Transforming Governance at the Pennsylvania Public School Employees' Retirement System

An Independent Governance Review

11/18/21

Funston Advisory Services LLC

Executive Summary

Overall

In 2019, in response to growing concerns about its system of direction and control, the PSERS Board of Trustees (PSERB) identified the need for a governance review. Beginning in December 2020, Funston Advisory Services LLC (FAS) has worked with the PSERB to try to develop consensus on what could practically be done to improve PSERS governance. PSERB must now decide how it wants to govern itself. We believe that this report will offer PSERB the opportunity to adopt a unified approach to governance reform, then implement those decisions, evaluate the results and adjust as needed.

FAS reviewed the recommendations from the reports by the Pennsylvania Auditor General (2017), the Act 5 Public Pension Management and Asset Investment Review Commission (PPMAIRC 2018) and the EY report on internal audit (2018) for those areas within the contracted scope of our review. They informed our analysis of PSERS governance and resourcing. FAS believes that our governance recommendations about the existing PSERS structure, resourcing, policies and procedures are directionally consistent with the findings and recommendations contained in these reports.

This report focuses on fundamental governance reforms that should be put into place as quickly as possible. Taken together, all of the recommendations in this report should significantly strengthen PSERS' governance: its strategic direction and policy setting, its approval, oversight and verification roles. If adopted, these recommendations would help transform and improve the effectiveness of PSERS' governance.

Background

In 2019, the PSERB had recognized concerns about the need for governance reforms and the need for an independent governance review. In early 2020, the PSERB asked for "an assessment of the current state of its Board governance as compared to governmental pension plans, institutional investment, and corporate management best practices." A competitive Request for Proposals (RFP) process began in May 2020. Following a COVID 19 related suspension of the RFP process, Funston Advisory Services LLC (FAS) was recommended to the full Board by an Ad Hoc Governance Committee and work began in December 2020. The scope of the PSERB engagement was a review of governance policies and practices for the overall direction and control of the PSERS. The scope included:

A. Governance Structure
B. By-laws, charters, and policies
C. Powers reserved for the Board and delegations
D. Board meetings and operations
E. Board oversight
F. Board committees
G. Board education and development
H. Evaluation of the Board direct reports

The scope did not include an assessment of the establishment of a combined investment system, asset allocation or investment operations, a forensic review, an audit, a compliance inspection or an operational review.

Goals of the Governance Review

The goals of the review were to:

- Identify ways to improve PSERS' governance to enable the Board to better fulfill its fiduciary duties and improve the effectiveness of governance and thereby overall organizational performance.
- Develop a common understanding, acceptance and commitment from the PSERS Board about the best ways to accomplish the above.
- Develop a high-level roadmap to support implementation of agreed-upon recommendations.

The Need for Governance Reform

Based on Trustee and Designee responses to our Governance Effectiveness Self-Assessment Survey from December 2020, the majority had a positive view of the direction of the system and its senior executives. They were most satisfied with PSERB's education and development, committees overall, bylaws, charters and policies and Board interactions with staff. They were less satisfied with Board oversight and independent reassurance, Board meetings and operations and the governance structure. They were least satisfied with the powers reserved for the Board and delegation and the evaluation of direct reports. For the most part, the PSERB believed their job was to direct the organization, hire competent professionals and advisors and trust their advice.

However, a minority but growing number of the PSERB had expressed, for some time, strong concerns about the direction of the system; their confidence in the senior executives; the independence of their advisors; the transparency, reliability and timeliness of materials provided for PSERB decision-making including, for example, the risk-sharing calculation; and the current asset allocation.

Specifically, concerns of these Board members included that PSERS' 10-year investment performance ranked poorly compared to its peers. They were concerned about the timeliness and reliability of information they received, the size of the allocation to private equity, private equity's under performance as an asset class when compared to public equity over the past few years, as well as private equity's higher fees and lack of transparency. They were also concerned about the level of illiquidity in the portfolio and the use of leverage (both explicit and implicit).

The result was a series of Nay or Abstain votes on various investment decisions by a consistent minority of the PSERB illustrating the growing fractures on the PSERB. Dissent or split votes may be appropriate in certain instances but generally are not an optimal continuing method for addressing governance or operational issues. Diversity of opinion is essential to avoid the perils of groupthink but should ultimately be used to focus a board on development of a cohesive policy direction.

The PSERB will need to make good faith efforts to resolve their differences at the root cause level. For example, we make recommendations that PSERB develop a strategic plan for the system and thoroughly review PSERS' investment beliefs and the asset allocation.

We believe that the recommendations for reform contained in this report will provide valuable guidance for the transformation of PSERS' governance.

Finding the Common Ground for Moving Forward

Trust, like reputation, is gained in inches per year and lost in feet per second.

Not surprisingly, trust is a word that comes up a lot with respect to retirement systems. Independent trusts such as PSERS are established on behalf of the beneficiaries to be administered by trustees for the exclusive benefit of the beneficiaries. Trustees are held to the highest legal standard of fiduciary duty.

For some time, a loss of trust has been growing within PSERB. Whom do trustees trust? Whom can they trust? Do they trust each other? Can they trust their executives? Can they trust their advisers? Can they trust the reliability of the information they receive? Certainly, rebuilding trust will be an incremental and potentially prolonged process, but the work needs to begin immediately. For the foreseeable future, the emphasis must be on "verify then trust" while remaining professionally skeptical.

Trustees and their designees have identified fundamental governance reforms. The PSERB needs to find the common ground for reform and move forward in unison. Stakeholders need to be reliably informed and understand PSERS' response and plan. While PSERS' current circumstances present difficult governance challenges, these fundamental governance reforms need to be addressed quickly and demonstrably.

Through the self-assessment survey and follow-on interviews, trustees and designees identified a number of governance concerns and made many constructive suggestions for improvements and reforms. We appreciate the cooperation and assistance that PSERS provided in our review and have done our best to incorporate those suggestions, as well as make further, more detailed suggestions to aid in their implementation. A detailed roadmap that contains a prioritization timeframe and implementation steps for the recommendations is also included.

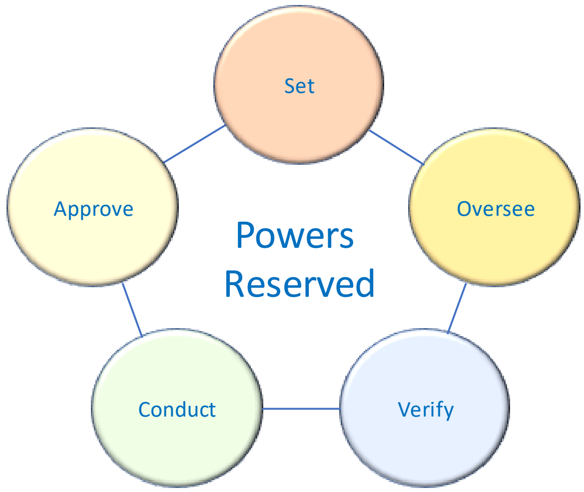
Powers Reserved

Trustees fulfill their fiduciary duties through the exercise of the powers delegated to the board by enabling legislation and the PSERB's bylaws, charters, strategies and policies. The duties and responsibilities of the PSERB are primarily set forth in 24 Pa. C.S. §8501, 8502 and 8521. (See Exhibit 6.1 for a summary of PSERS' governing laws.) For example, in §8521(a), the PSERB is given "exclusive control and management of the [fund] and full power to invest the same . . . subject, however, to the exercise of 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 . . .." The PSERB is also authorized by 24 Pa. C.S. §8502 to engage and utilize "a chief medical examiner, an actuary, investment advisors, counselors, an investment coordinator, and such other professional personnel as it deems advisable," as well as provide for independent audits and generally oversee management of the fund.

There are five main powers reserved that essentially constitute the job of a retirement system board:

1. Set direction and policy and prudently delegate its execution.
2. Oversee the execution of the direction within policy.
3. Verify then trust by obtaining independent reassurance that the reports the board receives and issues are reliable.
4. Conduct the business of the board and its committees.
5. Make key decisions that require board approval.

The Job of the Fiduciary Board



These Powers Reserved form the foundation of our entire report and its recommendations. FAS is recommending six fundamental governance reforms with 23 major recommendations supported by detailed implementation guidance that should help to transform PSERS' governance. These are summarized on the following page and describe in approximate order of priority what PSERB needs to do.

All recommendations are within the control of the PSERB. In addition, we have developed a set of more than 30 exhibits to provide examples of how PSERS might be able to implement these recommendations.

Summary of Recommended Governance Reforms

1. Develop alignment and improve the PSERB's focus on setting direction and policy and prudent delegation.
    - Develop a strategic plan and improve stakeholder communications and engagement.
    - Develop a unified direction on PSERS' strategic asset allocation.
    - Revise the PSERB's policy development process.
    - Clarify roles, responsibilities, and reporting relationships to the Board.
    - Develop a new evaluation process for the Executive Director and Chief Investment Officer.
    - Build on succession planning for PSERB direct reports.
2. Improve the timeliness and insightfulness of information for decision-making and the PSERB's oversight of the execution of direction within policy.
    - Adopt exception reporting.
    - Adopt an Enterprise Performance and Risk Management (EPRM) process for operational risk.
    - Assign oversight of cyber security and information security to a specific committee of the PSERB.
3. Verify then trust. Build trust by improving independent verification and the independence of the PSERB's advisors.
    - Strengthen independent verification and internal audit capabilities.
    - Enhance the mandate of the Audit and Compliance Committee.
    - Strengthen enterprise compliance by creating the position of Chief Compliance Officer and establishing an enterprise-wide compliance function
    - Reinforce and ensure the independence of PSERB's external advisors.
4. Improve the way the PSERB and its committees conduct the business of the Board in its meetings and operations.
    - Clarify PSERB leadership roles, responsibilities, and terms of office.
    - Reset the timing, format, and content of the PSERBS's meeting agendas, minutes, and related materials.
    - Stream, record, and archive PSERB's public meetings to improve communication and transparency.
    - Improve the functionality of the board portal to improve trustee insight and access to information.
    - Clarify designee participation especially in online meetings.
    - Streamline PSERB's committees, establish clear charters and institute new procedures.
    - Streamline PSERS's bylaws.
    - Enhance trustee education and development.
5. Improve PSERB's decision-making policies and processes.
    - Delegate manager selection and termination after fundamental governance improvements have been made.
    - Develop decision diligence standards and processes for each key PSERB required approval.
6. Seek better alignment of appointed trustee terms and qualifications.
    - Request staggering of member terms to the extent feasible.
    - Provide annual or biennial recommendations to appointing authorities that identify preferred experience, skills and diversity attributes to improve the overall composition of the PSERB.

The Structure of the Report

For each aspect of the review, the report describes:

1. Scope
2. Overview and Peer Practices
3. Findings and Conclusions
4. Recommendations and Implementation Guidance

Change Management Process

Transformation will require disciplined change management efforts and time. It will not be accomplished quickly. But the sooner governance reforms are started, the sooner results can be expected. PSERB should assign Board oversight of implementation to the Governance and Administration Committee to:

- Establish a change management process / leadership.
- Establish a cadence of review.
- Require exception reporting of implementation progress (actual vs. expected).
- Identify and elevate policy implications.
- Report progress on implementation to the Board at each meeting.

Implementation Priority Roadmap

We have also developed a recommended prioritized implementation roadmap which, for each recommendation, identifies the priority, the responsibility (i.e., Board, Committee, Advisors, Executive), the estimated degree of difficulty, time, and resources likely to be required and a time frame. The implementation roadmap is included as Appendix E.

Once these fundamental governance reforms are in place, PSERB will be in a better position to consider other governance improvements.

Main Body of the Report

Background of the Governance Review

This governance review was commissioned by the Board of PSERS through a competitive RFP process that began in May 2020. Funston Advisory Services LLC (FAS) was recommended to the full Board by an Ad Hoc Governance Committee and work began in December 2020.

Purpose and Scope

"PSERS is seeking an assessment of the current state of its Board governance as compared to governmental pension plan, institutional investment, and corporate management best practices."

- Conduct an independent review of PSERS current governance practices in comparison with peers.
- Identify ways to improve PSERS' Governance to enable the Board to fulfill its fiduciary duties and improve the effectiveness of governance and overall organizational performance.
- Develop a common understanding, acceptance, and commitment from the PSERS Board about the best ways to accomplish the above.
- Develop a high-level roadmap to support implementation of agreed-upon recommendations.

This was a review of governance policies and practices for overall direction and control and was not a forensic review, an audit, a compliance inspection or an operational or investment review. Generally speaking, strategic plans set the direction for an organization while policies provide the frameworks for control. To be in control is to operate within agreed upon limits. It is the role of the board to set direction and policy and then oversee that the direction is carried out within policy and to obtain independent verification that the reports PSERB receives and issues are reliable.

We conducted this governance review with several principles in mind:

- No surprises.
- Focus on solutions.
- Reinforce and enable the PSERB's exercise of its powers to fulfill its fiduciary duties.
- Enable the PSERB to engage and focus more on strategy rather than just tactics.
- The roles and responsibilities of the PSERB, the Board's advisors and staff differ, and must be clearly identified, mutually understood and respected.

The report's recommendations have been organized into five main themes based upon the powers reserved exclusively for the PSERB:

1. Improve the PSERB's focus on setting direction and policy and then prudently delegating the execution of that direction and policy.
2. Improve the PSERB's oversight of the delegated execution of direction within policy.
3. Build trust by ensuring the independence of the PSERB's advisors and improving independent verification of information provided by the staff to the PSERB.
4. Improve the conduct of PSERB meetings and operations.
5. Improve the robustness of the process for obtaining PSERB approval of key decisions.

The sixth theme of better aligning terms and appointments is obviously not within PSERB's direct control but something that the PSERB can hopefully work toward.

Peer Comparisons

FAS was asked to make comparisons with three groups: public retirement systems, institutional investors, and corporations. Significant differences existing between the public and private sectors as well as amongst individual public retirement systems. These differences exist along several major dimensions that we have tried to take into account in our analysis:

- Fiduciary standard
- Transparency and access to information
- Decision-making
- Choice of board
- Flexibility in resource allocation
- Budgetary and procurement authorities
- Compensation and benefits
- Turnover
- External oversight, compliance, and control

For a more detailed description of these differences see Exhibit 1.1 Differences between Public and Private Sectors.

Process

Board oversight of our process and work product was assigned to the Ad Hoc Governance Committee. On a day-to-day basis, we coordinated our requests for information through the Executive Director.

1. **Document reviews**. We began with document reviews (see Appendix 1. Partial list of documents reviewed).
2. **Peer Benchmarking Survey on Board Practices**. In December of 2018, Funston Advisory Services LLC conducted a benchmarking survey of Board reporting practices in 10 large public retirement systems including PSERS. Peers included: CalPERS, CalSTRS, Maryland State Retirement and Pension System, New York State Teachers' Retirement System, PERS of Ohio, STRS of Ohio, Oregon Public Employees Retirement System, Teacher Retirement System of Texas and the Washington State Investment Board. We have incorporated the findings from that survey in this review and updated the PSERS' results.
3. **Self-Assessment Survey.** FAS designed and administered an on-line Self-Assessment Survey to address each aspect of the scope. We received responses representing each of the 15 trustee "seats", i.e., a total of 10 (out of 15) trustee and 9 (out 14) designee responses.

   We produced a summary presentation of the results of the survey focusing solely on the responses of trustees and their designees. We allowed one quantitative response per "seat" and consolidated the narrative responses.

   We used this information to identify the priority issues and opportunities for improvement. We shared these survey results first with the Ad Hoc Governance Committee and then with the full PSERB. We used these results as the basis for our first round of individual interviews.

   We did not report the results of the executive surveys or interviews. We did this because we wanted to focus on the PSERB's responses to increase their ownership of the results.
4. **First round Interviews**. We conducted three rounds of Interviews (See Appendix 2 List of Interviews). The first round was to solicit feedback on the results of the survey and ask trustees and designees for their recommendations for improvement.
5. **Additional research.** We also asked PSERS to complete the FAS proprietary InGov® Benchmarking Survey that enables comparisons to public retirement systems on over 300 governance dimensions. These comparisons are contained throughout the report. We also used our proprietary National Public Pension Policy Repository (N3PR). N3PR contains the written policies of more than 80 U.S. public retirement systems.
6. **Draft Report on Preliminary Recommendations – March 9, 2021.**

   We used the results of the document review, peer benchmarking, self-assessment, the various proprietary data sources, and the first-round interviews to produce our preliminary recommendations report which was distributed to the Ad Hoc Governance Committee and then to the full Board on March 9, 2021.

7. **Second and third round interviews**. We then scheduled and conducted a second, and, in some cases, a third-round of interviews with all those trustees and designees who were interested and available to solicit their feedback on our preliminary recommendations (see Appendix 2).

8. **Draft Final Report.** We used the feedback from all rounds of interviews to produce our draft final report.

9. **Legal Review.** The draft report was then reviewed by PSERB's Fiduciary Counsel before being distributed to the Chairs, the Executive Team and the Ad Hoc Governance Committee.

10. **Chair Review.** The draft report was then reviewed by the Chair of PSERB, the Chair of the Audit and Compliance Committee (also the Vice Chair of PSERB) and the Chair of the Ad Hoc Governance Committee.

11. **External Counsel Review.** The draft final report was also reviewed by external counsel.

12. **PSERS Executive Review**. The PSERS' executive team (deputies and chiefs) then reviewed and commented on the accuracy and completeness of our findings and conclusions before review by the Ad Hoc Governance Committee.

13. **Review of the draft final report and workshop with the Ad Hoc Governance Committee.** A draft final report was then distributed to the Ad Hoc Governance Committee and a workshop was scheduled for June 28, 2021.

14. **Fourth round of interviews with trustees and designees on an "as requested" basis.**

15. **Final Report to the full PSERB.** Based on the feedback from the Ad Hoc Governance Committee and the full Board, final refinements were made and reviewed by the PSERB Chair, Vice-Chair and the Chair of the Ad Hoc Governance Committee. Our Final Report was then submitted to the full Board.

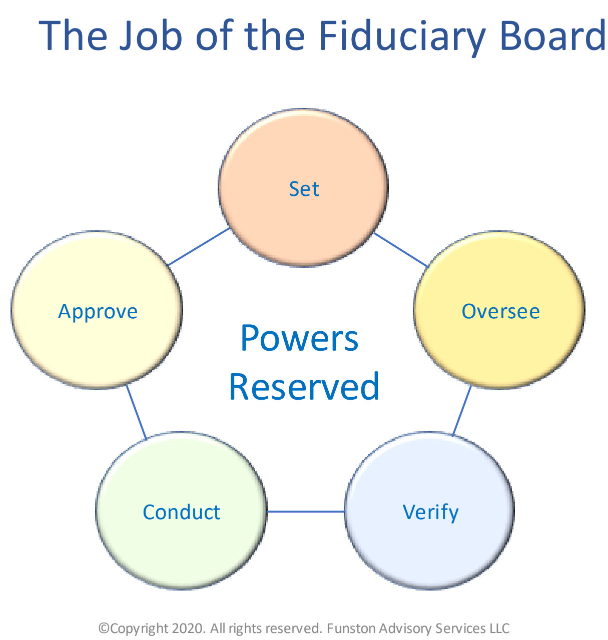
Figures and Exhibits

Throughout the report we refer to Figures (typically charts) that are included in the main body and to Exhibits (typically lengthy examples) that are included in the list of Exhibits. We have provide links to the various exhibits to aid easy access.

Powers Reserved for PSERS Fiduciary Board

The authorities and responsibilities of the PSERB are primarily set forth in 24 Pa. C.S. §8501, 8502 and 8521 and further defined in the PSERB's By-Laws, Charters and Governance Policies. Each power reserved requires a different type of Board involvement which we will describe further in the following pages. These powers are shown in Figure 1.1 below.

Figure 1.1. Powers Reserved and the Job of the Fiduciary Board



FAS has analyzed and reorganized PSERS' Bylaws according to the five powers that are typically reserved for a fiduciary board. See Exhibit 1.2 PSERS' Bylaws according to Powers Reserved for the reorganization of PSERS' existing Bylaws according to these five Powers Reserved. It is through these powers that PSERS' fiduciaries fulfill their responsibilities (see also Exhibit 1.3 Fiduciary Duty for excerpts from the SERS Governance Manual).

Findings and Conclusions

To improve its governance, the PSERB should focus on the five powers reserved exclusively for the Board while seeking greater flexibility with the General Assembly and the Executive Branch in the ability to prioritize and allocate resources (see also Part B. Powers Reserved for Others outside PSERS):

Figure 1.2. Powers Reserved Definitions

Power	Definition
Conduct	Conduct the business of the PSERS Board and its committees.
Set	Set PSERS' overall direction and policy based on advice from its independent advisors and its professional staff and then prudently delegating the execution of that direction to its professional staff.
Approve	Make key decisions that require Board approval.
Oversee	Exercise oversight that Board-approved directions are executed within policy.
Verify then Trust	Obtain independent verification that the information and controls the Board are relying on are justified, and the reports the Board receives and issues are reliable.

Closer adherence to and greater focus on the powers reserved exclusively for the Board will help to clarify the distinctions between the role of the PSERB, its independent advisors and its professional staff. It will also help to improve PSERB's meeting efficiency, discipline, and accountability. Trustees cannot be reasonably expected to personally develop the necessary policy frameworks, response options and approaches described in this report. They lack both the time and the expertise. Nor is it their job. But they can expect their independent advisors and professional staff to provide policy options, including pros and cons, and the reasoning behind any policy recommendations. The final decision on which of those options, if any, to adopt remains with the PSERS Board, and only the Board.

