated, and therefore compiling these separate policies into a single, comprehensive governance manual would be beneficial.

Based on the Board responsibilities outlined in the investment policies and the PSERC, the Board performed its duties in relation to adopting rules and internal controls over the investment process, establishing and regularly reviewing the asset allocation of the total portfolio, contracting with investment firms, and monitoring the performance of investments. We address the adequacy of the Board's performance of these duties in Issue Areas 3 and 5.

As part of our audit procedures, we conducted a survey of all 33 trustees that served on the Board as of December 2016 or was new to the Board and participated in the March 2017 Board meeting (See Appendix B). Our survey focused on whether the trustees consider PSERS' governance structure, investment expertise, and resources for decision-making adequate to provide effective oversight on investment operations. We received 25 completed surveys and have incorporated the results throughout the audit report.

Finding 4.1 – PSERS Board size and composition appear to be appropriate and in compliance with the PSERC, but inconsistent trustee attendance threatens consistent and reliable decision-making.

The PSERC states that the Board will consist of 15 members.[86] The composition of the Board is outlined in the Introduction and Background section of the audit report. The breadth of representation of key stakeholders in the system, including active participants, annuitants, contributing employers, and the Commonwealth's executive and legislative branches, is notable.

[85] 65 Pa.C.S. § 1101 *et seq.*
[86] 24 Pa.C.S. § 8501(a).

PSERS' Board size and composition appear to be appropriate and in compliance with PSERC.

Using the listing of Board members reported in PSERS' Comprehensive Annual Financial Report for fiscal years ended June 30, 2013, 2014, 2015, and 2016, and the attendance at board meetings documented through meeting minutes from July 1, 2013 through June 30, 2016, we found that the Board composition throughout the audit period was in compliance with the requirements enumerated in the PSERC.

We also compared the PSERS' Board composition and structure to that of 87 other state retirement systems as reported by the National Association of State Retirement Administrators.[87] Based on our analysis of these public pension fund boards, the average board size is 9-10 members. Given the PSERS' Board is 15 members, it is a large board. In fact, only 3 of the 87 boards reviewed had more members than PSERS. While one might expect that such a large board would be an unmanageable and inefficient decision-making body, our observations of Board meetings and survey of current trustees did not indicate that the Board's size is a source of difficulty. The breadth of representation of key stakeholders serves as an advantage because no one group dominates the Board and decisions must reflect a consensus of these diverse groups.

The Board's use of multiple designees and no attendance policy creates the potential for a lack of consistent and reliable decision-making.

Each ex-officio[88] member and each legislative member of the Board may appoint a duly authorized designee to act in his or her stead at any meeting of the Board or with respect to official business and activities of the Board conducted outside of meetings.[89] These particular Board members may authorize more than one designee either in priority preference or as alternates. A duly appointed designee, when acting in the stead of a member, shall adhere to the same standard of care, fiduciary relationship, and responsibility imposed upon a member.

According to the PSERC, 7 of the 15 Board members can act through multiple designees, which has the potential to impair the board's ability to make consistent and reliable decisions. For the 22 regular Board meetings held between July 1, 2013 and November 30, 2016, we analyzed the attendance of Board members and designees. The attendance of trustees, excluding ex-officio and legislative trustees, appeared to be fairly consistent. However, the attendance of the ex-officio and legislative members at these 22 meetings was concerning as seen in the table below.

[87] http://www.nasra.org/files/Topical%20Reports/Governance%20and%20Legislation/Board%20Governance%20Policies/Board%20Composition.pdf (accessed February 3, 2017).

[88] An ex-officio member (meaning by virtue of "right of office") automatically becomes a Board member due to already holding another public position (e.g., State Treasurer).

[89] 24 Pa.C.S. § 8501(a).

Board Position	Board Member		Designee			
	Number of meetings attended	Percent of meetings attended	Number of meetings attended	Percent of meetings attended	Number of meetings both missed	Percent of meetings both missed
Republican Senator	1	4.5%	19	86.4%	2	9.1%
Democratic Senator	0	0.0%	19	86.4%	3	13.6%
Republican Representative	18	81.8%	4	18.2%	0	0.0%
Democratic Representative	2	9.1%	20	90.9%	0	0.0%
Secretary of Education (ex-officio)	1	4.5%	14	63.7%	7	31.8%
State Treasurer (ex-officio)	3	13.6%	19	86.4%	0	0.0%
Executive Director of PA School Board Association (ex-officio)	14	63.7%	8	36.3%	0	0.0%

Source: Auditor General staff compiled from Board meeting minutes from www.psers.pa.gov.

The Board does not have an attendance policy for trustees. According to PSERS management, an attendance policy was never needed because attendance at Board meetings has never been a problem. However, we found several issues with attendance during this time period, as noted in the table above, as follows:

- 5 out of the 7 ex-officio and legislative members attended less than 15 percent of the meetings.
- One legislative member never attended a meeting.
- The Secretary of Education position was only represented at 68% of the meetings.

Having one designee consistently attend meetings is reasonable and prudent, but switching between members and multiple designees leaves the Board's decision-making process at risk. Good governance practices indicate that the expectations of trustees must be clearly detailed in a written policy. These expectations should include attendance requirements and what happens if trustees do not fulfill their responsibilities. Additionally, consecutive absences are especially problematic because it is much harder to understand developing issues and be fully prepared when a matter comes to a vote. When trustees do not consistently attend meetings, the Board loses critical resources and multiple perspectives that contribute to better decision-making.

Finding 4.2 – PSERS Board's Code of Ethics and related procedures need strengthened.

The standards of conduct, ethics, and conflicts of interest rules need to be clearly outlined and codified in order for the Board to fulfill its fiduciary duties. Using the "Model Code of Conduct and Ethics Policy" issued by the Association of Public Pension Fund Auditors as a guide for best practices, we identified the typical activities to which a pension fund's ethics policy is applied and where rules should be established specifically in relation to pension fund trustees, as follows:

- Personal interest in the funds activities and outside activities/employment
- Use of the fund's assets
- Conflicts of interest
- Nepotism
- Hiring and contracting
- Attendance at functions
- Gifts and honoraria
- Travel and incidental reimbursements
- Employment negotiations and post-employment restrictions
- Investments
- Confidentiality
- Illegal acts
- Diligence of a prudent investor
- Financial interests
- Conduct at board meetings
- Interactions with outside parties, fund members, and fund management staff

The PSERS Board Ethics Policy is comprehensive and contained all of the fundamental topics listed above. Establishing such a detailed policy to clearly indicate what constitutes acceptable ethical behavior is vital to pension governance.

The other critical part of an ethics policy is implementation and enforcement. We found the Board's Ethics Policy lacked sufficient administrative procedures, including providing regular ethics trainings to trustees and obtaining signed annual ethics acknowledgement statements from trustees. Additionally, the Board relied on each trustee to disclose potential conflicts of interest and did not verify whether this self-reporting was complete and accurate.

The Board members and designees have a fiduciary duty to act in the best interests of its members and a legal and ethical duty to its member agencies, sponsors, and the citizens of the commonwealth. These duties may challenge the character of those who serve the pension system as they must resist temptation to place their own interests above the interests of the system members. The Board can foster disciplined conduct by establishing a high standard of ethics and routinely communicating its commitment to operating ethically through its policies. Having a policy brings ethics to the forefront as an important organizational issue and gives members a starting point for seeking guidance on ethical issues.

PSERS Board's Ethics Policy did not require trustees to attend regular ethics trainings.

The Ethics Policy states that training on ethics and related topics will be provided to new trustees. This corresponds with the Board's Education Policy which states that new trustee orientation will include training on fiduciary duties, conflicts of interest, and ethics. Although the Ethics Policy states that ethics updates will be provided to trustees as needed, there is no requirement for ongoing training in these areas. PSERS management stated that since some trustees only serve three year terms, the policy is written to allow flexibility to rotate training topics based on its internal assessment of the Board's training needs.

During our audit period, the Board conducted two in-house trainings on fiduciary duties in its Finance Committee meetings in January 2014 and March 2017. Trustees were also given the opportunity to attend industry conferences sponsored by the PA Association of Public Employee Retirement Systems and National Council on Teacher Retirement that also addressed related topics as follows:

- "Fiduciary Duties 201" in September 2013
- "Insuring an Ethical Standard" in May 2015
- "Fiduciary Responsibilities" in July 2015
- "State Treasurer Candidates' View of their Fiduciary Duty" in May 2016

As discussed in Issue Area 1, trustees may be absent during the in-house trainings or not choose to attend industry conferences. Revising the policy to establish a minimum amount of ethics training that each trustee must receive and ensuring the minimum amount is attained would provide assurance that ethics is appropriately addressed with each trustee.

Additionally, ethical behavior is only one facet of a trustee's fiduciary duties and may not be sufficiently addressed in fiduciary trainings. Effective ethics training is focused on setting expectations of behavior in a variety of contexts. Therefore, it is helpful to present different scenarios of varying complexity so trustees can spot issues and make the right choices.[90]

In our trustee survey, three trustees indicated that they have felt pressure from investment staff, consultants, or outside parties to make a certain decision regarding investment opportunities.

[90] The Pennsylvania Ethics Commission offers ethics training upon request and at no cost. *See* http://www.ethics.pa.gov/How-To/Pages/How-To-Request-Ethics-Training.aspx and http://www.ncsl.org/portals/1/documents/ethics/pennsylvania.pdf (accessed May 2, 2017).

This is why effective ethics training is fundamental to instill values and promote ethical behaviors. The aim is to help trustees make sense of what, at a glance, might seem like a convoluted situation and determine the ethical choice.

Despite trustees' competing responsibilities, ethics training is important and can have an impact on pension governance and PSERS' reputation. The Board cannot afford to leave ethical decision making to chance. One misinformed decision of a trustee can harm the entire system. Beyond the obvious legal ramifications, the Board could also lose the trust of its members and other stakeholders as well as opportunities to establish quality relationships with principled vendors.

PSERS Board does not require trustees to acknowledge compliance with its Ethics Policy annually.

The Board's Ethics Policy requires each trustee to sign an acknowledgement statement when initially joining the Board. This is a good practice, but each trustee should also be required to confirm his or her understanding and commitment to the Board's ethical standards and core values annually.

In October 2013, PSERS began an initiative to have all trustees sign an acknowledgement statement where the trustee certified he or she has reviewed and understands the Ethics Policy and agrees to comply with the policy and all the applicable statutes and policies referred to within. At that time, the current trustees signed the acknowledgement statements and all new trustees from that time forward would be required to do the same as stated in the policy. This commitment to ethical standards is weakened by not regularly requiring each trustee to confirm his or her understanding of the Board's ethical standards and affirming no ethical violations have or will occur. Without consistent declarations, trustees may go for extended periods of time not considering or reporting ethical behaviors.

We requested the signed Ethics Policy acknowledgement statement for the 44 individuals that served as trustees by voting at board meetings between July 1, 2013 and October 31, 2016. PSERS did not have a signed acknowledgement statement for 6 of the 44 trustees.

The Board did not require two trustees to sign statements because one trustee was leaving the Board shortly after the October 2013 initiative and the other trustee was a special designee that was authorized to attend one specific board meeting in place of a member. According to PSERS management, the other four statements should have been completed when the individual became a new trustee, and it was an oversight on its behalf. Signed statements for the remaining 38 trustees were provided to us.

The Board relies on the trustees to self-report potential conflicts of interest.

In addition to the Board's Ethics Policy, each trustee must comply with the Pennsylvania Public Official and Employee Ethics Act[91] (Ethics Act), which helps to assure taxpayers that public officials and employees, including school employees, have well established standards for conduct regarding conflicts of interest and possible financial fraud, waste, and abuse. Any public official who would be required to vote on a matter that would result in a conflict of interest must abstain from voting and publicly disclose the nature of the interest.[92] Further, the Board and each trustee are bound by the Pennsylvania Sunshine Act[93], which requires agencies to deliberate and take official action on agency business in an open and public meeting to ensure the public has ready and continued access to vital information pertinent to government decision making.[94]

According to the Board's Ethics Policy, if a potential conflict of interest exists, the trustee is required to recuse themselves from any discussions involving the firm as well as voting to contract with the firm. The trustee is to inform the Board Secretary/Executive Director in writing that he or she is recusing themselves and the reason for the recusal. The Board relies on each trustee to volunteer information that a potential conflict of interest may exist, and does not take proactive measures to ensure each trustee complies with the policy. Prior to every board meeting, PSERS provides trustees with a list of the officers, directors, and principals for each firm being considered. PSERS relies on the trustees to review this list prior to the board meeting and recuse themselves from voting, if necessary.[95]

Between July 1, 2013 and October 31, 2016, trustees submitted 16 written recusals to the Board. Six of these recusals explained the reason for the potential conflict of interest, citing personal relationships or political contributions. However, the remaining 10 recusals, which were submitted to the Board by a single trustee, simply noted there was a potential conflict of interest. PSERS management stated the trustee provided the reason for the recusals as a "potential conflict of interest" and trustees are not required to provide further explanation. This rationale contradicts the Ethics Act, which states that the nature of the interest must be publicly disclosed for every voting conflict. Not only does this reduce the transparency of the voting process, it also prevents the Board from verifying each trustee is consistent in his or her recusals related to that specific individual or firm.

We also found that the Board did not obtain the campaign contribution reports elected officials are required to submit to the Department of State for the five trustees that hold public offices.[96]

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[91] 65 Pa.C.S. § 1101 *et seq.*
[92] 65 Pa.C.S. § 1103(j).
[93] 65 Pa.C.S. § 701 *et seq.*
[94] 65 Pa.C.S. § 702.
[95] The Pennsylvania Ethics Commission provides a sample written memo for disclosing a conflict in compliance with 65 Pa.C.S. § 1103(j) during its ethics trainings. For example, see item 5 in this link: http://gfoapa.org/Conference2015/Resources/Handouts/ethics_act_state_ethics_commission.pdf.
[96] The five trustees that hold public offices are two Senators, two House Representatives, and the State Treasurer.

PSERS management stated it is not statutorily required to obtain the campaign finance reports and having trustees file a Code of Conduct form along with a Statement of Financial Interests annually to PSERS, as required by the Public Official and Employee Ethics Act and the Governor's Code of Conduct, is sufficient. However, these two forms are only reviewed by the PSERS Human Resource Department and Office of Chief Counsel, and not the Board.

Even though it is not a statutory requirement, PSERS Board should be obtaining this information for transparency purposes and to promote good governance. Our survey found three trustees agreed with our results and indicated the process of identifying potential conflicts of interest for the investment firms and Board members/designees is inadequate. One of these trustees commented that the rules for declaring political donations to trustees or their political causes need to be stronger because the current system places an inordinate amount of trust in the investment firms. PSERS contractually requires investment firms to report political contributions made by its officers/principals annually, but does not review political contributions received by Board members who are elected officials.

The Board Secretary should obtain these reports for each trustee, where applicable, and review them to assist trustees in identifying specific instances in which a trustee's vote would violate the conflict of interest policy. Without an independent review, the Board would be unaware if any trustees would attempt to conceal potential conflicts of interest.

Finding 4.3 – PSERS Board completed its duties related to investment operations as outlined in the PSERC and Board's Investment Policy.

The Board exercises exclusive control and management of PSERS, including the investment of its assets. The Board is to serve the members and the stakeholders of the system by prudently investing the assets of the system, maintaining a financially sound system, and effectively managing the resources of the system.

The PSERC outlines the duties and responsibilities of the Board in relation to investment operations. The Board's "Investment Policy Statement, Objectives, and Guidelines" includes and expands upon those statutory provisions. We performed procedures to verify that the Board completed each of its investment-related duties as described below. The adequacy of the Board's processes used to complete these duties are discussed in other areas of the audit report as noted.

- Adopt rules and regulations for the uniform administration of the system.[97]

  The Board has implemented the "Investment Policy Statement, Objectives, and Guidelines," "Statement of Organization, Bylaws, and Other Procedures" and 14 other policies/guidelines to promote consistency and accountability throughout the system. We discuss an overview of these policies in Finding 4.4 and a detailed analysis of the Board's Education Policy and Ethics Policy in Issue Area 1 and Finding 4.2, respectively.

- Ensure that proper internal controls are developed to safeguard the assets of the system.

  There are several parties involved in investment operations decision making. The Investment Office Staff (IOS) along with consultants are responsible for the day-to-day administration of the investment operations. The IOS and external investment managers manage investment portfolios consistent with the investment policies and guidelines. The Board is ultimately responsible for managing the investment process. The Office of Financial Management processes, monitors, and records investment transactions. Finally, the Internal Audit Office ensures the established procedures are functioning as intended.

  We identified four key decision-making processes within investment operations in which there needs to be a clear segregation of duties as follows:

  - Asset Allocation
  - Contracting with Consultants
  - Contracting with External Investment Managers
  - Monitoring and Terminating External Investment Managers

  The responsibilities for each of these key processes must be shared in a way that disperses the critical functions of that process to more than one person or department. Based on our review, PSERS appears to have adequately designed its internal controls over investment operations to ensure a clear segregation of duties for key investment decision-making exists.

  Our audit results for the detail review of each of these processes can be found in Issue Areas 3 and 5 of the audit report.

[97] 24 Pa.C.S. § 8502(h). Section 8502(h) of the PSERC provides, in part: "(h) Regulations and procedures.--The board shall, with the advice of the Attorney General and the actuary, adopt and promulgate rules and regulations for the uniform administration of the system…."

- Establish an Asset Allocation strategy and ensure funds are invested in accordance with Board policies.

  Each year the IOS and the General Investment Consultant review the Asset Allocation strategy located within the "Investment Policy Statement, Objectives, and Guidelines" and determine if changes need to be made to the target distribution of funds amongst the different asset classes. Revisions to the Asset Allocation strategy are recommended to the Board by the Chief Investment Officer (CIO). The Board approves the revisions during a board meeting.

  Each month the IOS compares the actual asset market values to the target ranges established by the Asset Allocation strategy to ensure the market values have not collectively breeched the targeted ranges. Any necessary movement of funds to rebalance the total portfolio is authorized by the Chief Investment Officer and the transactions are reviewed by the Office of Financial Management.

  Our audit results for the detail review of the asset allocation process can be found in Issue Area 5 of the audit report.

- Contract with external portfolio managers and investment consultants.

  PSERS utilizes a Request for Proposal (RFP) process to select investment consultants. The Chief Investment Officer and IOS work together to develop the request. Once proposals are received, members of the selection committee, generally the CIO, IOS, and Board members, individually score the technical proposals and recommend a consultant to the Board. The Board votes to approve contracting with the consultant. Between July 1, 2013 and October 31, 2016, PSERS Board utilized four consultants. We verified the Board approved each of these consultant contracts through resolutions documented in the Board's meeting minutes.

  For external investment managers, the IOS and the appropriate investment consultant perform a detailed investigation of potential firms and ultimately chooses the investment manager that best compliments the investment program. The selected investment manager is recommended to the Board for approval. Between July 1, 2013 and October 31, 2016, the Board contracted with two new external investment managers. We verified the Board approved each of these external investment manager contracts through resolutions documented in the Board's meeting minutes.

  Based on our audit procedures, it appears the Board performed its duty of approving contracts with consultants and external investment managers. Our audit results for the detail review of the contracting process can be found in Issue Area 3 of the audit report.

- Monitor the performance of investments.

  PSERS' General Investment Consultant, specialty consultants, and the Investment Office perform daily monitoring of investment performance and report monitoring results to the Board on a regular basis. If an external investment manager is experiencing continuous poor returns or there is a significant change in the firm, such as significant personnel changes or a substantial deviation from their investment style, the CIO, with concurrence from the Executive Director and notification to the Board, has authority to terminate a contract with an external investment manager.

  Our audit results for the detail review of investment performance monitoring, including addressing poor performance, can be found in Issue Area 3 of the audit report.

- Arrange an actuary to perform an annual valuation of the various accounts and by resolution adopt the report and recommendations of the actuary.[98]

  Buck Consultants or Conduent Consulting performed an annual actuarial valuation for all three fiscal years ended during our audit period (June 30, 2014, 2015, and 2016). We verified the Board adopted each of these actuarial reports and recommendations through resolutions documented in the Board's meeting minutes.

- Prepare an annual financial statement for each fiscal year ended June 30,[99] and provide for an annual audit of the system by an independent certified public accounting firm.[100]

  PSERS operates as a component unit of the Commonwealth of Pennsylvania. We verified PSERS' Office of Financial Management prepared a Comprehensive Annual Financial Report for the fiscal years ended June 30, 2014, 2015, and 2016. The Board obtained an independent audit of its financial statements from SB & Company, LLC for each year. We verified the Board accepted the financial statements and approved the accompanying audit report through resolutions documented in the Board's meeting minutes.

In conclusion, during our audit period, it appears the Board performed its investment-related duties and responsibilities as required by the PSERC and the Board's Investment Policy. The adequacy of the Board's oversight of investment operations is further discussed in detail in other sections of the audit report as indicated above.

[98] 24 Pa.C.S. § 8502(j).
[99] 24 Pa.C.S. § 8502(n).
[100] 24 Pa.C.S. § 8502(o).

Finding 4.4 – PSERS Board lacks a comprehensive governance manual to unify its numerous policies and guidelines.

During our audit period, PSERS' Board did not have a governance manual, which serves as a fundamental document for public pension governance. The GFOA recommends that a governance manual include an outline of authority under which the system operates and the roles and responsibilities of the board of trustees, executive director, and staff. Additionally, the governance manual should contain all of the board policies and a description of all permanent committees.

Although the Board does not have a single document governance manual, the Board maintains 16 individual policies. The Board also plans to implement a new Governance Policy in 2017, which is currently in draft form.

The two most significant and comprehensive Board policies related to investment operations are the "Investment Policy Statement, Objectives and Guidelines" and the "Statement of Organization, Bylaws, and Other Procedures." A summary of the contents of each of these documents is outlined below:

"Investment Policy Statement, Objectives and Guidelines"

- PSERS retirement code which authorizes the establishment of the board of trustees
- Mission of the board
- Fiduciary standard
- Roles and responsibilities of each entity involved in executing its investment functions (Board of Trustees, Investment Office Staff, Office of Financial Management, Investment Consultants, State Treasurer, and Investment Managers)
- Investment Objectives
- Strategic Asset Allocation
- Performance Objectives
- Risk Management and Controls

"Statement of Organization, Bylaws, and Other Procedures"

- Purpose of the board, board membership, terms and conditions, and scope of board meetings
- Other board operational procedures
- Description of all 9 standing committees
- Standards of official conduct
- Financial Reporting and Independent Audits

The Board's other 14 policies are dedicated to specific topics. PSERS management asserts that maintaining the full range of policies electronically on its website for easy access by Board members/designees at any time is sufficient in lieu of a governance manual.

Between the current policies and the drafted governance policy, it appears the Board has all the pieces to create an adequate governance manual. We believe that all of the Board's policies should be incorporated into one document. A well designed governance manual facilitates effective management and provides a tool to educate trustees and stakeholders on fund operations. Without a governance manual, PSERS does not have a central source for the fund's primary governance documents, which may cause incomplete awareness of all existing policies and duplications or inconsistencies between the policies.

Recommendations for Issue Area 4

We recommend that the General Assembly amend the Public School Employees Retirement Code to:

1. Require regular attendance by the board members or their designee(s).

2. Authorize the Board, in consultation with the Executive Director, to remove a board member (excluding ex-officio members, but not their designee) or designee from the board for failure to regularly attend board meetings.

3. Authorize PSERS to develop an attendance policy for all board members and/or designees.

We recommend that PSERS:

4. Establish and implement a specific and detailed attendance policy for Board members and designees.

5. Implement controls for ensuring that all new Board members/designees sign the ethics policy acknowledgement statement upon being appointed to the Board.

6. Establish and implement provisions within the Board's Ethics Policy to:

    a. Put in place a minimum amount of ethics training each Board member/designee must receive, with emphasis placed on identifying and disclosing in writing any conflicts of interest, and ensuring that it is obtained.

    b. Require each Board member/designee to sign the ethics policy acknowledgement statement annually and when the policy substantially changes.

c. Develop procedures to verify that conflict of interest self-reporting was complete for each Board member/designee.

d. Request that the Ethics Commission provide the Board with ethics training on an annual basis and provide guidance on the trustees' use of its sample written memo for disclosing a conflict in compliance with 65 Pa.C.S. § 1103(j).

7. Obtain the Statement of Financial Interest and campaign contribution reports for each trustee, as applicable, and have an individual (independent of the Board) compare them to the list of owners/principals of each investment firm prior to presenting the firm to the Board for vote.

8. Aggregate the Board's policies and guidelines into a single, comprehensive governance manual.

Issue Area 5 – PSERS' procedures to ensure it is meeting its diversified investment strategy appear adequate.

Issue Area Summary: Findings 5.1, 5.2, and 5.3

The goal of a public pension system is to provide promised retirement benefits to its members, providing ongoing retirement security, and ensuring fiscal sustainability of the system.[101] In order to accomplish these goals, sufficient investment returns must be generated. Two fundamental principles of prudent investing are diversification and asset allocation. Diversification is holding multiple asset classes and multiple funds within each asset class. Asset allocation is a method used to diversify a portfolio that determines which asset classes would be beneficial and how funds should be distributed among those asset classes.

According to the Government Finance Officers Association, the single most important investment decision that pension trustees can make is the asset allocation determination.[102] Most public pension systems own hundreds of securities, so one security contributes relatively little to the overall investment performance. It is the balance of the different asset classes and how those asset classes perform in terms of risk and return that significantly influence overall portfolio performance. See the description of each asset class and how it relates to risk and return in the *Introduction and Background* section of our audit report.

There are an abundance of factors that contribute to establishing a diversified portfolio. Some of these factors include the risk preference, demographics, and the funded status of the system. Each pension system's strategy must be customized to address all of the variables specific to its portfolio. PSERS' General Investment Consultant is contracted to perform an Asset/Liability Study annually, which includes an in-depth review of the asset allocation. Based on the results of our audit procedures, PSERS' processes to review and adjust the asset allocation strategy annually appear to be adequate.

In order to ensure the actual net asset value for each asset class remains within the asset allocation strategy target range, the PSERS' Investment Office professionals perform a comparison monthly. Based on our audit procedures, it appears PSERS is consistently and adequately performing these comparisons. Further, we found that PSERS' strategy to invest in different asset classes and numerous individual funds within each asset class appears to be reasonable.

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[101] Patten Priestley Mahler, Matthew M. Chingos, and Grover J. "Russ" Whitehurst, *Improving Public Pensions: Balancing Competing Priorities*, Brown Center on Education Policy at Brookings, February 2014, page 1. *See https://www.brookings.edu/wp-content/uploads/2016/06/Improving-Public-Pensions_FINAL.pdf*.
[102] "Pension Investing: Fundamentals and Best Practices", gfoa.org.

Finding 5.1 – PSERS adequately reviewed its asset allocation strategy on a regular basis and verified actual asset values remained within the established target range.

PSERS reviewed its asset allocation strategy annually.

The Board's bylaws require the trustees to perform an annual review of the system's asset allocation strategy that is incorporated within the Board's investment policy. During our audit period, the PSERS' General Investment Consultant conducted a review of the asset allocation strategy and target ranges each year and recommended adjustments as deemed necessary.[103] The Chief Investment Officer reviewed the recommended adjustments and presented them to the Finance Committee for deliberation and the Board for approval.

For the 17 adjustments to the asset allocation target ranges made over the three year period, we verified the justification for the adjustments was reasonable and adequately documented in the consultant's final report. Additionally, we verified the justification for the adjustments were presented to the Board's Finance Committee and approved by the Board. Based on our review, we found PSERS adequately reviewed its asset allocation strategy each year and adjusted the target range as needed.

However, the results of our survey of Board members and designees indicated that more discussions need to be held on critical decision-making topics, such as asset allocation. See Issue Area 1 for related asset allocation education weaknesses identified.

PSERS compared actual net asset values to the asset allocation target range monthly.

In accordance with the written procedures in the Board's "Investment Policy Statement, Objectives, and Guidelines," to ensure the actual value of the assets remain within the established asset allocation target range, a Senior Investment Professional within the Investment Office performs a comparison of these figures each month. The results are reviewed by the Investment Office's Asset Allocation Committee, which consists of the Senior Portfolio Manager, Managing Directors, Deputy Chief Investment Officers, and Chief Investment Officer. If any asset values breach the target range, the Chief Investment Officer will rebalance the asset class to within the policy range. According to PSERS management, during our audit period, the asset values never breached the policy target range. To verify that the actual value of the assets

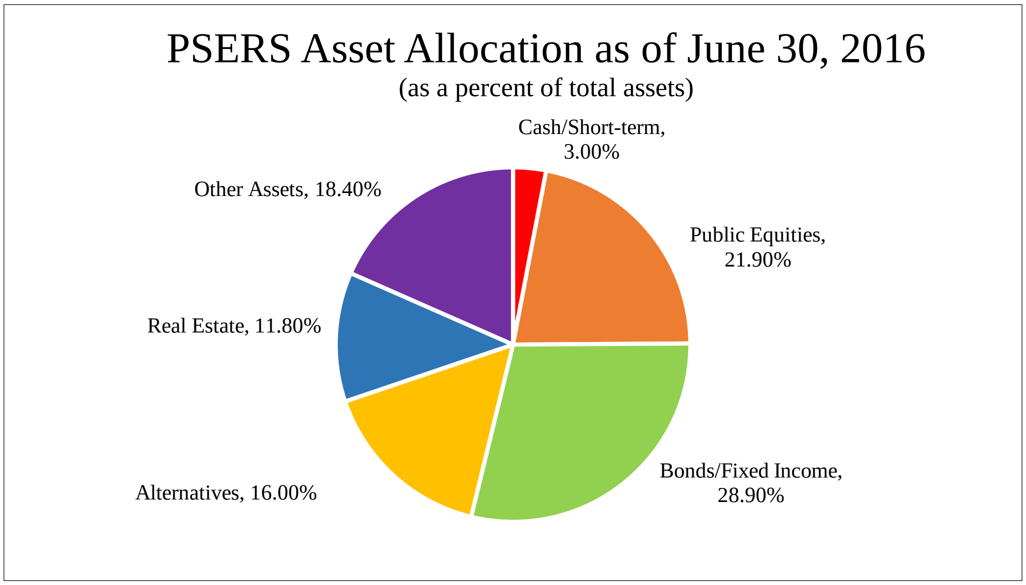
[103] PSERS' General Investment Consultant presented the results of its review of the asset allocation strategy to the Board's Finance Committee in June 2014, April 2015, and September 2016.

remained within the established asset allocation target range, we reviewed PSERS' monthly asset allocation comparisons.

We selected 7 of the 42 monthly asset allocation comparisons to test from the period July 1, 2013 through December 31, 2016. For each comparison, we verified the target range agreed with the current asset allocation strategy within the investment policy and determined whether the actual value of the asset classes were within the target range. All 7 monthly comparisons reviewed appeared to be complete and accurate. There were no instances where the actual value of the asset class exceeded the target range. Based on our review, we found PSERS adequately verified that actual asset values remained within the established target range.

Finding 5.2 – PSERS' efforts to develop a diversified asset allocation that minimizes market risk appear to be adequate.

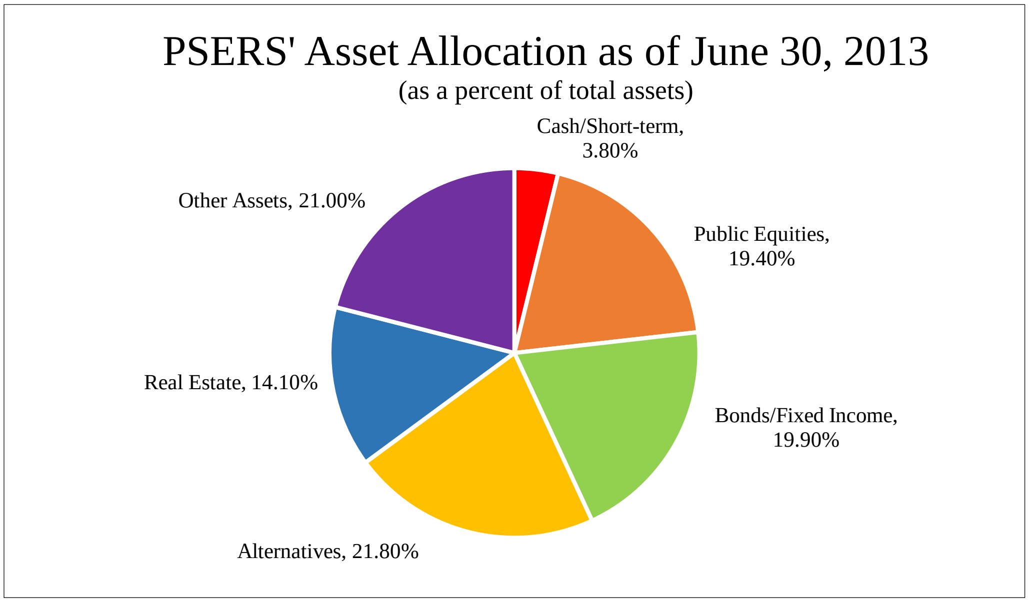
As of June 30, 2016, PSERS' total pension investments (asset allocation basis) totaling $49.2 billion were allocated throughout different asset classes, as shown in the chart below.



Source: Compiled from information in the PSERS' Comprehensive Annual Financial Report as of June 30, 2016.

A comparison of PSERS June 30, 2016 asset allocation to PSERS June 30, 2013 asset allocation reveals a shift in investments from Alternative Investments, Real Estate, and Other Assets (Commodities, Master Limited Partnerships, Risk Parity, Infrastructure, and Financing[104]) to Public Equities and Bonds/Fixed Assets.

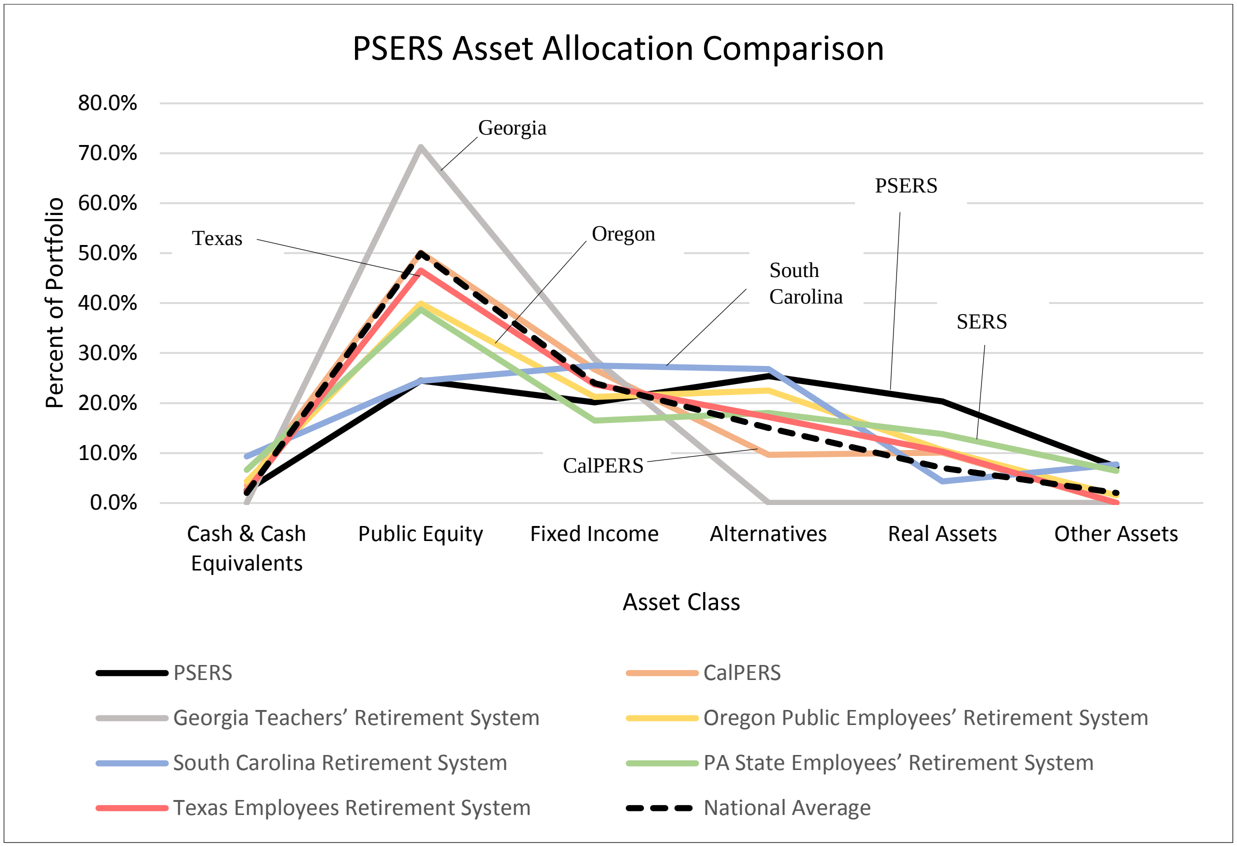
[104] The asset allocation as of June 30, 2016, contains a negative 14.6% of financing, or leverage, in the "Other Assets" category. PSERS borrowed money to increase its allocations to fixed income, real assets, and risk parity.



Source: Compiled from information in the PSERS' Comprehensive Annual Financial Report as of June 30, 2013.

We gathered asset allocation data for six other state pension systems on an individual basis, including the nation's largest state retirement system, the California Public Employees Retirement System (CalPERS).[105] We then compared PSERS' and these states' asset allocations to the national average asset allocation as reported on the National Association of State Retirement Administrators' website. Hereinafter referred to as the national average,[106] it includes public employee and public teacher retirement systems from all 50 states. The comparison is illustrated in the graph below.

[105] Data from each state's 2015 Comprehensive Annual Financial Report.
[106] National Association of State Retirement Administrators (nasra.org) (accessed March 16, 2017).

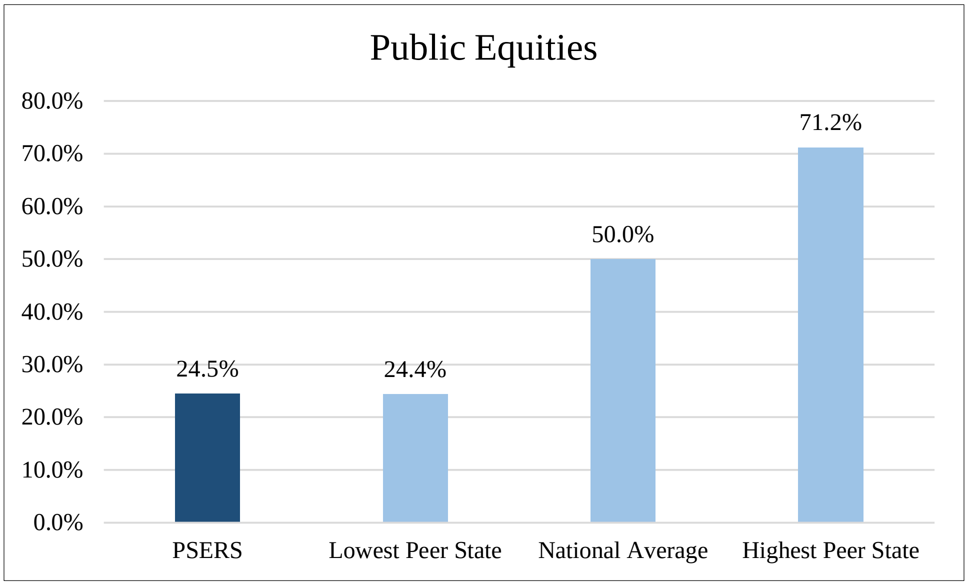


Source: The 2015 national average was obtained from the National Association of State Retirement Administrators and the individual peer system asset allocations were compiled from information contained in the systems' Comprehensive Annual Financial Reports for the fiscal years ended in 2015. With the exception of PSERS and the PA State Employees' Retirement System, the data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.

Based on the above comparison of both the national average and the 6 individual peer state system asset allocations, we identified two asset classes, public equities and real assets, where PSERS' strategy differed notably from other state pension systems.

Public equities

PSERS invested 24.5% of funds into public equities, which is less than the national average of 50.0% and the second lowest of the 6 peer state systems reviewed, which ranged from 24.4% to 71.2%, as seen in the chart below.



Source: The 2015 national average was obtained from the National Association of State Retirement Administrators and the individual peer system asset allocations were compiled from information contained in the systems' Comprehensive Annual Financial Reports for the fiscal years ended in 2015. With the exception of PSERS and the PA State Employees' Retirement System, the data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.

According to PSERS management, for each of the last five fiscal years, it has paid out more in benefits than it has received in member and employer contributions. (The detailed history of PSERS' unfunded pension liability can be found in the *Introduction and Background Section* of the audit report.) This deficiency, totaling about five percent of net assets, represents the amount of investment return needed each year to make up the difference.[107] Due to this deficiency, the Board reduced the risk profile of the System. It has done so by decreasing its return dependence on the equity markets and balancing the risk exposures into assets such as inflation-linked bonds, commodities, and those in the absolute return category that are less correlated with the equity markets. The goal of such an allocation is to generate the desired return profile with less volatility. While such an allocation will not provide for a large upside in returns, it is expected to minimize downside risks to the System's assets in the event of a large equity drawdown as experienced during the financial crisis in 2008.[108]

The highest of the peer state systems compared was the Teacher's Retirement System of Georgia (TRSG), which invested 71.2% of its funds into public equities. According to its Comprehensive Annual Financial Report (CAFR) for fiscal year ended June 30, 2015, TRSG's adopted asset allocation policy calls for targeting 55% - 75% of investments to the equities asset class and 25% - 45% to fixed income. The report states that asset allocation has the largest impact on its funds returns and, over the long term, equities usually outperform fixed income and cash by a wide

[107] PSERS' Comprehensive Annual Financial Report for Fiscal Year Ended June 30, 2015.
[108] Ibid.

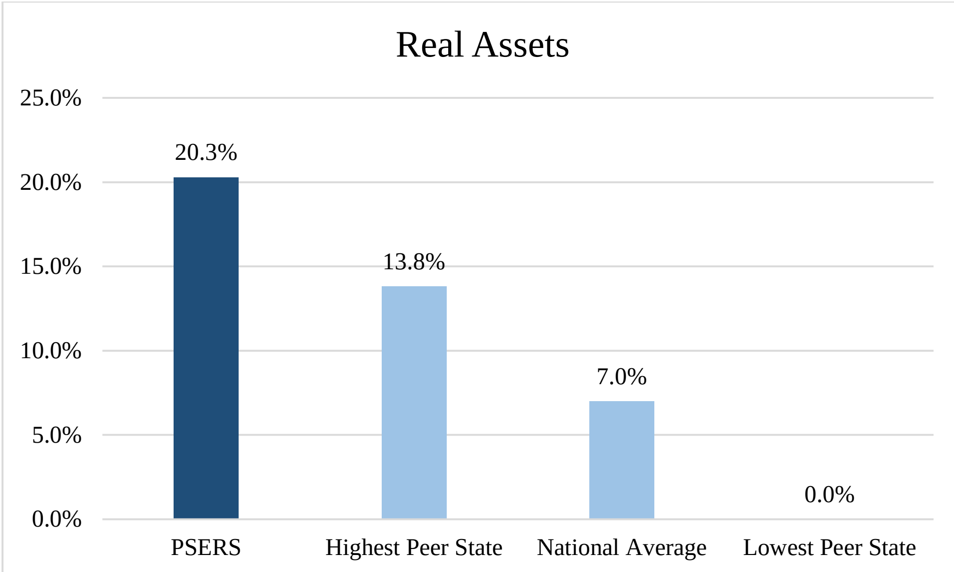
margin. For that reason, the TRSG has maintained significant equity exposure with the remainder of their funds invested in fixed income securities.[109]

The lowest of the peer state systems compared was the South Carolina Retirement System (SCRS), which invested 24.4% of its funds into public equities. According to its CAFR for fiscal year ended June 30, 2015, South Carolina's Retirement System Investment Commission (RSIC) and staff worked hard to further several long-term initiatives including reviewing asset allocation to improve expected portfolio return and mitigate risk. RSIC's 2014-2015 Annual Investment Report states the asset allocation for the fiscal year remained unchanged from the previous fiscal year to maintain the conservative asset and risk allocation which was driven by analysis of the liabilities and the financial health of the retirement systems. South Carolina's asset allocation rationale is comparable to PSERS.

Real assets

PSERS invests 20.3% in real assets which is higher than the national average of 7.0% and the highest of the 6 peer state systems reviewed, which ranged from no real assets to 13.8% of funds, as seen in the chart below. In our discussions with PSERS' IOS management, they stated that inclusion of real assets are appropriate in a diversified portfolio because of their relatively low correlation with public equities and bonds. Real assets tend to be more stable than publicly traded assets. Inflation, shifts in currency values, and other macroeconomic factors affect real assets less than publicly traded assets. However, real assets also have lower liquidity and have a higher and much more complicated fee structure than publicly traded traditional investments.

[109] Teachers Retirement System of Georgia Comprehensive Annual Financial Report for Fiscal Year Ended June 30, 2015.



Source: The 2015 national average was obtained from the National Association of State Retirement Administrators and the individual peer system asset allocations were compiled from information contained in the systems' Comprehensive Annual Financial Reports for the fiscal years ended in 2015. With the exception of PSERS and the PA State Employees' Retirement System, the data is of undetermined reliability as noted in Appendix A. However, this data is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.

PSERS' real asset exposure consists of real estate, master limited partnerships,[110] infrastructure, and commodities. According to PSERS management, each of these long-term real assets plays a role in the overall portfolio, as follows:

- The real estate program is designed to create the highest possible risk-adjusted returns in a controlled, coordinated, and comprehensive manner.[111]
- Master limited partnerships are included in the allocation due to their attractive current yields and strong growth potential.
- Infrastructure plays a strategic role by providing steady returns and cash yields, defensive growth, inflation protection, and capital preservation.
- Commodities are included in the allocation to diversify the System's total portfolio risk.[112]

[110] A master limited partnership (MLP) is a type of business organization that exists in the form of a publicly traded limited partnership and are most commonly present in the energy industry, providing and managing resources such as oil and gas pipelines.
[111] PSERS' 2016-2017 Annual Budget Report, psers.pa.gov, page 75.
[112] PSERS' Comprehensive Annual Financial Report for Fiscal Year Ended June 30, 2015 and 2016.