Prudent delegation of the implementation of board-approved direction and policy includes ensuring there are adequate resources to execute the direction. Currently, the PSERB has little to no control over additional resources despite the fact the resources would come from the system's funds rather than Pennsylvania's general revenues.

For a discussion of PSERS' governing legislation see Section 6.

1. The Board's focus on setting direction and policy and prudent delegation.

Scope

In this section, PSERS is compared with peer practices. Recommendations for improvement are made in seven major areas related to the direction and policy setting powers reserved for the PSERB and the prudent delegation of authority:

1.1 Strategic planning and stakeholder communications

1.2 PSERS strategic asset allocation

1.3 Policy development

1.4 Roles, responsibilities, and reporting relationships to the PSERB

1.5 Prudent delegation of authority and responsibilities

1.6 Evaluation process for direct reports

1.7 Succession planning

The relationship with independent external advisors is discussed in Section 3.3.

1.1 Strategic planning and stakeholder communications.

Overview

Setting the strategy of the system is a critical board responsibility. A robust strategic plan results from thinking strategically about the future and what the organization must do to successfully adapt to a rapidly changing environment. It starts with defining the system's challenges and opportunities, including a realistic assessment of the system's strengths and weaknesses.

A strategic plan is more than a project list and a timeline or a budget. The purpose of the plan is to develop a common understanding of the capabilities the system will require to become more resilient and agile and then develop a plan to deploy those capabilities towards a commonly-understood set of goals. Requisite capabilities (such as people and organization, policies and processes, systems and information for decision-making, facilities, software and equipment) should be defined as key metrics, all of which focus the system on desired strategic outcomes.

As a trust established for current and future beneficiaries, a public retirement board has the responsibility to think and act in consideration of long-term implications. The strategic plan should provide a practical roadmap for at least the next three to five years. It should describe the system's vision and mission, its strategic priorities, guiding principles and specific, measurable goals or outcomes to be achieved. It can take a year or more to fully develop a shared understanding, acceptance and commitment to the plan.

The strategic plan serves as the yardstick by which to measure actual performance compared to expected performance. The strategic plan should guide everything from agenda and policy setting to performance evaluations. It can also be an important tool for keeping the General Assembly and Governor informed about capabilities the system plans to develop, the expected resources required and why.

A leading practice amongst boards is to keep plan participants and other stakeholders reasonably well informed and engaged. As the complexity of benefit structures and investment strategies increases and funding status remains fragile, retirement systems need strong and clear policies for communicating with stakeholders as a matter of good governance. The Covid-19 pandemic powerfully underscored the need for retirement systems to find the most effective methods to interact with their stakeholders, especially during times of crisis.

A board policy commonly establishes communications roles for trustees and staff to ensure interactions with stakeholders are appropriate and that the information provided is accurate and consistent. The executive director (ED) is normally the designated spokesperson for most matters.

The ED commonly delegates most day-to-day communications responsibilities to a public information officer (PIO). That can entail managing websites, requests for information, social media channels, the content and design of official materials and media relations. The PIO also typically assists trustees with matters that require a public response from the board. Many larger funds now have a team involved in managing external relations and communications. The PIO and ED develop key messages and communication strategies and ensure the board is well informed. Of course, the board approves the basic thrust of a system's messaging.

The board chair is usually the spokesperson for matters involving board decisions and situations where it is inappropriate for the ED to speak on behalf of the board. Board policy typically directs that other trustees speak on behalf of the board only when authorized to do so by the board. If an individual trustee is compelled to comment on a board matter, it is important to indicate if they are voicing a personal opinion or if they are speaking for the board.

Peer policies commonly require trustees to inform the ED if they are contacted by media, elected officials, vendors, or other stakeholders. This policy enables the board and management to have a more complete picture of matters that interest stakeholders and to provide a consistent response. In a public retirement system, it is important to engage key stakeholders such as beneficiaries, members, and the legislature in the strategic planning process both in the formulation of the plan and in its communication.

Trustees are typically directed not to provide specific advice regarding the rights or benefits to which a fund participant may be entitled. They are also not to divulge information about individual participants in the fund or other confidential matters they may encounter as they carry out their responsibilities. Prior to engaging in external communications on sensitive issues, the ED is usually expected to consult with the board or board chair, as circumstances allow. Some policies require that the board or board chair review press releases before they are disseminated to better ensure that they accurately reflect the board's views.

In addition, trustees should have a system-specific email account for several reasons: first, to clarify the capacity in which they are communicating especially if they wear "multiple hats". Are they speaking as a trustee, a private citizen, a legislator or in their official capacity? Second, public retirement systems may receive requests for information and trustees may have their email accounts included in such discovery requests. For both of these reasons, leading practice is for the system to provide system-specific email accounts to be used only for system business.

Peer Comparisons

For an organization of the size and complexity of PSERS, it is prevailing practice among public retirement peers, institutional investors, and corporations to have a strategic plan. At the direction of the board, it is also prevailing practice to delegate the strategic planning process to the executive director who then engages the staff, the board and stakeholders in plan development. It is not unusual to utilize a strategic planning consultant to assist with this process, but the substance of the plan is developed with broad input and culminates in board approval of the plan.

The board must be kept engaged and have an opportunity to provide input periodically throughout the process. A strategic plan can only be successful if it is used consistently by the board, the executive and staff throughout the organization. First, it guides the executive director's goal setting. Then, the plan should cascade through the entire organizational goal setting and accountability processes. It provides a needed context for operational plans.

Effective strategic planning is much more than an exercise that produces a document that rests on the bookshelf or in a computer file. The plan should be used consistently and reviewed annually by the board, with an annual executive director's report to the board on the status of implementation. In this manner, a system-wide strategic plan that looks out 3-5 years and is refreshed annually becomes an important tool in effectively and efficiently leading a pension system by focusing on key desired outcomes at or beyond the horizon.

As mentioned above, stakeholders should be engaged in strategic planning in a meaningful way. A leading practice is to convene focus groups to gather input and encourage open and honest discussion to inform the plan's development concerning the system's strengths, opportunities for improvement and the needs of those who have an interest in the system's success. It is also desirable to include stakeholder communication needs in a transparent and measurable way within the strategic plan. As part of transparency, the strategic plan should be included on the system's website and kept refreshed as needed.

The strategic plan and annual updates should identify and respond to cross-functional emerging threats and opportunities. Strategic planning begins with thinking strategically about and challenging fundamental business model assumptions. Leading practice is for strategic plans to:

- Identify and challenge "mission critical" business model assumptions about how the system creates, delivers and captures value.
- Identify existential threats and opportunities.
- Identify capabilities required, e.g., people, processes, systems, facilities etc.

The goals of a strategic plan, in addition to focusing the board, the executive team and staff on the same outcomes, should be to cost-effectively:

- Improve control over causes within the organization's control.
- Improve resilience to causes of threats not within the organization's control.
- Improve agility to seize opportunities.

Findings and Conclusions

PSERB does not currently have a cohesive strategic plan. It does have a number of strategic elements such as its Agency Goals that includes plans for automating the Investment Book of Record (IBOR). These initiatives are to be commended. However, a comprehensive strategic thinking and planning process would provide an opportunity to develop unified direction. At present, there is a lack of cohesiveness within the PSERB about the short and long-term direction of the system.

PSERB has not yet dedicated the time to develop a shared understanding, acceptance and commitment to the strategic direction of the system. This is compounded by a lack of trust among some PSERB members, and between some PSERB members and the executive, that is contributing to PSERB and system dysfunctions.

FAS considers it a high priority for the PSERB to come to agreement on the future direction of the system in a unified strategic plan and asset allocation. Input should be sought from key stakeholders, e.g., beneficiaries, members, legislators in the development of the strategic plan and then keep them engaged in on-going communications about progress in executing the plan. Currently, there is no consistent outreach plan or process by PSERS aimed at key stakeholders.

PSERS's communication's office has a public information officer and a director who manage all external relations and communications to ensure continuity of messages. This office works closely with the Bureau of Communications and Counseling (BOCC), the Office of Financial Management (OFM), and Investments. PSERS also has a legislative liaison who manages communications and engagement with stakeholders and the General Assembly.

Currently, PSERS does not provide system-specific email accounts for most trustees. The ex officio and legislative members of the PSERB utilize their state-supplied business email addresses for PSERS business, while the elected members utilize their personal email addresses for PSERS business purposes.

Recommendation

1.1 Develop a strategic plan and improve stakeholder communications and engagement.

Implementation Guidance

1.1.1 Direct the Executive Director to develop a multi-year strategic plan, with PSERB and key stakeholder input, and convene an annual offsite for the PSERB to review, modify as desired, and approve the proposed plan; the strategic plan should inform annual goal-setting and plans.

1.1.2 Develop a comprehensive communications policy that clearly identifies the System's spokespersons and includes a crisis communications plan.

1.1.3. Utilize the strategic plan to set the Executive Director's and System's annual goals.

1.1.4 Require the plan to cascade throughout PSERS by using it for annual goal setting throughout the organization.

1.1.5 The strategic plan definition of desired outcomes should be used to guide policy development on media and stakeholder communications, as well as communication with the General Assembly and the Governor's Office.

1.1.6 Strategic plan goals and outcomes should be shared publicly on the PSERS website and information should be kept refreshed and current.

1.1.7 Based on the strategic plan, develop a comprehensive stakeholder relations plan that leverages opportunities to meet strategic goals.

1.1.8. Use the Strategic plan as a guide in setting the PSERB annual policy calendar and meeting agenda planning.

1.1.9 PSERS should provide all trustees with an individual PSERS email account and require trustees to conduct all PSERS-related electronic communications within their PSERS specific email account.

1.2 PSERS' strategic asset allocation.

The topic of asset allocation was not contained in our original scope, but it is strategically important. We do not attempt to address the question of "what is the proper allocation?" which is an investment decision. Instead, we describe leading practice for the process of deciding on the asset allocation.

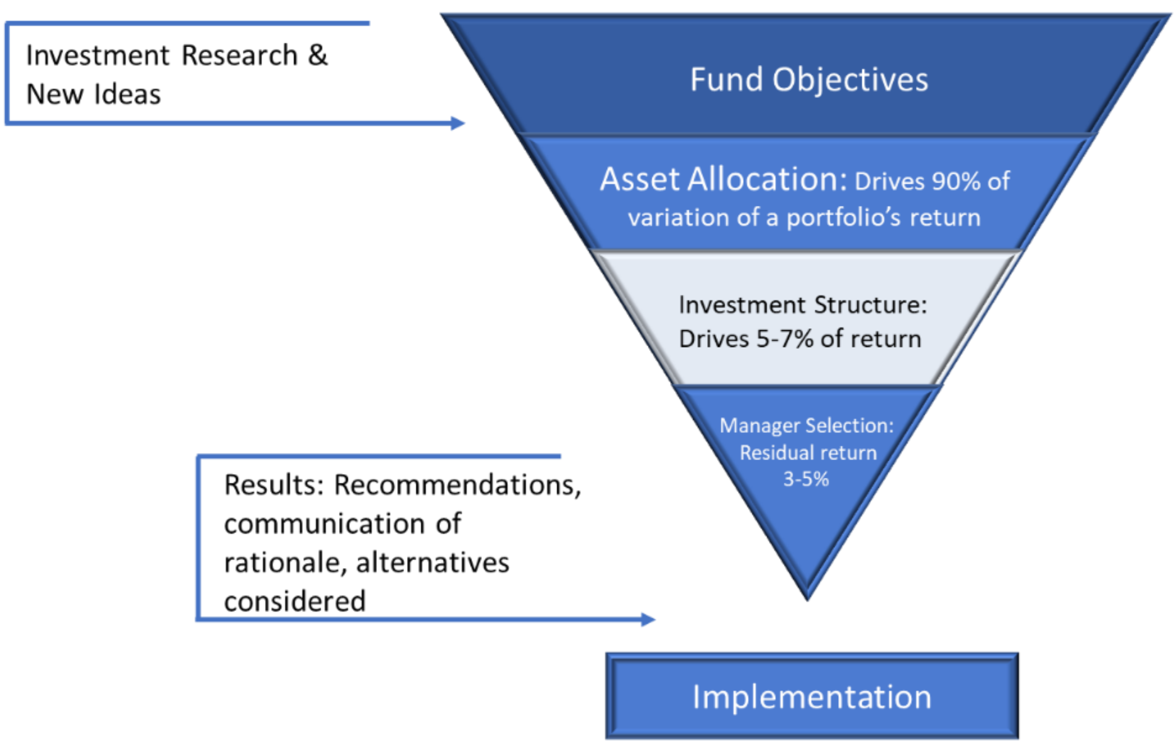
Overview

The asset allocation decision is one of the most important decisions to be made by trustees. Asset allocation is what divides the investment portfolio into asset classes such as equities, fixed income or cash, and decides how much, and how, to invest in each. The asset allocation also reflects the organization's risk appetite.

Asset allocation, and not the ability to select stocks or time the market, is responsible for the bulk of the returns and volatility in a diversified fund. For example, Vanguard's research found that 91.1% of the return variation of an investor in US funds and 86% in Canada funds, can be attributed to the choice of asset allocation.[1] That is consistent with a number of academic studies, tracing back to the seminal one from Brinson, Beerbower and Hood.[2] In other words, asset allocation affects investment risk and returns more than any other decision trustees will make.

See the chart below from Wilshire Associates who also state: "Both industry research and our experience indicate that the asset allocation decision has the greatest impact on a portfolio's long-term return and risk profile."[3]

Figure 1.3. Top-Down Approach to Risk and Return Management



The allocation to US equity, foreign bonds, cash, real estate, private equity, or the other major asset classes will, inevitably, dominate all other investing decisions in terms of performance by about a ten to one ratio. Everything else – how much is managed internally or through third-party money managers, the selection of the portfolio managers, the tightness of the contracts, the style of investing, the active/passive decision, how money or portfolio managers are hired and fired – pales in comparison to a fund's asset allocation.

Yet there is a tendency among many funds to spend too little time and effort really understanding and selecting the fund's asset allocation. That's understandable. At most funds, asset allocation occurs every few years and tends to be a somewhat academic study led by consultants and actuaries focusing on unknowable – yet vital – assumptions about future returns, risks and correlations of different asset classes By contrast, the month-to-month or quarter-to-quarter tasks such as performance reviews, parsing private equity terms, etc., are more tangible and demand immediate attention.

This is not to suggest that those issues are unimportant, but asset allocation dwarfs them in impact. A good asset allocation can overcome a myriad of other investing weaknesses and the most perfectly executed investment program cannot overcome a failed asset allocation.

Think of it this way: Asset allocation is the strategic plan for investing - the map of those paths through that difficult landscape. All the rest are the tactics which enable you to adapt and follow various paths to the goal.

Peer Comparisons

PSERS is an outlier among its peers in that it adopts what it calls a strategic asset allocation annually. With very few exceptions, other public funds adopt a strategic asset allocation for a multi-year period, although many re-visit their progress towards those long-term goals on an annual basis, and they may also consider whether the assumptions and conditions extant at the point of adoption are still valid. Such reconsiderations may also occur as a result of major changes to market dynamics, such as the 2008-2009 global financial crisis. But, in general, those annual check-ups are not deep-dive asset allocation processes.

There are three overarching reasons for the multi-year time horizon:

1. The prevailing investing wisdom is that investors, particularly large investors with long-term liabilities such as pension plans, are best served by creating a strategic investment plan and sticking with it, rather than reacting to every market twist and turn. Such a plan allows long-term investors to take advantage of the lack of correlation of various asset classes and serves as a good "north star" when markets undergo the inevitable periodic corrections.

2. There is also a process advantage. Having an extensive strategic asset allocation process allows a board to deeply consider its expectations for the economic environment ahead, reach consensus on its views of the potential risk/return/correlation of various asset classes, consider all the implicit issues such as economic leverage, fee levels, whether the board has reason to believe its managers can outperform, etc.

As the Pennsylvania Auditor General noted in its 2017 report, a key responsibility of the PSERB is to "Ensure 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." A multi-year process provides the time to do so.

3. Finally, there is an implementation reason. Large pension funds are investing tens (and sometimes hundreds) of billions of dollars. There are trading costs and implementation costs. For example, it is hard to quickly expand or contract private equity or real estate or microcap public equity allocations with large size.

   For this reason, many strategic asset allocation processes may also include implementation schedules, approved by the board, for the investment office to move to the new asset allocation over time. Those implementation schedules also provide a metric by which a board can hold the investment office accountable. By contrast, funds with annual asset allocation processes risk incurring outsized transaction costs if the asset allocation is materially changed and the fund tries to come into conformity with the new allocation quickly, or, conversely, runs the risk of never coming into compliance with the new asset allocation if it moves slowly.

Findings and Conclusions

Despite asset allocation being so important, there is a lack of clear, unified direction from the PSERB. There are some strongly held but very divergent trustee views on the current asset allocation, investment philosophy, investment policies, and investment metrics, etc.

Substantively, those differences largely center on four issues: 1) the amount of alternative (non-public) assets in the allocation and the resultant issues of liquidity, fees and transparency; 2) the leverage in the fund, including both explicit and implicit (economic) leverage; 3) the amount of active management versus passive management; and 4) the trustees' views on the performance of the fund. Some seem to think PSERS' peformance has been satisfactory while others see it as unacceptable. This last point highlights the need for the PSERB to clearly define its expectations and tolerances. There also appears to be a lack of clarity on the selection, modification and reporting of benchmark information.

While those are the key substantive issues, there is also dissatisfaction with the process by which the asset allocation was established. As noted, the asset allocation at PSERS has been an annual process and a proposed asset allocation has traditionally been scheduled to be proposed, discussed and adopted in a single meeting. In 2020, it had been scheduled for two meetings, one to discuss capital market assumptions and one to adopt the asset allocation.

This would have been an improvement on PSERS' traditional one-meeting schedule. However, even the scheduled two meetings would still have been a relatively short period of time for the PSERB to examine all the underlying issues, submit questions to staff, the actuary and the investment consultant, come to consensus around capital market assumptions, consider different allocations and related issues, and understand the implementation implications, etc. Indeed, the PSERB was unable to do so, forcing the process to extend over several months.

However, that multi-month process was dominated by the PSERB looking at various requested asset allocations. In other words, the structure of the information provided was geared to the intended shorter time frame, rather than an examination and consensus-building approach to the underlying issues. As both PSERB members and staff noted, the PSERB needs to take the opportunity to thoroughly contemplate the various issues implicit in asset allocation, such as the tradeoffs between liquidity, volatility, risk, return, leverage (both explicit and leverage), performance on average and over time versus performance in stress periods, etc.

FAS believes this contributed to the lack of PSERB resolution about those issues. To be clear, diversity of opinion is a strength, in that it combats groupthink, surfaces ideas and unconventional wisdom and allows the PSERB to more fully inform itself. But at the end of the process, that diversity of opinion should result in unified and prudent direction to the staff so that they can implement the PSERB's directions. At present, the unresolved differences manifest themselves on a more reactive, annual or even a meeting-by-meeting basis amidst continuing disagreements.

See Exhibit 1.4 which describes the kinds of activities that should be associated with the asset allocation process, mapped to the six PSERS Investment Committee meetings per year over the course of four years. Such a cycle would allow the PSERB to robustly discuss the substantive issues and arrive at a consensus asset allocation.

PSERS would benefit from adopting an asset allocation process such as the one described in Exhibit 1.4 (see recommendation 1.2.2). However, the current asset allocation is a source of contention among trustees. It would be productive for the PSERB to take more immediate steps to resolve the issues, or at least clarify them so that they can be discussed directly. Therefore, two recommendations (1.2.1 and 1.2.2) are made to initiate a process for a more constructive conversation around the asset allocation. Realistically, it will take time to develop a common understanding, acceptance, and commitment, but the process can and should start almost immediately.

The process should be facilitated by an independent third-party investment consultant (separate from the current investment consultant) and selected by the PSERB. Advance preparation should include, for example, the performance/risk/correlation data (actual and expected) for each asset class, the general nature of the debate around each asset class including such issues as to how dispersed are the capital market assumptions for each asset class and why; the selection and monitoring of benchmarks; the nature of the asset class with regard to liquidity, transparency, fees and other issues of concern to public pension funds; leverage considerations; etc. This presumes a certain level of PSERB investment understanding which should be addressed, in part, by onboarding and continuing education.

A discussion document should clearly identify, for example, asset allocation options and impacts on the expected rate of return and on the probability of achieving that expected rate of return (ERR), both on average and in various stress scenarios, and the impact of varying ERRs on Contribution rates. There should also be comparisons with the allocations of peer funds, their historic returns and the selection of appropriate benchmarks. The Cost Effectiveness Management (CEM) results should be helpful here (see 2.2 Oversight of Performance and Risk).

PSERS consulting actuary provides an actuarial model that allows for real time comparisons of a range of investment rate of return assumptions. PSERS has been using models from its external actuary for many years for a variety of purposes including the evaluation of various investment rate of return assumptions.

Recommendation

1.2 Develop a unified direction on PSERS' strategic asset allocation.

Implementation Guidance

1.2.1 As soon as practical, the PSERB should agree on a process to revisit and affirm or change the current strategic asset allocation. A two-day retreat might allow sufficient time for discussion provided that adequate advance preparation has occurred.