Pennsylvania SERS is the highest peer state system compared to PSERS with 13.8% holdings in Real Assets. Similar to PSERS' asset allocation strategy, SERS real asset program seeks high, long-term capital appreciation to enhance total SERS Fund return. SERS states that it considers liquidity to be the predominant risk and constructs an asset allocation policy that provides a high expected probability of achieving SERS' long-term actuarially assumed rate of return, consistent with the board's tolerance for risk.[113]

Other than the TRSG, which has an asset allocation of 71.2% in equities and 28.8% in fixed income and does not invest in real assets, the lowest of the peer states compared was the South Carolina Retirement System (SCRS), which invested 4.3% of its funds into real assets. According to its recent CAFR for fiscal year ended June 30, 2015, SCRS' target allocation to real assets is 8% with an acceptable range of 2-14%.[114]

It is not surprising that PSERS' investment strategy varies slightly from other state pension systems. There is no one asset allocation strategy that would address the specific characteristics and needs of all public pension systems. Therefore, it is most important that the decisions made by the system are based on the individualistic profile of the system, and that the decisions are reevaluated on a regular basis to adequately respond to market, demographic, or other changes. These decisions should be based on the opinions of industry experts. Based on our review, PSERS' efforts to develop a diversified asset allocation that minimizes market risk appear to be adequate.

Finding 5.3 – PSERS' efforts to invest in multiple funds within each asset class to develop a diversified portfolio appear to be adequate.

Diversification within asset classes in a portfolio also helps to balance its exposure to risks and reduces the volatility of the overall investment. If portfolios are not diversified, its exposure to risks and volatility increases. On the other hand, if portfolios are too diversified, there is a potential of paying more investment fees for duplication of services. Similar to the discussion of asset allocation above, the amount and type of funds within an asset class needs to be based on the pension system's investment time horizon, the demographics of the plan participants and beneficiaries, the cash flow requirements of the system, the actuarial assumptions approved by the board, the funded status of the system, the employers' financial strength, and the board's willingness and ability to take risk. As of June 30, 2016, PSERS had 169 externally-managed portfolios, split between asset classes as shown in the table below.[115]

[113] SERS' Comprehensive Annual Financial Report for Fiscal Year Ended December 31, 2015.
[114] South Carolina Retirement System's Comprehensive Annual Financial Report for Fiscal Year Ended June 30, 2015.
[115] As of June 30, 2016, PSERS had 20 internally managed portfolios.

Asset Class	Number of Externally-Managed Portfolios
Public Equity	8
Fixed Income	37
Alternatives	81
Real Assets	39
Other[116]	4
Total	169

Source: Information compiled from the "Roster of Investment Managers, Advisors, and Consultants" as of June 30, 2016 on PSERS' website (psers.pa.gov).We did not validate the accuracy of this data; therefore, the data is of undetermined reliability as noted in Appendix A. However, this data is the best data available and we performed certain tests of the reasonableness of the data. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our finding and conclusions.

The majority of the external investment managers invest in alternative investments, also known as non-traditional investments, including private equity, venture capital, and absolute return. According to PSERS management, the contractual lifespan of non-traditional investments is typically 10 years. New funds being added to the portfolio each year and the inability to exit from current funds for such long periods of time causes the larger number of funds in these areas.

Based on our review, the diversity of PSERS' investment portfolio appears to be determined by an investment strategy which is prudent to minimize risk based on market conditions.

Recommendations for Issue Area 5

We recommend that the PSERS Board of Trustees:

1. Ensures it has sufficient information and adequate discussions to fully understand the complexities and importance of its asset allocation strategy in order to fulfill its fiduciary duty to prudently invest funds.

2. Continues to analyze its investment strategies and target asset allocation on a regular basis to ensure the Board makes prudent investment decisions, including active and passive investing, as conditions change.

[116] The category "Other" contains risk parity investments which primarily consist of global equities, global nominal bonds, global inflation-linked securities, and commodities in an allocation that balances risk across these asset classes with structurally offsetting biases to growth and inflation.

Issue Area 6 – PSERS generally complied with the Public Employee Pension Forfeiture Act, but significant legislative changes and procedural improvements are needed.

Issue Area Summary: Findings 6.1, 6.2, and 6.3

Act 140 of 1978, as amended, or the Public Employee Pension Forfeiture Act[117] (Act), provides that members of the Public School Employees' Retirement System (PSERS) could be subject to pension forfeiture if the member pleads guilty or is sentenced/convicted[118] of an Act 140 specified criminal offense and the member's public position was used to commit the crime. The pension benefits are to be forfeited upon conviction.[119]

Based on our interviews with PSERS management and our test procedures, we found PSERS' monitoring of identified potential pension forfeiture cases appears to be complete and accurate. PSERS also appears to have made accurate pension forfeiture determinations in compliance with Act 140. However, we identified several issues regarding the Act and PSERS' implementation of the Act that need improvement.

Our greatest concern regarding the Act lies in the overly restrictive language used in the Act,[120] as amended in 2004,[121] regarding the victims of sex crimes. The Act mandates that the victim of certain sex crimes committed by a "school employee" in the "public school"[122] within the course of his/her employment is limited to a "student" in order for pension forfeiture to occur. This stipulation is incongruous given that sex crimes can victimize all individuals that are present in a public school or involved in school-related business. Public school employees must be held to high standards of behavior because they are entrusted with the safety of their students. These school employees are expected to conduct themselves with ethical and moral integrity, as well as engage in lawful conduct at all times.

Further, we also point out that the definition of "school employee" in the Public School Employee Retirement Code (PSERC) should be broadened to ensure that the provision covers

[117] 43 P.S. § 1311 *et seq.;* members of both PSERS and the State Employees' Retirement System are subject to the act.
[118] I.e., if found guilty by jury trial.
[119] PSERS and SERS have **no** discretion in the application of the Act whenever a specified criminal offense is involved.
[120] 43 P.S. § 1312.
[121] Act 86 of 2004.
[122] The definition of "Public school" in the Public School Employee Retirement Code (PSERC) states, in part: "Any or all classes or schools within this Commonwealth conducted under the order and superintendence of the Department of Education including, but not limited to: all educational classes of any employer charged with the responsibility of public education within this Commonwealth as well as those classes financed wholly or in part by the Federal Government, State-owned colleges and universities, the Pennsylvania State University, community colleges…." *See* 24 Pa.C.S. § 8102.

anyone who performs any services directly benefiting a public school[123] and receives pension benefits. This definition should also apply to any independent contractor or a person compensated on a fee basis receiving any form of remuneration qualifying for pension benefits.[124] This would expand the Act to cover retired school employees who continue to directly perform services for a public school or governmental entity.

We also found that PSERS did not use its statutory authority to, for example, promulgate regulations and issue administrative guidelines[125] to require public school employers to report when one of its employees is charged with one of the criminal offenses listed in the Act. Additionally, PSERS did not utilize existing police record databases to identify members convicted of these crimes. PSERS management considers its current case discovery process to be sufficient, but is looking into acquiring a subscription to the Pennsylvania Justice Network, which is an integrated system of criminal justice and public safety resources.

Further, we found that although PSERS properly determined which convicted members should forfeit their pensions, it failed to seek recoupment for pension benefit payments made after conviction. PSERS management stated they do not seek recoupment of benefits because it is typically a relatively modest amount of funds and tends to be a futile effort. PSERS needs to strive to make every reasonable, cost-effective effort it can to reclaim these funds given the current severe underfunding of its pension liability.

We also found that PSERS did not adequately evidence its monthly review of disciplinary actions taken against certified teachers.

Finally, PSERS' written procedures for pension forfeiture need to be strengthened. Specifically, procedures related to reviewing disciplinary actions taken against certified educators, monitoring cases through the use of tracking logs, and retaining documentation are not adequately described within the written procedures. Our results are discussed in detail in the below findings.

Finding 6.1 – Overly restrictive language in the Public Employee Forfeiture Act limits pension forfeitures to school employees against students.

The Act states that no public official or public employee is entitled to receive retirement or other benefits if the public official/employee is convicted of a criminal offense enumerated in the Act

[123] As considered in *Sandusky v. Pennsylvania State Emp. Ret. Bd.*, 127 A.3d 34 (Pa. Commwlth., 2015) for services directly benefiting a state-related institution.

[124] As will be discussed in our later released audit report of SERS, the definition of "school employee" should also be included in the State Employees' Retirement Code (SERSC) and likewise be broadened accordingly.

[125] In contrast, SERS has promulgated regulations that require employers to report any possible pension forfeiture cases to SERS on their own initiative and has issued a management directive regarding reporting potential public employees' pension forfeiture cases and placing responsibility on all agencies subject to the act.

related to public office or public employment.[126] For that reason, the Act applies to both the Pennsylvania State Employees' Retirement System (SERS) and PSERS members.

In September 2004, the Act was amended to include certain sex crimes in its list of criminal offenses. A member's pension could be forfeited because the member was convicted of one or more of the following Crime Code offenses under the Act when committed by a *school employee* as defined in the PSERC[127] against a *student*: rape, statutory sexual assault, involuntary deviate sexual intercourse, sexual assault, aggravated indecent assault, indecent assault, and indecent exposure (hereinafter referred to as sex crimes).

The Act refers to the PSERC for the definition of school employee. The PSERC defines a school employee as "Any person engaged in work relating to a public school for any governmental entity and for which work he is receiving regular remuneration as an officer, administrator or employee excluding, however, any independent contractor or a person compensated on a fee basis."[128]

Consequently, the amended Act's language restricts pension forfeiture to *school employees* convicted of sex crimes whom are predominantly PSERS members. The term "school employee" should be broadened to include provisions for anyone receiving pension benefits who performs any services directly benefiting a public school, as well as any independent contractor and a person compensated on a fee basis receiving any form of pension benefits. Further, the changes should be added to the SERS Code so that the provision regarding sex crimes for school employees will clearly also apply to any school employees receiving SERS pension benefits.

Additionally, the amended Act limits pension forfeiture to members convicted of sex crimes against only *students* in a public school as defined in the PSERC. This limitation should be removed. When a member commits a sex crime in a public school through his or her public office/position or when the public employment placed the member in a position to commit the crime, public pension forfeiture needs to apply to the member regardless of whether the victim is a student.

[126] 43 P.S. § 1311 *et seq.*

[127] It is important to note that certain "school employees" have the option of joining either SERS or PSERS including working for the Pennsylvania Department of Education, Pennsylvania State University, the State System of Higher Education/universities, and certain community colleges or possibly another retirement plan. Therefore, as discussed later, the definitions of "school employee" and "public school" should also be included in the SERS Code. The SERS membership guidelines provide as follows, "Educational Employees If you work for the Pennsylvania Department of Education, the State System of Higher Education or its member universities, Penn State, or certain community colleges, you can choose to either join SERS or to join the Public School Employees' Retirement System, or, possibly, to join another retirement plan offered by your employer." http://sers.pa.gov/members-membership-in-sers.aspx.

[128] 24 Pa.C.S. § 8102.

For instance, if a public school teacher, as a PSERS member, rapes a fellow school employee while on school property, the current language of the Act would allow the member to retain his or her pension benefits.

The Act should be amended to allow for all participants in a public pension system convicted of one of the enumerated sex crimes against any individual that are present in a public school or involved in school-related business to be subject to pension forfeiture, not just against a student when committed by a school employee. Public school employees must, at all times, be accountable to the Commonwealth citizens and serve them with utmost responsibility, integrity, and loyalty. No public school employee should be able to receive pension benefits after using his or her position to commit such heinous crimes.

Finding 6.2 – PSERS' pension forfeiture case discovery process needs to be strengthened.

During our audit period, PSERS identified potential pension forfeiture cases (cases) through subscriptions to online newspaper services, monthly reviews of the Pennsylvania Department of Education's (PDE) list of disciplinary actions taken against Pennsylvania certified educators, communications with the PSERS' regional offices, member attorneys, and an anonymous tip hotline. Although these procedures are useful in finding cases, they do not provide assurance that all cases are identified. We found a weakness in the process, as PSERS did not require public schools to report employees convicted of pension forfeiture-related crimes to them and did not utilize existing police record databases to identify members convicted of these crimes. Additionally, we found that PSERS' review of the list of disciplinary actions taken against certified educators was not adequately documented and related written procedures were insufficiently detailed.

PSERS did not use its statutory authority to require public schools to report employees convicted of criminal offenses listed in the Act.

The PSERC requires public schools to provide information to PSERS when requested by the Board;[129] however, PSERS and its board did not use this statutory authority to specifically request notification from public schools when one of their employees commits a criminal offense listed within the Act.[130] According to management, PSERS encourages employers to report such

[129] 24 Pa.C.S. § 8506(b) relating to "Records and information.": "At the direction of the board, the employer shall furnish service and compensation records as well as other information requested by the board and shall maintain and preserve such records as the board may require for the expeditious discharge of its duties."

[130] As noted earlier, in contrast, SERS promulgated regulations requiring all subject employers to report any possible pension forfeiture cases to SERS on their own initiative and has issued a management directive regarding reporting potential public employees' pension forfeiture cases and placing responsibility on all agencies subject to the act.

information and provides a summary of Act 140 on its website. This, along with PSERS' other methods used to find cases, according to PSERS, are sufficient to identify potential pension forfeiture cases.

PSERS' website instructs employers to contact its employer service center representative if additional information about the Pension Forfeiture Act is needed or to report a potential pension forfeiture matter to PSERS. Providing an avenue for employers to report information to PSERS is not as effective as requiring employers to report information through its statutory authority. PSERS should be doing everything possible to identify potential pension forfeiture cases, and requiring employers to report these cases would add further assurance that cases are being uncovered. Without this requirement of employers, some pension forfeiture cases might never be detected.

PSERS did not use police records to identify potential pension forfeiture cases.

During our audit period, PSERS did not use existing police record databases to identify potential pension forfeiture cases. However, PSERS is currently looking into acquiring a subscription to the Pennsylvania Justice Network (JNET) to add another layer of effectiveness to its current pension forfeiture discovery procedures. JNET is a collaborative effort of 16 state agencies to build a secure, integrated justice system that promotes information sharing through the use of its applications, services, architecture, outreach and training. JNET allows criminal-justice and other public-safety resources to be shared among Federal, state, county, and municipal agencies.

PSERS management stated that JNET is analyzing its ability to filter only the crimes applicable to the Pension Forfeiture Act. According to management, if successful, JNET would provide PSERS with a file of the matches, and PSERS would compare that file against its member database. We commend PSERS for this proactive initiative to strengthen the pension forfeiture case discovery process.[131]

PSERS' review of the list of disciplinary actions taken against certified educators was not adequately documented.

We attempted to verify whether PSERS performed the monthly reviews of PDE's list of disciplinary actions taken against certified educators, but found no documented evidence. PSERS management stated its staff printed the PDE lists for review, but discarded the printed lists after applicable cases were added to the tracking logs. Additionally, no supervisory review was

[131] As of March 2017, PSERS management continues to work with JNET and the Administrative Office of Pennsylvania Courts on this initiative. Once PSERS management obtains official approval from these parties, an implementation timeline will be established.

performed to ensure all potential cases were added to the tracking logs. Both the initial procedures as well as supervisory review of these procedures serve as important controls in ensuring all potential pension forfeiture cases are identified. Without adequate documentation of these procedures and related supervisory review, there is no evidence substantiating that the review and supervisory oversight were performed.

In order to determine whether PSERS was aware of all potential pension forfeiture cases using PDE's list, we reviewed the 641 disciplinary actions taken by PDE against certified educators[132] between July 1, 2013, and October 31, 2016. Using the description of each disciplinary action, we extracted information related to 106 disciplinary actions that included a Federal or Pennsylvania state charge/conviction for a crime subject to Act 140. We compared this information to PSERS' tracking log of pension forfeiture cases and found that 57 individuals were listed on PSERS' tracking log and 49 were not. Using auditor judgement, we selected 20 of the 49 individuals that were not listed on PSERS' log. PSERS management provided an explanation and documentation evidencing why each individual was not included in its log. The majority of these individuals were either not PSERS members or the crimes were committed when the individuals were not school employees. Based on our procedures, it appears that PSERS properly included individuals on its tracking logs based on its review of PDE's disciplinary actions list.

Although this is a beneficial process to assist PSERS in identifying potential pension forfeiture cases, it only applies to the portion of members that are certified educators. Therefore, the list would not include school employees working in the business office, food service, maintenance, or nursing.

PSERS' pension forfeiture written procedures regarding discovering cases through PDE disciplinary actions, tracking cases, and maintaining case documents were insufficiently detailed.

The procedures used to review PDE's website were also not included in PSERS' written procedures for pension forfeitures. The written procedures state the notification of possible pension forfeiture cases comes from many sources including, "The Department of Education Professional Certification Bureau, which lists recent teacher certification actions, including suspensions and revocations on its website." However, it does not specify the following:

- How to find the list on the website
- What information must be retrieved
- How to determine whether or not an individual with disciplinary actions should be added to PSERS' case tracking log

[132] www.education.pa.gov.

- How often the reviews are to be performed
- How to document the review performed
- How long to retain this documentation

PSERS management stated the written procedures do not include more detail because it is an easy and self-explanatory process; however, incomplete written procedures can lead to misunderstandings, inconsistent treatment, or a loss of process knowledge when staff turnovers occur.

After a potential case is discovered, PSERS' Benefits Policy Division and the OCC independently track potential pension forfeiture cases using spreadsheets that detail when and how the case was identified, the criminal charges, and the results of the court hearing. For each potential forfeiture case identified, PSERS maintains a case file including related newspaper articles, a memo from PSERS' OCC stating if the Act applied to the criminal offense, a letter to the member if pension benefits were forfeited, court dockets, and any other pertinent information. However, the use of the tracking logs and the documents to be retained in the member's file are not thoroughly explained in its written procedures.

According to PSERS management, the tracking logs were not included in its written procedures because they are primarily used for administrative ease. Additionally, management acknowledged the written procedures do not detail each document that should be retained in the member's file, with the exception of the final OCC determination memo. PSERS should include in its written procedures the use of the tracking logs and more detail regarding specific documents to be retained in the member's case file related to pension forfeiture cases. Once again, comprehensive written procedures are important to ensure consistent and accurate treatment of cases.

Finding 6.3 – PSERS properly determined which convicted members should forfeit their pensions, but failed to seek recoupment of pension payments made after conviction.

After gaining an understanding of PSERS' procedures to process pension forfeiture cases, we tested PSERS' pension forfeiture case files to determine if PSERS made pension forfeiture determinations in accordance with the Act. PSERS identified and closed 106 pension forfeiture cases from July 1, 2013, through October 31, 2016.

Results of Closed Cases	Number of Cases
Pension was Forfeited	44
Pension was not Forfeited	62
Total Closed Cases	106

Source: Pension forfeiture list of cases provided by PSERS. We performed certain tests and deemed this data to be reliable with a limitation that no one independent source existed to ensure the population is complete as noted in Appendix A.

Out of the 106 pension forfeiture cases, 44 cases were determined to be subject to the Act and resulted in a pension forfeiture. The remaining 62 cases were not subject to the Act, and the member's pension benefits were not forfeited. We selected 20 cases, 10 cases that resulted in pension forfeiture and 10 cases that did not result in pension forfeiture, to verify each case file contained sufficient documentation to evidence the details of the case and whether pension forfeiture was properly determined. We also confirmed the OCC's determination of the applicability of the Act was accurate and adequately evidenced.

Based on our test procedures, we found that PSERS correctly determined whether pension forfeiture was warranted in accordance with the Act for the 20 cases tested. However, we found that PSERS failed to stop annuity payments on the date of the PSERS member's conviction and did not attempt to recuperate funds paid to a member for pension benefits between the date of conviction and the date the actual benefits were terminated, as explained below.

For the 10 cases we tested subject to pension forfeiture as noted above, there were two cases in which the member was already receiving pension benefit annuity payments at the time of conviction. The two members continued to receive annuity payments after the date of conviction for 139 days and 67 days respectively, as detailed in the chart below:

Case	Conviction Date	Benefit Termination Date	Number of Days To Terminate	Benefits Paid After Conviction
1	November 12, 2013	March 31, 2014	139 Days	$ 494.52
2	June 20, 2016	August 26, 2016	67 Days	$1,214.60

Source: Auditor General staff compiled from pension forfeiture case files provided by PSERS.

PSERS management stated the delay for the first case was a result of understaffing and a large number of cases that required a more thorough investigation and analysis. The OCC focused on the more complex cases first, which caused a delay in finalizing this member's benefit termination. The member received four months of annuity payments after conviction.

In the second case, the member received two months of annuity payments after the month of conviction. PSERS management stated this delay was a result of a misunderstanding by a new staff member as to when forfeiture was to take place (upon guilty plea or upon sentencing) and since that time the staff member has received additional training by OCC.

PSERS management stated they do not seek recoupment of the overpayment of benefits because it is typically a relatively modest amount of funds. Also, most members do not have the funds to return, and the administrative/legal expenses involved to get the funds back can be costly.

We understand the potential amount of overpayments collected may be insignificant; however, PSERS should at least attempt to recoup these funds. PSERS could inform the member of the overpayment amount and request those funds be returned to PSERS within the determination letter. This simple step will be no cost to PSERS and could result in recovering the overpayments. Additionally, if PSERS' attempts to recapture the funds turn out to be unsuccessful. PSERS can refer the case to the Office of the Attorney General, which will attempt to recapture funds as long as the amount exceeds $100. Given the current underfunded state of the retirement system, PSERS should make every attempt to preserve pension funds.

Recommendations for Issue Area 6

We recommend that the General Assembly consider strengthening the provisions of Act 140 of 1978 and the Public School Employee Retirement Code (Code) as follows:

1. Broaden the language limiting application of the Act 140 sex crimes committed by a "school employee" against a "student" in the "public school" within the course of his/her employment; thus, expanding the application of sex crimes committed by ***any*** PSERS member against any individual who is present in a public school or involved in school-related business.[133]

   Our suggested change to Section 1312 of the Act pertaining to PSERS includes the following:

   "'Crimes related to public office or public employment.'…Any of the criminal offenses set forth in Subchapter B of Chapter 31 (relating to definition of offenses) [of the Crimes Code] when the criminal offense is committed by a school employee as defined in 24 Pa.C.S. § 8102 (relating to definitions) against any individual present in a public school or involved in school-related business ~~student.~~ ."

2. Broaden the definition of "school employee" in the Code to include provision for anyone receiving pension benefits who performs any services directly benefiting a

[133] 43 P.S. § 1312.

public school, as well as any independent contractor or a person receiving pension benefits who is compensated on a fee basis.[134]

Our suggested change to Section 8102 of the Code includes the following: "'School employee.' Any person engaged in work relating to a public school for any governmental entity for which work he is receiving regular remuneration as an officer, administrator or employee <u>or any person receiving pension benefits who performs any services directly benefiting a public school including</u> ~~excluding, however,~~ any independent contractor or a person compensated on a fee basis."