1.2.2 On a going forward basis, PSERB should adopt a multi-year asset allocation process, similar to **Exhibit 1.4.**

1.3 Policy setting.

Overview

Good governance practices create the formal infrastructure that guides fiduciary decision-making. The formality and accountability that derives from good governance practices, including the development and adoption of clear and comprehensive policies (and compliance with such policies), is essential to demonstrating prudence. The duty of prudence is a core fiduciary principle; while the standard of care may vary based on applicable state law, most states (including Pennsylvania) apply a prudent expert standard which requires the fiduciary to exercise the care, skill, prudence and diligence that a prudent expert would use in a similar enterprise.

Policy setting is one of the key powers reserved for a board. A comprehensive set of governance policies will provide consistency and guidance to the board and staff, establishing clear limits or standards to be met in the execution and implementation of board-approved objectives.

Peer Comparisons

Informed decision-making requires reasonable and appropriate diligence (including, research, education, data collection and analysis, and consulting experts, where appropriate), and periodic benchmarking of peer practices. The process and diligence in developing policy options is typically performed by the board's independent consultants and advisors and its professional staff, then reviewed, modified, and adopted by the board. This applies not only to public retirement systems, but to institutional investors and corporations as well.

It is important that trustees periodically benchmark their governance practices against that of their peers. Peer benchmarking requires ongoing education regarding evolving practices. This can be accomplished through structured board training and education programs. Peer benchmarking also requires fiduciaries to actively seek the advice of consultants, counsel and/or other experts who have access to such information. Reviewing and analyzing peer practices can assist fiduciaries in determining not only how their fund or system's governance practices align against their peers, but in identifying gaps and strength in the system's governance practices and policies.

We previously assisted PSERS' sister fund, the Pennsylvania State Employees Retirement System (SERS), in developing its governance policies and Governance Policy Manual and believe they would provide a good model for reference by PSERS. However, while peer practices serve as an important reference point in determining whether an action or inaction is negligent, the Trustees should also consider PSERS' unique circumstances.

See Exhibit 1.5 for Governance Policy Benchmark Examples.

Findings and Conclusions

It is imperative that the PSERB establish a robust process for policy development and implementation. The prudent expert standard applicable to the PSERB is process oriented, with a focus on diligence. Thus, PSERB and other PSERS fiduciaries will not be judged legally on outcomes; rather, on the prudence of the process undertaken in exercising their discretion. Because prudence is process oriented, the development and consistent application of reasonable governance practices is key. However, stakeholders may hold very different opinions based on outcomes rather than process.

PSERS trustees identified policy setting and upgrading the Governance Manual as one of the top priorities for improvement, citing concerns about:

- an overall lack of PSERB focus on policy development;
- a piecemeal approach to development resulting in a lack of coordinated priority setting for policy development by committees and the full PSERB;
- the seeming inability of the PSERB to arrive at a consensus on certain policy issues such as the investment policy and the travel policy resulting in lengthy development times;
- a need for simplification and plain language;
- a lack of clarity about policies pertaining to investments, stakeholder communications, risk management; and vendor referral;
- the need for a more systematic and explicit consideration of a broader range of viable policy options and implications;
- policy documents that have become overbearing and redundant after years of revisions and additions; and,
- ambiguity in the process for evaluation and enforcement of confidentiality obligations.

1.3.1 Strategic Policy Calendar

Overview / Peer Comparisons

In 2018, Funston Advisory Services LLC conducted a benchmarking survey on board reporting practices in 10 public retirement systems including PSERS. The survey found that nearly all (9 of 10) peer group systems follow a traditional set calendar order in organizing board and committee topics. 4 For example, certain items are always discussed in certain months based on past practice rather than the system's direction and policy setting needs.

As a complement to the strategic plan, it is a leading practice for a board to develop a multi-year strategic policy development calendar for the board and its committees. The strategic policy calendar identifies and anticipates important policy updates or changes that may be needed and a schedule for addressing them, e.g., asset allocation decisions, investment policy updates, financial management policy updates, benefit delivery policies, HR policies, etc.

The strategic policy calendar identifies foreseeable key policy decisions required and their timing (see the example of the proposed four-year ALM cycle – Exhibit 1.4). This includes the formal delegation of specific policy topics by the board to its committees, professional staff, and consultants annually, with target dates for bringing key policy items back to the board for its approval.

The strategic policy calendar also includes a discussion of why a policy topic is important and why only the board can decide this issue. Educational sessions are also linked to specific strategic agenda items prior to decision making. It is prevailing practice for a board to re-prioritize committee workloads when a new strategic policy issue arises.

1.3.2 Policy Option Summaries

Overview and Peer Comparisons

Many boards complain that they are often only presented with a single recommendation to resolve a complex policy issue without consideration of the range of options available and the related pros and cons. It is a leading practice for peers to have a systematic process for engaging the board and its committees in identifying and evaluating policy options.

The purpose of a Policy Option Summary is to ensure that the board is presented with a full range of options when complex policy issues are involved. The summaries should answer the questions: What is the least we could do under the circumstances? What is the most we could do? What are the related pros and cons? However, policy option summaries need not be applied to every item that relates to consideration of policy issues, as the summaries are intended to inform deliberations on complex decisions which are material and involve potentially different reasonable outcomes.

A Policy Option Summary facilitates trustee understanding of the context and potential alternatives to be considered for a decision and helps structure discussion which leads to a better-informed decision by the board. It also is leading practice to maintain an evergreen version of the Policy Option Summary to enable new trustees to more quickly understand a complex policy issue, its background, and the decision-history.

Such summaries can also serve to demonstrate the prudence of the decision-making process. They also can help to depersonalize an issue both clearly showing all sides of options, i.e., separate the message from the messenger. When trustees perceive that their opinions have been heard, understood, and given the benefit of full consideration, it may be easier for the board to arrive at a consensus.

Finally, Policy Option Summaries provide a framework for identifying and discussing the full range of policy alternatives to be considered with related pros and cons and to advise the board of dissenting opinions when considering recommendations.

Please see Exhibit 5.1 Leading Practices in Delegation of Manager Selection for an example of a Policy Option Summary. Below is a recommended structure for a Policy Option Summary.

Example Policy Option Summary

I. **Summary – a one page summary of the issue and options**

II. **Background and analysis**

a. The current environnent (macro / micro)

b. Issues and potential consequences if no action is taken.

c. Key assumptions

d. Discussion of alternatives and options considered (least to most)

e. Business case with costs and benefits / pros and cons of each option, including risks of action and inaction.

f. Due diligence results, including key stakeholder input and dissenting opinions.

g. Prior decisions taken related to this decision.

h. Recommended questions to be asked by the PSERB for this topic.

III. Recommendation

a. Recommended option

b. Resources required / degree of difficulty / involvement of others / time required

c. Accountabilities

d. Timing

e. Monitoring process/reporting

1.3.3 Legislative Policy Positions

Overview and Peer Comparisons

PSERS was created by the Commonwealth's General Assembly, which also defined the governance structure and composition of the Board of Trustees. Other state retirement systems around the country are similarly chartered by their state legislative bodies.

The majority of pension systems of the size and scope of PSERS, and most smaller pensions, have policies or practices regarding how they react and communicate concerning legislative actions that impact their systems. Those systems with limited autonomy, such as PSERS, which are tied to the executive and/or legislative branch of government for approval of budgets and headcount, for example, as opposed to those that are legislatively authorized as independent trust funds with independent authority, may have a more restrictive approach to legislative positions.

Typically, there is a prescribed process or policy as to the development of board responses and how any response is communicated and by whom. Generally, the spokesperson is either the executive director, a communications director, or the board chair. Leading practice includes timely updating of the website, easy-to-find press releases or statements which identify the board's positions and impact of any legislative changes, and a generally high level of transparency.

A minority of funds have separate legislative policies which describe the general position of the board and may make broad statements about supporting any legislation that is a positive for sustainability of defined benefits or for strengthening funding in general. Generally, the executive director is authorized to speak or lobby on behalf of such legislation. Other funds have imbedded in the written responsibilities of the executive director the legislative support of defined benefit plans and sustainability.

For those funds with more limited autonomy, legislative statements typically authorize the executive director to speak in a manner consistent with past board positions and to otherwise confer with the board. As a practice, even if not spelled out in a policy or a responsibility description, boards understand that rapid response is not timed with board meetings, so the expectation is that the executive director would work directly with the board chair to craft appropriate responses, and then at the next board meeting discuss with the full board.

Findings and Conclusions

PSERS has an atypical board composition, having ex officio and other elected officials a majority of voting trustees – of the largest 53 integrated state public retirement systems, only SERS in Pennsylvania and MOSERS in Missouri share this composition. Missouri and Louisiana are the only other states besides Pennsylvania with any legislators as voting trustees.

Having this majority presence of elected and appointed state officials as trustees may result in a different dynamic regarding legislative positioning than with a typical peer system which does not have legislative members and may only have one or two ex officio members representing the plan sponsor. This is not to suggest that legislators and ex officios would act homogenously.

PSERS legislative trustees, while wearing their "legislative hats," could be sponsoring statutory changes that would affect PSERS that may not be consistent with the full PSERB's position when acting as system fiduciaries. This can present challenges to the PSERB in developing legislative policy positions related to potential policy differences between PSERB and individual legislators on the PSERB.

In the self- assessment survey, trustees expressed interest in improving PSERB and staff communication internally, and in improving external communication regarding legislative initiatives. PSERS does not have a legislative policy, nor any governance documents that express expectations or constraints on the Executive Director concerning legislative positions or collaborating internally with the PSERB and speaking externally. According to the Deputy Executive Director of Benefits, "although not formally written, there has been an historical directive of the PSERB to take no position. Also, the Office of Chief Counsel drafts for the general assembly and submits an OCC Report to the Chair of the Board that identifies legislative writing assignments. Legislative drafts, however, are not public records. Any public policy regarding legislative positions may need to apply only to legislation introduced, not contemplated."

The PSERB and the Executive Director have not developed a rapid response procedure to enable the Chair and the Executive Director to collaborate on legislative issues between PSERB meetings. The PSERB could consider several options regarding legislative policy interaction: For example, Act 128 of 2020 gives PSERB the ability to establish an Executive Committee for just this purpose.

1. Take no position (status quo);
2. Develop procedural expectations of the Executive Director and Board Chair regarding legislative statements;
3. Be reactive and limit external communications to explaining the impact of proposed legislation on the pension system;
4. Develop a formal policy on legislative policy interaction and communications.

1.3.4 Governance Policy Manual

Overview and Peer Comparisons

In addition to bylaws, committee charters and stand-alone policies, a prevailing practice among pension funds is to establish a governance policy framework and compile governance policies in a governance policy manual. The governance policy manual is a central repository for all of the board's governance documents and should be user-friendly since it is an important resource for the board, staff, professional service providers, participants, and stakeholders.

The PA SERS Governance Manual provides a good model framework to guide PSERS in the development of new policies. PA SERS policies can serve as a valuable reference point, but PSERS' policies should be customized, as appropriate, to reflect its unique circumstances.

Findings and Conclusions

Our review of PSERS Governance Manual found that the Governance Manual covers many of the core topics that are appropriate for a pension board governance manual; however, it is duplicative of other sources of authority, contains unnecessarily formal language, conflates governance and functional policies, contains functional staff and administrative policies, and has a structure that is difficult to navigate.

The standards of conduct and ethics policies are currently addressed in a dispersed manner, with certain topics being addressed in the bylaws and others in the Ethics Policy. In addition, there are certain important policy topics that are not addressed, as noted in the "Policy Gaps" section below, or that are lacking appropriate detail and/or sufficient guidance.

- **Standards of Conduct** (with references to applicable Commonwealth laws). We note that there is inherent complexity in the application of certain laws to certain PSERB members under Pennsylvania law; the SERS approach may serve as a useful reference point.
- **Ethical Conduct**. The current Ethics Policy substantially covers ethical conduct.
- **Conflicts of Interest and Recusal.** This topic is covered in the Ethics Policy; however, we recommend drafting a more comprehensive policy that references applicable law and provides greater specificity regarding the process for determining if an actual conflict or the appearance thereof exists, including consulting with in-house counsel and/or external fiduciary/ethics counsel, and procedures for disclosure and recusal.
- **Board Confidentiality** (addressed in current Ethics Policy though clarity on enforcement is needed).

Policy Gaps

In our review of the Governance Manual, we identified several policy topic "gaps" where PSERS is lacking important policies that are foundational to good governance. Using the PA SERS Governance Manual as a model framework, the following policy topic gaps were identified and are grouped by powers reserved:

Figure 1.4 Identified Policy Gaps

Identified Policy Gaps
Independent Reassurance
• Audit
Independent Advice
• Actuarial Services
Conduct business of the Board / Committees
• Board Performance Evaluation
• Attendance**
• Confidentiality**
• Insider Trading/MNPI?
• Board Standards of Conduct
○ Ethics [current]
○ Conflict of Interest (including identification, reporting, and cure)
• Compliance
• SEC Pay-to-Play Compliance and Reporting
• Strategic Planning Process
• Succession Planning (for the Board)
• Manager/Vendor Referral
Set Direction and Policy
• ESG
• Funding
• Legislative Policy
Direct Reports
• Board-Staff Relations
• Personnel Performance Evaluation (Board direct reports)
Oversight of performance and risk
• EPRM
Stakeholder Communications
• Communications
○ Stakeholder
○ Media
○ Crisis

*The Attendance and Confidentiality Policies could be addressed in the Bylaws, consistent with the approach taken by SERS.

Recommendation

1.3 Revise the PSERB's Policy Development Process.

Implementation Guidance

1.3.1 Formalize and streamline the process for policy setting.

1.3.2 Refine the content of PSERS' existing policies and develop new policies where there are gaps (see Figure 4. Identified Policy Gaps).

1.3.3 Draft a comprehensive and user-friendly governance manual that incorporates all of PSERS' governance policies (but not staff-level operating procedures).

1.3.4 Develop a more robust process for compliance with the Ethics Policy.

1.3.5 The Code of Conduct, Ethics and Conflicts of Interest policies should comprehensively address the Standards of Conduct, Ethical conduct, conflicts of interest and recusal and board confidentiality (see Exhibit 1.6 Model Governance Manual Framework—Article IV, Section 4: Code of Conduct Ethics and Conflicts of Interest).

1.3.6 Develop a Strategic Policy Calendar for each Committee of the PSERB which identifies policy development priorities and should be approved by the full PSERB annually.

1.3.7 For complex policy matters, develop policy options with related pros and cons with links to supporting data – emphasize the full range of options available, as well as recommendations to ensure informed opinion and that dissenting opinions are heard.

1.3.8 The PSERB should discuss the role it wishes the ED to have regarding legislation and clearly communicate those expectations to the ED.

1.3.9 The PSERB should determine how it wants to handle pension legislation in general in consultation with stakeholders.

1.3.10 Revise the Governance Manual to be more comprehensive and user-friendly (see Exhibit 1.6 Model Governance Manual Framework).

1.3.11 Require each trustee and senior staff member to provide an annual certification of compliance with the Code of Conduct, Ethics and Conflicts of Interest policies.

1.3.12 Consistent with the recommendations of the Auditor General, the PSERB should adopt a more robust process for compliance with the PSERS Ethics Policies.

1.3.13 In addition to those already required by staff, require annual ethics/compliance affirmations from all counterparties of the investment office such as investment managers, broker/dealers and consultants.

1.3.14 The PSERB should require that investment counterparties, including asset managers, general partners and broker-dealers, annually affirm that they are aware of, and in compliance with, PSERS ethics policies with regard to their interactions with PSERS and PSERS personnel.

1.3.15 To establish clarity around the overarching fiduciary duty principles that govern the PSERB, including the duties of loyalty and prudence, the PSERS Governance Manual should include a statement of the fiduciary duties that guide all of its actions. See Exhibit 1.3 Fiduciary Duty

1.3.16 The PSERB should designate the Chief Compliance Officer to be responsible for monitoring enterprise compliance (see Exhibit 3.2).

1.3.17 The PSERB should request that that the Auditor General periodically audit compliance with the PSERS ethics policies and report its findings to the Audit and Compliance Committee.

1.3.18 All legislative inquiries or study commission recommendations such as those issued by the Office of the Auditor General or other special studies such as the Act 5 report should receive a formal response.

1.3.19 The PSERS website should be kept current regarding PSERS legislative positions to keep stakeholders informed.

1.4 Roles, responsibilities, and reporting relationships to the PSERB

Overview and Peer Practices

Governance and Fiduciary Duty

The governance of a retirement system begins with its creation through the enabling legislation of the jurisdiction. Governance is a system of direction and control enabled by the authorities and processes for decision-making and ensuring directions are executed within policy, i.e., within limits.

There are approximately 5,300 public retirement systems in the United States. Almost all jurisdictions (with three exceptions at the State level – North Carolina, New York and Connecticut which have the State Treasurer or Comptroller as sole trustees) have largely delegated fiduciary responsibilities to part-time lay boards. The overarching duty of a public retirement trustee is to act in the best interests of the beneficiaries (current and future).

By legislative design, these lay boards (including PSERS) are comprised of individuals representing various constituencies who are not necessarily investment or pension administration experts and whose duty it is to provide "prudent" direction to, and oversight of, the System. This ensures that the beneficiaries and often the plan sponsor are represented. Even if trustees consider themselves or are expert, they usually do not have the time to be involved in day-to-day management nor should they be.

However, according to the National Association of State Retirement Administrators (NASRA), jurisdictions delegate budgetary and staffing authorities less often.[5] A key authority among public retirement peers and especially institutional investors and corporations is the authority to allocate resources to meet organizational needs, especially since those resources usually come from the fund itself and not the jurisdiction's general revenues. Once the powers retained by the jurisdiction have been established, overall responsibility and accountability for the system's performance rests with the board of trustees. See Section 6. Governance Structure and Legislation.

The trustees themselves are either elected by current and retired members, appointed by the jurisdiction or serve because of their official roles such as Treasurer, Comptroller or state cabinet officers. Typically, there are few if any professional or experiential qualification requirements. This increases the importance of effective on-boarding and continuing education for trustees and underlines the importance of having independent expert consultants/advisors and skilled professional staff who are trusted by the trustees. It also underlines the need to have clear, concise and insightful communication of vital information for board decision-making and oversight.

The Board of Trustees

The overall responsibility of a fiduciary board is to direct and control the retirement system for the exclusive benefit of the beneficiaries. Trustees are held to the highest legal standard of care, a higher standard than for directors of publicly-traded corporations.[6] Consistent with prevailing peer practices, a board typically organizes itself into committees to expedite the work of the board, to advise the board on available choices, recommend options, to oversee and to verify the system's performance and risk. Committees are typically advised by staff and by independent consultants.

It is the board's responsibility to make informed choices about direction and policy. The board also needs to ensure the system is adequately resourced. The board can and should also retain its own independent consultants/advisors regarding direction, available policy options and implications. The board decides the overall course of action needed. The board sets the targets for expected performance and then defines how much variation between targeted and actual performance is acceptable. This is critical to effective oversight.

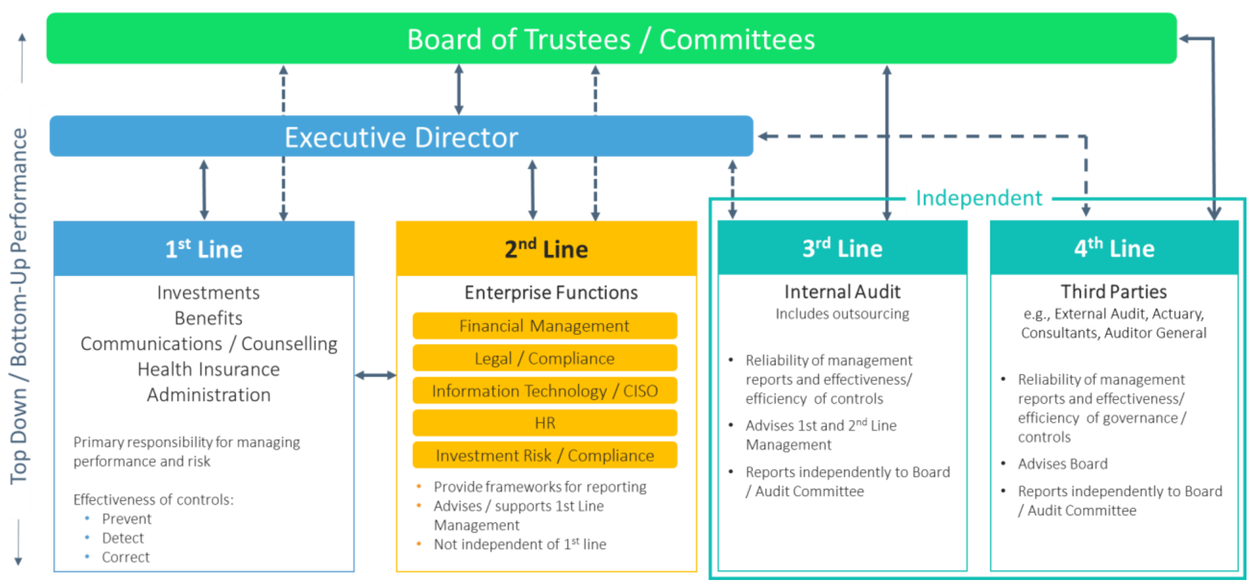
It is the responsibility of the board to set the direction for the system and to hire the executive director to execute the direction within the policies as set by the board, to demand accountability and to obtain appropriate independent verification on the reliability of reports it receives and issues. It is the executive director's responsibility to carry out the board's direction and to timely bring to the attention of the board where course correction or additional resources may be needed. Prevailing practice among peers is for the board to hire the ED, often with the assistance of a search firm, and for the board, primarily through the chair, to be in regular contact with the executive director once hired.