We recommend that PSERS:

3. Require employers to formally report employees charged with criminal offenses applicable to Act 140 to them by promulgating regulations through the regulatory review process and to issue a related administrative directive to all "public schools" as defined in the PSERC.

4. Continue to pursue a subscription to JNET and use its resources to identify pension forfeiture cases.

5. Strengthen its written procedures for pension forfeitures to include the documents required to be maintained in the member's case file, the use of the tracking spreadsheets to evidence oversight of the pension forfeiture cases, and a detailed description of the evaluation of the PDE's list of disciplinary actions taken against Pennsylvania certified educators.

6. Pursuant to the written procedures developed in the above recommendation, document the evaluation of PDE's list of disciplinary actions taken against Pennsylvania certified educators and the supervisory review of the evaluation. The documentation should include, but not be limited to, the dates the evaluation and review of the evaluation were performed, the initials of the individual performing the evaluation, the initials of the individual reviewing the evaluation, and a comment for each case stating whether the case was included in PSERS' tracking list or the reason why the case is not subject to pension forfeiture.

7. Develop written policies and procedures to seek recoupment of overpayments of annuity benefits paid after the date of conviction.

8. Incorporate a request for repayment of the annuity benefits paid after the date of conviction within the pension forfeiture letter sent to the member.

[134] 24 Pa.C.S. § 8102.

9. Consult with the Office of Attorney General to determine if utilizing its resources to attempt to recapture annuity benefits paid after the date of conviction exceeding a minimum threshold would be feasible and cost effective.

Status of Prior Audit Findings

Our prior audit of the Public School Employees' Retirement System (PSERS) covered the period January 1, 2001, through December 31, 2004 and contained six chapters with a total of 15 findings. Three of the 15 prior year findings did not offer recommendations. For the remaining 12 prior year findings, which contained 35 recommendations, the section below provides the status of these findings and offers additional recommendations, when applicable, to eliminate the deficiencies currently identified.

Prior Finding 1.1 – PSERS' Board policies regarding conflicts of interest require improvement to ensure that the policies properly reflect the fiduciary duties of Board members of a public pension plan like PSERS. (Partially Resolved)

In our prior audit, we found that the PSERS' Bylaws adopted the Pennsylvania Public Official and Employees Ethics Act[135] provisions regarding conflicts of interest. We concluded that these provisions were ineffective for addressing conflicts of interest that arise for Board members acting in their fiduciary capacities. Specifically, the Ethics Act and PSERS' Bylaws did not contain monetary threshold amounts for which Board members would be required to disclose campaign contributions from firms that had business dealings with PSERS. As a result of the absence of a monetary threshold, all campaign contributions did not necessarily have to be disclosed so that the other Board members, the staff, and the public, could be apprised of the relationships individual Board members had with firms doing business with PSERS. We noted in the prior audit that there were instances in which Board meeting minutes revealed that members may have been uncertain or may have misunderstood when it was necessary for them to recuse themselves from voting.

We recommended that PSERS issue guidelines regarding conflicts of interest for Board members and their designees that exceed those of the Ethics Act by the following: (1) Defining conflict of interest as it specifically pertains to a Board member's fiduciary duty, including establishing a minimum campaign contribution amount that would trigger action by the Board member and indicating under what circumstances a Board member should publicly disclose a potential conflict, as well as abstain from voting and disclose on the record the nature of the potential conflict; (2) Requiring the Board's Secretary to obtain copies of all campaign finance reports that Board members who are elected officials are required to file with the Department of State so that the Board Secretary can assist Board members in identifying specific instances in which a Board member's vote would violate the conflict of interest policy; and (3) Requiring all investment advisory consultants and investment managers to provide an up-to-date comprehensive disclosure statement of all campaign contributions made by principals or employees of their investment firm to Board members, who are elected officials, each time that consultant or

[135] 65 Pa.C.S. § 1101 *et seq.*

manager has a proposal before the Board so that the Board Secretary can assist Board members in complying with the conflict of interest policy.

Status as of this audit

PSERS' Board established an Ethics Policy in 2010, which provides that the trustees must not engage in any employment activity or enterprise for compensation that is inconsistent with their fiduciary duties. Additionally, it states that a trustee who has received a political contribution of $250 or more within the past two years from an officer of a company with business before the Board must recuse themselves from participating in the matter. Further, the policy includes a detailed list of situations that would create potential conflicts of interest, such as gifts, nepotism, and personal interest; and addresses how the potential conflicts should be disclosed to the Board. Therefore, this prior audit recommendation has been adequately implemented.

PSERS management stated that it does not require the Board's Secretary to obtain copies of all required Department of State campaign finance reports for the five Board members who are also elected officials. PSERS management relies on the Board members to recuse themselves from voting if a potential conflict of interest exists, as all Board members are subject to the PSERS Board policies, Ethics Act, and the Governor's Code of Conduct. We disagree that solely relying on Board member's self-reporting is adequate. This prior audit recommendation has **not been implemented**. Further evaluation of this topic and our recommendations can be found in Finding 4.2 of the current audit report.

With regard to the third recommendation, in November 2013, PSERS began requiring potential investment managers to submit information to PSERS as to whether any relationships exist between the manager and the consultants. PSERS presents this information within its presentation to the Board for approval to contract. We verified that PSERS' current due diligence questionnaire requires disclosure of this information and we also reviewed a presentation given to the Board discussing investment manager/consultant relationships. Based on these audit procedures, it appears that PSERS' procedures to identify potentially conflicting relationships between consultants and managers and report these relationships to the Board prior to contracting is adequate. Therefore, this prior audit recommendation has been adequately implemented.

Prior Finding 1.2 – PSERS did not maintain a formal training program for its Board members or track how many hours of training each Board member received. (Partially Resolved)

In our prior audit, we found that while some PSERS' Board members attended educational meetings, we did not find evidence that PSERS maintained a formal training program for its

Board members and designees and did not track the number of training hours each Board member and/or designee received. Additionally, we found that despite the fact that PSERS' contracts with its investment consultants and managers contain provisions for them to provide educational presentations to the Board, PSERS did not take adequate advantage of such opportunities during the audit period.

We recommended that: (1) PSERS develop a formal Board member training policy, including a minimum annual training requirement along with the appropriate record-keeping; (2) PSERS offer additional "in-house" educational training sessions provided by PSERS' contracted consultants and managers, including a review of the prudence standard to which the Board members must adhere[136]; and (3) PSERS' Chief Counsel determine whether Section 8501(d) of the PSERS Retirement Code[137] authorizing PSERS to reimburse employers for the time that a Board member who is a member of the plan and employed by a governmental entity is "necessarily" away to "to execute the duties of the Board" provides PSERS with the necessary authorization to provide reimbursement for the time that a Board member spends at an educational/industry meeting or the attendance of official Board meetings, other meetings at which all Board members are in attendance and approved training courses. Should the Chief Counsel determine that such reimbursement is authorized by the Retirement Code, PSERS should address such reimbursement in its formal Board member training policy and should also consider requiring Board members, who are school employees, to limit their educational travel to the summer months.

Status as of this audit

The PSERS' Board adopted an Education Policy in 2007, which includes information regarding its new member orientation program and continuing training program, both through in-house sessions and industry conferences. However, the Board did not establish a minimum amount of training each Board member and designee should obtain annually, and its documentation of these trainings was inadequate. This prior audit recommendation was **not implemented**. Further evaluation of this topic and our recommendations can be found in Issue Area 1 of the current audit report.

Based on our review of all of the PSERS consultants' and Investment Office professionals' training presentations offered to the Board between July 1, 2013 and March 31, 2017, it appears the amount of educational and training opportunities provided to the Board was adequate. Prudent Investor standard and/or fiduciary trainings were conducted in 2014 and 2017, as well as in several industry conferences throughout our audit period. Therefore, this prior audit recommendation has been adequately implemented.

[136] 24 Pa.C.S. § 8521(a).
[137] 24 Pa.C.S. § 8501(d).

In January 2007, PSERS' Chief Counsel concluded that the PSERS Retirement Code provides sufficient authority for the Board to reimburse the employers of Board members, who are also PSERS members, for the salary or wages of the member or for the cost of employing a substitute for such member while the member is absent for educational purposes. We verified the Board's Education Policy contains information about reimbursements for all educational events. Therefore, this prior audit recommendation has been adequately implemented.

Prior Finding 1.3 – PSERS' Internal Auditor Office lacked the organizational independence and staff resources necessary to effectively complete audits. (Partially Resolved)

During our prior audit, we reviewed PSERS' Internal Auditor Office (IAO) to determine if it was fulfilling its responsibilities in compliance with the professional standards established by the Institute of Internal Auditors (IIA). We reported that the IAO lacked sufficient organizational independence because the Internal Auditor reported directly to PSERS' Executive Director. We also found that the IAO was unable to adequately plan for and complete internal audits because the IAO was chronically short-staffed and consistently assigned duties unrelated to the internal audit function. Finally, we reported that the IAO operated without an approved charter, which would formalize the position of the IAO by receiving full endorsement by the Board as well as outline the specific duties and responsibilities assigned to the IAO.

We recommended that: (1) PSERS realign its current organizational structure so that the IAO reports both to the Executive Director and to the Board's Audit/Budget Committee, and the Internal Auditor periodically update PSERS Board and senior management on the IAO's purpose, authority, responsibilities, and performance relative to its audit plan; (2) The Board's Audit/Budget Committee assume the responsibility for assuring and maintaining the independence of the internal audit process, ensuring that there are no unjustified restrictions or limitations placed on the internal audit staff, reviewing the charter, objectives, plans, activities, staffing, budget, qualifications and organizational structure of the IAO, and reviewing the effectiveness of the internal audit function, including compliance with most recent edition of IIA Standards; (3) The Board conduct a review of the IAO to determine the number of audit staff needed to effectively accomplish the office's mission; (4) The Board establish a policy prohibiting the reassignment of internal audit staff to duties that compromise staff members' ability to maintain their independence. The Board should also take steps to ensure that existing internal audit staff is independent of the operations they audit; (5) The IAO be required to complete an audit plan on an annual basis and place priority on completing audits of high-risk areas; and (6) To strengthen the position of IAO, a charter containing the minimum criteria outlined in the IIA's Standard 1000 be developed and presented to the Audit/Budget Committee and the PSERS Board for approval.

Status as of this audit

According to PSERS management, Section 4.2b of the PSERS Board's Bylaws is the formal document outlining the organization of the Audit/Budget Committee, its rights, and privileges. This document explains the Audit/Budget Committee is responsible for oversight of the IAO and is responsible for approving the IAO charter to assist the internal auditors in fulfilling their mission and responsibilities. However, the PSERS' organizational chart has not changed since our prior audit and still depicts the IAO reporting solely to PSERS' Executive Director. PSERS management stated that while the IAO is able to choose areas of audit, the Executive Director aides in planning and prioritizing the work performed by the IAO.

PSERS management stated that the current structure does not create an independence impairment. The Internal Auditor and the Audit/Budget Committee have unlimited access to each other; and there have been no instances where reporting only to the Executive Director hindered its duty to report audit findings, even when those findings related to the executive offices. Further, management stated that the Executive Director has always welcomed any recommendations from the IAO.

<u>The Audit/Budget Committee failed to fulfill its internal audit responsibilities.</u>

The Audit/Budget Committee does not have procedures in place to ensure the independence of the internal audit process, including that there are no unjustified limitations placed on the internal audit staff. The Audit/Budget Committee meets twice a year, typically in March and October, for the beginning and end of the annual financial statement audits. We reviewed the Audit/Budget Committee meeting minutes between January 1, 2013, and December 31, 2016, and the only discussions were regarding adopting annual budgets and accepting the annual financial statements and related independent auditor's reports. There were no documented discussions regarding the IAO's audit plans, risk assessments, staffing, or oversight. Additionally, the Audit/Budget Committee does not review the effectiveness of the internal audit function, ensure compliance with current internal auditing standards, or prohibit reassignment of internal audit staff to functions that are subject to internal audits. Further, the Board's Bylaws state the Audit/Budget Committee is responsible for "approving the Charter of the Internal Audit Department Function;" however, no such charter exists.

According to PSERS management, the former Chief Counsel did not believe it was necessary for the Audit/Budget Committee to approve a charter for the IAO. We disagree. Both the Audit/Budget Committee and the IAO need comprehensive charters to outline the purpose, authority, and responsibilities of each entity.[138] The charters also need to address the importance

[138] The IIA Standard 1000 defines an internal audit charter as "a formal document that defines the internal audit activity's purpose, authority, and responsibility. The internal audit charter establishes the internal audit activity's position within the organization, including the nature of the chief audit executive's functional reporting relationship with the board; authorizes access to records, personnel, and physical properties relevant to the performance of engagements; and defines the scope of internal audit activities."

of independence and how it is maintained and monitored. Without these documents, the internal audit function may not operate as intended.

PSERS management indicated that the Audit/Budget Committee exercises adequate oversight of the Internal Auditor Office, citing that the committee has periodic communications and meetings with the IAO; however, the communications were not documented. While the Audit/Budget Committee appears to be adequately addressing PSERS' external audits, there is no evidence of oversight of the IAO's internal audits and related functions. Accordingly, prior year recommendations (2), (4), and (6) were **not implemented**.

The Internal Auditor Office is compromising its independence by operating predominantly as a compliance function without adequate staffing levels.

The Institute of Internal Auditors' (IIA) defines compliance as "adherence to policies, plans, procedures, laws, regulations, contracts, or other requirements."[139] In contrast, internal audit activity is a "department, division, team of consultants, or other practitioner(s) that provides independent, objective assurance and consulting services designed to add value and improve an organization's operations. The internal audit activity helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management and control processes."[140]

During our audit period, the IAO performed the following compliance and internal audit functions:

[139] Institute of Internal Auditors "International Standards for the Professional Practice of Internal Auditing" (the iia.org).
[140] Ibid.

<table>
<tr><th>IAO Compliance Functions</th><th>IAO Internal Audit Functions</th></tr>
<tr><td>• Oversee Center for Medicare and Medicaid Services (CMS) reporting requirements relating to the Prescription Drug Program to ensure that PSERS is complying with requirements/deadlines.
• Perform benefit recalculations and approve offline calculations/spreadsheets used for benefit calculations.

<u>Investment Compliance</u>
• Ensure that the PSERS' investments that are meant to mimic the S&P 400/500/600 indices have no variations from the indices.
• Compare PSERS' actual holdings to the allowable holdings as stated in its investment policies.
• Track quarterly letters received from public market portfolio managers confirming that they have complied with PSERS' Investment Policy Statement.
• Ensure PSERS employees are not investing in the same funds where PSERS holds more than 5% of the funds' total.
• Review and compare the actual proxy votes cast at meetings to the proxy consultant's recommendations.</td><td>• Coordinate annual financial audit.

• Coordinate other external audits/reports.

• Annual assessment to identify high-risk areas within PSERS.

• Internal Audits.

• Liaison to Treasury and other state agencies.</td></tr>
</table>

Although combining compliance with internal auditing within one division of an agency is not inherently problematic, there needs to be sufficient staffing and a distinct delegation of duties to ensure independence of the internal audit function is maintained. The IIA states if the chief audit executive assumes responsibility for compliance activities, these roles may impair, or appear to impair, the organizational independence of the internal audit activity. In response, the Board must perform oversight activities to address these potential impairments, such as "periodically evaluating reporting lines and responsibilities, and developing alternative processes to obtain assurance related to the areas of additional responsibility." [141] However, during our audit period these safeguards did not exist.

Additionally, the IAO continued to be insufficiently staffed. According to PSERS management, the Board did not conduct a review of the internal audit staff requirements as recommended in our prior audit. In 2008, the internal audit complement was increased from 2 to 3 staff members. However, the PSERS' investment compliance function was transferred to the IAO in 2013. The investment compliance procedures are so robust that one IAO staff member is solely dedicated to

[141] https://na.theiia.org/standards-guidance/Public%20Documents/2016-Standards-Exposure-Markup-English.pdf.

these responsibilities. This leaves the Internal Auditor and one staff member to complete the remaining compliance and internal auditing duties, which are clearly not segregated for independence purposes.

PSERS management stated that the ability for PSERS to obtain additional positions has been difficult because of the hiring freezes and complement caps enacted by the Governor's Office of Administration. However, according to PSERS management, during our audit period, there was no attempt made to pursue a complement increase because the efforts were expected to be fruitless. PSERS must advocate for additional staff if it determines that the need for more auditors is necessary to effectively accomplish the IAO's audit mission.

Without sufficient organizational independence, there is little assurance that the internal audit activity is free from interference in determining the scope of internal auditing, performing work, and communicating results. Internal auditors must have an impartial, unbiased attitude. A lack of independence prevents the IAO from effectively accomplishing its mission, which is internal auditing and not compliance oversight. This prior audit recommendation (1) was **<u>not implemented</u>**.

In fact, the main purpose of the internal audit function is to identify and assess areas of high risk within the organization to improve operations. During our audit period, the IAO conducted a comprehensive risk assessment for all areas of operations and developed audit plans annually. We reviewed the risk assessments and audit plans for fiscal years 2015 and 2016. Therefore, this prior audit recommendation (5) has been implemented.

However, the 2016 risk assessment identified 146 areas within PSERS and determined 11 of these areas to be high-risk and 71 to be of moderate risk. However, between July 1, 2013 and December 31, 2016, the IAO only completed one internal audit and seven informal reviews. PSERS management stated that more audits were not completed due to the vast amount of other recurring tasks that were given priority. Significant understaffing in the PSERS IAO presents considerable risks for errors, untimeliness, and increased employee stress. This prior year audit recommendation (3) was **<u>not implemented</u>**.

Recommendations

We recommend that PSERS:

1. Change the organizational structure of the internal audit function to promote independence and comply with the Institute of Internal Auditors standards.

2. Develop an Internal Auditor Office Charter, defining its purpose, authority, and responsibilities, and have it approved by the Board. The charter should include:

    a. Defining the nature of the Internal Auditor Office's relationship to the Audit/Budget Committee, Board, and Executive Director.
    b. Maintaining the office's independence and objectivity, including prohibiting the reassignment of internal audit office staff to duties that compromise its ability to maintain independence.
    c. Conducting risk assessments of PSERS' internal controls by the office on a recurring basis.
    d. Establishing an annual audit plan by the office to be reviewed and approved by the Audit/Budget Committee.

3. Revise the Audit/Budget Committee responsibilities in the Bylaws to include:

    a. Ensuring the independence of the committee's internal audit process.
    b. Ensuring there are no unjustified restrictions or limitations placed on internal audit staff by the committee.
    c. Reviewing and approving the committee's annual audit plans.
    d. Reviewing the effectiveness of the committee's internal audit function, including its compliance with IIA Standards.

4. Reevaluate the current duties and responsibilities assigned to the Internal Auditor Office and consider either removing the compliance duties or requesting additional internal audit staff and establishing two distinct areas (a compliance section and internal audit section) with specifically assigned staff to ensure the internal audit function remains independent and produces timely audits.

We recommend that the Governor's Office of Administration:

5. If requested by PSERS, evaluate the need for a complement increase for the PSERS Internal Auditor Office.

Prior Finding 2.1 – Although PSERS is subject to oversight by the Governor's Office of Administration (OA), OA appears to hamper neither PSERS' independence to make investments nor its mission. (Resolved)

In our prior audit, PSERS' staff indicated that the impact of OA's oversight is limited to administrative matters and does not hamper PSERS' independence to make investments or its ability to achieve its mission.

We recommended that PSERS make a more concerted effort to work closely with OA in order to ensure that the impact of administrative limitations is diminished, such as having a staff member acting as an OA liaison.

Status as of this audit

PSERS management stated that it has a good working relationship with OA, both at the Board and staff level, and has meetings with OA on an ad hoc basis. Management indicated these practices have worked well in the past and continue to do so now. Therefore, this prior audit finding is resolved.

Prior Finding 2.2 – The Governor's Office of General Counsel (OGC) on the whole appears to present no impediments that hamper PSERS' independence to make investments nor its mission. (Resolved)

In our prior audit, PSERS communicated to auditors that it felt constrained by OGC policies and procedures to the extent that we were compelled to issue a finding on the matter. We highlighted the advantages of OGC's legal support to PSERS, concluding that the constraints articulated to us by PSERS were constraints on administrative matters only.

We recommended that: (1) PSERS' legal staff make a concerted effort to work closely with OGC in order to help diminish any delays and unnecessary burdens and possibly seek to have the OGC provide PSERS' Office of Chief Counsel more latitude to make certain types of decisions; and (2) If the relationship is problematic, seek complete independence from OGC.

Status as of this audit

According to PSERS management, its legal staff works closely with the OGC and is unaware of any recent delays or unnecessary burdens that have occurred as a result of OGC policies and procedures. PSERS' Chief Counsel attends regular meetings with OGC and provides reports to them regarding legal activities at PSERS. It appears that PSERS continues to work cooperatively with the OGC and its independence and mission continue to be unhampered. Therefore, this prior finding is resolved.

Prior Finding 2.3 – PSERS has not been consistent with regard to identifying the prudence standard to which it has determined the Board is subject. (Resolved)

In our prior audit, we found that PSERS had not consistently identified its prudence standard as either "prudent person" or "prudent investor." According to its Chief Counsel, the "prudent investor standard" is preferred. However, we found inconsistency in the standard used within various documents.

We recommended that: (1) PSERS ensure that all of its documents consistently refer to the Prudent Investor Rule, which is the prudence standard to which PSERS' Chief Counsel had determined the PSERS Board members are subject; and (2) PSERS Board members and their designees be provided with an immediate orientation session, a member orientations packet, and an additional training program about the prudence standard to which they are subject and their obligations and accountability to PSERS members.

Status as of this audit

Currently, PSERS' Board Bylaws, Education Policy, Securities Litigation Policy, Investment Policy, and annual budget report submitted to the General Assembly consistently incorporate the Prudent Investor standard, by name or by language.

In 2006, PSERS provided the Board members with training on the Prudent Investor standard and their responsibilities under this level of care. Additionally, the orientation materials for new PSERS Board members and designees include a specific presentation on the Prudent Investor standard. PSERS management indicated it conducts an education session on fiduciary duties at least once every 3 years. PSERS' Board members and designees also have opportunities to attend outside training events/conferences that address fiduciary duties. Therefore, this prior finding is resolved.

Prior Finding 2.4 – It is unclear whether the prudence language in the PSERS Retirement Code, which was adopted in 1974, is adequate to reflect the prudent investor rule contained in the Uniform Prudent Investor Act as adopted in 1994 and amended into the Pennsylvania Probate Code in 1999. (Resolved)

We found that the PSERS Board appeared to adhere to the requirements outlined in the Prudent Investor Rule, but questioned whether the prudence language in the PSERS Retirement Code contains all the elements to encompass modern portfolio theory and investment diversification principles as contained in the Prudent Investor Rule.

We recommended that: (1) PSERS seek a legislative change to the provision in the PSERS' Retirement Code containing the Board member's prudence standard to ensure that it encompasses all of the key elements of the Prudent Investor Rule and amend its investment policy accordingly; and (2) The General Assembly consider amending the PSERS Retirement Code to reflect the Prudent Investor Rule.

Status as of this audit

PSERS management stated that there have been no amendments to the PSERS' Retirement Code that would have provided an opportunity to revise this language. Since PSERS has incorporated the higher standard of the Prudent Investor standard consistently into all of its policies and contracts and legislative change is outside PSERS' control, we consider this matter resolved as to PSERS' potential actions. However, as noted in our recommendations for Issue Area 1, we do recommend that the General Assembly amend the PSERC to include a clarification of the Board trustees' fiduciary duties and the standard to which they are subject under Section 8521(a) of the PSERC, 24 Pa.C.S. § 8521(a).

Prior Finding 3.3 – PSERS staff did not disclose relationships between PSERS' general investment advisory consultant and external financial managers to the Board. (Resolved)

PSERS uses investment advisory consultants to provide a wide range of services, including recommending investment objectives, assisting in the development of investment policies, evaluating investment managers, and monitoring investment portfolios. PSERS relies on the expertise and guidance of its investment advisors. In our prior audit, although PSERS' staff monitored these relationships by requiring consultants to submit an annual report detailing other types of services they provide, the names of the businesses to which they provide services, background of their principles, and a list of their other business activities, we found that the relationships were not disclosed to the Board, which has the final decision making authority on potential investment managers.

We recommended that PSERS' staff continue to require investment managers to report any relationships they have with PSERS' investment consultants. Additionally, information regarding any potential conflicts of interest and business relationships between the investment managers and the general investment advisory consultant should be disclosed to the PSERS Board prior to its voting on an investment manager.

Status as of this audit

During our current audit, we evaluated PSERS' procedures used to identify relationships between the investment consultants and managers and report these relationships to the Board. Based on our audit procedures, we found PSERS' procedures appear adequate. For a detailed description of our audit procedures and results, see the current audit Finding 3.2 within this report. This prior finding is resolved.

Prior Finding 4.1 – While PSERS' due diligence process for selecting investment managers appears adequate, PSERS did not have formal policies and procedures. (Resolved)

In the prior audit, we found that PSERS did not have formal policies and procedures regarding the type and amount of due diligence required to be performed on each investment manager prior to making a recommendation to the Board's Finance Committee and the Board. We questioned that without such policies and procedures in place, how PSERS could ensure consistency in its due diligence process.

We recommended that PSERS develop formal due diligence policies and procedures, including all requirements and steps in the due diligence process, to ensure that PSERS' Board members have sufficient information to make prudent investment decisions to fulfill their fiduciary duties.

Status as of this audit

In 2006, PSERS revised its "Investment Policy Statement, Objectives and Guidelines" to include a substantial section on the selection of investment managers as well as steps in the due diligence process conducted by PSERS' staff when selecting investment managers. Therefore, this prior finding is resolved.

Prior Finding 4.2 – PSERS did not adequately monitor its investment managers' compliance with their contracts. (Resolved)

In the prior audit, we found that while PSERS' monitoring of the investment managers' financial performance was adequate, PSERS' monitoring of managers' compliance with contract guidelines, objectives, and documentation requirements was deficient. Specifically, we found that staff did not complete all annual on-site reviews of external managers; there was inadequate policies; and software called *Investment Monitor* could not be fully utilized. We also found that fidelity bond policies and/or errors and omissions for two of the 12 managers tested could not be located. Further, PSERS' Risk and Compliance Division did not adequately fulfill all of its responsibilities.

We recommended that PSERS' Investment Office's Risk and Compliance Division improve its monitoring of investment managers' compliance with contract guidelines and documentation requirements by: (1) Formalizing its existing policies and procedures in writing, including the specific steps for performance and compliance monitoring, including the steps for obtaining and retaining contractually required documents; (2) Fully programing its software, *Investment Monitor*, and utilizing the software to its fullest capacity; (3) Obtaining and retaining copies of all contractually required documentation, including current errors and omission insurance and fidelity bond insurance.

Status as of this audit

In 2013, the investment manager contract compliance function was transferred to the Internal Auditor Office. We reviewed the written procedures established for compliance monitoring, which include a quarterly and annual review of each manager's portfolio compliance with the "Investment Policy Statement, Objectives and Guidelines," and the submission of applicable certificates of insurance. This prior audit recommendation has been adequately implemented.

The software, *Investment Monitor*, is obsolete and no longer used by PSERS. According to PSERS management, PSERS currently uses the *Blackrock Solutions* system to monitor manager portfolio compliance. We reviewed a spreadsheet used to track the results of the investment manager compliance. The rules for each manager as stated in the "Investment Policy Statement, Objectives and Guidelines" are coded within the system. Data from the custodian bank is uploaded into the system and compared against these rules. This prior condition is resolved.

The certificates of insurance, including errors and omission and fidelity bond insurance, are obtained from each external public investment manager annually. The Internal Auditor Office uses a spreadsheet to track the submission of these items, and other contractually required documents. We compared the most recent spreadsheet to the current list of external public investment managers to ensure the listing was complete and reviewed the certificates of insurance for 5 of the 46 managers. Based on these procedures, this prior condition is resolved.

Prior Finding 5.1 - PSERS was unable to demonstrate case-specific monitoring of the securities litigation process due to inadequate procedures and a lack of documentation. (Resolved)

In our prior audit report, we found that PSERS' procedures for securities litigation were inadequate. Our review of PSERS' Board policy and PSERS' procedures relating to securities litigation revealed two deficiencies. First, no charter existed for the then newly established Corporate Governance Committee, created specifically to address securities litigation issues. Second, PSERS' procedures did not contain sufficient detail for staff to properly monitor the securities litigation process, including who was responsible for monitoring and what actions were required for each procedure. We also found that PSERS reported securities litigation settlement recovery amounts to the Board. However, in order to put the recovery amount in context, PSERS could provide the Board additional information, such as the total amount of investment losses. Finally we reported that PSERS could not provide case-specific monitoring documentation, which resulted in PSERS' inability to ensure that third parties fulfilled their responsibilities and specific claims were timely and appropriately handled.

We recommended that: (1) PSERS enhance its securities litigation procedures to include details specifically outlining the roles and responsibilities of all staff and third parties involved in the process; (2) PSERS' staff provide the Board with additional securities litigation information, so that the Board has a complete and accurate representation of the significance of each settlement and can exercise appropriate oversight; (3) PSERS Board formally adopt a charter for the Corporate Governance Committee; (4) PSERS obtain monthly reports from the custodian bank that list the details for each securities litigation claim filed with a claims administrator; and (5) PSERS periodically obtain, from the third party, an audit of the custodian bank to ensure that all monies owed to PSERS have been accounted for properly.

Status as of this audit

We reviewed PSERS' Securities Litigation Policy (Policy), adopted by the Board in 2003 and amended significantly in 2005. The Policy outlines the roles and responsibilities of all staff and third parties, specifically, including a definitions section identifying the pertinent parties and the role of Office of Chief Counsel and Executive Staff. This matter is resolved.

We reviewed the most recent Office of Chief Counsel's (OCC) annual report on securities litigation settlement information provided to the Board, which included a substantial narrative, on not only recoveries from successfully disposed cases, but also indicates investment losses where PSERS was an unsuccessful litigant. Therefore, this prior audit recommendation has been implemented.

PSERS management stated that Section 4.2.d, Corporate Governance Committee, of the Board's "Statement of Organization, Bylaws, and Other Procedures" is the formal document outlining the organization of the committee, its rights, and privileges. This document explains the composition of the Corporate Governance Committee, voting roles, and details the responsibilities of the committee. It states the committee is responsible for reviewing and recommending revisions to the securities litigation policies, monitoring the implementation of the Securities Litigation Policy, and advising the Board on security litigation matters of significance. Additionally, the

Securities Litigation Policy details the specific responsibilities and procedures to be utilized by the committee. As a result, we consider this matter resolved.

We reviewed the most recent quarterly report of securities litigation collection of claims as provided to the Board, which contained a detailed listing of all receipts collected by quarter for the past year, settlements pending distribution for which PSERS has an outstanding claim, and a comparison of total receipts by quarter for the past four years. Further, PSERS performed 14 class action settlement audits between July 1, 2013 and December 31, 2016. We reviewed one of these audits and the supporting documentation. We believe this is sufficient.

Based on our review of the Policy and PSERS' current securities litigation procedures, we found that PSERS appears to have adequately designed controls in place to monitor securities litigation matters, ensure that claims are filed by PSERS' custodian bank in applicable cases, and ensure the receipts are received by the custodian bank. Because these controls are in place, the prior recommendation of obtaining a third-party audit of the custodian bank is no longer necessary.

Prior Finding 6.1 - PSERS did not present information to the General Assembly that clearly indicated the amount PSERS invested in Pennsylvania. (Resolved)

In our prior audit, we stated that the Pennsylvania General Assembly demonstrates its interest in the investment of Pennsylvania businesses as a means of promoting community and economic development by articulating in Section 8521(e) of the Retirement Code:

> The [Board] may, when possible and consistent with its fiduciary duties … consider whether an investment in any project or business enhances and promotes the general welfare of this Commonwealth and its citizens, including, but not limited to **investments that increase and enhance the employment of Commonwealth residents, encourage the construction and retention of adequate housing and stimulate further investment and economic activity in this Commonwealth**.[142]

We reported that PSERS was not including an adequate amount of information in its annual budget report to provide the General Assembly with a thorough understanding as to the dollar amount actually invested in Pennsylvania businesses, real estate, etc.

We recommended the annual budget report submitted to the General Assembly be expanded to include: (1) The amount of the Pennsylvania-based managers' portfolios invested in Pennsylvania companies or real estate; (2) The amount of the commitment to real estate managers that have been funded; (3) The year of commitment, the amount committed, the amount funded, and the amount returned on alternative investments; (4) The number of

[142] 24 Pa.C.S. § 8521(e). (Emphasis added.)

Pennsylvania companies PSERS invested in and the total number of persons employed with these companies; (5) The amount of the total market value listed for Pennsylvania-based managers and the total for that particular asset class; and (6) The return-on-investment for Pennsylvania investments versus all investments by PSERS.

Status as of this audit

During our audit period, the PSERS' budget reports submitted to the General Assembly contained detailed sections on both Pennsylvania-based investment managers and investments in Pennsylvania. The budget reports included comprehensive information on all of the subjects highlighted in our prior audit recommendation section, except the returns on Pennsylvania investments. PSERS management stated that the purpose of the provision in the PSERS' Retirement Code is to promote Pennsylvania businesses and investments in Pennsylvania and separating the subsequent returns from other returns is inconsequential. PSERS' explanation appears reasonable. Therefore, this prior finding is resolved.

Agency's Response and Auditors' Conclusions

We provided draft copies of our audit findings and status of prior findings and related recommendations to the Public School Employees' Retirement System (PSERS) for its review. On the pages that follow, we included PSERS' response in its entirety. Following the agency's response is our auditors' conclusions.

Public School Employees' Retirement System

Response to Commonwealth of Pennsylvania Department of the Auditor General Performance Audit Report

Submitted on May 19, 2017

COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

May 19, 2017

Honorable Eugene DePasquale
Department of Auditor General
Room 229 Finance Building
Harrisburg, PA 17120-0018

RE: Public School Employees' Retirement System (PSERS)
Performance Audit Report
Management Response

Dear Auditor General DePasquale:

The attached Management Response is offered to the Performance Audit Report – Draft Findings – dated May 2017, for inclusion with the Final Report. We appreciate the opportunity to provide this response on behalf of the Board of Trustees of PSERS to the various findings and recommendations.

PSERS Management is very pleased to note that the Report does not include any findings that PSERS is in violation of any statute, Retirement Code provision, regulation, Management Directive, By-law provision, or other policy, relating to any of the areas within the scope of the audit. Moreover, the Report does not make any specific finding of any fraud, waste or abuse of public funds relating to any of the areas within the scope of the audit.

With respect to the important Pension Forfeiture Act (Act), the Audit Team reviewed PSERS processing of 106 possible forfeiture cases during the audit period and sampled 20 cases, concluding that PSERS properly determined all 20 cases in accordance with the Act. PSERS Management agrees with other recommendations to improve its ability to discover possible forfeiture cases as early as possible and to strengthen our written procedures.

Regarding PSERS' investment operations, the Audit Report properly found and opined that:

- PSERS' reporting and transparency practices are commendable and surpass peer organization practices;
- PSERS appropriately manages investment expenses;
- PSERS' attention to diversification, risk management and asset allocation – "the single most important investment decision that pension trustees can make" (Issue Area 5 of

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- Report) – are all adequate and reasonable and recommends that PSERS continue doing what we are doing in those areas;
- Recommendations in Issue Area 3 all deal with strengthening and enhancing current practices in the areas of transparency, fee negotiation and monitoring of managers.

Many of the other findings and recommendations are more procedural and administrative in nature. In most cases, the Audit Team points out possible "best practices" from other public funds or from academic research and recommend that PSERS consider adoption of the "best practices". Management accepts these findings and recommendations in the spirit of continuous improvement of the administration of the System.

Management would be remiss if we did not comment on certain language included in Issue Area 2 which was inexplicably inserted in the Draft Report following the conclusion of the official Exit Conference on May 18, 2017. The addition of the gratuitous assertion that PSERS' use of external active investment management is "woefully unfair to the taxpayers" is baseless and inconsistent with the Government Accounting Standards cited in the Report. We draw your attention to the Management Response at Issue Area 2 (page 6) and Finding 2.3 (pages 6-9) for factual rebuttal of the assertion. Sadly, the post-exit conference addition of this politically-motivated invective places a stain on an otherwise professional performance audit and the hard and capable work of the audit team.

Thank you for the opportunity to append this Management Response to your Report.

Very Truly Yours,

Glen R. Grell

GLEN R. GRELL
Executive Director
PSERS

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Issue Area 1 – PSERS failed to assess and document the investment knowledge and skills of each trustee to demonstrate the Board collectively possesses the abilities to oversee prudent investment decisions.

PSERS Management disagrees with Issue Area 1.

This Area does not appear to include specific "findings" (as other Areas do); however, the report includes four headings which make interrelated criticisms of the Board, which warrant responses:

1. There are no prerequisites to becoming a Board trustee.
2. The Board does not assess the investment education needs of each trustee.
3. There are no requirements for continual educational sessions.
4. The Board's tracking of trustee attendance at educational events is weak.

Under the PSERS Retirement Code (PSERC), PSERS Trustees (Trustees) are elected or appointed to bring diverse skills and experiences to the Board and to make certain that the points of view and priorities of various stakeholders (e.g. certified members, non-certified members, annuitants, school boards and administrators, taxpayer's, public, legislature and administration) have a voice among the Board. Trustees are volunteers and part-time and they are not compensated for their time and expertise, beyond reimbursement of expenses. By design, they are not the day-to-day managers of the System. Rather, Trustees provide strategic direction, establish policies and monitor performance in diverse areas of investment of funds, pension benefits administration, health insurance plan administration, prescription drug benefit program administration, and related functions.

The Audit Report acknowledges there is no basis in the PSERC nor in fiduciary and governance practices to establish minimum qualifications to be a PSERS Board Member, yet it faults PSERS for not imposing such requirements. The Audit Report cleverly avoids asserting that PSERS Board Members are not qualified by saying PSERS failed to assess and document their expertise.

The biographical information provided to the Auditor General's Office showed the PSERS Board is comprised of an accomplished and diverse array of individuals. It is hard to understand how the Audit Team concluded that the following board composition does not collectively possess the skills and knowledge to provide oversight of the investment portfolio and the System.

Board Member(s)	Qualifications
Governor Appointee A	- Former President, CEO & Treasurer of the Pennsylvania Bankers Association - Chairman, Pennsylvania Banking and Securities Commission - Commissioner, Pennsylvania Banking and Securities Commission - Treasurer and Partner, Tri-County Investors
Governor Appointee B	- Senior Counsel with an international law firm specializing in Global, Corporate and Securities practices - Former US Ambassador - Trustee, University of Pennsylvania - Member, Board of Visitors, Temple University Beasley School of Law - Overseer, University of Pennsylvania School of Nursing - Judge Pro Tempore, 1st Judicial District of Pennsylvania - Member, Federal Judicial Nomination Panel
Member elected by members of the PA Public School Boards	- MBA in Finance & Accounting - Retired CPA - Retired investment banker
Annuitant of the System	- Served on the PSERS board since 1994 and has been the Chairman of the PSERS board since 2007 - Served on the Board of Directors for the PA State Education Association - Served on the Executive Board for the National Council on Teacher Retirement (NCTR) and Past-President of NCTR

Two members appointed by the President Pro Tempore of PA Senate	- One member serves as the Chairman of the Senate Appropriations Committee and is a CPA - One member served as a senior development advisor where he managed a $35 million portfolio of community development loans and investments
Two members appointed by the Speaker of the House from the PA House of Representatives	- One member is the Chairman of the House Appropriations Committee - One member is lawyer and has taught courses in economics, personal finance and business law
Three Ex-Officio Members	- One member has served as a senior manager for the Pennsylvania Bankers Association - The other two ex-officio members have experience in public education
Three Active Certified Members	- Two of the active certified members have a master's degree and all of active certified members have a bachelor's degree - These members have a combined experience of 65 years serving as teachers in the public school system

In the area of Board Member Education, the Audit Report acknowledges (1) there is no basis in the PSERC to impose continuing education requirements on the Board; (2) the PSERS staff provides a thorough new member orientation program to in-coming Trustees; (3) the PSERS staff offers a wide range of educational programs to Trustees. There is no criticism of the quantity or quality of Board Education programs. Rather, the basis of the criticism has to do with the quality of our attendance-taking skills.

In fact, Trustees have available a wide range of supplemental education opportunities, internal and external, most notably offered through Pennsylvania Association of Public Employee Retirement Systems and National Council on Teacher Retirement (NCTR). The NCTR training includes approximately 23 hours of instruction at NCTR's Annual Meeting and a three day workshop, which alternates annually between the Harvard Kennedy School and the University of California Berkeley Center for Executive Education. Documents provided to the Audit Team demonstrated that Trustees attended the following training events during the 2016 calendar year alone:

Board Member(s)	Conferences Attended: (There were 4 conferences available to attend.)	Board Education presented during board meetings: (There were 4 educational sessions held.)
Governor Appointee A	0	3
Governor Appointee B	0	2
Member elected by members of the PA Public School Boards	1	4
Annuitant of the System	4	4
Member appointed by President Pro Tempore of PA Senate representing the Majority party (or their designee)	1	3
Member appointed by President Pro Tempore of PA Senate representing the Minority party (or their designee)	1	4
Member appointed by the Speaker of the House from the PA House of Representatives for Majority party (or their designee)	0	4
Member appointed by the Speaker of the House from the PA House of Representatives for Minority party (or their designee)	2	4
Secretary of Education (or their designee)	0	4
Treasurer (or their designee)	0	1

Executive Director of the PA School Boards Association	1	4
Active Certified Member A	2	4
Active Certified Member B	3	4
Active Certified Member C	4	3
Active Non-Certified Member	3	4

Finally, the Audit Team's primary research tool was a survey of current and previous Trustees – yet the report misstates the results of the survey by focusing on the very few negative or critical responses while neglecting to include the overwhelmingly favorable responses, particularly in the areas of board member skills; new member orientation; completeness and timeliness of investment information provided to the Board; sufficiency of conflict of interest procedures and other key areas.

For example in the area of sufficiency of knowledge and experience, 24 of 25 respondents consistently "Agreed" or "Strongly Agreed", yet the Audit Report points out the one respondent who felt he or she did not have sufficient knowledge and experience. Out of 29 separate inquiries, only one category had 4 respondents who "Disagreed" or "Strongly Disagreed" with the positive statement. By any reasonable standard, the survey responses were overwhelmingly positive, yet a reader of the Audit Report would draw a negative conclusion.

Recommendations for Issue Area 1

Recommendations to General Assembly:	PSERS Management Response:
1. Include a minimum amount of investment knowledge or experience the Board, as a collective whole, must possess in order to guide informed investment decisions and promote effective oversight of investment operations.	This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
2. Require that all new board members or designees be mandated to attend a board orientation session when appointed to the board.	This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
3. Mandate a minimum amount of continuing education or training each Board member/designee must obtain annually, specifying the minimum amount of hours of training and the core subject matters the trainings must encompass.	PSERS disagrees that Trustees do not have ample opportunities to enhance their skills and competencies and notes that most Trustees take advantage of the opportunities in order to better serve PSERS. This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
4. Clarify that designees are subject to the same mandated training and education as members.	This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
5. Include a clarification of Board trustees' fiduciary duties and the standard to which they are subject under Section 8521(a) of the PSERC, 24 Pa.C.S. § 8521(a).	PSERS disagrees. Section 8521(a) of the Retirement Code sets forth the prudent investor standard which the Board must apply in making investment decisions. That investment standard is clear. Section 8521(e) places the Board in a fiduciary relationship to the members of the system regarding the investments and disbursements of the fund and prohibits the Board members from profiting with respect to the fund. The fiduciary relationship gives rise to the common law standards to

	which a fiduciary is bound, such as the duty to act primarily for the benefit the members of the system in accordance with all applicable laws. The Board is thus prohibited from making investments that are imprudent or speculative in nature due to the application of subsection (a), and are bound by general fiduciary standards due to the application of subsection (e). While Section 8521(e) sets forth a number of factors that the board may consider in making investment decisions, such as promoting the general welfare of the Commonwealth and its citizens, these other factors must otherwise be consistent with the investment standard and the general fiduciary standards. Common law fiduciary duties are numerous and nuanced, and an attempt to clarify them via statute would necessarily limit them. **Implementation Plan: N/A**
Recommendations to PSERS:	**PSERS Management Response:**
6. Obtain and maintain biographies of each Board member/designee to evidence educational, career, or other experience related to key Board processes, including institutional investments.	PSERS will endeavor to implement the best practice. **Implementation Plan: PSERS Management will implement.**
7. Include Board member biographies on the PSERS website to increase transparency.	PSERS will endeavor to implement the best practice. **Implementation Plan: PSERS Management will implement.**
8. Establish and implement provisions within the Board's Education Policy to require: a. Each Board member/designee complete a self-evaluation, on a Board-provided form, of their educational needs at least annually to assist in identifying topics for training. b. The Board to determine the subject matters addressed at education sessions and to what extent each topic needs to be discussed. c. A minimum amount of mandatory education or training each Board member/designee must obtain each year, specifying the minimum amount of hours of training and the core subject matters the trainings must encompass.	PSERS responses are as follows: a. PSERS will propose revisions to the Board Education Policy. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.** b. PSERS will propose revisions to the Board Education Policy. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.** c. PSERS will consider mandating in the By-laws or Education Policy a minimum amount of hours of training for each member and designee, but questions the authority to impose consequences if members and/or designees do not abide by the training requirement. Any such revision should take into consideration those Board Members, by their profession, who routinely take continuing education courses, many of which benefit their service as a Trustee. For example, one Trustee reports earning 240 hours of continuing education over the past three years, the vast majority of which are applicable to his service as a Trustee.

	Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.
d. The Board Liaison document and retain when each new Board member/designee completes the new member orientation program.	d. PSERS has already initiated this practice. **Implementation Plan: Resolved**
e. The Board Liaison track every educational session attended by the Board member/designee noting the length of the training in hours and the subject matter of each session.	e. PSERS has already initiated this practice. **Implementation Plan: Resolved**

Issue Area 2 – PSERS' management of investment expenses within its asset allocation strategy/policy appears standard however woefully unfair to the taxpayers. PSERS should take a leadership role in the public pension sector by continuing to improve its reporting of investment expenses and fund performance.	
The Audit Report cites the DAG conducted their audit under the Government Auditing Standards (GAS), December 2011, issued by the Comptroller General of the United States, United States Government Accountability Office, Washington D.C. Section 1.19 of GAS, states "The credibility of auditing in the government sector is based on auditors' objectivity in discharging their professional responsibilities. Objectivity includes independence of mind and appearance when providing audits, maintaining an attitude of impartiality, having intellectual honesty, and being free of conflicts of interest." We question the objectivity and impartiality with respect to the statement "woefully unfair to the taxpayers", which was not included in the first 2 draft reports. This is an opinion, not a fact.	
Findings for Issue Area 2	
Department of the Auditor General (DAG) Findings	**PSERS Management Response:**
Finding 2.1 – Although PSERS' reporting of investment expenses surpasses its peer public pension systems, additional disclosure improvement can still be made.	Agreed. PSERS currently reports all of its investment expenses, including management fees, in accordance with accounting principles generally accepted in the United States of America. PSERS is always striving to be fully transparent on all investment related expenses. PSERS currently requests that all private fund investment managers report quarterly data utilizing the ILPA (Institutional Limited Partners Association) Reporting Template. This template breaks out the fund fees and expenses in detail. We will provide more detailed fund fees and expenses once all the private fund managers update their reporting systems to comply with this requirement.
Finding 2.2 – PSERS' reporting of fund performance is comprehensive, but does not directly or clearly show the true costs associated with the investment returns.	Agreed. When entering new contracts with private investment managers, PSERS will require them to report quarterly data utilizing the ILPA template, which will provide detailed fund fees and expenses.
Finding 2.3 – PSERS' management of investment expenses within its asset allocation policy appears standard, yet woefully unfair to taxpayers.	We strongly disagree with the unsubstantiated and untrue statement "…yet woefully unfair to taxpayers." The beneficiaries directly (and taxpayers indirectly) over the past 17 years benefited by an additional $12.1 billion in incremental performance that otherwise would not have been achievable without active management. For every $1 spent on investment management fees during this 17 year period, active managers returned $3 in excess performance over their benchmarks. PSERS hires top tier investment managers for top tier performance because the beneficiaries (and taxpayers) deserve the best. Hiring the second or third best may be penny wise, but it is pound foolish as those managers generally don't deliver. Even though competition is intense for top tier investment managers among other pension plans, sovereign wealth funds, endowments and foundations, and other investors, PSERS continues to aggressively negotiate fees to obtain a fair, equitable agreement with these investment managers. From PSERS viewpoint, the beneficiaries, and taxpayer by extension, are $12 billion better off today relative to cheaper, passive alternatives.

Table 10.2 on page 51 of our Fiscal Year 2017-18 Budget Report to the House Appropriations Committee contains these figures and is reproduced below.

Table 10.2 demonstrates that over the past 17 fiscal years, on average, every dollar PSERS has spent in investment fees and expenses has resulted in investment earnings of $3.05 above the Policy Benchmark's dollar returns.

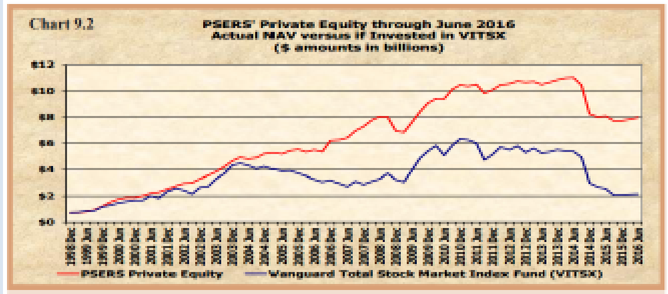
Table 10.2 PSERS' Investment Earnings over Policy Benchmark
Fiscal Years Ended June 30
(Dollar Amounts in Millions)

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*	$1 of Investment Expenses Translates into $$$ in Excess Earnings
2016	$ 416	(0.71)%	$ (339)	$ 0.19
2015	455	1.02%	497	2.09
2014	482	2.74%	1,519	4.15
2013	558	2.28%	1,243	3.23
2012	481	1.45%	900	2.87
2011	515	2.81%	1,573	4.05
2010	522	3.72%	1,754	4.36
2009	478	(5.87)%	(3,131)	(5.55)
2008	399	(0.98)%	(618)	(0.55)
2007	314	7.45%	2,360	8.52
2006	211	3.30%	1,635	8.75
2005	193	2.13%	1,090	6.65
2004	191	3.33%	1,388	8.27
2003	179	(0.42)%	(141)	(0.21)
2002	163	0.57%	319	2.96
2001	144	2.27%	1,200	9.33
2000	125	1.85%	934	8.47
Total	$ 5,826		$ 12,183	$ 3.05

*Dollar amounts in millions.

A more specific example of where some of this excess return is coming from is Private Equity. Private Equity managers invest in private companies not available for most individuals to invest in. Private Equity is also an expensive asset class relative to a passive public equity index. In fact, the standard rate for Private Equity is a 2% management fee plus 20% of the returns generated (although PSERS has been generally able to negotiate much better fee terms). A passive low cost index costs less than 0.10%. In fact, for PSERS the costs are even lower since we manage our indexes internally. Chart 9.2 on page 43 of our Fiscal Year 2017-18 Budget Report to the House Appropriations Committee contains the performance of our Private Equity program, net of all fees and costs (net of 2% management fee and 20% of the profits) versus the performance of a similar amount of capital invested in the Vanguard Total Stock Market Index Fund (VITSX) from December 1998 through June 2016:

Chart 9.2 tracks the performance of PSERS Private Equity program versus the performance of the Vanguard Total Stock Market Index Fund from December 1998 through June 2016. PSERS has been able to generate almost $6 billion in incremental value, net of all fees and costs, versus the passive, low cost index approach to equity investing.



PSERS Private Equity program outperformed VITSX by around $6 billion, net of the management fee and profit share. This $6 billion accrued to the benefit of the beneficiaries (and, indirectly, the taxpayer). We could have saved a lot in fees, but we would have given up even more in performance. In the end, the taxpayer would have been at a disadvantage if we didn't have that excess performance.

PSERS has a professionally managed investment program designed to obtain the highest, net of fee, investment performance within appropriate risk constraints based on the financial circumstances facing PSERS. PSERS hires numerous top performing active investment managers that we believe will exceed the performance of passive alternatives, net of all fees and costs. Will all managers succeed? Of course not, which is why we assemble a diversified stable of managers. As shown above, this stable of managers has added significant value over time. This long history of added value also shows that PSERS has a proven talent for finding the better managers. For asset classes where we don't think active managers can add value, we will use low cost passive exposures, such as we do in U.S. equities.

Diversification of the portfolio, including diversification of asset classes and diversification of investment managers, is in the beneficiaries' and taxpayers' interests, as diversification helps PSERS better survive market stress and difficult conditions that are sure to come again at some point in the future. Many of the asset classes that add to our diversification do not have passive alternatives, so active management is the only option. However, given our size, expertise, and access to top tier managers, we have had success in selecting active managers in these alternatives which makes them invaluable additions to our portfolio.

PSERS hears the drum beat for lower fees and will continue to aggressively negotiate deals with top tier investment managers who we believe provide us the best opportunity to generate attractive risk-adjusted, net of fee returns relative to passive alternatives. PSERS is proud of its track record of generating an additional $12 billion over the past 17 years, net of all fees and costs. While the money management industry ("Wall Street") is an easy target, let's not forget that the investment managers

	hired by PSERS have collectively added value directly to the beneficiaries and indirectly to the taxpayer. We do agree with the finding "PSERS' management of investment expenses within its asset allocation appears standard…" PSERS appreciates the acknowledgement that our strategic approach to key decision-making appears reasonable and that we minimize investment expenses within our asset allocation policy, specifically when deciding to use internal vs. external managers and the use of an active vs. passive strategy.
Recommendations for Issue Area 2	
Recommendation to Governor's Office of Administration:	**PSERS Management Response:**
1. Increase PSERS' Investment Office complement to allow for increased internal management of investments and lessen the multi-million dollar fees paid to external investment managers.	This recommendation is directed to the Office of Administration and no response is required from PSERS. **Implementation Plan: N/A**
Recommendations to PSERS:	**PSERS Management Response:**
2. Report all investment expenses, including management fees, performance fees, fund expenses, and portfolio-company charges, in its Comprehensive Annual Financial Reports, other reports, and public website.	PSERS currently requests that all private product investment managers report quarterly data utilizing the ILPA (Institutional Limited Partners Association) Reporting Template. The template breaks out the fund fees and expenses in detail. PSERS has gotten a very good response from our private product investment managers but not yet 100%. The primary reason that we haven't yet gotten 100% adoption is that some managers are still updating their reporting systems in order to be able to comply. PSERS currently reports all of its investment expenses, including management fees, in accordance with accounting principles generally accepted in the United States of America. An annual audit of the System by an independent certified public accounting firm is required by the Retirement Code. PSERS has received an unmodified opinion on the annual financial statements from the System's auditors every year. In addition, PSERS' Comprehensive Annual Financial Report has met the guidelines necessary to be awarded the GFOA Certificate of Achievement for Excellence in Financial Reporting for 34 consecutive years. **Implementation Plan: PSERS Management will implement.**
3. Contractually require investment managers to distinctly identify and report all investment fees and expenses incurred by PSERS.	PSERS has made using the ILPA Reporting Template a mandatory side letter term in all private investment manager contracts for all private investments approved by the Board beginning May 5, 2016. **Implementation Plan: PSERS Management will implement.**
4. Report investment performance on both a gross-of-fee and net-of-fee basis in its Comprehensive Annual Financial Reports, other reports, and public website.	PSERS will explore the feasibility of reporting a gross-of-fee return. PSERS has historically reported a net-of-fee return since staff and the consultant knew the asset values remaining were net of all fees and costs, even if the fees and costs were not separately identified and this represents the true realized return of the plan. Calculating a gross-of-fee return is more complicated in a multi-asset class fund such as PSERS where some assets are held in LP fund structures which report their net asset value (NAV) net of certain fees and expenses which are implicit to the fund's reported market value. In fact, we believe

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	most funds that calculate a gross-of-fee return really report a modified gross-of-fee return which is only partially gross of fee and still reflects performance net of some fees and expenses embedded in these alternative asset class (PSERS used to present a modified gross-of-fee return about a decade ago which excluded alternative investment fees and costs). To calculate gross-of-fee returns, the net-of-fee returns have to add back cash flows from fee payments (depending on how an organization defines what a fee is and whether or not it has been separately captured). Even with this knowledge, calculating a gross-of-fee return can be complicated by whether or not the fee payment came from the corpus or paid through some other source (i.e., fee payment through unallocated cash). Timing of those fee payments also has to be factored into the calculation. Obtaining true gross of all fee NAVs for assets held in alternative LP fund would be very difficult since these funds do not report gross and net NAVs. Finally, creating a comprehensive gross-of-fee return history would be nearly impossible and very costly. All of this creates a significant burden on the staff and consultant to gather a significant amount of data without a commensurate benefit. **Implementation Plan: PSERS will explore the feasibility and staff resources required for reporting a gross-of-fee return.**
5. Report investment performance on time periods greater than ten years to coincide with its long-term investment strategies.	PSERS will endeavor to include time period longer than ten years to coincide with its long-term investment strategies. **Implementation Plan: PSERS Management will implement.**
6. Continue to advocate increasing the number of investment professionals at PSERS to allow for increased internal management of investments and lessen the multi-million dollar fees to external investment managers.	Strongly Agreed. **Implementation Plan: PSERS Management will continue to request additional investment professional positions.**

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Issue Area 3 – PSERS failed to document its investment manager fee negotiations and lacked adequate written procedures for monitoring manager performance.	
Findings for Issue Area 3	
DAG Findings	**PSERS Management Response:**
Finding 3.1 – PSERS appears to have properly procured investment consultants in accordance with its written procedures which are consistent with DGS' *Procurement Handbook*.	Agreed. PSERS appreciates the acknowledgement that PSERS appears to have properly procured its investment consultants in accordance with written procedures that are consistent with DGS' Procurement Handbook.
Finding 3.2 – PSERS failed to document its investment manager fee negotiations.	Agreed, in part. PSERS does actively and successfully negotiate fees, but documentation of negotiations may be inconsistent. PSERS will endeavor to document all fee discussions and negotiations. Currently, the outcome of fee negotiations is documented in both presentations to the Board as well as the contractual agreements with the investment managers. PSERS has put in place additional procedures to document discussions and negotiations between PSERS and its external managers.
Finding 3.3 – PSERS' written procedures for monitoring investment managers need to be strengthened.	Agreed. One hurdle has been a shortage of staff. PSERS simply did not have adequate staff to fully lay out and document all the procedures it uses. However, with the hiring recently of additional staff, PSERS believes it can fully satisfy this recommendation in the relatively near future.
Recommendations for Issue Area 3	
Recommendations to PSERS:	**PSERS Management Response:**
1. Adopt an investment fee policy which details the measures and techniques to use to obtain lower fees, such as determining what fees similar investors are paying and making these fee comparisons part of the negotiation process.	Consistent with this recommendation, in 2016 PSERS established a number of committees, including the Fee Committee and Allocation Implementation Committee, to, among other things, more formally and systematically negotiate and document fee structures across all of its external managers. The key policy objective for these committees is to implement fee arrangements that are (i) fair to PSERS and the manager, (ii) are simple to understand and monitor, (iii) result in the best alignment of interests between PSERS and the manager, (iv) are consistent with what PSERS peers are able to achieve, and (v) most importantly have the highest chance of generating the highest risk-adjusted, net-of-fees returns to PSERS over time. **Implementation Plan: PSERS will establish a written investment fee policy to formalize its current process.**
2. Take an aggressive position when negotiating fee structures with investment managers to obtain the lowest fees possible.	PSERS believes that the key policy objective for any fee structure is that it aid in generating the highest risk-adjusted, net-of-fees returns to PSERS over time, versus other alternatives. PSERS takes an aggressive position with its managers in meeting this objective. PSERS does not believe that a narrow focus on obtaining the lowest fees will necessarily meet that objective. Rather, by considering fairness, simplicity, alignment, and peer consistency as well – it increases its chances of meeting this objective. **Implementation Plan: PSERS will continue to aggressively negotiate fair fee arrangements that appropriately align the interest of PSERS and the manager in generating the highest risk-adjusted, net-of-fees returns for PSERS over time, versus other alternatives.**

3. Document all fee structure discussions and negotiations between PSERS and the investment manager, including why the fee structure was determined to be reasonable and a justification if the initial fee schedule was unable to be altered/lowered.	PSERS will endeavor to document all fee discussions and negotiations. Currently, the outcome of fee negotiations is documented in both presentations to the Board as well as the contractual agreements with the investment managers. Through the Fee Committee, Allocation Implementation Committee, and its document storage system, Tamale, PSERS has put in place additional procedures to document discussions and negotiations between PSERS and its external managers. **Implementation Plan: PSERS Management will implement.**
4. Strengthen written monitoring procedures for the processes used to monitor both quantitative and qualitative measures for both traditional and non-traditional investments, including specific aspects to review, a list of the individuals responsible for reviewing, how monitoring results are to be reported to management, and how to address issues that may affect manager retention.	Please see response to Finding 3.3 above. **Implementation Plan: PSERS Management will implement.**

<table>
<tr><th colspan="2">Issue Area 4 – Despite having an adequate governance structure with clearly outlined responsibilities, PSERS lacked adequate policies and procedures related to Board trustee adherence to ethics standards and attendance at meetings.</th></tr>
<tr><td colspan="2">Findings for Issue Area 4</td></tr>
<tr><td>DAG Findings</td><td>PSERS Management Response:</td></tr>
<tr><td>Finding 4.1 – PSERS Board size and composition appear to be appropriate and in compliance with the PSERC, but inconsistent trustee attendance threatens consistent and reliable decision-making.</td><td>Agreed, in part. PSERS agrees that consistent attendance by our trustees strengthens the decision-making process. The PSERC provides for the use of designees for certain Trustees whose duties as elected or public officials makes it impractical to expect regular "in-person" attendance. Designees are experienced staff members of the Trustee and are afforded access to all information, orientation, training, and supplemental education opportunities as all other Trustees. When factoring in the attendance of both the trustee and his authorized designee, the attendance for those trustees reflected in the table on page 42 of the report increases considerably and, in fact, reaches 100% for four of the seven members. (Republican Representative, Democratic Representative, State Treasurer, and Executive Director of PSBA). Overall, the board members and their designees attended 91.5% of the board meetings for the period July 1, 2013 – November 30, 2016. The table presented in the Draft Audit Report (Pg. 42) only represents the attendance by the ex-officio and legislative members. There are eight (8) other members on the PSERS Board (who may not utilize designees) and a summary of their attendance at meetings for the review period is outstanding, as shown in table below:

<table>
<tr><th>Board Position</th><th>Meetings Attended</th><th>Percent of Meetings Attended</th></tr>
<tr><td>Governor Appointee A</td><td>19</td><td>86.3%</td></tr>
<tr><td>Governor Appointee B</td><td>17</td><td>77.3%</td></tr>
<tr><td>Annuitant of the System</td><td>22</td><td>100%</td></tr>
<tr><td>Active Certified Member A</td><td>20</td><td>90.9%</td></tr>
<tr><td>Active Certified Member B</td><td>21</td><td>95.5%</td></tr>
<tr><td>Active Certified Member C</td><td>19</td><td>86.4%</td></tr>
<tr><td>Active Non-Certified</td><td>20</td><td>90.9%</td></tr>
<tr><td>School Board</td><td>22</td><td>100%</td></tr>
</table></td></tr>
<tr><td>Finding 4.2 – PSERS Board's Code of Ethics and related procedures need strengthened.</td><td>Agreed. PSERS already has a strong Code of Ethics, but will offer regular ethics training to the trustees along with obtaining signed ethics acknowledgment statements annually from all trustees and their designees. We will also review and strengthen our process for identifying potential conflict of interest.</td></tr>
<tr><td>Finding 4.3 – PSERS Board completed it duties related to investment operations as outlined in the PSERC and Board's Investment Policy.</td><td>Agreed. PSERS appreciates the acknowledgement that the PSERS Board has performed its investment-related duties and responsibilities as required by the PSERC and the Board's Investment Policy.</td></tr>
<tr><td>Finding 4.4 – PSERS Board lacks a comprehensive governance manual to unify its numerous policies and guidelines.</td><td>Agreed. Although, PSERS already has individual governance-related policies and makes them easily accessible, PSERS Management recognizes having a single governance manual that will be the primary source for PSERS' governance documents is a best practice.</td></tr>
</table>

Recommendations for Issue Area 4	
Recommendations to General Assembly:	**PSERS Management Response:**
1. Require regular attendance by the board members or their designee(s).	This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
2. Authorize the Board, in consultation with the Executive Director, to remove a board member (excluding ex-officio members, but not their designee) or designee from the board for failure to regularly attend board meetings.	This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
3. Authorize PSERS to develop an attendance policy for all board members and/or designees.	This recommendation is directed to the General Assembly and no response is required from PSERS. **Implementation Plan: N/A**
Recommendations to PSERS:	**PSERS Management Response:**
4. Establish and implement a specific and detailed attendance policy for Board members and designees.	PSERS Management will endeavor to implement an attendance policy, but will research our authority to impose consequences if the members and/or designees do not abide by the policy. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.**
5. Implement controls for ensuring that all new Board members/designees sign the ethics policy acknowledgement statement upon being appointed to the Board.	PSERS has already implemented this practice. **Implementation Plan: Resolved.**
6. Establish and implement provisions within the Board's Ethics Policy to: a. Put in place a minimum amount of ethics training each Board member/designee must receive, with emphasis placed on identifying and disclosing in writing any conflicts of interest, and ensuring that it is obtained. b. Require each Board member/designee to sign the ethics policy acknowledgement statement annually and when the policy substantially changes	a. PSERS will endeavor to implement a minimum amount of annual ethics training for each member and trustee, but will research our authority to impose consequences if the members and/or designees do not abide by the requirement. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.** b. Although PSERS current practice is to require each Trustee and their Designees to sign an Ethics Policy Acknowledgement upon their initial appointment to the Board, and whenever the Ethics Policy is revised, we will now require an annual signed acknowledgement. **Implementation Plan: PSERS Management will implement best practices.**

c. Develop procedures to verify that conflict of interest self-reporting was complete for each Board member/designee.	c. PSERS will explore what the best practices are among other public plans and propose revisions to the policy. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.**
d. Request that the Ethics Commission provide the Board with ethics training on an annual basis and provide guidance on the trustees' use of its sample written memo for disclosing a conflict in compliance with 65 Pa.C.S. § 1103(j).	d. PSERS will request the Ethics Commission to provide the Board with ethics training annually. **Implementation Plan: PSERS Management will implement.**
7. Obtain the Statement of Financial Interest and campaign contribution reports for each trustee, as applicable, and have an individual (independent of the Board) compare them to the list of owners/principals of each investment firm prior to presenting the firm to the Board for vote.	PSERS will explore what the best practices are among other public plans and propose revisions to the policy. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.**
8. Aggregate the Board's policies and guidelines into a single, comprehensive governance manual.	PSERS will combine the Board's policies and guidelines into a single governance manual. **Implementation Plan: PSERS Management will implement.**

Issue Area 5 – PSERS' procedures to ensure it is meeting its diversified investment strategy appear adequate.	
Findings for Issue Area 5	
DAG Findings	**PSERS Management Response:**
Finding 5.1 – PSERS adequately reviewed its asset allocation strategy on a regular basis and its verified actual asset values remained within the established target range.	Agreed. PSERS Investment Office Staff and general investment consultant will continue to annually present the asset allocation recommendations to the Board as well as discuss the rationale for any recommended allocation changes.
Finding 5.2 – PSERS' efforts to develop a diversified asset allocation that minimizes market risk appear to be adequate.	Agreed. PSERS appreciates the acknowledgement that our effort to develop a diversified asset allocation that minimizes market risk appears adequate.
Finding 5.3 – PSERS' efforts to invest in multiple funds within each asset class to develop a diversified portfolio appear to be adequate.	Agreed. PSERS appreciates the acknowledgement the diversity of our investment portfolio appears to be determined by an investment strategy which is prudent to minimize risk based on market conditions.
Recommendations for Issue Area 5	
Recommendations to PSERS Board of Trustees:	**PSERS Management Response:**
1. Ensures it has sufficient information and adequate discussions to fully understand the complexities and importance of its asset allocation strategy in order to fulfill its fiduciary duty to prudently invest funds.	In September 2016, the entire Board Meeting was devoted to a deep dive into the asset allocation strategy. PSERS Investment Office Staff and general investment consultant will continue to annually present the asset allocation recommendations to the Board as well as discuss the rationale for any recommended allocation changes. **Implementation Plan: Current practice. No change required.**
2. Continues to analyze its investment strategies and target asset allocation on a regular basis to ensure the Board makes prudent investment decisions, including active and passive investing, as conditions change.	PSERS Investment Office Staff and general investment consultant will continue to monitor the current investment strategies, evaluate new ones, monitor the invested asset allocation relative to the strategic asset allocation plan approved by the Board, and monitor performance of active managers' net-of-fee, risk-adjusted performance versus applicable passive benchmarks. The results of these activities will continue to be communicated to the Board on a regular basis to allow the Board to fulfill its fiduciary oversight responsibilities. **Implementation Plan: Current practice. No change required.**