Each trustee has a duty to exercise judgment, skill, and care, and to act solely in the best interests of the beneficiaries regardless of how they came to be on the fiduciary board. Most pension boards in the U.S. are part-time volunteers with varied educational backgrounds and professional expertise. Thus, in applying the prudent expert standard, a board must rely on the board's independent consultants/advisors for advice, guidance, and verification and on its professional staff not only for advice and guidance but also for execution and on peer practices.

The board is the governing body of the retirement system - subject to oversight and any limits imposed by the jurisdiction. A key role of the fiduciary board is to maintain the long-term, big-picture focus despite short-term pressures. It is very easy to get caught up in the day-to-day business of the retirement system because these tasks are usually more immediate and tangible than wrestling with long-term issues, which are often far more complex, and can have highly uncertain outcomes. But these long-term issues are exactly the ones that have the most impact over time and which only the board can address. It is also important for a board to clearly define its expectation for the roles of those with important relationships with the board.

In 2020, the Institute of Internal Auditors (IIA) published a revision to its "Three Lines of Defense Model"[7]. The IIA wanted to recognize there is also a value creation component to each of these responsibilities. FAS has adapted the IIA's model to depict four lines of relationships to a board both direct (solid line) and indirect (dotted line). These lines of relationships to a board are extremely important and are shown graphically below. FAS also recognizes there may be state specific requirements that may affect the depiction of the relationships. To avoid confusion, it is critical that these respective roles and responsibilities be clearly and widely understood.

Figure 1.5. Lines of Board Relationships



Finally, the board should receive independent reassurance (shown in green above) that verifies the reliability of the information and reports the board receives and issues. These independent parties should also verify the effectiveness of the key controls the retirement system relies upon. The importance of "Verify then trust" is discussed in Section 4.

Committees of the Board

The board typically elects a chair and vice-chair and establishes committees to do more specific, detailed work. The assumption that the vice-chair will assume the role of chair upon the expiry of the term of the current chair is often implicit, but not universal. Committees are typically the principal mechanisms for the board to exercise its powers especially in doing more in-depth reviews, making recommendations for the approval of the full board, overseeing the performance and risk of the system and escalating policy issues to the full board. The role of committees is discussed further in Section 4.

The Executive Director (ED)

Selecting, evaluating, and preparing for the succession of the executive director (ED) are among the most important functions of a fiduciary board. It is through the executive director that the board's direction and policies are executed, and organizational leadership and public presence are demonstrated.

The importance of the ED's position and the reporting and working relationship with the board cannot be overstated. It is to the ED that a board first looks for implementation and is the single point of executive accountability as the most senior officer of the system.

The ED has overall responsibility for both operations and enterprise administration in the execution of board approved directions within policy. As noted earlier in Section 1.1 Strategic Planning and Stakeholder Communication, the ED should lead the strategic planning process to identify and develop needed long-term capabilities and actively engage the board in the process.

The ED is also responsible for advising the board on direction and policy. This includes coordinating staff research and advice and making recommendations based on the pros and cons of the range of available policy options and their implications. The ED should also be able to engage consultants to advise the staff.

The ED is responsible for hiring, evaluating, compensating, and planning for the succession of the senior officers and staff of the system for both operations and enterprise functions. The ED and senior officers should timely report actual progress toward goals and expectations to the board and its committees.

The ED is also responsible for providing reasonable (but not absolute) assurances to the board that there are capable people, processes, systems, and resources in place to effectively and efficiently manage the system to achieve expected performance. This includes the responsibility to timely identify and escalate matters to the board when actual performance varies unacceptably from what is expected, or when resources may be inadequate. It also includes the responsibility to provide accurate and timely information for board decision-making. The ED should seek board direction and adapt execution of approved directions as needed.

As discussed in Section 1.5 The PSERB's evaluation process for PSERS' Executive Director / Chief Investment Officer, the ED's goals should be clearly defined in advance and linked to the system's strategic plan. The executive director should be held accountable for the achievement of these goals using an annual written evaluation and with compensation linked to measurable performance. It is prevailing practice among peers for the board to have the authority to set compensation for this position. Certainly, every institutional investor and corporation would see this as fundamental to the relationship.

For all these reasons, the executive director's succession plan is very important in the event of a temporary vacancy in this position as well as to plan for a permanent vacancy due to retirement or other reasons. The leadership and performance of all senior officers and staff, with the exception of the chief auditor officer (CAO) who reports directly to the board, is ultimately the responsibility of the ED.

First Line – Operating Officers and Staff

Operating officers report directly (solid line) to the executive director and are traditionally considered the "first line of value creation and defense". In a retirement system, these senior executive officers and their staff are responsible, for example, for investment, benefit delivery and enterprise administration. They are also primarily responsible for managing performance and risk in all respects such as HR, compliance, safety, and security. But specialized support for these responsibilities usually comes from the second line (see below).

Operating officers should also provide reasonable but not absolute assurances to the board that there are capable people, processes, and systems in place to manage the system and achieve the mission. These senior officers also have a dotted line relationship to the board because of their frequent exposure to the board. For this reason, the board typically provides feedback to the executive director on their performance who retains responsibility for their hiring and evaluation.

Operating officers are supported by a second line of enterprise functions that support improving performance and in developing and maintaining control in compliance with legislation and regulations, policies and contracts.

The Chief Investment Officer (CIO)

The chief investment officer is a key senior staff member and one of the ED's most important hires. It is prevailing practice for the ED to engage the board in the CIO selection, evaluation, and compensation process but the final decision should rest with the ED. This engagement process, however, is simply prudent and does not diminish the direct line of accountability of the CIO to the ED. Some peers have the CIO directly hired by the board and reporting directly to the board although FAS considers this a lagging practice for an integrated system (i.e., both benefit delivery and investment).

Prevailing practice among peers is for the CIO to report directly to the executive director who is then responsible for CIO's annual goals and evaluation as well as compensation reviews. As noted, the board should have input to the CIO's annual goals and performance review, and the ED should coordinate the review of the CIO with the investment committee of the board and provide clear feedback from the board.

Second Line – Enterprise Administration Functions

In a public retirement system, this second line of enterprise functions typically includes financial management, legal and compliance, information technology and cybersecurity, human resources, and risk management support. These second line functions are no less critical and are not independent of management. These senior officers e.g., Chief Financial Officer, Chief Legal Counsel, Chief Administrative Officer and Chief Technology Officer, also have a solid line to the executive director for enterprise administration and a dotted line to the board because of the frequency of their contact.

The senior officers in enterprise functions support operating management to ensure that overall responsibilities for performance and control are met. They also provide reports to the board on the effectiveness of controls. Risk and compliance functions (because they report directly to operating and enterprise executives) typically assert annually to the board they have not been subjected to undue influence to modify their reports to the board.

A board should also have visibility to these enterprise executives and their key staff for several reasons: first, to provide development opportunities for the executives and staff; and second, to enable the board to have insights on the bench strength of the organization. The board should also provide feedback on the performance of these executives to the executive director.

The Chief Legal Counsel (CLC)

At peer funds, the CLC is usually hired and supervised by the executive director (with input from the board) and serves as primary counsel for the ED, staff and board, with ultimate legal obligations to the system. In a survey conducted by FAS, 93 percent of public pension plans reported that their CLC was appointed by and reported to the executive director. Nevertheless, like all senior executives, the position has “dotted line” reporting obligations to the board whenever legal compliance or fiduciary obligations to the fund and its beneficiaries are involved.

On the other hand, fiduciary counsel is typically selected by and represents the board, but also with ultimate legal obligations to the system. Fiduciary counsel can often provide counsel to the board on matters when the chief legal counsel has a conflict.

The CLC attends all board meetings as the board’s expert legal counsel on state and local pension laws. It is a leading practice for the CLC and the board’s independent fiduciary counsel to confer in advance of board meetings to reconcile positions and/or advice (where possible) to avoid confusion and identify any potential areas of disagreement and decision options. It is preferable for fiduciary counsel to also have a direct line to the chair and be available to participate in planning calls and meetings when legal issues or interests of the board might be involved.

Third Line – Independent Verification

The Chief Audit Officer (CAO)

Prevailing practice among peers is for the board to hire one other key senior staff in addition to the executive director, i.e., the internal auditor or chief audit officer (CAO). The CAO must be independent of the executive director since it is the responsibility of the CAO to be a singular point of contact for independent verification/audit of administrative matters. These audits are typically reported through the audit committee and then directly to the board. Among peers, there is a dotted line relationship from the CAO to the executive director for supervision and coordination of such things as annual leave, meeting scheduling, interactions with staff, or other administrative matters.

The CAO's audit workplan may be coordinated with the ED and senior staff or at the request of the ED include an item for an independent review. However, the audit schedule must be reviewed and approved by the audit committee of the board. It is prevailing practice for the CAO to meet periodically with the audit committee or full board without the executive director. The audit committee typically sets the CAO's annual goals and is responsible for the CAO's performance review and compensation.

Fourth Line - Independent Auditors and Advisors to the Board

Given the complex and time-consuming nature of pension system management, trustees need assistance from experienced professional staff and outside experts. A board should be able to retain independent auditors and consultants/advisors such as external audit, legal counsel, investment advisors, governance, and actuarial professionals any time they feel they need them.

These are independent consultants and advisors to the board and while they need to work collaboratively with the professional staff, the board must be satisfied with the independence of their advice. While professional staff can support the board in the search process for independent consultants/advisors, the decision to hire, direct, evaluate and terminate auditors and advisors must be clearly that of the board. This is discussed further in Section 3. Independent Advisors.

The fourth line also includes independent oversight such as the Department of the Auditor General.

The Third and Fourth Lines of Board Relationships are described in further detail in Section 3. Independent verification and independence of the Board's consultants/advisors.

Findings and Conclusions

The PSERS Board of Trustees

Overall, the PSERB needs to more clearly and consistently exercise its direction and policy setting role. This should begin with the strategic plan and the development of overall performance goals and metrics for the system. It is the responsibility of the PSERB to ensure that it makes informed choices; provides appropriate direction to staff; requires organizational adherence to legislation and PSERB policy; and avoids any vacuum in direction or policy.

PSERB needs to ensure that it is presented with a range of viable policy options and insightful pros and cons. The PSERB needs to constructively question and challenge assumptions and provide feedback. The PSERB will then be better positioned to make informed choices and provide clear direction. The PSERB's performance expectations are unclear or inconsistent. The PSERB needs to clearly define its expectations for the ED regarding acceptable vs. unacceptable performance, and then hold him/her accountable. Clearly establishing tolerances will enable more effective oversight of performance.

PSERB also needs to clearly define the role, authorities, performance expectations and lines of reporting for those with relationships to the PSERB and then hold the various parties accountable for their performance. The PSERB should provide input to the ED on the performance of all officers and staff with frequent PSERB contact. PSERB should also demand independent opinions from its consultants/advisors.

The Executive Director

The ED needs to take the lead on developing the PSERS strategic plan and actively engage the PSERB in that process. The ED should work with the Chair of the PSERB and the Chair of each of the Committees to develop a strategic policy agenda and coordinate staff efforts to close existing gaps in policy. The ED needs to ensure the PSERB is presented with a range of viable policy options and related pros and cons for complex policy issues. Information for PSERB decision-making needs to be much more timely, concise and insightful. The ED should also seek PSERB's input on the performance of those senior officers and staff with frequent contact with the PSERB.

Chief Investment Officer (CIO)

It is unclear to what extent the ED and PSERB discuss the goals, expectations, and evaluations for the CIO. The ED does have some CIO compensation authority, but accountability to the PSERB Board and its expectations on this are not clear. It is not a desirable practice to segregate the investment compensation scheme from the authority to compensate the ED and set budget for staff compensation, all of which should rest with the PSERB and be delegated as appropriate.

Chief Legal Counsel (CLC)

When the PSERB received legislative authority to hire its own CLC in 2017, the initial CLC was retained by the PSERB pursuant to adoption of a Board Resolution. While not a prevailing practice amongst peers, retention of the CLC by PSERB rather than the ED was consistent with section 3.4(c) of the Bylaws. The Bylaws state that the "Board will employ" the CLC and refers to the CLC being "appointed by the Board." However, a new CLC was hired by the ED in 2020 without approval of, or any apparent participation by, PSERB.

With advice from fiduciary counsel, the PSERB should confirm the current interpretation of the Bylaw and evaluate whether PSERB action is required in connection with the 2020 CLC retention. In addition, the current Bylaw provision should be re-evaluated in the context of peer practices (which overwhelmingly assign retention and supervision of the CLC to the ED, after consultation with the board) and in recognition of the Commonwealth Attorneys Act (71 P.S. § 732-401), which merely states that "[e]ach independent agency may appoint and fix the compensation of a chief counsel," without specifically requiring action by the independent agency's governing board.

Fiduciary Counsel

During the PSERB member interviews, some confusion was identified about the respective roles of internal legal counsel and external fiduciary counsel and whom each represents. However, no material substantive issues regarding those legal services were raised (see additional background in the CLC Overview above).

The PSERB would benefit from clarification of the roles played by internal counsel and external fiduciary counsel. Both internal and external legal counsel have a professional obligation to clearly advise their clients on the scope of the representation. The PSERB and Executive Director should request advice from both PSERS Chief Legal Counsel and Fiduciary Counsel on the scope of their representation and the identification of their respective clients, and their lines of reporting and supervision be clarified.

Independent Advisors to the PSERB

The roles and independence of third-party auditors and consultant/advisors are discussed in section 3. Independent verification and independence of the PSERB's consultants/advisors.

Recommendation

1.4 Clarify roles, responsibilities, and reporting relationships to the Board.

Implementation Guidance

1.4.1 Establish the Executive Director and the Chief Audit Officer as the two direct reports to the PSERB (see Exhibits 1.7.1 and 1.7.2).

1.4.2 Clearly define "direct" and "indirect" reporting relationships to the PSERB and the nature of relationship (see also Figure 1.5 Lines of Relationships with the Board).

1.4.3 Confer with Fiduciary Counsel regarding interpretation of the Bylaw requirements for retention of the CLC and whether any remedial action by PSERB is required in connection with the recent engagement of the new CLC.

1.4.4 Confer with the CLC and Fiduciary Counsel regarding clarification of their respective roles, who their PSERS' clients are, and their understanding of the current lines of reporting.

1.4.5 Modify the Bylaws and PSERS policies as necessary to accurately reflect arrangements for retention and supervision of the CLC and receipt of legal services by PSERB, staff and the ED.

1.4.6 For all executives with regular contact with the PSERB, the Board should be asked for input on their performance as part of their annual performance appraisal.

1.5 Prudent delegation of authority and responsibilities

Overview

The PSERB's primary powers and responsibilities are set forth in 24 Pa. C.S. §8501, 8502 and 8521. Under 24 Pa. C.S. §8502(h), it is the board's responsibility to set clear, unified directions and approve policies or regulations to guide the implementation of those directions. These are powers reserved exclusively for the board through enabling legislation and bylaws. A board may choose to delegate certain authorities (to its committees and professional staff) but ultimately responsibility rests with the board.

This is why prudent delegation and robust oversight are so critical. Typically, board-approved directions describe what is to be accomplished while policies describe guidance and limits on how the direction is to be accomplished. Generally speaking, the need for specifics of policy and direction only sometimes originates with the board but are always board approved.

Staff are expected to do the background work and make recommendations to the board (typically through its committees) on direction and policy, subject to the informed approval of the board. Furthermore, the board should have independent advice that the courses of action recommended by management are appropriate (or should be changed), and independently verify that the reports the board receives and issues are reliable.

It is not the responsibility of the board to closely manage the organization. Furthermore, it may be considered imprudent for the board not to delegate given the part-time nature of their involvement even if they are themselves expert in certain areas.

The Restatement (Third) of Trusts (1992; a. 2003) provides that a "trustee has a duty to perform the responsibilities of trusteeship personally, except as a prudent person of comparable skill might delegate those responsibilities to others." This represented a shift in trust law and a reversal of the prior constraints on delegation under Restatement (Second). Prudent delegation is a subjective analysis that looks at what a trustee with comparative skill might do.

The Restatement (Third) provides further that **"[a] trustee's discretionary authority in matters of delegation may be abused by imprudent failure to delegate as well as by making an imprudent decision to delegate." This has been interpreted in the context of public pension funds to create an *affirmative duty to delegate* where a board does not have the requisite investment skill or experience (or the time) to make informed investment decisions.**

Both the Uniform Prudent Investor Act ("UPIA") and the Uniform Prudent Management of Institutional Funds Act ("UPMIFA") take a substantially similar approach. Section 9(a) of the UPIA provides that "[a] trustee may delegate investment and management functions *that a prudent trustee of comparable skills could properly delegate under the circumstances*. The trustee shall exercise reasonable care, skill and caution in (1) selecting an agent; (2) establishing the scope and terms of the delegation, consistent with the purposes and terms of the trust; and (3) periodically reviewing the agent's actions in order to monitor the agent's performance and compliance with the terms of the delegation."

The emergence of these model laws and their widespread adoption by the states allowed public pension plan trustees to rely on qualified staff, investment advisors and investment managers to make informed investment decisions in a dynamic environment where investment products are increasingly complex. Board members should focus their attention on the growing list of important functions, such as strategic direction, asset allocation, policy matters, and ongoing monitoring and evaluation of performance and delegated responsibilities (oversight).

Peer Comparisons

Given PSERS size and complexity, the PSERB's continuing involvement in manager selection makes it an outlier in comparison to peers (see Exhibit 5.1 Leading Practices in Delegation of Manager Selection for detailed peer comparisons and a Policy Option Summary).

Findings and Conclusions

As described earlier, given the importance of the asset allocation in determining investment outcomes, it seems inappropriate that the PSERB, through the investment Committee, would spend large amounts of time on manager selection while critical asset allocation decisions remain unresolved.

However, effective, and prudent delegation requires trust. There are numerous governance improvements regarding investment oversight which should be made to build and maintain trust between the PSERB and professional staff and consultants/advisors.

Consequently, the PSERB may wish to delay further consideration of additional delegation until initial implementation of reforms of governance policies and practices have been established. At that time, it will be worthwhile for the PSERB and the Investment Committee to consider the highest and best use of its time.

Recommendation

1.5 See Recommendation 5.1 re: further delegation.

1.6 The Board's evaluation process for PSERS' Executive Director / Chief Investment Officer

Overview

There is a tendency to think of a performance evaluation as an annual event. However, it is prevailing practice for the board committee charged with this process (typically Governance or Personnel) to meet with the ED on a quarterly basis to check in on performance, reinforce general communication needs and discuss any concerns in direction of the system or the need for a mid-course correction. The internal and external environments are constantly changing so mid-course corrections should be anticipated.

Evaluations should be structured around certain critical documents. The first is a current position description that outlines expectations, behavior characteristics, and major areas of responsibility. The position description is a reference that should have been refreshed or created for the search and hiring process and should be reviewed and updated by both the board and ED annually. The second key document is the strategic plan. Third is the statement of annual performance objectives that should be mutually agreed-upon in advance.

Peer Comparisons

Prevailing practice is to have a clearly articulated set of performance goals for the executive director (ED) that are established well in advance. There are often both annual and multi-year goals. These are updated yearly and derive from the system's strategic plan. Goals typically are largely quantitative metrics regarding expected performance or outcomes and qualitative criteria with respect to process and relationships. The ED's goals should mirror the expected performance for each of the vital retirement functions performed by the system since the executive director is the board's single point of executive accountability for organizational performance.

There should be a process for informal feedback throughout the year (e.g., quarterly) so there are "no surprises" and there is adequate time to make needed course corrections or improvements. The evaluation process is often assigned to a specific committee. All trustees should provide feedback using an agreed-upon format (see Exhibit 1.8). The chair of the board is usually responsible for communicating with the executive director.

Prevailing practice is to base compensation on performance and merit as determined by the annual evaluation. It is prevailing practice for the board to ask staff to commission an independent compensation survey at least every five years, usually defined by policy or bylaws and assigned to the responsible committee.

Compensation consultants can perform extensive analyses of peer funds, local cost environments, and provide compensation ranges. It is the responsibility of the assigned committee to recommend to the board the desired target salary compensation range for the system, and for this to guide compensation decisions.

The ED is then responsible and accountable for administering salaries within the expected range. Many funds desire mid-range salaries, and some, for a variety of reasons, are comfortable with high range salaries for certain positions.

It is prevailing practice for the chief investment officer (CIO) to report to the ED. Based on a FAS benchmark study, ninety per cent of state integrated funds (like PSERS) have the CIO reporting directly to the executive director. As the single point of executive accountability, the ED should have the authority and responsibility to make decisions regarding hiring, evaluation, compensation and succession for all key executive positions with the exception of the Chief Audit Officer, as previously noted.

However, given the importance of the CIO position, it is prevailing practice for the executive director to consult with the board in the selection, evaluation and compensation of the CIO, as the board retains the authority to veto executive decisions. Clearly, good communication between the ED and the board is critical, particularly in reference to key senior positions.

Quarterly check-in meetings should be formally scheduled, respectfully conducted, and expectations clearly stated. The chair should informally solicit feedback from fellow trustees throughout the year.