Issue Area 6 – PSERS generally complied with the Public Employee Pension Forfeiture Act, but significant legislative changes and procedural improvements are needed.	
Findings for Issue Area 6	
DAG Findings	**PSERS Management Response:**
Finding 6.1 – Overly restrictive language in the Public Employee Forfeiture Act limits pension forfeitures to school employees against students.	This finding is directed to the General Assembly and no response is required from PSERS. PSERS is not able to amend this Act; rather, amendments can only be made by the General Assembly.
Finding 6.2 – PSERS' pension forfeiture case discovery process needs to be strengthened.	Agreed, in part. The audit revealed that PSERS, in fact, discovered every potential forfeiture case and properly determined which members should forfeit their pensions. PSERS agrees, however, that the discovery process can be strengthened and improved to lessen the administrative burden on staff.
Finding 6.3 – PSERS properly determined which convicted members should forfeit their pensions, but failed to seek recoupment of pension payments made after conviction.	Agreed, in part. PSERS would seek recoupment if amount owed exceeds cost to collect. PSERS did not seek recoupment of pension payments, because it is typically a relatively modest amount of funds. Also, most convicted members do not have the funds to return, and the administrative/legal expenses involved to get the funds back can be costly and outweigh the benefit.
Recommendations for Issue Area 6	
Recommendations to General Assembly:	**PSERS Management Response:**
1. Broaden the language limiting application of the Act 140 sex crimes committed by a "school employee" against a "student" in the "public school" within the course of his/her employment; thus, expanding the application of sex crimes committed by any PSERS member against any individual who is present in a public school or involved in school-related business. Our suggested change to Section 1312 of the Act pertaining to PSERS includes the following: "'Crimes related to public office or public employment.'…Any of the criminal offenses set forth in Subchapter B of Chapter 31 (relating to definition of offenses) [of the Crimes Code] when the criminal offense is committed by a school employee as defined in 24 Pa.C.S. § 8102 (relating to definitions) against any individual present in a public school or involved in school-related business student. ."	This recommendation is directed to the General Assembly and no response is required from PSERS. PSERS is not able to amend this Act; rather, amendments can only be made by the General Assembly. **Implementation Plan: N/A**

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2. Broaden the definition of "school employee" in the Code to include provision for anyone receiving pension benefits who performs any services directly benefiting a public school, as well as any independent contractor or a person receiving pension benefits who is compensated on a fee basis. Our suggested change to Section 8102 of the Code includes the following: "'School employee.' Any person engaged in work relating to a public school for any governmental entity for which work he is receiving regular remuneration as an officer, administrator or employee or any person receiving pension benefits who performs any services directly benefiting a public school including excluding, however, any independent contractor or a person compensated on a fee basis."	This recommendation is directed to the General Assembly and no response is required from PSERS. PSERS is not able to amend this Act; rather, amendments can only be made by the General Assembly. **Implementation Plan: N/A**
Recommendations to PSERS:	**PSERS Management Response:**
3. Require employers to formally report employees charged with criminal offenses applicable to Act 140 to them by promulgating regulations through the regulatory review process and to issue a related administrative directive to all "public schools" as defined in the PSERC.	PSERS educates and notifies school employers of the need to notify PSERS when an employee is charged with a forfeitable offense. Promulgating a regulation requiring all school employers to report employees charged with a forfeitable offense would have no practical effect unless PSERS had the authority to enforce the failure to report such a charge and issue consequences on the employer. PSERS does not have the authority to issue such a regulation or impose consequences of a violation. PSERS also does not have the authority to issue a management or administrative directive. 4 Pa. Code § 1.2. **Implementation Plan: N/A**
4. Continue to pursue a subscription to JNET and use its resources to identify pension forfeiture cases.	PSERS finalized its arrangement with JNET and AOPC to receive all information pertaining to enumerated crimes under the Act in April 2017, and is working to implement the system. **Implementation Plan: PSERS Management is in the process of implementing this recommendation.**
5. Strengthen its written procedures for pension forfeitures to include the documents required to be maintained in the member's case file, the use of the tracking spreadsheets to evidence oversight of the pension forfeiture cases, and a detailed	PSERS has amended its spreadsheet to include a notation evidencing PSERS evaluation of the PDE's list of disciplinary action taken against PSERS members. PSERS does not maintain information on non-PSERS members or crimes not subject to the Act. PSERS will review its existing record retention policy as it relates to maintaining evidence of the review in the member's case file.

description of the evaluation of the PDE's list of disciplinary actions taken against Pennsylvania certified educators.	**Implementation Plan: PSERS has implemented these changes and will implement the remaining changes.**
6. Pursuant to the written procedures developed in the above recommendation, document the evaluation of PDE's list of disciplinary actions taken against Pennsylvania certified educators and the supervisory review of the evaluation. The documentation should include, but not be limited to, the dates the evaluation and review of the evaluation were performed, the initials of the individual performing the evaluation, the initials of the individual reviewing the evaluation, and a comment for each case stating whether the case was included in PSERS' tracking list or the reason why the case is not subject to pension forfeiture.	PSERS has amended its spreadsheet to include a notation evidencing PSERS evaluation of the PDE's list of disciplinary action taken against PSERS members. PSERS does not maintain information on non-PSERS members or crimes not subject to the Act. **Implementation Plan: PSERS has implemented these changes and will implement the remaining changes.** PSERS will review its existing record retention policy as it relates to maintaining evidence of the review in the member's case file. PSERS has determined that the level of supervisory review is appropriate under the current circumstances. **Implementation Plan: No further action required.**
7. Develop written policies and procedures to seek recoupment of overpayments of annuity benefits paid after the date of conviction.	PSERS will work to develop a recoupment policy. **Implementation Plan: PSERS Management will implement.**
8. Incorporate a request for repayment of the annuity benefits paid after the date of conviction within the pension forfeiture letter sent to the member.	PSERS will incorporate a request for repayment of the annuity benefits paid after the date of conviction within the pension forfeiture letter. **Implementation Plan: PSERS Management will implement.**
9. Consult with the Office of Attorney General to determine if utilizing its resources to attempt to recapture annuity benefits paid after the date of conviction exceeding a minimum threshold would be feasible and cost effective.	PSERS will work to develop a recoupment policy and will determine whether and what extent to utilize the Office of the Attorney General. **Implementation Plan: PSERS Management will implement.**

Prior Finding 1.3 – PSERS' Internal Audit Office lacked the organizational independence and staff resources necessary to effectively complete audits. (Partially Resolved)	
Findings for Prior Finding 1.3	
DAG Findings	**PSERS Management Response:**
Prior Finding 1.3 – PSERS Internal Audit Office lacked the organizational independence and staff resources necessary to effectively complete audits. (Partially Resolved)	PSERS Management agrees that we need to add additional safeguards to ensure the independence of the Internal Audit Office. We are in the process of restructuring the Audit/Budget Committee so that is a stand-alone Audit Committee or Audit & Compliance Committee. We plan to develop comprehensive charters for the Audit Committee and the Internal Audit Office that outline purpose, authority and responsibilities of each entity. The Internal Audit Office will also present a risk assessment and audit plan to the Audit Committee on an annual basis. We will also provide quarterly updates to the Audit Committee on the audit status, audit results and other compliance activities.
Recommendations for Prior Finding 1.3	
Recommendations to PSERS:	**PSERS Management Response:**
1. Change the organizational structure of the internal audit function to promote independence and comply with the Institute of Internal Auditors standards.	PSERS agrees to implement best practice. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.**
2. Develop an Internal Auditor Office Charter, defining its purpose, authority, and responsibilities, and have it approved by the Board. The charter should include: a. Defining the nature of the Internal Auditor Office's relationship to the Audit/Budget Committee, Board, and Executive Director. b. Maintaining the office's independence and objectivity, including prohibiting the reassignment of internal audit office staff to duties that compromise its ability to maintain independence. c. Conducting risk assessments of PSERS' internal controls by the office on a recurring basis. d. Establishing an annual audit plan by the office to be reviewed and approved by the Audit/Budget Committee.	PSERS will endeavor to implement an Internal Auditor Office Charter which addresses the listed elements. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.**

3. Revise the Audit/Budget Committee responsibilities in the Bylaws to include: a. Ensuring the independence of the committee's internal audit process. b. Ensuring there are no unjustified restrictions or limitations placed on internal audit staff by the committee. c. Reviewing and approving the committee's annual audit plans. d. Reviewing the effectiveness of the committee's internal audit function, including its compliance with IIA Standards.	PSERS will develop and present By-law amendments which address the listed elements. **Implementation Plan: PSERS Management will provide information and a recommendation to the PSERS Board for consideration and possible action.**
4. Reevaluate the current duties and responsibilities assigned to the Internal Auditor Office and consider either removing the compliance duties or requesting additional internal audit staff and establishing two distinct areas (a compliance section and internal audit section) with specifically assigned staff to ensure the internal audit function remains independent and produces timely audits.	PSERS will consult with peer pension funds and/or have a study performed to determine the structure and optimal number of staff for the Internal Audit Office. **Implementation Plan: PSERS Management will implement.**
Recommendation to Governor's Office of Administration:	**PSERS Management Response:**
5. If requested by PSERS, evaluate the need for a complement increase for the PSERS Internal Auditor Office.	This recommendation is directed to the Office of Administration and no response is required from PSERS. **Implementation Plan: N/A**

Auditors' Conclusion to the Public School Employees' Retirement System's Response

Overall, PSERS agreed or partially agreed with most of our findings and is committed to implementing many of the suggested recommendations or making such recommendations to the PSERS Board for its consideration and possible action. Our current audit report made 26 recommendations to PSERS and/or the PSERS' Board of Trustees, 10 recommendations to the General Assembly, and 1 recommendation to the Governor's Office of Administration. We also made 4 recommendations to PSERS and 1 recommendation to the Governor's Office of Administration regarding the unresolved issues noted in the prior audit report, dated September 2006. We are pleased with PSERS' cooperative attitude in addressing our concerns. However, with regard to the PSERS' response, the following items require further clarification:

Issue Area 1

We would like to clarify that Issue Area 1 **does not state** that the Board members/designees or the Board collectively as a whole do not possess the skills and knowledge to provide oversight to the system. Since neither the Public School Employees' Retirement Code (PSERC) nor PSERS Board bylaws contain any guidance on the amount of investment knowledge the Board collectively should have or the amount of continued education each Board member and designee should have, we have no criteria to measure against. We noted several other state pension systems where legislative requirements exist regarding investment knowledge or experience, which supports our recommendations to the General Assembly to amend the PSERC.

We indicate that PSERS did not maintain biographies of the Board members/designees. As noted in PSERS' response, per our request, PSERS management provided biographical information for the Board members/designees for the audit period. We acknowledge there are several Board members and designees with bachelor's and master's degrees, professional certifications, and career experience in the fields of finance, accounting, and law. However, the lack of established investment knowledge requirements, in addition to not assessing the education needs of the Board members/designees, and not adequately tracking attendance at training events, results in PSERS lacking formal documentation supporting the amount of investment knowledge the Board possesses as a whole.

Additionally, PSERS' response to the finding and Recommendation 3 (regarding the minimum amount of annual continuing education or training) indicates there is no necessity for criticism of the quantity or quality of the Board education programs and disagrees that trustees do have ample opportunities to enhance their skills and competencies. Once again, the audit report **does not state** that the trustees were not provided with sufficient training opportunities. We state the effectiveness of the Board's education programs cannot be determined to be adequate without documentation substantiating which Board members and designees attended sessions.

PSERS' management stated that it will consider revising the Board policies to include a minimum amount of training each Board member and designee must obtain annually, but questions the authority to impose consequences if members do not abide by them. We feel it is irrelevant if PSERS or the Board cannot impose consequences. All Board members and designees should put forth every effort to be in compliance with all of the Board's policies and fulfill his/her responsibilities. If any Board member or designee would not obtain the minimum amount of training in a given year, the reason behind not complying with the Board policy should be sufficiently documented.

PSERS' response also states that the audit report misstates the results of the Board member and designees surveys by focusing on the negative responses. We disagree that our report misrepresents the survey results. We reported both positive and negative responses that were directly related to our audit findings. Specifically, the audit report states the following positive results of the surveys:

- The majority of trustees feel they have sufficient knowledge regarding investments to assist the Board in making decisions (page 25).

- One trustee indicated the ability to communicate complex technical financial theory and practice in a clear and concise manner is challenging, but the staff are very good at providing this information. Another trustee stated that PSERS provides many opportunities for Board members to receive education. This statement was echoed by a third trustee who stated the amount and quality of the educational sessions are sufficient (page 27).

- All respondents indicated that the trustees receive adequate information from the PSERS investment staff or the investment consultants to allow for informed decision making. One trustee noted that the CIO and investment staff have been consistently available to answer questions prior to the meetings. Another trustee commented that the staff has always taken the necessary amount of time to answer questions within the meetings… Based on our survey results, it appears the PSERS investment staff is dedicated to assisting the trustees in obtaining investment related knowledge (page 29).

Additionally, we state in the Executive Summary that overall, the survey results were very favorable to PSERS; however, there are certain comments we point out throughout the report that indicates PSERS can make improvements.

With regard to PSERS' management disagreeing with Recommendation 5 to the General Assembly to revise the Public School Employees' Retirement Code (PSERC) to clarify the prudence standard to which Board members and designees are subject because it believes the current language already adequately represents the prudent investor standard, we disagree. Currently, the PSERC states the trustees should exercise that "degree of judgment, skill and care under the circumstances then prevailing which persons of prudence, discretion and intelligence who are familiar with such matters exercise in the management of their **own affairs**."[143] We interpret this to be the "prudent person" standard, and are recommending the language to be changed to the higher fiduciary standard, the "prudent investor" standard. The prudent investor standard as incorporated into Title 20 (pertaining to decedents and estates) provides: "A fiduciary shall invest and manage property held in a trust as a prudent investor would, by considering the purposes, terms and other circumstances of the trust and by pursuing an overall investment strategy **reasonably suited to the trust** [i.e., the fund]."[144] Based on our audit procedures, we found PSERS operates according to the prudent investor standard, and includes the prudent investor standard, or the superior prudent expert standard, in all of its policies and contracts.

Issue Area 2

PSERS' response indicates that it aggressively negotiates with external investment managers to obtain a reasonable fee structure. However, PSERS did not document its fee negotiations or justify the reasonableness of the fee structure if a lower fee could not be negotiated. Therefore, we could not verify whether PSERS negotiated fees, or if it did negotiate, to what extent an aggressive effort was put forth. Additionally, there could be other strategies that produce less investment expenses that could provide PSERS with its long-term rate of return of 7.25%. We agree that the goal should be to seek the highest return on pension funds but it should be done with the least amount of expense. Our concern is not whether it is best to have a passive versus active approach, nor that investment fees need to be paid to get returns, but that there should be a constant, never-ending focus to consistently drive the amount of fees paid by PSERS to the absolute lowest level. PSERS should be using its leverage as one of the largest funds to aggressively push fees to the point that other pension funds can then pursue too. Every investment fee dollar saved remains in the pension fund for the benefit of the retirees and the accrued savings of the taxpayers.

Issue Area 4

We understand and agree with the use of a designee for certain Board members. However, constantly interchanging the presence of the Board member and up to two designees at Board meetings and education sessions may negatively affect the Board's decision-making process. PSERS' management agrees that consistent attendance by its trustees is important and accurately notes that the Board members without designees regularly attend meetings.

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[143] 24 Pa.C.S. § 8521(a) (emphasis added).
[144] 20 Pa.C.S. § 7203 (emphasis added). *See also* the Uniform Prudent Investor Act http://www.uniformlaws.org/shared/docs/prudent%20investor/upia_final_94.pdf.

Issue Area 6

PSERS' response to Recommendation 3 (regarding the formal reporting of employees charged with applicable crimes) states that it does not have the authority to issue a regulation or management directive requiring school employers to report employees charged with a forfeitable offense. However, as noted in Finding 6.2, the PSERC already has a provision requiring public schools to provide information to PSERS when requested by the Board.[145] It is imperative that PSERS begin requiring public school employers to provide information regarding its employees who are PSERS members that have been charged with or convicted of a criminal offense subject to pension forfeiture, whether through the Governor's Office, by issuing a formal regulation or directive, through the existing provision in the PSERC, or by establishing a written policy.

We would like to commend PSERS on its finalized arrangement with the PA Justice Network and the Administrative Office of Pennsylvania Courts to obtain all information pertaining to the enumerated crimes subject to pension forfeiture. This demonstrates PSERS' commitment and initiative to improve its pension forfeiture case discovery procedures.

[145] 24 Pa.C.S. § 8506(b) relating to "Records and information.": "At the direction of the board, the employer shall furnish service and compensation records as well as other information requested by the board and shall maintain and preserve such records as the board may require for the expeditious discharge of its duties."

Appendix A Objectives, Scope, and Methodology

The Department of the Auditor General conducted this performance audit in order to assess the Pennsylvania Public School Employees' Retirement System's (PSERS) administration of investment operations related to its pension benefits fund, and to assess whether PSERS appropriately follows the Public Employee Pension Forfeiture Act (Act 140 of 1978, as amended) and its associated regulations.

We conducted this audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Objectives

Our performance audit objectives were as follows:

- Determine if the PSERS appropriately follows the Public Employee Pension Forfeiture Act (Act 140 of 1978, as amended) and its associated regulations for public school employees convicted of certain crimes relating to public office or public employment (see Issue Area 6).

- Determine if PSERS' governance structure, delineation of decision-making responsibility, investment expertise, and resources are adequate to provide effective oversight of investment operations (see Issue Areas 1 and 4).

- Determine if PSERS' external investment advisors and consultants are properly procured and investment fees are reasonable and consistent with investment performance measures (see Issue Areas 2 and 3).

- Evaluate the diversity of PSERS' investment portfolio to determine if the investment strategy is prudent to minimize risk based on market conditions (see Issue Area 5).

We also conducted procedures to determine whether PSERS implemented our prior audit report's findings and recommendations from the report issued in September 2006 (see Status of Prior Audit Findings).

Scope

This audit report presents information for the period of July 1, 2013, through March 31, 2017, unless otherwise indicated, with updates through the report date.

PSERS management is responsible for establishing and maintaining effective internal controls to provide reasonable assurance of compliance with applicable laws, regulations, contracts, grant agreements, and administrative policies and procedures.

In conducting our audit, we obtained an understanding of PSERS' internal controls, including any information system controls, if applicable, that we considered to be significant within the context of our audit objectives.

For those internal controls that we determined to be significant within the context of our audit objectives, we also assessed the effectiveness of the design and implementation of those controls as discussed in the *Methodology* section that follows. Any deficiencies in internal controls that we identified during the conduct of our audit and determined to be significant within the context of our audit objectives are included in this report.

Methodology

To address our audit objectives, we performed the following procedures:

- Interviewed PSERS management and staff responsible for administering pension forfeitures and the investment program, including individuals from the Office of Chief Counsel, Bureau of Benefits Administration, Investment Office, as well as the Executive Director, Deputy Executive Director, and Assistant Executive Director.

- Reviewed the Public Employee Pension Forfeiture Act, PSERS Retirement Code, the Public Official and Employee Ethics Act, and the PA Sunshine Act to determine legislative requirements related to the audit objectives.

- Reviewed the PSERS Board "Investment Policy Statement, Objectives, and Guidelines," "Statement of Organization, Bylaws, and Other Procedures," "Education Policy," "Ethics Policy," and other written policies and procedures to determine policy requirements related to the audit objectives.

- Reviewed PSERS Comprehensive Annual Financial Reports and Actuarial Valuation Reports for the fiscal years ended June 30, 2013, 2014, 2015, and 2016.

- Reviewed PSERS Annual Budget Reports for the fiscal years ended June 30, 2014, 2015, 2016, 2017, and 2018.

- Performed extensive research on current investment related trending issues including market events, investment expense comparison limitations, lack of transparency in reporting investment expenses and performance, and passive versus active management strategies.

- Reviewed model policies and best practices for Board governance and investment operations, including:

  - "Model Code of Conduct and Ethics Policy" issued by the Association of Public Pension Fund Auditors.

  - Government Finance Officers Association "Governance of Public Employee Post-Retirement Benefits Systems" and "Pension Investing: Fundamentals and Best Practices."

  - "Clapman Report 2.0" issued by the Stanford Institutional Investors' Forum Committee on Fund Governance.

  - The PEW Charitable Trusts "Making State Pension Investments More Transparent."

- Observed the PSERS' Bureau of Benefits Administration staff perform case discovery procedures using the Pennsylvania Department of Education's (PDE) "Notice of Certification Actions" list.

- Reviewed the 641 disciplinary actions taken by PDE against certified educators between July 1, 2013, and October 31, 2016. Using the description of each disciplinary action, we extracted information related to the 106 disciplinary actions that included a Federal or Pennsylvania state charge/conviction for a crime subject to Act 140. We compared this information to PSERS' tracking log of pension forfeiture cases.

- Performed online media searches for criminal cases that would appear to be covered by Act 140 of 1978 and compared the results of our searches with the population of cases being tracked by PSERS.

- We haphazardly selected 10 cases that were subject to pension forfeiture and 10 cases that were not subject to pension forfeiture out of the 106 pension forfeiture cases closed between July 1, 2013, and October 31, 2016. We verified whether each case file contained sufficient documentation to evidence the details of the case, determined whether pension forfeiture was accurately applied, and confirmed the PSERS Office of

Chief Counsel's determination of the applicability of the Act was adequately evidenced and supported.

- For the 10 cases noted above that were subject to pension forfeiture, we verified whether pension benefits were terminated on the date of the member's conviction.

- Attended the Board meetings from September 2016 through March 2017 to evaluate if Board meetings were interactive and the extent of Board discussions regarding investments.

- Reviewed Board meeting minutes between July 2013 and September 2016 to determine whether all contracts and reports requiring Board approval were presented to the Board, and to ensure the voting on investment contracts were documented in accordance with laws, bylaws, and policies.

- Conducted a survey of all 33 trustees that served on the Board as of December 2016 or were new to the Board and participated in the March 2017 Board meeting (See Appendix B) regarding whether the trustees consider PSERS' governance structure, investment expertise, and resources for decision-making adequate to provide effective oversight on investment operations. We reviewed and analyzed the 25 surveys that were returned.

- Compared the PSERS' Board composition and structure to the PSERS Retirement Code for compliance and that of 87 other state retirement systems as reported by the National Association of State Retirement Administrators for reasonableness.

- For the 22 regular Board meetings held between July 1, 2013 and November 30, 2016, we analyzed the attendance of Board members and designees and all votes related to investment contracting.

- Evaluated the 16 written recusals submitted to the Board between July 1, 2013 and October 31, 2016, in relation to investment contracting voting and discussions.