At year-end, the evaluation process should have no surprises, and should be well documented. It is the responsibility of the ED to provide clear and written documentation of performance measurements for each goal, and the HR function within the staff or the system's Legal counsel should maintain these records for the board.

Findings and Conclusions

The latest comprehensive assessment of compensation provided for "investment professional" positions within the Investment Office, and the Office of Financial Management was completed in 2015. It did not include a review of the Executive Director's compensation.

As noted earlier, PSERS lacks a strategic plan. Currently, the executive team (deputies and chiefs) develops annual agency and unit goals and is accountable to the ED who is accountable to the PSERB for reaching milestones and accomplishing results. There are some strategic elements to this "Agency Goals" approach, but it should be more systematic. See the Strategic Plan recommendations in Section 1.1.

Evaluation Process

As noted, the PSERB does not have a well-defined process to evaluate the ED. The process for obtaining the PSERB's input on the CIO or other executives with reporting lines to the PSERB e.g., the Chief Audit Officer to the Audit, Compliance and Risk Committee, is likewise unclear. Although several trustees said they had the opportunity to fill out an evaluation form, there is generally no advance discussion nor clear information on the Executive Director's goals. The current process is largely subjective and inconsistently applied.

Currently, the ED's evaluation documentation and process is not linked to strategic goals and is based on subjective evaluations of the following factors:

- Leadership
- Code of Conduct / Ethics
- Communication
- Management, Administration, Budget, Legislative Effectiveness
- Planning
- Policy
- Relations with the Board of Trustees
- Overall

Based on the PSERB's self-assessment survey results and the follow-up interviews with trustees and designees, the majority of trustees appear to have confidence in the management of the system and are comfortable with their interactions with staff. For these Trustees, staff are perceived as responsive to trustee questions and requests for information. Staff report they frequently respond to direct telephone and e-mail contact from trustees. However, currently there is no trustee request tracking system that clarifies for both PSERB and staff the exact request and expected time for response. Such a tool would be a relatively easy way to improve efficiency in responsiveness and accountability and is not in any way intended to stifle communication. Such a tracking request system would also enable prioritization of staff responses and resource allocation.

However, a number of Trustees have been critical of some of the senior executive. They feel that information for decision-making is often received too late for proper review, the full range of policy options is not presented for their consideration and that important factors have been glossed over.

The disparity in trustee views needs to be addressed. One way is for the PSERB to clearly establish performance expectations and then hold the ED responsible for performance. This should be a constructive and mutually beneficial process that sets the bar for performance and provides clarity for all trustees and the ED.

In recent years, the PSERB has only evaluated the performance of the Executive Director, leaving all other employee evaluations to the Executive Director. PSERS uses Employee Performance Reviews (EPRs) annually for all employees. The PSERB has experimented with several formats for ED evaluation in recent years, sometimes interviewing PSERB members; sometimes interviewing executive staff; sometimes interviewing heads of constituent organizations, etc. to assess the ED's effectiveness.

In 2016, the Executive Director initiated the Agency Goals, a process of engaging with unit leaders to identify goals with system-wide importance and tracking progress throughout the year. The Executive Director does not currently solicit feedback from the PSERB on the CIO or any other key executive position that has visibility to the PSERB.

Evaluation parameters for the PSERS ED evaluation are in general categories that are of the nature of proficiency requirements found in a job description: Leadership, Ethics, Communication, Management /Administration/Budget/ Legislative, Planning, Policy, Board Relations. While peer ED's are certainly evaluated on general competencies such as these, meaningful goal setting is more specific and tied to a longer-range strategic plan. Compensation is then tied to performance based on specific goals.

See Exhibit 1.8 Example Executive Director Evaluation Matrix

Compensation

In the final analysis, the current PSERS' ED evaluation process is not linked to strategic plan goals or other objective measures. In addition, the PSERB has no power to increase the compensation of the ED or to award incentive pay without approval from the Governor's Office. Compensation expectations and target ranges for good performance are not defined and increases appear to be sporadic and confined to cost of living increases for the current ED.

FAS believes the PSERB's inability to determine the compensation for the ED is a lagging practice.

Recommendation

1.6 Develop a new evaluation process for PSERS' Executive Director and Chief Investment Officer.

Implementation Guidance

1.6.1 The responsibility for the ED's evaluation should be assigned to the Governance and Administration Committee to coordinate input from the entire PSERB.

1.6.2 Annual performance expectations for the ED should be established at the beginning of each year informed by the strategic plan. Multi-year goals can also be identified at this time. Goals should be measurable and directly observable by the PSERB.

1.6.3 The PSERB, through the Governance and Administration Committee and the Board Chair, should provide feedback on performance on a regular basis and conduct a formal performance evaluation at least annually.

1.6.4 On a quarterly basis, the ED, the Governance and Administration Committee and the Board Chair should schedule a meeting for the purpose of a general check-in and opportunity to ask questions of both parties, receive feedback from both parties, and make mid-course corrections as necessary.

1.6.5 The PSERB should provide input into the selection, evaluation and compensation of the CIO although the CIO is a direct report to the ED. The PSERB should also provide input into the evaluations of all other senior executives who have frequent contact with the PSERB. The ED retains the responsibility for hiring, evaluation, compensation and succession of all direct report executives.

1.6.6 If necessary for objectivity, consider a third-party facilitator for the next ED evaluation.

1.6.7 The Board Chair and the ED should both sign the annual evaluation documents.

1.6.8 The PSERB should retain a compensation consultant to conduct a comprehensive compensation survey that includes a review of ED compensation. A separate consultant specializing in investment compensation plans should be hired to review how and by what criteria investment professionals are compensated.

1.7 Succession planning for PSERB direct reports.

Overview / Peer Comparisons

Succession planning for public retirement systems is a critical responsibility of the executive director. The plan should be approved by the board, then updated as necessary. Public retirement systems all have some hurdles in succession planning, especially for those that are directly within the executive function of state government and that operate within civil service requirements and union contracts. Typically, the identification of specific individuals for specific positions is prohibited. Nonetheless, a succession plan, particularly for emergency vacancies, is a prevailing practice for meeting business continuity needs.

The succession plan should maintain internal governance and checks and balances such as segregation of duties. For example, if there are two positions that are control positions in that each is required to countersign documents, then those positions should be covered by someone within those respective functions and not the ED.

The ED has the responsibility to keep the board informed and the plan up-to-date. Within a system-wide plan, the board should ensure there is a clear emergency succession plan for its direct reports, i.e., the executive director and the chief audit officer (CAO). The board should also become familiar with the bench strength of the leadership of the system through exposure to executives at board and committee meetings. Succession planning for senior level positions is also typically embedded in hiring and promotion decisions.

Findings and Conclusions

PSERS has a detailed emergency succession plan for every executive position. This is considered a leading practice. However, the current succession plan has not been reviewed by the PSERB. In the recommended committee structure, this would be the responsibility of the PSERB Governance and Administration Committee.

The Committee's primary focus should be the emergency succession for the ED's position if that position is suddenly vacant since the continued, seamless operation of the system is the PSERB's responsibility. Currently, the Deputy Executive Director of Benefits, is the designated successor in the event of the Executive Director becomes unavailable. The Committee's secondary focus should whether the other critical positions are all identified and appear thoughtfully planned and covered in the event of an emergency.

However, the current PSERS succession plan should be amended, specifically in reference to the CAO and Chief Financial Officer (CFO). The Executive Director should not be a successor to any positions reporting directly to the ED, such as the CFO, where it is important there be segregation of duties.

As for the CAO, it would be a conflict of interest for the ED to be the emergency successor to that position since it is an independent report to the PSERB. Someone from within Internal Audit would likely be the more appropriate emergency successor.

Recommendation

1.7 Build on succession planning for PSERB direct reports.

Implementation Guidance

1.7.1 The review of the executive succession plan should be the responsibility of a Board Committee, and clearly stated in the assigned committee's charter.

1.7.2 The ED should amend the current succession plan and submit it to the committee for discussion and review.

1.7.3 Develop bench strength within each operational area using rotational assignments and with robust cross training to improve continuity so there are successor options within each substantive area of operation.

1.7.4 The Executive Director should develop a process with input from HR and Legal counsel that documents interim or temporary succession assignments.

2. Information for decision-making and the PSERB's oversight of the execution of direction within policy.

Scope

2.1 PSERB oversight and reporting to the PSERB

2.2 Oversight of performance and risk management, compliance and controls and reporting on system operations

2.3 Cyber security and information security

2.1 PSERB oversight and reporting to the PSERB.

Overview

One of the key roles of a board is to oversee that board-approved directions are carried out within policy. Ironically, oversight has two meanings:

1. To watch over and direct but not closely supervise or manage.

   or

2. An unintentional failure to notice or do something.

The public retirement environment is highly complex, rapidly changing and sometimes chaotic. How does a public retirement board exercise proper oversight to ensure that the system is performing as expected and, if not, that important issues are brought to the attention of the board promptly so they can be addressed?

Boards have a right to be concerned, because when things go wrong, one of the first questions usually asked in such situations is "Where was the board?" More fundamentally, it is the board's job. So how far should a board take its oversight? Why do boards miss things? What are the challenges that need to be overcome?

To oversee means to watch over and direct but that does not mean closely manage. Some trustees assume they must closely manage or exercise "day to day supervision" to exercise effective oversight thereby avoid potential failure. However, the reality is that such direct management makes it difficult to truly oversee the functioning of the system.

First, it would neuter real oversight, as it would require a board to exercise oversight over itself. Second, close management by a board makes it difficult to hold accountable an executive director or other senior staff, since it becomes unclear who is responsible for what. Finally, close management creates confusion among staff as to who to listen to and what are a system's goals and priorities. This is why the board is responsible for hiring a capable executive director, exercising oversight, and holding that person accountable for the organization's performance.

Finally, and most importantly, a board that is too focused on the details is more likely to miss the big picture (i.e., the proverbial forest for the trees). While details are often easier to understand and address, a key role of the board is to understand and take the much more difficult, long-term, big picture view. First, that is a role that only the board can perform. Second, the long-term view inevitably proves more impactful than micro-management.

There are, of course, extraordinary situations (unexpected succession, a crisis involving senior staff, etc.) when close management or close supervision is necessary. Additionally, a board may see the need to become more actively involved in specific issues at a specific point in time to satisfy itself that the system is performing as expected or to satisfy itself that a particular issue is being addressed satisfactorily. However, these "deep dives" should not become the routine "modus operandi" for the board. Sometimes it may be necessary but closely managing or supervising the day-to-day management activities on a regular basis undermines both the senior executive and the board.

Exception-based Reporting

Good oversight relies on having good information, converting that information to analysis, and using that analysis to judge how the system is performing against goals. There are three common barriers to having good information: Incorrect information, too little information, and too much information.

The problem of having wrong information and too little information is manifest. Wrong information is misleading and too little information can mean a board cannot fulfill its duty of care because it cannot understand the functioning of the system at the appropriate level for it to exercise proper oversight. The issue of too much information is less obvious, but a frequent issue at some funds where board packages sometimes run to hundreds or even more than a thousand pages.

While the cause of such lengthy reports may be well-intentioned – for instance to provide more transparency to a board – the result is the frustration of board members who must fight their way through pages and pages to find the information they need and of staff who have to spend days or weeks preparing the board books.

In FAS's experience, board books tend to grow by accretion – someone requests a report one month, someone else another report in another month, etc. But that well-intentioned, additional transparency becomes self-defeating as the (often non-searchable), thousand-plus page board book creates opacity, not transparency. Simply reducing the amount of information provided to the board is not an acceptable alternative either; trustees want and need the ability to drill down for more detail when desired.

The answer to the predicament is exception-based reporting (sometimes called "dashboards" or scorecards) which a) starts with the board's authority to set performance goals, b) holds management accountable for meeting those goals, c) highlights when the goals are not being met, and d) allows for drill-downs as the board, or individual board members, desire.

Exception-based reporting has been a prevailing practice in the corporate sector for decades but can be considered leading practice in public retirement systems. Exception-based reporting compares actual performance with expected performance and highlights differences that are outside of the "normal" or expected range. Exception reports include normal or expected performance but focus on the exceptional, either exceptionally good or poor.

The vital signs for retirement functions that go into a dashboard should be approved by the board. Likewise, the range of "normal" performance, i.e., tolerances of variability in vital signs, also should be approved by the board. This is often an iterative process with some trial and error expected. A critical component of exception-based reporting is the independent verification of the reliability of the reports so that a board can rely on the data presented. Exception reports highlight when limits are being approached or exceeded.

Given that many boards use a red/yellow/green "stoplight" type of report, independent verification is needed to address the "how do we know that green is really green" issue. Management is unlikely to report something as a problem or potential problem (red/yellow) unless it really is a problem. There is risk, however, that green is not really green. Few things can destroy trust faster than finding out that the controls you were counting on are not reliable. This is why it is critical to verify that "green is really green".

Exception-based reporting has the benefits of ensuring vital, timely data is presented to decision-makers (enterprise-wide and enterprise-deep), reduces discretion and bias in what is reported, and has pre-established thresholds that require escalation if breached. These benefits are significantly enhanced when the process is automated as PSERS plans to do with its investment book of record (IBOR) which will directly populate many of the investment vital signs.

Automation of exception-reporting also:

- Improves timely identification of exposure to risk;
- Enforces leading practices and procedures;
- Reduces human error;
- Requires consistent and detailed information to support exception reports and decision making; and
- Reduces reliance on staff identifying and escalating exceptions.

Effective Board Oversight

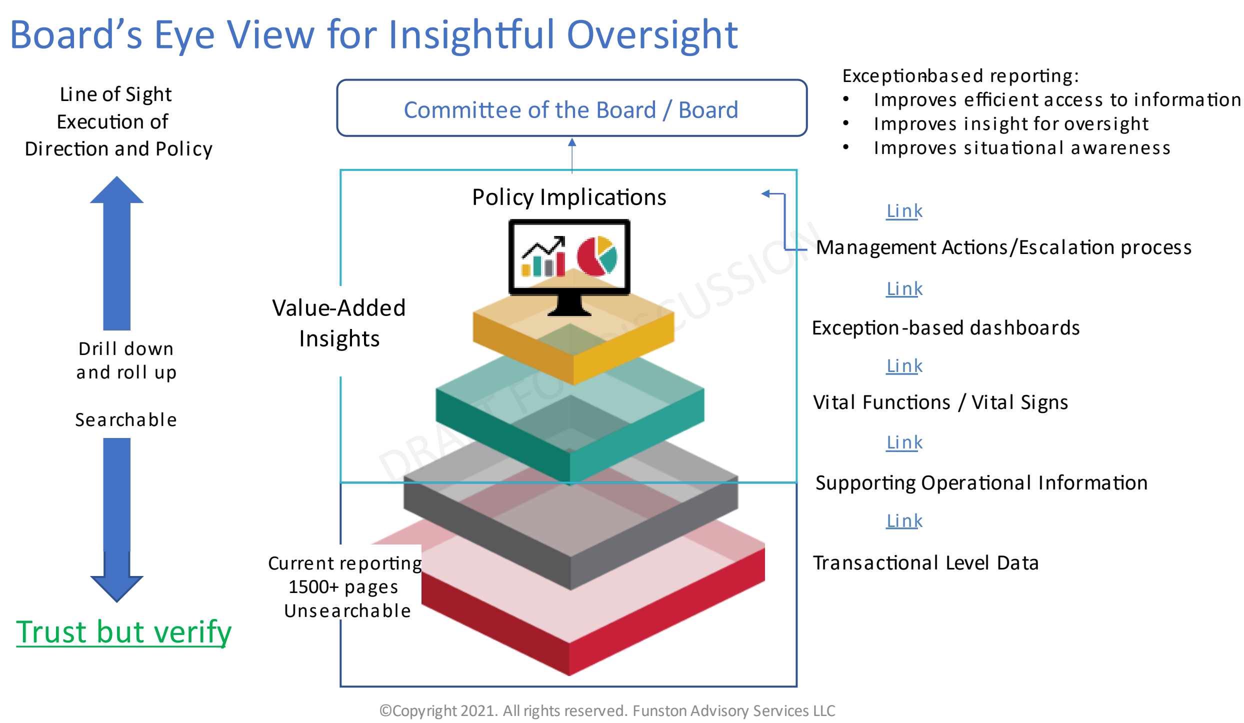
Effective oversight by a board and its committees requires line of sight and insight through clear and transparent communications. Leading practice includes:

1. Oversight of each vital function and its vital signs is assigned to a specific committee of the board.
    - Vital retirement functions include, for example, asset management, benefits delivery, financial management and administration.
2. Vital signs for vital functions are recommended by relevant committees for board approval (or adopted by the board as a part of a strategic planning process, such as the strategic asset allocation).
    - Vital signs include, for example, asset allocation ranges, actual vs. required contribution rates.

3. Risk tolerances (acceptable vs. unacceptable variability) are clearly defined and approved by the respective committee and the board in advance.
4. Oversight reporting is exception-based i.e., performance is as expected unless otherwise notified.
5. Exceptions require root cause analysis, actions taken or to be taken by management and identification of policy implications if variance continues/increases.
6. Reliability of management's reports is independently verified.
7. Responsibilities and accountabilities are clear for the board, its committees, staff and consultants/ advisors.

As a result, the board and its committees should have needed line of sight and insights for effective oversight as shown in Figure 2.1 below. The goal is to increase insights for trustees and streamline accessibility to underlying information.

Figure 2.1 A Board's Eye View



Each power reserved requires a different type of board involvement and a different type of reporting and access to information. This is discussed more in the following section on the board portal.

In the case of oversight, there are four primary board roles:

First, the board must oversee that board approved and delegated directions are executed within policy across all vital retirement functions (not just investment). Of course, the direction and policy need to be clear and consistent.

Second, the board should oversee that actual performance is consistent with expectations, i.e., within a range of acceptability, within the tolerance band approved in advance by the board.

Third, the board should gain insight into the policy implications of unwanted or unexpected performance variability and system's response options.

- The board should clearly understand the implications of unwanted or unexpected performance variability in terms of vital signs such as funded ratio, contributions, investments, benefits, and expenses.
- Rarely do actual results exactly match expectations, so a key first step is to define what is expected and then define how much variability is acceptable. The board should approve the range of acceptable variability or tolerance.
- Variances may be over or under-performance although most people are concerned about under-performance especially when it comes to investments. Even when results are much better than expected, it is important to understand why. What can be learned? Can the success be repeated? If so, how.
- However, sometimes the results can seem to be too good to be true. It can be very worthwhile understanding why the over-performance occurred or if the actual result was unexpectedly close to the expected outcome.
- Once "unwanted" or "unexpected" variability has been identified- What is the range of options available to the system? What is the least that can be done? What is the most the system could do?

Fourth, the board should be reasonably assured and independently reassured there are capable people, processes, systems and resources in place to achieve the expected performance and manage related risks. In other words, trust but verify.

- The board should be reasonably but not absolutely assured by executives that there are capable people, processes, systems, and resources in place or be promptly informed there are issues that require correction and where board direction and policy setting involvement is required.
- An important part of prudent delegation is to ensure there are sufficient resources to carry out the agreed-upon direction. This has implications for the board's autonomy to allocate resources and is discussed further in Part B. Powers Reserved for Others.
- The board can and should also retain independent consultants/advisors and seek independent reassurance about the reliability of management's reports. These include internal audit and compliance and externally, the financial auditors, investment consultants, consulting actuaries, fiduciary counsel and other third party "experts".

- Such assurance and independent reassurance are only prudent.

In Figure 2.1, assume there are four levels of detail starting with the lowest level of detail first. The lowest levels of detail are typically at the transactional and the operation levels. Although the use of board portals has become more prevalent, their functionality lags considerably. This is discussed further in Section 2.3.

The purpose of establishing what we call a "Board's Eye View" is to enhance trustee access to underlying data while providing top-down value-added insights. Executive summaries can be linked to supporting operational information and reports which should show data in time-series for trends. Any trustee should be able to navigate up and down the levels.

Reds and Yellows on the dashboard should be linked to executive summaries of the policy implications of the variance and management's actions taken and proposed actions and any needed board directions. The highest level is a summary dashboard for the vital function or even all vital functions together, e.g., investment, benefits delivery, administration as described earlier. See Exhibit 2.1 for Example PSERS Specific and Other System's Dashboards.

It may make sense to start with a dashboard for each committee of the board reflecting their specific area of oversight responsibility. This approach will enable more ready and individualized access to information as well as the insights to be gained from maintaining a broader, longer term perspective. Again, trust but verify.

The findings, conclusions and recommendations to improve independent verification are discussed under "Verify then Trust" in Section 3 which follows.

Peer Comparisons on Board Reporting

In our 2018 benchmark survey,[8] only 30% of systems stated they had an enterprise-wide reporting system. The board packages ranged between a low of 100 pages and a high of almost 2000. When it comes to board reporting, leading practices include:

- Hyperlinks from board packages to prior decisions, back-up presentations and supporting details and related educational materials;
- An enterprise-wide reporting system to support board reporting; and,
- Reporting on operations on an exception basis.

Prevailing practices include the use of standard templates for board decision items which include an executive summary, background and statement of issues and recommendations. PSERS' responses are highlighted in green.

Figure 2.2 Enterprise-wide Reporting at Peers

Do you have an enterprise-wide performance reporting system to support reporting to the Board?	Number of Responses (10)
Yes, our enterprise performance reporting system includes all departments	3
Yes, but it does not include the entire organization	3
No, we do not have an enterprise performance reporting system	3
Write-in: We report performance in a number of ways e.g., strategic planning, investment, etc.	1

Figure 2.3 Agenda and Presentation Size

Board and Committee Agenda and Presentation Size

On average, approximately what percentage of reports address the various powers reserved.	B	C	D	E	F	G	H	I	J	High	Low	Med
Full Board:												
Average Total Number of Agenda Items	30	23	20	6	11	10	10	19	46	46	6	19
Average Total Number of Pages	500	163	100	302	110	100	150	298	951	951	100	163
Pages of Presentations from Staff	25	19	50	139	99	50	110	107	85	139	19	85
Pages of Materials from Outside Presenters	150	17	25	18	11	10	40	91	198	198	10	25
Pages of Back-Up Detail	325	0	25	57	0	40	0	100	581	581	0	40
Committees:												
Average Total Number of Agenda Items	20	11	5	3	11	8	4	6	44	44	3	8
Average Total Number of Pages	350	88	1000	28	40	140	200	57	917	1000	28	140
Pages of Presentations from Staff	70	12	500	28	40	20	120	27	118	500	12	40
Pages of Materials from Outside Presenters	150	14	250	0	0	100	80	0	6	250	0	14
Pages of Back-Up Detail	130	0	250	0	0	20	0	30	674	674	0	20

Figure 2.4 Exception Reporting

Do you generally report on operations on an "exception" basis rather than full reporting on "normal" operations?	Number of Responses (9)
Yes	1
No	4
Other	4
Write-in: We do both - exceptions get more attention but ops activities are routinely reported on	
Write-in: Reports are included in the Committee and Board packets, but only certain items are addressed at the meetings.	
Write-in: Some of each	
Write-in: We are in our first year of using an EPM system and we report quarterly	

Figure 2.5 Tolerances / Limits

For which types of reporting do you apply tolerance or trigger limits for performance reporting? Please check all that apply.	Number of Responses (7)
Financial performance versus budget	6
Investment manager performance versus benchmark	6
Member services performance versus targets	6
Employer services performance versus targets	4
Cybersecurity events versus acceptable levels	5
Open staff positions or average time to fill open positions	2
Write-in: asset allocation targets and ranges	1
Write-in: Audit items	1
Write-in: Risk items	1
Write-in: There are approximately 45 different operational areas as well as KPI's which we report to the board on a quarterly basis, exception reporting for the Strategic items	1

Findings and Conclusions

The PSERS' Self-Assessment Survey revealed that the PSERB was least satisfied with its Oversight responsibilities and ranked it as one of the three highest priorities for improvement. Almost all survey respondents agreed there is data overload. A number expressed concern that the volume of information makes it difficult to assess the quality of the information. Currently, there is no systematic reporting of enterprise performance and risk information.

Concerns expressed by PSERS' trustees about reporting and oversight can be summarized as data rich but insight poor:

- The reporting to the PSERB of key financial and investment information is often confusing and disorganized and raises questions about their logic and their accuracy.
- The performance expectations are generally not approved by the PSERB (prominent exceptions are asset class returns and volatilities, and target allocations which are approved as part of the asset allocation).
- Tolerances for acceptable variability in vital signs between actual and expected have not been approved by the PSERB for vital retirement functions (although rebalancing ranges have been approved}.
- Committee requests for granular detail due to concerns about strategy can result in information overload at the committee level.
- PSERB oversight of performance and risk needs immediate improvement through better and more consistent use of dashboards / key performance indicators (KPIs).

There appear to be four major reasons for PSERS trustees' dissatisfaction with their oversight:

First, the volume of data presented to the PSERB for their approval, for direction setting, or just for information is overwhelming. The PSERB is overloaded with data and trustees complain materials are often received late.

To avoid missing something important, some trustees have asked for more and more detail, which gets added to an already large amount of material. The staff, desiring to be responsive, adds more information at the transactional or operational level. But this can actually create opacity, not transparency, as the big picture gets fractionalized into a morass of detail. Over time, increasing detail can lead to a patchwork of reports that just keep getting bigger.

Going digital has not helped. In fact, it has probably made things worse. The PSERB receives an average of close to 1500 pages of material for each meeting. It is an outlier compared to its peers. Even if they are electronic pages, how can anyone read it all, let alone make sense of it? Leo Tolstoy's War and Peace was ***only*** 1225 pages and had 580 main characters. Board books might contain as many acronyms as Tolstoy's characters.

One of the keys to effective oversight is situational awareness (knowing what's going on around you). This will be discussed further in a just a moment. But it is hard to be situationally aware when inundated with large volumes of rapidly changing data amidst high uncertainty.

Important signals may be lost in all the background noise. Executives and board consultants appear to be trying to be transparent and responsive to trustee requests for supporting information. But transparency can be overwhelming unless data is organized and presented well. There are better ways to achieve transparency than just being buried under mountains of data.

Second, trustees differ in their appetite for detail and their level of preparation for a PSERB or committee meeting.

Some Trustees want a lot of detail while others are satisfied with keeping things at a high level and receiving reports on an exception basis. When it comes to trustee preparation, perhaps it is not surprising that some Trustees are unable to plow through all the volumes of material and often wait instead for the executives or consultants to "walk them through the presentation".

Those with designees can delegate this review but this can result in an uneven trustee understanding of the issues. A lot of information is often provided as back up "just in case" a question is asked. This is not a good use of anyone's time. The PSERS executive team needs to find ways to quickly provide a high-level view of performance and enable increasing drill down as differentially required by the various trustees.

Third, the information is not well presented.

Individuals have different learning styles and needs. Some like text, some like charts, some like tables, some like digital, some like print, some like to have someone walk them through it. There are better ways to present, aggregate and disaggregate information so that it is more easily understood and where trustees can choose how they want to see the information. Also, it is important to identify when performance is "normal" or "expected" and when it is approaching or exceeds an established limit. Color coding and time series (both charts and numerical) can help.

Many executives think and present information to their boards iteratively i.e., a sequence of forward steps leading to a result. Board information should be presented with a summary before being presented with all the supporting details i.e., starting with the result and working backward as needed to understand it. There should also be the ability for Trustees to drill down to greater levels of detail as needed. This is discussed further in Section 2.2 Board Portal.

Fourth, PSERB materials are not well separated in relation to the authority or power the PSERB is being asked to exercise, e.g., to set direction and policy and prudently delegate, or to approve key decisions or to oversee delegated performance and risk.

Recommendation

2.1 Adopt exception reporting.

Implementation Guidance

2.1.1 Broaden oversight to include all vital retirement functions (current focus is overwhelmingly on investments).

2.1.2 The PSERB should approve vital signs and tolerances for variances between actual and expected performance for all vital retirement functions.

2.1.3 The PSERB should require exception reporting (with appropriate escalation responses) using dashboards for all vital functions (See Exhibit 2.1).

2.1.4 At PSERB and Committee meetings, Staff and PSERB consultants/s should only present highlights requiring PSERB attention based on exception reporting principles.

2.1.5 Focus on accountability for performance and identify the executive responsible for each key metric.

2.1.6 Identify the independent verification source for each key metric (see also Independent Verification).

2.1.7 Conduct a biennial review of all reports for relevance and utility and streamline or eliminate, as appropriate.

2.2 Oversight of performance and risk management

Overview

The Failure of ERM

As part of our scope, FAS was asked to look at PSERS' approach to the oversight of risk management. Experience has shown that conventional approaches to risk management that are typically based on subjective assessments of impact and likelihood often fail. There are a variety of reasons for this and underpin the basis of our recommendations for PSERS.

The COSO Enterprise Risk Management (ERM) framework was first introduced in 2004.

> "… a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives."

It was intended to provide a cross-functional view of the risks facing the entire enterprise and not just individual silos. Unfortunately, with few exceptions, ERM has failed according to a 2018 State of Risk Oversight report from North Carolina State University's Poole College of Management. Based on survey responses from 474 business executives spanning a number of industries, types and sizes of organizations:

- Most respondents (60%) believed the volume and complexity of risks is increasing extensively over time.
- Two-thirds (65%) of organizations indicated they have recently experienced an operational surprise due to a risk they did not adequately anticipate.
- Just 31% said they have a complete ERM process in place.
- A mere 23% described their risk management as "mature" or "robust."
- Fewer than 20% of executives thought that their risk management processes provide important strategic advantages.
- Just 26% said that their board substantively and formally reviewed top risk exposures when discussing the organization's strategic plans.

In public retirement systems, FAS is unaware of any successful ERM programs despite years of effort. Successful means "of practical use to management or the board" and is differentiated to fit the facts and circumstances relevant to that particular system.

Why has ERM failed?

There are multiple causes for the failure of ERM to be embraced as a useful management tool:

- Typically, risk assessments are conducted just once a year. As a result, risk assessments are not dynamic, whereas the operating environment, markets and regulatory context are rapidly changing.
- Voluminous guidance, jargon and complexity cause confusion and delay.
- Focus on almost infinite possible events as causes means that the linkage of risks to objectives has been lost.
- Separate identification (risk universes), assessment, analysis, treatment and reporting of risk apart from performance.
- Perceived precision contributes to over-confidence/myopia, e.g., top ten focus.
- Subjective and inevitably biased nature of most risk assessments (over/under estimation of exposure and remediation).
- Fail to take into account velocity / duration of risks or interactions among risks (e.g., contagions).
- Assumes risks are uncorrelated yet, in fact, when things get really bad, everything seems correlated (which unfortunately is when you most need effective risk management).

The Meaning of Risk

Risk is a term that is widely-used yet commonly misunderstood. FAS defines risk as the <u>potential</u> for an <u>unacceptable</u> difference between actual and expected <u>performance</u> regardless of cause.

This is consistent with the definitions of operational risk used by investors and financial institutions world-wide. It also provides a very practical basis for performance and risk management and oversight and is closely related to quality management.[9]

Risk is also more than just standard deviation which is the amount of variation. The risk is whether you get the standard deviation you expected. The expected performance is the objective, outcome, or target. It is what you hope to achieve and what will vary based on the nature of your enterprise. The risk is that you do not achieve it.

Strategic management of risk lies in choosing the right target and the right metric, and then having the right escalation procedures when things go wrong. For example, before COVID-19, many companies and even countries chose to outsource critical capabilities and supplies. COVID-19 has since exposed many supply chain vulnerabilities for essentials as varied as personal protective equipment, ventilators, computer chips and even ketchup.

The original objective of those companies was to reduce costs by becoming “lean” and “just in time”, i.e., do not hold inventory until just before you need it. But that objective carried potentially significant risks which were either not recognized or were dismissed. Risks are not only associated with the failure to achieve an objective but also with the objective itself and whether the objective is the “right” objective.

In many cases, the world saw "lean" turn into "anorexic". A case in point is the auto industry's dependence on $2 chips that shut down production of $80,000 vehicles and resulted in tens of thousands of employee furloughs.[10] The focus on lean should have been balanced with a pragmatic view on the extreme cost of idled automotive production lines. Now companies are holding additional inventory "just in case."

Risk, therefore, is the failure to achieve the expected performance, i.e., it is the effect and not its causes. Below are some investment performance risk examples:

Figure 2.6 Example Risk Definitions

Risk	Definition
Market risk	Market volatility. The risk is that you expect the market to behave in certain way and it does not.
Liquidity risk	The inability to convert assets to cash in a desired timeframe or without material frictional costs. The risk is that you expect the assets to be liquid and they are not.
Concentration risk	When price movements correlate among assets. The risk is that you expect to have a diversified portfolio, but it is not.
Credit / Default risk	Failure to be paid for an obligation. The risk is that you are promised a certain return / repayment, but the promise is not kept
Inflation risk	Inflation undermines the real value of an asset. The risk is that you expect inflation within a certain range, but it is not.
Mortality risk	The inability to know to what age an individual or a cohort of individuals will live, so benefit streams and the required assets to pay them are uncertain. The risk is that you expect to pay benefits for a certain time period, but you do not – you must pay them for considerably less or more.

The biggest risk for a retirement system is that long-term assets are insufficient to meet long-term liabilities. The chart below shows expected performance, actual performance and potential causes, and provides an opportunity for the evaluation of significance and controllability.

Figure 2.7 Example Risk and Causes of Inability to meet pension obligations

Expected Performance	Actual Performance (Risk)	Possible Causes	Significance / Controllability H/M/L	
C= Contributions of X $ based on ARC	Contributions less than expected • Employers • Employees	• ARC not made • ARC under-estimated • Declining active members / withdrawals • Short-termism (over-react in short-term/under-react long-term)		
I = Investment returns Y%	Investment returns less than expected	• Expected rate of return unrealistic • Asset allocation underperforms • Ineffective execution • Higher risks to achieve higher returns result in higher losses • Illiquidity forces sale of assets at distressed prices		
B = Benefits (timely / accurate)	Benefits less / more than expected	• Retroactive increases • Inaccurate calculations • Payments not timely		
E = Expenses of X$	Expenses more than expected	• Inadequate budgeting • Unexpected expenses		
Reputation (known/admired)	Loss of reputation	• Failure to manage other aspects of performance • Unjustified reliance on controls / failure to verify reliability of reports		
Compliance with laws/policies	Non-compliance	• Lack of training • Unclear policies / procedures / lack of timely independent reviews • Lack of proper tone at the top • Lack of resources / wrong resources		
Operations metrics e.g., Timely / accurate payments, call abandonment, response to service requests	Unwanted variability	See Root Causes: • Governance • People / Organization / Culture • Policy / Processes • Systems / Information • External factors		

Key oversight questions for trustees

There may be multiple causes some of which are within the control of the system and others which are not. Five key oversight questions for trustees are:

1. What's vitally important?
2. What's changed?
3. What are the most significant causes?
4. Which of these can the board do something about?
5. Where should we allocate resources?

The main oversight concern for boards should be whether the approved direction is being executed within policy. If there is an unacceptable difference between actual and expected performance, i.e., a risk occurrence, then what are the policy implications if the variance continues or increases?

The system should make regular use tools such as Root Cause Analysis to determine the most important causes within the control of the system and to anticipate potential failures using Failure Modes and Effects Analysis (see Exhibits 2.2.1 and 2.2.2).

Risk Appetite and Risk Tolerance

The determination of risk appetite and risk tolerances are critical responsibilities of the board. Risk appetite is the amount and type of risk an organization is willing to seek or accept. This depends on the nature of the enterprise. The risks associated with a public retirement system are different from those of a public company and are different from, for example, mountain climbing or Formula 1 racing. Risk appetite also depends on the type of performance / risk such as operations, reputation or investment. Typically, risk appetite is an aggregated amount and changes over time and with circumstances.

Risk tolerance, on the other hand, usually applies to a specific performance objective or target and sets limits on how much viability is acceptable. The determination of how much variability is acceptable is a decision for the board with respect to vital signs for vital retirement functions.

Upper and lower control limits are established through an incremental and iterative process and all key tolerances should be approved by the board. Recall that governance is a system of direction and control. To be in control is to operate within agreed upon limits. By careful attention to adherence to board-approved tolerances, a board can better exercise its responsibilities for oversight of control.

Enterprise Performance and Risk Management (EPRM) process

Enterprise Performance and Risk Management is a systematic approach for identifying and reporting of key performance and risk indicators (vital signs) for each vital retirement function. It is dynamic and continuously updated to describe whether actual performance is within an acceptable range compared to expected performance. It is designed to address operational, i.e., performance, risk.

The benefits of EPRM include:

1. Clear accountability for the effective management of performance and risk at the executive and committee levels with clear management ownership. There is no stand-alone ERM function.
2. Built into every committee report. Performance and risk are integrated using common management language and processes. Time series (trend) reports address velocity and interactions.
3. Dashboards using board approved critical metrics (vital functions/vital signs/tolerances) will require independent verification of reliability.
4. EPRM is simple, practical, effective and efficient and uses minimal jargon.
5. Provides a tool for use by the full board, all committees and all staff with high visibility / transparency to all stakeholders.
6. Faster performance-based feedback improves performance.
7. Reports are dynamic (updated as often as needed –preferably automated reporting linked to, for example, the Investment Book of Record IBOR).
8. Tolerances are easier to define based on performance (upper and lower control limits).

Findings and Conclusions

PSERS has done and continues to do an excellent job of maintaining business operations throughout COVID-19 and has put in place additional tools to enable remote work. PSERS has established elements of risk appetite in its Investment Policy Statement but it has not developed a consistent enterprise-wide definition of risk.

The PSERB has oversight responsibility for enterprise performance and risk. However, other than for certain investment metrics there is a lack of PSERB-defined risk tolerances and triggers for exception reporting and escalation. There is a general lack of enterprise risk policies including the types of risks to be addressed.

Executives and staff risk management responsibilities are not clearly defined. PSERS does not systematically use key performance and key risk indicators. There are few clearly defined risk escalation policies and criteria. Currently, PSERS does not have a systematic approach to risk identification and assessment. Subjective assessments of likelihood and impact, although prevailing practice among peers, should be avoided as biased and misleading and often result in over or under-estimations of exposure.

System and Organization Controls (SOC) audits are examinations of external service organizations. SOC Type 1 audits focus on the processes and controls that a service organization performs that are likely to be relevant to PSERS own internal control over financial reporting (ICFR). SOC Type 1 audits should be performed and provided by any external entity that provides information that forms the basis of PSERS' financial statements and related controls.

PSERS has annually obtained SOC Type 1 reports from key financial reporting vendors for the Define Benefit plan such as BNY Mellon and STP, Voya and T. Rowe Price for the Defined Contribution plan and Trustmark and Optum for Health Options Plan (HOP).

The organization does not currently conduct control environment surveys, i.e., surveys of staff attitudes toward internal controls. Control environment surveys can be useful tools to identify potential problems in employee attitudes and perceptions of risk and internal control (see Exhibit 3.5).

PSERS has comprehensive business continuity plans and a comprehensive incident management framework or system. An incident is an event that could lead to loss of, or disruption to, an organization's operations, services, or functions.

PSERS does not currently provide risk training to staff. The new Act 128 of 2020 will require risk training for the PSERB. PSERS also does not have a formalized ERM program in place. PSERS also does not systematically use a variety of performance and risk management tools such as Root Cause Analysis (RCA) or Failure Modes and Effects Analysis (FMEA) (see Exhibit 2.2). The use of such tools is much more prevalent in the corporate environment but are no less relevant for public retirement systems.

In recent years, PSERS has engaged CEM Benchmarking annually to provide pension administration benchmarking. The results are routinely shared with the relevant committees and/or full Board.

PSERS also has engaged CEM Benchmarking to obtain comparisons on investment performance and costs, with the most recent report completed in 2019. However, these results have not been shared with the Investment Committee. This information would be helpful to the PSERB and its Committees in exercising their investment oversight responsibilities.

There is a need for PSERS to perform at least three types of risk assessment:

1. Strategic risks and opportunities should be addressed as part of the strategic plan to identify emerging threats and potential opportunities.

2. Operational risks should be addressed as part of the integrated enterprise performance and risk management (EPRM) process described above that identifies vital signs for vital retirement functions and includes PSERB approved tolerances for variability. Vital signs for vital functions serve the same purpose of identifying critically important, i.e., high risk performance areas.

3. Critical dependencies and maximum allowable recovery times (how long PSERS can go without something) should be assessed as part of a comprehensive business continuity analysis. This would identify PSERS' critical dependencies such as key people, processes, systems, facilities, suppliers and beneficiaries and other stakeholders. Backup and recovery plans should then be developed and tested to ensure that PSERS can recover within the specified time. This should include defining Recovery Time Objectives (RTOs) for operations and Recovery Point Objectives (RPOs) for data.

Recommendation

2.2 Adopt an Enterprise Performance and Risk Management (EPRM) process for operational risk.

Implementation Guidance

2.2.1 The EPRM process should be overseen by the Audit, Compliance and Risk Committee and by each committee for each of the functions within its respective mandate.

2.2.2 Oversight of each vital function and its vital signs should be assigned to a specific committee of the PSERB.

2.2.3 Vital signs for vital functions should be recommended by relevant committees for PSERB approval.

2.2.4 Risk tolerances (acceptable vs. unacceptable variability) should be clearly defined and approved by the respective committee and the PSERB in advance.

2.2.5 Oversight reporting should be exception-based i.e., as expected or normal, unless otherwise notified.

2.2.6 Exceptions should require root cause analysis, actions taken or to be taken by management and identification of policy implications if the variance continues/increases.

2.2.7 The reliability of management's reports should be independently verified.

2.2.8 Responsibilities and accountabilities should be clear for the PSERB, its committees, staff and consultants/s.

2.2.9 Incorporate the identification and management of strategic threats and opportunities into the PSERS strategic plan.

2.2.10 Identify PSERS' critical dependencies and maximum allowable recovery times. Develop plans to test and ensure recovery capabilities (RTOs and RPOs) are within defined limits.

2.2.11 Adopt the definition of risk as the <u>potential</u> for an <u>unacceptable</u> difference between actual and expected <u>performance</u> regardless of cause.

2.2.12 Treat performance and risk as inseparable and imbed in board reporting using exception reporting dashboards.

2.2.13 PSERS should perform three types of risk assessment (strategic, operational and business continuity).

2.2.14 Make more systematic use of performance and risk management tools such as Root Cause Analysis and Failure Modes and Effects Analysis (see Exhibit 2.2).

2.2.15 Assign each committee of the PSERB oversight responsibility for performance and risk, the review and approval of vital signs and tolerances for vital functions within the committee's scope.