- Evaluated the PSERS Board Ethics Policy against the best practices noted in the seventh bullet above to determine whether its policy was adequate and compared its policy to actual procedures to determine whether PSERS operated in compliance with its policy.

- Requested the signed Ethics Policy acknowledgement statement for the 44 individuals who served as Board members and designees by voting at board meetings between July 1, 2013 and October 31, 2016, and reviewed the 38 statements provided.

- Reviewed the campaign contributions received reports for calendar years 2013 through 2016 for the five elected officials serving on the Board between July 1, 2013, and December 31, 2016.

- Reviewed the Statement of Financial Interests reports for calendar years 2013 through 2015 for all Board members and designees on the Board between July 1, 2013, and December 31, 2016.

- Evaluated other state public pension systems' statutory requirements that mandate some form of investment knowledge or experience, including the Iowa Public Employees Retirement System, Virginia Retirement System, Arizona State Retirement System, New York State Teachers Retirement System, Ohio Public Employees Retirement System, and Teacher Retirement System of Texas.

- Compared the PSERS Board Education Policy with best practices for new member orientation and ongoing education to determine whether its policy is adequate and compared its policy to actual procedures to determine whether PSERS operated in compliance with the policy.

- Evaluated other state public pension systems' statutory requirements that mandate some form of ongoing training requirements for Board members and designees, including the California Public Employees' Retirement System, Texas retirement systems, and Maryland retirement systems.

- Reviewed the five educational presentations from the PSERS' staff, 17 educational presentations from a consultant/investment manager, and a listing of the 21 industry trainings/conferences offered to Board members and designees from July 1, 2013, through June 30, 2016.

- Reviewed the presentation slides for the new member orientation sessions from July 1, 2013 through September 30, 2016.

- Evaluated the Board's spreadsheet used to track educational events attended by the Board members and designees.

- Requested and reviewed biographical information for each Board member and designee who served on the Board between July 1, 2013 and September 30, 2016.

- Using a listing of 90 public sector retirement systems published by the Pew Charitable Trusts and auditor's judgement, we selected six peer state pension systems to use throughout the audit for comparison purposes, including the Board composition, asset allocations, investment fees, and investment returns. Based on total assets, we selected the largest state public pension system, the Pennsylvania State Employees' Retirement System (SERS), and the two state public pension systems closest in total assets to PSERS and SERS.

- Evaluated the organizational and decision-making responsibilities of the investment staff, Chief Investment Officer, consultants, and the Board to determine if they are adequately designed to provide a segregation of duties and levels of review/approval over the key investment decisions and actions.

- Using auditor's judgement, selected two of the three new investment consultant contracts (the overall general investment consultant and the hedge fund consultant based on higher risk) approved by the Board for the period July 1, 2013 through October 31, 2016, and:

  - Reviewed the Request for Proposals (RFP) at a high level to ensure they were adequately written and included all key provisions, such as provisions addressing conflicts of interest. We also reviewed draft versions of the RFPs that were circulated within PSERS chain of command and to its legal office for review and revisions.

  - For evidence of advertising of the RFPs, we reviewed e-mails circulated by the Commonwealth Department of General Services through its PA Supplier Portal and the list of consulting firms PSERS directly notified.

  - Reviewed the technical and cost proposals received by PSERS and the related scoring sheets, as summarized in spreadsheets, and verified that the highest scoring candidates were the ones recommended to the Board.

  - Verified the Board-approved resolution for contracting with each consultant.

  - Reviewed the signed Purchase Orders that contained the terms of the services to be provided and the costs, and verified the required signatures were on the final contracts evidencing the contracts were reviewed and approved.

  - Reviewed the Statements of Financial Interest filings with the State Ethics Commission and with the Governor's Office for the PSERS staff and Board members involved in the procurements.

  - Reviewed PSERS' Conflict of Interest Policy, the RFP Evaluation Committee members' Certification of Confidentiality and No Conflict of Interest statements for procurements of investment consultants, and the disclosure statement and Political Contributions disclosure forms provided by PSERS external investment managers.

- Used our judgment to select 4 of the 19 new external investment manager advisory agreements (based on higher risk asset classes without duplicating an asset class) that were approved by the Board between July 1, 2013, and October 31, 2016, and:

    - Reviewed the due diligence documentation.

    - Reviewed the fee negotiation documentation, if available, including the published fee schedules and fee information in public filings with the Securities Exchange Commission, e-mails and other evidence of communications, and the fee structure in the final contract terms.

    - Verified the Board-approved resolution for contracting with each external investment manager.

    - Verified the required signatures were on the final advisory agreements evidencing the agreements were reviewed and approved.

- Used our judgment to select 8 of the 169 external investment managers (one haphazardly from each of our categorized asset classes) as of June 30, 2016, and reviewed evidence of quantitative and qualitative monitoring for the quarters ended December 31, 2015, March 31, 2016, June 30, 2016, and September 30, 2016, including:

    - Quarterly performance reports provided to PSERS by the investment managers.

    - Quarterly reports provided to PSERS by its contracted consultants.

    - Documentation of meetings, telephone conversations, and other pertinent information.

- Reviewed fund and asset class performance as reported to the Board for July 1, 2013 through March 31, 2017.

- Reviewed Board meeting resolutions for July 1, 2013, through December 31, 2016, and verified the Board approved changes to the target asset allocations each year in accordance with its policy.

- Calculated asset allocation levels using the prior-period ending allocation levels and the increases/decreases specified in Board Resolutions and compared our calculations to the PSERS' published target allocations.

- For the period July 1, 2013 through December 31, 2016, we haphazardly selected and reviewed 7 of the 42 monthly asset allocation comparisons, verifying:

- ➢ The asset class asset allocation target policy range on the comparison agreed to the asset allocation policy weight.

- ➢ The current net asset value/percent was accurate based on the custodian bank's data sheets by investment accounts.

- ➢ The actual net asset value/percent was within the target policy range.

- Compared the PSERS asset allocation to peer state pension systems and the national average asset allocation as reported on the National Association of State Retirement Administrators.

- Reviewed the results of the asset/liability studies performed by PSERS' General Investment Consultant as presented to the Board June 2014, April 2015, and September 2016.

To address the Status of Prior Audit Findings, we performed the following procedures:

- Interviewed PSERS management and staff responsible for investment contract compliance and internal auditing.

- Reviewed the Institute of Internal Auditors "International Standards for the Professional Practice of Internal Auditing."

- Reviewed January 2007 PSERS' Chief Counsel legal opinion which concluded that the PSERS Retirement Code provides sufficient authority for the Board to reimburse the employers of Board members, who are also PSERS members, for the salary or wages of the member or for the cost of employing a substitute for such member while the member is absent for educational purposes.

- Reviewed PSERS' Internal Auditor Office (IAO) current organizational chart and section 4.2b of the PSERS Board's Bylaws, which serves as the official committee charter for the Audit/Budget Committee.

- Reviewed the Audit/Budget Committee meeting minutes between January 1, 2013 and December 31, 2016.

- Reviewed the IAO's 2015 and 2016 risk assessments and audit plans.

- Evaluated the use of the Prudent Investor Rule in PSERS' current Board policies, reports, and training materials.

- Verified that PSERS provided the Board members with training on the Prudent Investor Rule and their responsibilities under this level of care in 2006.

- Compared the IAO's most recent spreadsheet to track the submission of insurance certificates and other contractually-required documents to the current list of external public investment managers for completeness. We haphazardly selected 5 of the 46 managers and verified the errors and omission and fidelity bond insurance certificates were obtained.

- Reviewed PSERS' Securities Litigation Policy and section 4.2d of the PSERS Board's Bylaws which serves as the official committee charter for the Corporate Governance Committee.

- Reviewed the Office of Chief Counsel's annual report on securities litigation settlement information provided to the Board for calendar year 2016 and the quarterly report of securities litigation collection of claims as of December 31, 2016.

- Haphazardly selected and reviewed one of the 14 class action settlement audits performed between July 1, 2013, and December 31, 2016.

- Verified the PSERS Annual Budget Report for the fiscal years ended June 30, 2014, 2015, and 2016 contained detailed sections on both Pennsylvania-based investment managers and investments in Pennsylvania.

Data Reliability

In performing this audit, we used information from state retirement systems' Comprehensive Annual Financial Reports and computer-processed information from PSERS, including its pension forfeiture case tracking sheet, investment contract compliance tracking sheet, asset allocation comparisons, list of external investment managers, and the 2017-2018 Budget Hearing Report. We also used the national average asset allocation as issued by the National Association of Retirement Systems Administrators.

Government Auditing Standards requires us to assess the sufficiency and appropriateness of computer-processed information that we use to support our findings, conclusions, or recommendations. The assessment of the sufficiency and appropriateness of computer-processed information includes considerations regarding the completeness and accuracy of the data for the intended purposes.

The PSERS and PA State Employees' Retirement System (SERS) Comprehensive Annual Financial Reports are audited annually by independent auditing firms and are reported as component units within the Commonwealth of Pennsylvania's Comprehensive Annual Financial Report (CAFR). The Bureau of State and Federal Audits, Department of the Auditor General, audits the Commonwealth's CAFR each year (jointly with a CPA firm) and performs procedures to ensure the independent audit firms that audited the PSERS and SERS CAFRs are qualified and possess knowledge of applicable auditing standards and industry-specific knowledge and regulations. Based on these procedures, we found no limitations with using the data for our intended purposes. In accordance with *Government Auditing Standards*, we concluded the data reported within the PSERS and SERS CAFRs to be sufficiently reliable regarding completeness and accuracy for the purposes of this engagement.

For the other five peer states' CAFRs (California Public Employees Retirement System, Teachers Retirement System of Georgia, South Carolina Retirement System, Texas Employees Retirement System, and Oregon Public Employees' Retirement System), we verified the independent auditors issued an unqualified opinion on the CAFRs. However, we did not perform procedures to validate the information in the reports. As such, we deemed this information to be of undetermined reliability; however, this is the best data available. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

To assess the completeness and accuracy of the data in the pension forfeiture case tracking sheet, we conducted audit procedures as follows:

- Interviewed PSERS management and staff responsible for maintaining and revising the tracking log as to their procedures used for data entry.
- Performed online media searches to attempt to verify the tracking log was complete.
- Compared the PA Department of Education's list of disciplinary actions taken against certified educators to the tracking log.
- For 20 of the 106 closed cases within the tracking log, we traced data in the tracking log to source documents including notification emails, Office of Chief Counsel legal determinations, and official court documents.

Based on the above procedures, we found the pension forfeiture tracking log is sufficiently reliable regarding completeness and accuracy for the purposes of our engagement. However, the lack of one source that would capture all potential forfeiture cases did not exist during our audit period and caused a limitation on the completeness of the log, as discussed in Finding 6.2.

For the investment contract compliance tracking log, used as part of our review of the implementation of our prior audit recommendations, we conducted audit procedures as follows:

- Interviewed the PSERS staff member who maintains and revises the tracking log as to the procedures used for data entry.

- Compared the tracking log to PSERS' current list of external public investment managers for completeness.

- For 5 of the 46 external public investment managers, we traced data in the tracking log to source documents (errors and omission and fidelity bond insurance certificates).

Based on the above procedures, we found no limitations with using the data for our intended purposes. In accordance with *Government Auditing Standards*, we concluded the Act 13 data to be sufficiently reliable regarding completeness and accuracy for the purposes of this engagement.

In regard to the asset allocation comparisons, PSERS summarizes data from its custodian bank to obtain the actual net asset value by asset class to ensure it is within the target policy range. To assess the completeness and accuracy of the comparisons, we conducted audit procedures as follows:

- Interviewed PSERS management regarding the procedures used to perform the comparison.

- Verified the total asset class on the comparison agreed to the listing by investment managers and verified the listing by investment managers agreed to the detailed account information.

- Traced the target policy ranges used in the comparisons to the PSERS Investment Policy for the appropriate time period.

- Recalculated the amount of assets by asset class divided by the total assets to verify the accuracy of the percent allocation to the asset class.

Based on the above procedures, we found no limitations with using the data for our intended purposes. In accordance with *Government Auditing Standards*, we concluded the asset allocation comparisons to be sufficiently reliable regarding completeness and accuracy for the purposes of this engagement.

For the list of external investment managers, we compared the list to the investment managers listed in PSERS' CAFR for the same time period and selected 8 of the 169 external investment managers and obtained source documentation regarding the monitoring of performance for agreement and reasonableness of the list. We did not perform procedures to validate the completeness of the list; however, this is the best data available. As such, we deemed this information to be of undetermined reliability. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

For the PSERS' Investment Earnings over Policy Benchmark table from the 2017-2018 Budget Hearing Report, we compared the total investment expenses to the CAFR for agreement and reasonableness of the investment expenses reported. We did not perform procedures to validate the other information used to calculate how the dollar of investment expenses translated into dollars in excess of returns; however this is the best data available. As such, we deemed this information to be of undetermined reliability. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

We did not perform procedures to validate the national average asset allocation as issued by the National Association of Retirement Systems Administrators; however this is the best data available. As such, we deemed this information to be of undetermined reliability. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

We did not perform procedures to validate the accuracy of the chart depicting the historical difference between passive and active management of U.S. Large Cap Stocks issued by the Hartford Funds; however this is the best data available. As such, we deemed this information to be of undetermined reliability. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

We did not perform procedures to validate the accuracy of the chart depicting the historical investment expenses and returns by asset class issued by CEM Benchmarking; however this is the best data available. As such, we deemed this information to be of undetermined reliability. Although this determination may affect the precision of the numbers we present, there is sufficient evidence in total to support our findings, conclusions, and recommendations.

Appendix B PSERS Board of Trustees Survey

PSERS Board of Trustees Survey

Please check the column that best represents your agreement or disagreement with the statement and add comments if necessary.

		Strongly Agree	Agree	Disagree	Strongly Disagree	Comments
1	The process for selecting or appointing board members is effective in producing a board capable of making investment decisions.					
2	The composition of the board is appropriate.					
3	The board collectively has the needed skills, diversity, and representation of all system members.					
4	When I was new to the board, I was given sufficient information to allow me to make a contribution to the organization quickly, including a new orientation training.					
5	I receive financial information from PSERS' Chief Financial Officer that is understandable and gives me a clear sense of the PSERS' financial position.					
6	The investment staff and consultants provide adequate information to the board to allow making informed decisions regarding investments.					
7	Materials related to significant investment decisions are provided to the board members far enough in advance of the meeting.					
8	I perform research on my own regarding investment decision making beyond the materials provided to the board.					
9	I feel other board members give adequate consideration to my opinions.					
10	I feel comfortable to say that I agree/disagree with another member or with investment/consultant staff within the Board meetings.					
11	I often ask questions regarding investment-related decisions during Board meetings (or ask the staff prior to Board meetings).					
12	There is sufficient discussion among board members for investment-related decisions.					
13	The board adequately addresses voiced concerns about investment staff or consultant recommendations.					

Appendix B PSERS Board of Trustees Survey (continued)

		Strongly Agree	Agree	Disagree	Strongly Disagree	Comments
14	I have sufficient knowledge and experience in the following areas to assist the board in decision making:					
	Investment Fee Structure(s)					
	Risk					
	Performance Benchmarks					
	Assets Allocations					
	Portfolio Diversity					
15	The process of identifying potential conflicts of interest for each consultant and external investment manager is adequate.					
16	The process of identifying board members' conflicts of interest is adequate.					
17	I have felt pressure from investment staff/consultants to agree with their recommendations.					
18	I have felt pressure from outside parties to make a certain decision regarding an investment.					
19	The amount of educational sessions provided to the board members is sufficient in the following areas:					
	External Investment Manager Selection Process					
	Asset Allocations					
	Specific Asset Classes (real estate, public, equity, etc.)					
	Risk Management					
	Investment Fees					
	Portfolio Diversity					
	Current Market Conditions					
	Other (Please specify.)					

Other comments/concerns:

Appendix C — Glossary of Investment Terms

Absolute Return	An investment policy/strategy that aims to give the same return regardless of market conditions. The return should not rise or fall in line with equities, but will often offer a fixed percentage above bank rates, inflation or other objective measure.[1]
Active Fund Management	The management of assets in which the skill of the fund manager is used to select particular stocks at particular times, with the aim of achieving higher than average growth for the asset class in question.[1]
Asset Allocation	An investment strategy that aims to balance risk and reward by apportioning a portfolio's assets among asset classes according to an investor's goals, risk tolerance, and investment horizon.[2]
Asset Class	A group of financial instruments that exhibit similar characteristics, behaves similarly in the marketplace, and are subject to the same laws and regulations. The three main asset classes are equities, fixed-income, and cash and cash equivalents.[2]
Benchmark	A measure against which fund management performance is to be judged. A series of appropriate indices is chosen which reflects the requirements of the trustees.[1]
Correlation	A statistical measure of how two securities or portfolios move in relation to each other. Correlations can range from negative 1 (perfect negative correlation) to positive 1 (perfect positive correlation). A correlation of 0 indicates that the movements of securities or portfolios are completely random.[3]
Diversification	The process of investing in a number of different asset classes, and individual investments within those asset classes to avoid any exposure to a single source of risk.[1]
Due Diligence	An investigation of a potential investment to confirm all facts, such as reviewing all financial records, plus anything else deemed material. Refers to the care a reasonable person should take before entering into an agreement or financial transaction.[2]
Emerging Markets	A national market that is in an early stage of economic development and is expect to grow rapidly.[4]

Gross of Fees	The total rate of return on an investment before the deduction of any fees or expenses.[2]
Hedging	The use of specialized instruments, such as financial futures and options, to modify the risk characteristics of a portfolio in order to protect against catastrophic losses if the market declines abruptly.[5]
Index	A hypothetical portfolio of securities representing a particular market or a segment of it used to statistically measure change in the securities market.[2]
Investment Consultant	A third-party firm retained by the Board to provide advice on various investment issues ranging from general advice to advice on specialty asset classes.[3]
Investment Guidelines	An outline of policy or conduct expected in the management of an investment portfolio.[3]
Investment Manager	A person or organization that makes investments in portfolios of securities on behalf of clients, in accordance with the investment objectives and parameters defined by these clients, as well as being responsible for all activities associated with the management of the portfolios including trading securities on a day-to-day basis associated with portfolio monitoring, transaction settlements, measuring performance, and regulatory and client reporting.[2]
Investment Risk Strategy	Management of the investment portfolio risk to limit any potential negative affect. An investment strategy can help manage certain risks. Asset allocation and diversification are two ways to manage risk.[6]
Modern Portfolio Theory (MPT)	Theory of trust investment and portfolio management that looks more toward the portfolio as a whole and less toward the prudence of a single investment in the portfolio. MPT assumes that investors: a) use a portfolio approach to evaluate investments; b) are risk-adverse; c) behave rationally; and d) make unbiased forecasts.[3]
Most Favored Nation Clause	A provision that states that the investment manager represents the fee the client is paying is the lowest fee the manager offers on similar advisory agreements with other clients.[7]
Net of Fees	The pure return to the investor after all fees, expenses, and taxes.[2]
Passive Fund	An investment strategy that limits active buying and selling and relies

Management	more on long-term appreciation and limited maintenance. Passive investments will track their benchmarks very closely and exhibit low tracking error.[2]
Performance-based Fee	An arrangement whereby a money manager is compensated in proportion to the degree by which investment results exceed a predetermined benchmark.[5]
Private Markets	Investments in limited partnerships, limited liability companies, and other entities that invest in private debt, private equity, or venture capital.[3]
Prudent Investor Standard	Requires a trustee to act prudently and with caution, discretion, loyalty, and care but does not restrict the assets in which the Board can invest.[3]
Prudent Investment Clause	A policy that requires investments to be made with the judgment and care, the circumstances that prevailing, that persons of prudence, and intelligence would exercise in the management of their affairs, not for speculation, but for investment, considering the probable income to be derived.[5]
Risk	The chance that an investment's actual return or market value will be different than expected. This includes the possibility of losing some or all of the original investment. Risk is usually measured by calculating the standard deviation of the historical returns or average returns of a specific investment.[3]
Risk Parity	An approach to investment portfolio management which focuses on allocation of risk, usually defined as volatility, rather than allocation of capital. The risk parity approach to asset allocation allows investors to target specific levels of risk and to divide that risk equally across the entire investment portfolio to achieve optimal portfolio diversification.[2]
Standard Deviation	A measure of volatility or fluctuation. Standard deviation is a way to measure the probable range within which an average investment return would be likely to fluctuate.[5]

Volatility	Fluctuations in the market value or the rate of return of an investment. A highly volatile security is one whose price or yields change dramatically, and therefore fluctuate considerably from the average.[5]

[1]Adapted from The Pensions Regulator, http//www.thepensionsregulator.gov.uk/glossary.aspx.
[2]Adapted from Investopedia, http://www.investopedia.com/terms.
[3]PSERS' Investment Policy Statement, Objectives, and Guidelines, http://www.psers.pa.gov/About/Investment/Documents/Guide/Inv%20Policy%20Stmt%20(approved%202017-03-10)2.pdf.
[4]Adapted from Encarta Dictionary, http://www.bing.com.
[5]Government Finance Officers Association, *Pension Investing Fundamentals and Best Practices, http://www.gfoa.org/sites/default/files/PensionInvesting_FundamentalsAndBestPractices.pdf.*
[6]Financial Industry Regulatory Authority, *The Reality of Investment Risk*, http://www.finra.org/investors.
[7]PSERS' Annual Budget Report 2016-2017, http://www.psers.pa.gov/FPP/Publications/General/Documents/2016%20Section%203%20-%20PSERS%20Investment%20Information.pdf.

Appendix D Distribution List

This report was distributed to the following Commonwealth officials:

The Honorable Tom Wolf
Governor

Ms. Melva Vogler
Chairman
Board of Trustees, Public School Employees' Retirement System

The Honorable Glen Grell
Executive Director
Public School Employees' Retirement System

The Honorable Randy Albright
Secretary of the Budget
Office of the Budget

The Honorable Joseph Torsella
State Treasurer
Pennsylvania Treasury Department

The Honorable Josh Shapiro
Attorney General
Office of the Attorney General

The Honorable Sharon Minnich
Secretary of Administration
Office of Administration

Mr. Robert Caruso
Executive Director
State Ethics Commission

The Honorable Denise Smyler
General Counsel
Office of General Counsel

The Honorable Pedro Rivera
Secretary of Education
Pennsylvania Department of Education

The Honorable Daryl Metcalfe
Majority Chair
House State Government Committee

The Honorable Matt Bradford
Democratic Chair
House State Government Committee

The Honorable Mike Folmer
Majority Chair
Senate State Government Committee

The Honorable Anthony Williams
Democratic Chair
Senate State Government Committee

The Honorable David Hickernell
Majority Chair
House Education Committee

The Honorable James Roebuck
Democratic Chair
House Education Committee

The Honorable John Eichelberger
Majority Chair
Senate Education Committee

The Honorable Andrew Dinniman
Democratic Chair
Senate Education Committee

A Performance Audit

Public School Employees' Retirement System (PSERS)

Mr. Brian Lyman, CPA
Director
Bureau of Audits
Office of Comptroller Operations

Ms. Mary Spila
Collections/Cataloging
State Library of Pennsylvania

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