2.2.16 Assign the Audit, Compliance and Risk Committee (ACR) responsibility for oversight of the overall utilization of the EPRM process as a tool for the PSERB and the staff.

2.2.17 Communicate the results of the CEM benchmarking surveys to the relevant committees.

2.2.18 Conduct Control Environment Surveys to assess staff attitudes toward internal control.

2.2.19 Establish a comprehensive Incident Management System including an executive Incident Management Team comprised of a cross-functional group of executives representing all major PSERS functions. There should be identified alternates for each lead role on the team.

2.2.20 Train all executives and staff re: the above and include the approach to enterprise performance and risk management as part of the orientation for new trustees/designees.

2.1.21 Assign the position of Deputy Executive Director for Administration to lead the EPRM process – this position is to support management and will not be independent. The DED should have dotted line relationship to the Audit Compliance and Risk Committee. The Chief Information Security Officer should have direct (solid line) reporting to DED position and Investment Compliance should have indirect (dotted line) reporting to this position (see Exhibit 1.7 Enterprise Performance and Risk Management Reporting Chart).

2.3 Cyber security and information security

Overview and Peer Comparisons

Public retirement systems, like most public agencies, are subject to large numbers of attempted cybersecurity threats on a daily basis. It is important to have effective cybersecurity controls to detect and prevent security breaches and to reduce or counteract security risks from many sources. It is also critical to educate employees regarding different types of threats and how they should be anticipated and handled. It is a common practice to conduct annual staff and board training on the importance of cybersecurity and common risks they may encounter.

Most large public retirement systems have a Chief Technology Officer and a Chief Information Security Officer (CISO), similar to PSERS. The CISO typically develops a cybersecurity strategy that includes assessments of controls on information and utilization of third parties to run penetration tests periodically to identify potential vulnerabilities.

Leading practice in public retirement systems is for the board to receive regular reports from staff regarding the cybersecurity program. For example, Colorado PERA specifies semi-annual reports to the board that provide "updates regarding cybersecurity including network controls, vendor management, incident response, and insurance coverage." Other examples include similar reports on a quarterly basis.

In the private sector, most public company boards have a committee that has responsibility for overseeing cybersecurity and information security risks, most typically the Audit Committee. For example, the General Electric Audit Committee charter includes, "The committee's role shall include oversight as it relates to enterprise risk management and cybersecurity risk." Sometimes a different board committee oversees cybersecurity, and in a few cases, boards have created special cybersecurity committees, particularly those with strategic interests in information technology.

Leading cybersecurity practices for an organization such as PSERS would include: having a cyber incident response plan; predetermined provisions for dealing with ransomware; contingency planning for extended downtime and data loss in the business continuity plan; and plans for dealing with privacy violations if PII were stolen.

On April 14, 2021, the U.S. Department of Labor's Employee Benefits Security Administration (EBSA) issued much anticipated cybersecurity guidance for employee retirement plans.[11] Some of the EBSA's best practices include:

- Maintain a formal, well documented cybersecurity program and conduct prudent annual risk assessments.
- Implement a reliable annual third-party audit of security controls, follow strong access control procedures.
- Ensure that any assets or data stored in a cloud or managed by a third-party service provider are subject to appropriate security reviews and independent security assessments.
- Conduct periodic cybersecurity awareness training.
- Have an effective business resiliency program addressing business continuity, disaster recovery, and incident response and encrypt sensitive data, stored and in transit.

Findings and Conclusions

The PSERS Information Security Office has security controls and a plan in place. Third-party independent security assessments and vulnerability testing are conducted periodically. The Office has been implementing additional provisions in contracts with cloud-based hosting providers in consideration of recent significant security breaches at other public institutions. Although these provisions have been inconsistent in the past, recent recommendations have been made by the Deputy Executive Director for Administration to improve vendor and contract management and oversight by the PSERB. In addition to the internal PSERS Information Technology staff, the Commonwealth Enterprise Information Security Officer (EISO) provides assistance and oversight in the area of cybersecurity.

In response to well-publicized national security breaches, the Chief Information Officer and the CISO have provided briefings to the PSERB on an ad hoc basis to report on any potential PSERS impacts and keep the PSERB informed. The most recent report was in January 2021.

PSERS conducted a disaster recovery exercise in March 2021. The goal for the exercise was to restore critical PSERS systems and applications at the Unisys PACS data center, in an isolated segment of the network. Restoration was performed from system backups. After systems and IT infrastructure were successfully restored, staff performed application functional testing to ensure that restored services and applications functioned as expected. For this exercise, the Restore Time Objective (RTO) target was 96 hours to have systems recovered. The actual recovery time for this DR exercise was just under 80 hours, including system recovery and functional testing.

In March 2021, the CISO also submitted a Cyber Security Program Strategy to the PSERB that describes, among other things, the National Institute of Standards and Technology (NIST) Cybersecurity Framework which he has proposed to adopt.

PSERS plans include:

- Modifying overall risk strategy to include cloud computing
- Enhancing threat and vulnerability management to detect, monitor, and mitigate threats
- Confirming security controls are in place
- Testing security controls by conducting recurring independent cyber security assessments of PSERS and third-party vendors/business partners
- Ensuring that PSERS and third-party vendors/business partners are following best practices
- Maintaining cybersecurity insurance
- Developing more robust security provisions in contracts
- Building upon relationships with security partners to further strengthen PSERS defenses
- Diversifying security consulting vendors to provide checks and balances

Plans to be reviewed should include, for example: the cyber incident response plan, provisions for dealing with ransomware, downtime and data loss and recovery in their business continuity plan, plan for privacy violations if PII were stolen. Although PSERS staff have done a good job of proactively keeping the PSERB appraised when cyber issues arise, no specific committee has been assigned formal oversight.

Recommendation

2.3 Assign oversight of cyber security and information security to a specific committee of the PSERB.

Implementation Guidance

2.3.1 The responsibility for the oversight of cybersecurity should be assigned to a specific committee of the PSERB. The Committee should be briefed on PSERS cybersecurity and information security plans and, as appropriate, make recommendations to the PSERB for approval.

2.3.2 The Committee should receive key performance and risk indicators which address cybersecurity and information security in its regular board books.

2.3.3 There should be more systematic improvements in vendor and contract management and oversight by the PSERB.

3. Independent verification and independence of the PSERB's consultants/advisors.

Scope

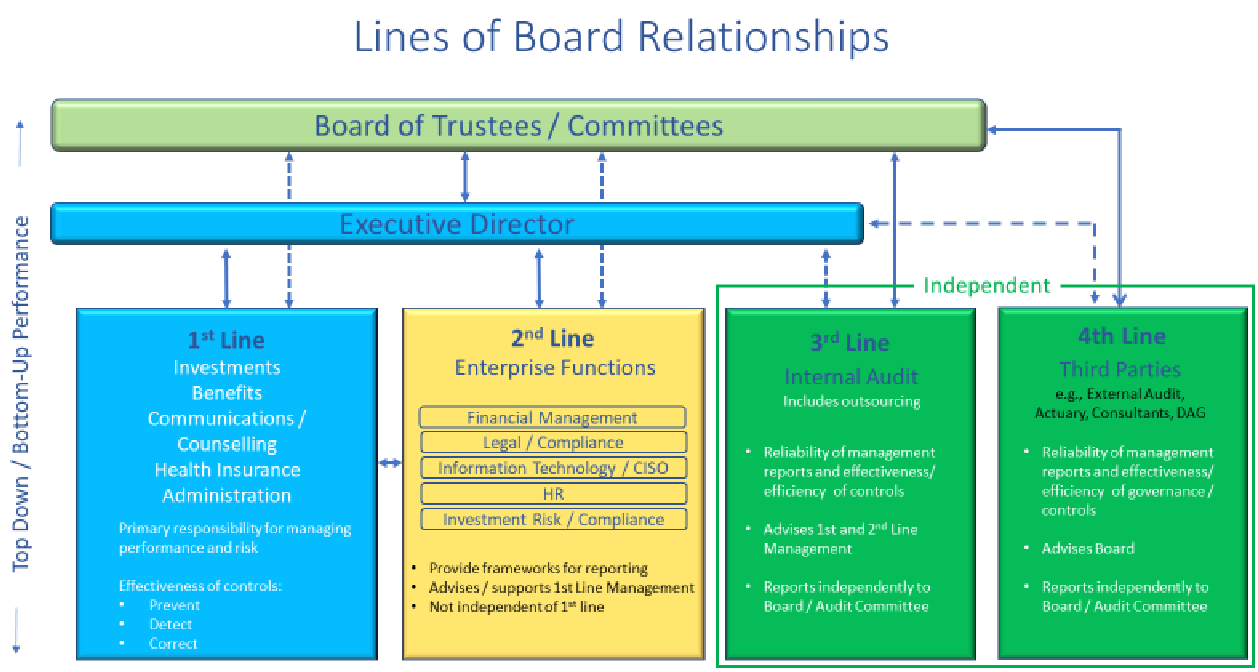
In this section, leading and prevailing practices regarding independent reassurance are discussed including:

3.1 Internal Audit and the lines of defense, including the role of 3rd parties
3.2 Audit and Compliance Committee
3.3 Investment risk and compliance
3.4 Overall compliance
3.5 External Advisors

3.1 Independent Verification / Internal Audit Capabilities

Overview

Recall the Four Lines of Board relationships shown in Figure1.5 below.



Third Line - Internal Audit

The third line is internal audit. Internal audit reports to the board and not to the executive director. Internal audit is independent of management. Fundamentally, the job is to independently assess and report to the board on the reliability of operating management's reports and the effectiveness of controls.

The Institute of Internal Auditors (IIA) defines Internal Auditing as: "An independent, objective assurance and consulting activity 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 risk management, control and governance processes." [12]

Internal Audit is not a compliance function. The Institute of Internal Auditors' (IIA) defines compliance as "adherence to policies, plans, procedures, laws, regulations, contracts, or other requirements.[13] "Compliance is a line management responsibility reporting ultimately to executive management."[14] However, Internal Audit does have a role in assessing the adequacy of compliance controls.

Assigning IA resources to perform compliance both compromises the integrity of the IA function (since compliance reports directly to management) and makes it more difficult for IA to determine if control systems are adequate to perform their tasks. Thus, compliance is a first and second-line responsibility not that of internal audit (3rd line).

Internal Audit must be independent of operating management to fulfill its functions. Typically, this means that the Chief Audit Officer (CAO) reports directly (solid line) to the board, usually through the Audit Committee. The Audit Committee should be responsible for hiring, evaluating ,compensating and planning for the succession of the CAO.

Because, the CAO is part of the organization, the incumbent needs to report administratively (dotted line) for vacation, benefits, training etc. Typically, the CAO reports administratively to the executive director or deputy executive director. Because even the administrative line of reporting might impair the independence of the CAO, the CAO should be annually required to certify that they have not been subject to undue influence.

The Fourth Line – Independent Consultants / Auditors / Third Parties

There is also a fourth line of relationships. This line includes the external auditors, the general investment consultant, the actuary and other consultants the board retains specifically to provide independent advice and verification. In addition, oversight may be exercised by the jurisdiction through such means as auditor general reviews. With the exception of those reviews commissioned by oversight bodies, these consultants/advisors or auditors have a solid line relationship to the board and a dotted line relationship to liaise with the senior executive.

There are three principal functions performed by the fourth line: first, to provide independent advice to the board on direction and policy; second, to support the board's oversight of performance and risk; and in some cases, to provide independent verification of the reliability of the reports received and issued by the board.

By virtue of their role, these consultants/advisors / auditors need to interact on a regular basis with executive management. However, it must be clear to all that the board is the client. This can be reinforced by ensuring the board (supported by staff) selects, evaluates and terminates these consultants/advisors / auditors again with the exception of those appointed to perform oversight functions by the jurisdiction.

Findings and Conclusions

The Department of the Auditor General (DAG)

The DAG performed a review of PSERS in 2006 and again in 2017 "to determine the status of the implementation of our prior audit findings and recommendations as presented in the audit report released in September 2006".

In 2017, the DAG reported:

> "During our prior audit (2006), we (DAG) 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."

E&Y December 2018

Based on their own review, E&Y found that:

> "Although the IAO's charter mandates a balance of internal audit, compliance and consulting type activities, approximately 90% of the IAO's time is spent on compliance-related activities and the coordination of audits, investigations and inquiries initiated by external entities.
>
> Given the current time allocation, the IAO is unable to provide the PSERS organization with compliance coverage for non-traditional investments, which comprise a significant portion of PSERS investment portfolio.
>
> Furthermore, the staffing constraints have prevented the IAO from:
>
> - Executing a comprehensive risk-based process audit approach
> - Executing audits over areas of emerging risk, such as cyber security
> - Providing ongoing professional education and training of its staff
>
> While appropriate safeguards have been put in place to maintain the IAO's independence and the effectiveness of the function, the IAO is currently performing certain compliance-related activities that should be performed by management.

Considering the observations above, E&Y recommended the following:

- "PSERS should augment the staffing model of the IAO in order to allow the function to fulfill its existing responsibilities, including the performance of activities more traditionally performed by Internal Audit functions, such as risk-based audits of PSERS' processes. This could be accomplished through a combination of hiring and engaging third party co-source organizations.
- PSERS should assess each of the existing compliance activities performed by the IAO and transfer primary responsibility to the business for any activities where the IAO is acting in a "first line of defense" capacity.
- PSERS should consider engaging a third-party provider to supplement the existing staffing model and competencies of the IAO, similar to practices of peer organizations and leading practice internal audit functions."[15]

The PSERB Chair appointed several new Audit and Compliance Committee members and a new Committee Chair in early 2020. Progress has been made on a number but not all of the DAG's and E&Y's recommendations since that time.

- A charter for the Internal Audit Office (IAO) was approved by the Audit and Compliance Committee in Dec. 2017 but has not been since reviewed although the charter requires it every two years.
- The Chief Audit Officer reports functionally to the Audit and Compliance Committee and Administratively to the Executive Director although the current organization charts do not reflect this.
- In June 2020, the majority of the investment operations compliance work was transitioned from Internal Audit to Investment Compliance.
- A new Chief Audit Officer was hired in January 2021.

PSERS submitted a response to the DAG in May 2017.[16] However, the 2017 DAG report identified that the Internal Audit function had been chronically under-staffed since 2006. Until January 2021, there were still only two internal auditors in place. The Executive Director offered several explanations for this situation:

1. Upon review of the AG report, following a competitive process, PSERS engaged E&Y specifically for the purpose of addressing, evaluating and helping to implement the recommendations. The E&Y engagement included meetings with staff and Trustees and presented an assessment of the existing structure and several possible models, both short-term and long-term, and was completed and presented to the Board in December 2018.

2. As PSERS was proceeding with the restructuring, the Head of Internal Audit left PSERS on June 22, 2019, with fairly short notice, which left two staff, one of whom was acting as the Interim Director. PSERS posted the vacancy immediately (June 17, 2019, through July 2, 2019) but received only 4 candidates, none of whom possessed sufficient qualifications (including a CPA). There then ensured a lengthy process to reclassify the position within the Commonwealth HR system in order to be able to attract qualified candidates. The reclassification was not approved until August 14, 2020. The time required to gain approval was part of the delay but competing priorities and COVID-19 considerations added to it.

3. Once reclassified, the posting for the CAO position ran from September 3-23, 2020, and generated many well-qualified candidates. Remote interviews and in-person second interviews were conducted. The candidate and offer had to then be approved by the Office of Administration, which authorized the offer January 4, 2021.

4. During this period, PSERS was also addressing other aspects of audit and compliance, including, as noted, the movement of investment compliance away from Internal Audit (lifting some of the workload) as well as the competitive procurement of the outsourced investment compliance contractor (Constellation).

This staffing shortage remains critical to the effective functioning of the IAO as of the writing of this report and needs to be addressed urgently. See Figure 3.1 below for our evaluation of the implementation of the DAG's 2017 recommendations pertaining to Internal Audit.

Figure 3.1 Status of 2017 DAG Internal Audit Recommendations

2017 DAG Recommendations	2021 Status FAS Findings
The DAG recommended that PSERS:	
1. Change the organizational structure of the internal audit function to promote independence and comply with the Institute of Internal Auditors standards.	Not Adopted
2. Develop an Internal Auditor Office Charter, defining its purpose, authority, and responsibilities, and have it approved by the Board. The charter should include:	Adopted in 2017 but now outdated
a. Defining the nature of the Internal Auditor Office's relationship to the Audit/Budget Committee, Board, and Executive Director.	Adopted
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.	Not adopted
c. Conducting risk assessments of PSERS' internal controls by the office on a recurring basis.	Not adopted but now required by Act 128 of 2020
d. Establishing an annual audit plan by the office to be reviewed and approved by the Audit/Budget Committee.	Adopted but almost exclusively compliance focused
3. Revise the Audit/Budget Committee responsibilities in the Bylaws to include:	
a. Ensuring the independence of the committee's internal audit process.	Adopted
b. Ensuring there are no unjustified restrictions or limitations placed on internal audit staff by the committee.	Adopted
c. Reviewing and approving the committee's annual audit plans.	Adopted
d. Reviewing the effectiveness of the committee's internal audit function, including its compliance with IIA Standards.	Not adopted
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.	Not adopted
The DAG recommends 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.	Budget requested 5/2019 and approved 6/2019, CAO employed 1/2021

Despite the DAG's recommendations, PSERS' Bylaws continue to describe the Audit and Compliance Committee charter as to "Ensure the Internal Audit Office performs compliance reviews with applicable laws, regulations, rules, board and management policies, directives and generally accepted business practices related to benefits administration, investments, finance, healthcare, information technology and communications."

Based on interviews with members of the Internal Audit group, few if any, internal audits were planned or conducted in the past four years. Even though staff resources were scarce, they were assigned to compliance functions. Moreover, while it was possible to outsource internal audits to compensate for the lack of staff, no internal audits were outsourced. Thus, much needed coverage just did not happen.

In 2020, after the transfer of Investment Compliance responsibilities to the CIO, Internal Audit remained focused almost exclusively on activities that were important, but were not internal audit, including, for example:

- coordinating with external audit;
- fraud waste and abuse follow-ups;
- compliance activities; and,
- a travel investigation that was primarily data gathering and not an examination of policies or forming any opinions about controls.

In addition, the 2018 E&Y study also identified concerns about the lack of compliance coverage for non-traditional investments. Despite the near absence of internal audits contained in the Internal Audit and Compliance Annual Plans, and despite recommendations by both the DAG in 2017 and E&Y in 2018, the Internal Audit plans between 2018-2020 were approved by the Audit and Compliance Committee.

Based on the Committee Minutes for the same period, there also appears not to have been any discussion of the plans despite recommendations from the DAG that there be such discussion. However, the current Committee Chair has stated that the need for additional staffing was discussed at every meeting since early 2020 and the Committee gave its approval to both hire internal audit staff and to utilize outsourced resources as necessary. It appears that the minutes did not include these details from the meeting deliberations.

Based on our review of the Audit Committee minutes, throughout 2018 and until March 2019, the Audit Committee received reports on the status of the implementation of the Auditor General's recommendations. The minutes from May 2018, May 2019 and June 2020, show the Audit Committee approved the Audit and Compliance Plans for the upcoming years. Again, the minutes appear to be very high level and do not include all discussion points and actions taken.

When Investment Compliance was still part of the IAO, private market compliance was planned and budgeted for in the IAO and an RFP was completed to hire Constellation. Otherwise, IAO did not make use of outsourcing to improve audit coverage generally or for specialty audits such as investments. Outsourcing was still not included in the proposed 2021 plan although the Audit and Compliance Committee Chair states that the Committee has approved the use of outsourced IA resources and the CAO states PSERS management has indicated it is receptive to such inclusion.

IAO is now beginning to partner with other functions within PSERS, such as IT, to include processes such as capital calls and capital allocation. According to the Audit and Compliance Committee Chair, in every meeting, questions related to staffing and outsourcing are asked.

In sum, the DAG made 12 recommendations of which 7 were adopted and five were not. One of the adopted ones is now out of date and another, while technically adopted, focused IA on compliance rather than control effectiveness. The recommendations by E&Y to outsource were not adopted. Since her hire, the new CAO has introduced a number of needed initiatives to improve the IAO. See Exhibit 3.1 "Initiatives Undertaken in 2021 by the Chief Audit Officer". The CAO has also identified some further improvement opportunities including:

- Finding the right mix in outsourcing/co-sourcing to complement IAO. Increase collaboration with external auditor to increase audit coverage/reduce audit hours.
- In the future, adopt data analytics to increase audit capabilities and enhance fraud prevention and detection. Leverage a tool to provide more real time dashboard/reporting on issues/deficiencies.

Regarding Independent Audits, House Bill 1962 (2020 Act 128) requires:[17]

> 1) The board shall provide for annual audits of the system and the plan by an independent certified public accounting firm. The audits shall include the board's accrual and expenditure of directed commissions. The board may use the same independent certified public accounting firm for the audits of both the system and the plan.
>
> 2) The following shall apply:
>
> (i) Except as provided under subparagraph (ii), the board shall provide for an internal control audit of the system and the plan at least every five years.
>
> (ii) If an annual financial report prepared under subsection (n) identifies a material weakness or significant deficiency or an internal control audit identifies a material weakness or significant deficiency, the board shall provide for an additional internal control audit of the system and the plan for the year subsequent to the report or audit in which the weakness or deficiency was identified.

Recommendation

3.1 Strengthen Independent Verification and Internal Audit Capabilities

Implementation Guidance

3.1.1 Formalize the Lines of Relationship to the PSERB (See Figure 3.1).

3.1.2 The annual Internal Audit plan should continue to be approved by the Audit, Compliance and Risk Committee to ensure it includes adequate internal audit activities and has adequate staffing or plans for outsourcing to enable the plan to be completed.

3.1.3 As soon as practical (within two years) and every three years thereafter, schedule a Quality Assurance Review of the Internal Audit function as currently required by PSERS Bylaws.

3.1.4 Given the staff shortages and the historical lack of internal audits, make immediate use of outsourced resources to improve audit coverage and for specialty audits such as investments and cybersecurity until such time as PSERS can develop its internal audit capabilities.

3.1.5 Develop a professional education and development plan for IA staff.

3.1.6 Any remaining compliance activities should be reassigned from IA to the function responsible for the policy as soon as possible.

3.1.7 Create the position of Chief Compliance Officer. This position should report to the Chief Counsel and indirectly to the Audit, Compliance and Risk Committee (see Exhibit 3.2).

3.1.8 Conduct an annual staff survey to assess the control environment on a department-by-department basis and overall, e.g., Control Environment Survey (see Exhibit 3.5).

3.1.9 Obtain annual affirmations of compliance with required disclosures, code of conduct and conflicts of interest by trustees, executives and third parties.

3.1.10 The Chief Audit Officer (CAO), Chief Information Security Officer (CISO) and the Senior Investment Risk Manager should annually certify their freedom from undue influence to the ACR Committee.

3.1.11 Designate one person (the DED Administration) to be responsible for oversight of performance reporting integrity and the internal and external controls thereof. That person should not have responsibilities for any aspect of performance calculation.

3.2 The Audit and Compliance Committee

Overview and Peer Comparisons

Nearly every public retirement system (that has committees), institutional investor and public company has an audit committee. Often the audit committee mandate has been expanded to include compliance and risk.

According to the CFA Institute:

> "The primary purpose of an organization's audit committee is to provide oversight of the financial reporting process, the audit process, the system of internal controls and compliance with laws and regulations.
>
> The audit committee can expect to review significant accounting and reporting issues and recent professional and regulatory pronouncements to understand the potential impact on financial statements. An understanding of how management develops internal interim financial information is necessary to assess whether reports are complete and accurate.
>
> The committee reviews the results of an audit with management and external auditors, including matters required to be communicated to the committee under generally accepted auditing standards. Controls over financial reporting, information technology security and operational matters fall under the purview of the committee.
>
> The audit committee is responsible for the appointment, compensation and oversight of the work of the auditor *(including the chief internal auditor)*. As such, CPAs report directly to the audit committee, not management.
>
> Audit committees meet separately with external auditors to discuss matters that the committee or auditors believe should be discussed privately. The committee also reviews proposed audit approaches and handle coordination of the audit effort with internal audit staff. When an internal audit function exists, the committee will review and approve the audit plan, review staffing and organization of the function, and meet with internal auditors and management on a periodic basis to discuss matters of concern that may arise.
>
> Audit committees must have authority over their own budgets and over external auditors. It is through these protections that investors will come to trust the financial reports released by organizations/companies.
>
> While boards should seek members who can provide a diverse range of competent perspectives based on their experience and expertise, it is nevertheless imperative that board members are knowledgeable and conversant in the language of finance and accounting. This need is particularly acute for the audit committee."[18]

The 2018 ACT 5 or PPMAIRC Report identified that "the duties and responsibilities of Audit Committees, public, nonprofit and governmental, in both fiscal and in other compliance matters have become broader in scope in the last decade."[19] The report continues and describes "best practices" for Audit Committees. FAS has excerpted the Audit Committee best practices identified in the PPMAIRC report and incorporated them into a consolidated expansion of Audit and Compliance Committee responsibilities (see Exhibit 3.4).

Act 128 2020

In addition, Act 128 of 2020 (House Bill 1962) amends both the PSERS and SERS Codes to provide for annual stress testing and provides additional Board governance processes through establishment of additional committees related to audit functions. The bill increases the required hours of annual mandatory training for members of the PSERS and SERS Boards from 8 to 10 hours and expands the scope of training to include asset allocation and risk assessment. The legislation provides that in order to be appointed to the audit/compliance committee as a voting member, a member of the PSERS board or SERS board must complete at least 16 hours of training in risk assessment, internal control and auditing standards inclusive of the hours indicated for board training within 90 days of appointment. The Committee on Sponsoring Organizations Enterprise risk management guidelines may be considered as a guide to the training, and current members of the audit/compliance committee are exempt from the new 16-hour training requirement.

The bill provides that the PSERS board and SERS board may establish an executive committee consisting of the board chair, vice chair, the chair of the audit/ compliance committee, the chair of the bylaws/policy committee, the chair of the investment committee and the chair of the budget/finance committee or other members of the board as determined by the board. The legislation provides for the PSERS board and SERS board to establish an asset liability contingency operating committee as a function within the investment committee, which shall be charged with evaluating the risk associated with the systems' assets and liabilities. The bill directs the PSERS and SERS boards to provide for an internal control audit of their respective systems and plans at least every five years. If an annual financial report or an internal control audit identifies a material weakness or significant deficiency, the board shall provide for an additional internal control audit of the system and the plan for the year subsequent to the report or audit in which the weakness or deficiency was identified.

The bill requires the PSERS and SERS boards to conduct an annual stress test of their respective systems and submit the results to the Governor, the General Assembly and the Independent Fiscal Office no later than January 1 of each year. The stress test shall include a scenario analysis, simulation analysis and sensitivity analysis in accordance with accepted industry standards.

Finally, the bill directs that no later than March 1 of each year, the Independent Fiscal Office (IFO) shall produce a report summarizing the results of the stress tests, including a calculation of the ratio of projected employer pension contributions to projected State revenues under a scenario analysis.

Findings and Conclusions

The PSERS Audit and Compliance Committee uses the AICPA Audit Committee Toolkit and Checklists. These help to ensure the Audit and Compliance Committee (AC) is asking the right questions. Similar tools and checklists should be developed for use by every committee.

Oversight of performance, risk and independent verification coverage has not been assigned to a specific committee of the PSERB although the current AC charter does state the committee "shall review the effectiveness of the Agency's system for assessing, monitoring, and controlling significant risks or exposures". Each committee should have oversight of performance and risk within its area of responsibility while the AC should ensure there is comprehensive coverage and independent verification.

Although it is not currently contained in its mandate, in the future, the AC Committee should hire, evaluate and plan for the succession of the Chief Audit Officer (CAO) who administratively reports to the Executive Director. Leading practice is for the AC to be involved in the hiring of the CAO.

Internal control audits of the system and the plan have not been performed for some time. There is currently no process for the escalation of a material weakness or significant deficiency identified as the result of an internal or external audit.

Until January 2020, the AC Committee did not routinely hold separate executive sessions with the internal and external auditors. PSERS has also lacked a comprehensive independent verification plan for performance reports received and issued by the PSERB. There are no legislatively required expertise requirements for membership on the AC Committee, but the system can itself require additional training for these members. Act 128 of 2020 specifies the annual training required of the Audit and Compliance Committee members.

The Internal Audit Charter including the latest Internal Audit Office (IAO) structure, titles and reporting relationships has not yet been updated. Until the hiring of the new CAO, internal audit plans have largely focused on non-audit related activities. The AC minutes have not consistently reflected whether there was discussion of IAO's annual plans before approval and adoption.

The Act 5 report cites GFOA and APPFA best practices for Audit Committees and the existing PSERS AC charter addresses many but not all of these leading practice responsibilities (see Exhibit 3.4). As noted earlier, the AC charter still includes a provision that requires Internal Audit to perform compliance reviews.[20] As discussed, compliance is a first and second-line management responsibility and this responsibility should be removed from the IAO's mandate and its reference in the AC Charter. FAS has provided PSERS with a model charter that incorporates each of these leading practices.

Recommendation

3.2 Enhance the mandate of the Audit and Compliance Committee to include, among other things, provisions from Act 128 of 2020.

Implementation Guidance

3.2.1 Expand the mandate of the Audit/Compliance Committee to include Risk and rename it the Audit, Compliance and Risk Committee (ACR).

3.2.2 In the future, the Audit, Compliance and Risk Committee should hire, evaluate and plan for the succession of the Chief Audit Officer (CAO) who administratively reports to the Executive Director.

3.2.3 The ACR should set the performance objectives for the CAO and provide annual and interim feedback on performance.

3.2.4 The ACR should continue to improve communications with, clarify expectations for and monitor the performance of the external auditor.

3.2.5 The ACR should ensure that an internal control audit of the system and the plan is conducted at least every five years.

3.2.6 If an annual financial report identifies a material weakness or significant deficiency or an internal control audit identifies a material weakness or significant deficiency, the PSERB should ensure that an additional internal control audit of the system and the plan for the year is conducted subsequent to the report or audit in which the weakness or deficiency was identified.

3.2.7 The ACR Committee should continue to routinely hold separate executive sessions with the internal and external auditor.

3.2.8 The ACR should oversee the development of a comprehensive independent verification plan for vital signs for each vital function and all reports received and issued by the PSERB (see Exhibit 3.3).

3.2.9 Update the Internal Audit Charter to include the latest IAO structure, titles and reporting relationships. (see Exhibit 1.7)

3.2.10 The ACR should continue to oversee compliance but these responsibilities should be reassigned from Internal Audit to a Chief Compliance Officer (see Exhibit 3.2).

3.2.11 The ACR minutes should reflect whether there was discussion of IAO's plans before adoption.

3.2.12 Review and revise the ACR charter to incorporate leading practices (see Exhibit 3.4).

3.2.13 The ACR should conduct an annual self-evaluation of its performance.

3.2.14 Require specialized training for ACR Committee members within 90 days of their appointment (see recommendation 4.10.8).

3.3 Investment Risk and Investment Compliance

Overview and Peer Comparisons

Investment risk and investment compliance are second line of defense functions, providing assurance to management, and through management to the board, that the investment program is being managed in accordance with board direction and within acceptable tolerances. Investment risk tends to be a mathematically-oriented function, designed to make sure that risk exposures stay within pre-approved bounds. A simple example would be the mathematical limits put around asset class exposures. A more sophisticated example would be the type of scenario testing that PSERS now does as a result of the Act 5 legal requirement. In other words, investment risk management is generally measured mathematically, and is designed to measure exposures both ex-poste and ex-ante, with the goal being, to the extent possible, to control expected volatility in asset prices.

By comparison, investment compliance is rules based. As an example, PSERS cannot invest in certain companies with business operations in Sudan and Iran due to Act 44 of 2010. That is a bright line of allowable or prohibited investments. Other typical compliance limits include the amount of an individual security or group of securities, allowable types of securities, checking if collateral is within specified bounds, etc. Funds typically buy compliance software to help with tracking rules and with mapping securities so they can be tracked against those rules, particularly since a large system can have more than a hundred different accounts and thousands of securities.

Another aspect of investment risk and compliance is mid- and back-office functionality. This would include ensuring the safekeeping of assets (generally outsourced to a custodial bank, though there may be assets custodied away from that bank), valuation, controls around money movements, etc. Given the increasing complexity of investment programs at public funds, some larger funds have created an Investment Book of Record (IBOR) to better guarantee the accuracy of data and performance reporting. IBORs are generally viewed as providing material improvements to process and technology in the areas of: asset allocation; portfolio construction; manager selections; portfolio monitoring (compliance and risk); data quality and quantity; risk measurement; cash flow forecasting; and liquidity monitoring, as well as facilitating performance and risk reporting.

Given the combination of billions of dollars and a public sponsor, as well as fiduciary obligation and trust obligations to the beneficiaries, public pension system investment risk and compliance programs often include ethical and legal compliance as major components. Among the common issues included in these compliance programs are gift, travel and entertainment policies, restrictions on what investment staff can invest in personally or periodic disclosure and conflict of interest and ethics form reporting.

Leading practice is for funds to extend the relevant ethical and legal restrictions to counterparties, such as broker/dealers and money managers and direct deal counterparties (e.g., where a system does direct investing in real estate, private equity, etc.) and to require those counterparties to periodically attest that they are aware of the fund's ethics rules and have not violated them. Depending on the size of the fund, resources available and complexity of the investment program, some funds combine investment risk and investment compliance, though different skills are required for each.

Findings, Conclusions and Recommendations

Investment risk and compliance was not included in our scope, therefore FAS did not formulate any findings, conclusions, or recommendations about investment compliance at this time.

3.4 Enterprise Compliance

Overview and Peer Comparisons

The purpose of an enterprise compliance program is to monitor compliance with applicable legislation, organizational policies, and contracts. Responsibility for compliance rests clearly with the operating management of the business units. A board should receive reasonable assurance from operating management and independent reassurance that the organization is in compliance with applicable laws, policies and contractual requirements.

For example, the goals of the compliance function at Florida State Board of Administration are "to prevent compliance violations from occurring, to identify any violations that may have occurred, and to escalate violations to management for review and resolution. The compliance team achieves these goals within a framework of routine compliance testing and reporting."[21]

In addition to the controls employed by operating management, Compliance is part of the second line of defense which ensures that the organization complies with applicable laws, policies, guidelines, and contractual agreements and non-compliance is escalated until it is resolved.

Below are listed examples of the kinds of compliance activities that a Compliance Office charter would typically address:

- Compliance organization and reporting relationships
- Compliance activities, training, and controls
- Finance and accounting organization and reporting
- Finance and accounting controls framework and key controls
- IT organization and reporting
- IT controls framework and key controls
- Employer compliance
- Investment compliance tracking
- Frequency of investment compliance testing
- Private market documentation compliance tracking
- Segregation of duties
- Cash transfer approvals
- Investment accounting staff training
- Financial statement sign-offs

Findings and Conclusions

While there are numerous compliance-related activities, PSERS appears to lack an enterprise-wide coordinated compliance monitoring function. As a result, there is a need for the position of Chief Compliance Officer ("CCO"). The CCO should be responsible, among other duties, for:

- Obtaining and reviewing the campaign contribution reports of elected officials on the PSERB, and cross-referencing to investment manager and vendor lists
- Reviewing PSERB member and senior staff disclosures in ethics filings, and cross-referencing to investment manager and vendor lists
- Obtaining and reviewing the annual attestations from investment office counterparties that they are aware of, and have complied with, PSERS ethics policies
- Providing an annual certification of compliance
- Ensuring public disclosure and proper documentation of potential conflict of interest disclosures

See Exhibit 3.2 Example Chief Compliance Officer job description (PA SERS).

Recommendation

3.4 Strengthen enterprise compliance by creating the position of the Chief Compliance Officer and establishing an enterprise-wide compliance function.

Implementation Guidance

No additional guidance

3.5 Improve / ensure the independence of External Consultants / Advisors.

Overview and Peer Comparisons

Virtually all public retirement systems use a variety of specialized, independent consultants and advisors to help the board perform their responsibilities. Indeed, it would be hard to imagine a public retirement board able to function adequately without access to such outside expertise. Typical consultants include: the actuary; auditor; fiduciary counsel; and general and specialty investment consultants.

To be effective, the consultants must be both expert in their field and independent. These two requirements parallel the twin fiduciary obligations: expertise facilitates the duty of care and independence facilitates the duty of loyalty.

There are more subtle characteristics that enable a successful relationship as well. These generally come down to how the consultant(s) interact with the board. Some consultants are aggressive and some passive, some verbose and some terse, some academic and some focus on the practical. Much as one size fits only one, so, too, there is no style that fits all.

That said, the one “soft” factor that determines, more than any other, whether or not the relationship between a board and the consultant is productive is trust. That should be easy, but there are myriad ways that trust can be lost, from a business model change by the consultant’s firm that compromises independence, to something as simple as the perception by a board that the consultant is not listening to them or not considering the specific facts and circumstances of the specific fund and is therefore providing “cookie-cutter” advice which is inappropriate for that specific fund or is overly influenced by management.

There are a number of leading practices to structurally encourage and facilitate trust. These include specifying clearly which consultants are independent consultants to the board and which consult to staff, fully vetting potential conflicts prior to hiring, meeting with the consultants periodically without staff present, and the board (rather than staff) providing evaluations and feedback to the consultant on a formal basis.

Consultants and advisors are usually subject to multi-year contracts which are re-bid periodically. A typical arrangement is a three-year contract, with the option for two one-year extensions which can optionally be approved by the board before issuing a new RFP. Even if the incumbent consultant or advisor is re-engaged, the re-bidding process helps the board understand what other provider options are available to them, reinforces that the firm is hired by and reports to the board, and ensures that the price/value level is competitive.

Findings and Conclusions

The PSERB self-assessment survey revealed some dissatisfaction with some relationships between PSERB's consultants and the Board. In general, the concerns focused on the consultants' independence. Some trustees felt that the consultants were too deferential to staff and did not adequately question staff recommendations.

Compared to prevailing practice, PSERS has few structures designed to reinforce third-party expertise and independence and to build trust. For example, PSERS used "agency committees" to select PSERB consultants. These are committees composed of both PSERB members and staff as voting members. Prevailing practice is that while staff must often run searches and make recommendations, only PSERB members should vote to contract with independent Board consultants. Allowing staff to vote on the Board's independent consultants sends the wrong signal about the consultants' independence.

Prevailing practice is that the PSERB and its Committees should:

- Direct staff to prepare the RFP, with the Board/Committee approving criteria and scoring weights;
- See the breadth of solicitation and evaluations of all qualified candidates, with staff recommendations; and
- Discuss and make the selection in which only PSERB members vote.

Once hired, PSERS has no requirement that the relevant PSERB committee meet with the relevant consultant without staff present. FAS applauds the recent change that routinizes an executive session for the Audit/Compliance Committee and external auditor, while noting that such sessions have long been considered prevailing practice for not only public pension peers, but American corporations generally. PSERS' Board does not routinely provide periodic formal evaluations to its consultants which is lagging practice. Leading practice is to provide such evaluations because it both holds the consultants accountable and facilitates alignment of expectations between the board and the consultant.

PSERS also has not provided annual guidance to its consultants/advisors about its priorities or regular performance feedback. Adopting this leading practice would reinforce the independence of the advisors and consultants and ensure that the PSERB's priorities are known to them.

There are currently numerous consultants, advisors and service providers to PSERS. Not all should be considered advisors to the PSERB, although some may present to the PSERB and the Board, upon request, would have access to any consultant, advisor or service provider. Based upon prevailing practice at other public retirement systems, FAS recommends that the PSERB consider the following to be Board consultants or advisors:

- General Investment Consultant (not asset class consultants)
- Actuary
- Independent Auditor
- Fiduciary Counsel
- DC Plan Consultant
- Health Plan Consultant
- Board Governance Consultants
- Any other advisors or consultants the PSERB decides to retain

For these consultants and advisors, the PSERB would follow the processes described above for initial selection, meetings without staff present, objective setting, and annual evaluation. PSERS has the authority to enter into contracts up to five years in length without outside authorization according to Commonwealth procurement policy.

Recommendation

3.5 Reinforce and ensure the independence of External Advisors.

Implementation Guidance

3.5.1 Separate independent advice from independent reassurance (verification).

3.5.2 Reinforce / ensure independence (advice / verification) by the PSERB taking a more active role in selecting consultants/advisors and managing the relationship. Consistent with Commonwealth procurement requirements, the relevant PSERB Committee should select respective PSERB consultants/advisors with staff support, but with only the appropriate Committee Members/ PSERB Members voting.

3.5.3 Specify which advisors are PSERB consultants and which are staff consultants.

3.5.4 Committees should meet with consultants/advisors and communicate expectations, perform annual evaluations, and review and amend contracts / service level agreements as warranted.

3.5.5 Committees should meet at least annually with consultants without staff present, in executive session as permitted by Commonwealth Law.

3.5.6 The PSERB or appropriate committee should ensure that the contract for each PSERB consultant or advisor is subject to an RFP process at least every five years.

4. Conducting the business of the PSERB in its meetings and operations.

Scope

In this section, the following topics are discussed:

4.1 Leadership roles and responsibilities
4.2 The format and content of the PSERB's meeting agendas, minutes, and related materials
4.3 The PSERB's use of executive sessions as related to the Sunshine Act
4.4 Communication and transparency of the PSERB, staff, and external stakeholders
4.5 PSERB meeting frequency and duration
4.6 The PSERB portal
4.7 Designee participation in meetings
4.8 PSERB committees
4.9 PSERS's Bylaws and charters
4.10 PSERB Education and Development

Overview

Although most public and private organizations have a board of directors, public retirement systems are unique in having fiduciary boards of trustees. As noted earlier, trustees are held to the highest legal standard of care, a higher standard than for directors of publicly-traded corporations. As with most public agencies, trustees are also subject to state Freedom of Information Act (FOIA), generally referred to as Public Records Laws, and Open Meetings, or Sunshine Laws. As a result, it is important to have well-considered board operations and meeting procedures and protocols.

It is prevailing practice for all board governance standards to be included in a board manual that includes the board charter, comprehensively establishing the rules by which the board operates. Such rules or by-laws specify how meetings are called, how agendas are set, how the board behaves (standard of conduct), and how board business is conducted. These governance documents should also focus trustees on the strategic issues while delegating when prudent. The board agenda should be related to an overall strategic plan and an annual calendar of events and important required board actions. A strategic agenda helps refocus trustees to look beyond one year at a time and moves the system continuously toward desired future outcomes.

4.1 Leadership Roles and Responsibilities

Overview and Peer Comparisons

Public retirement leadership responsibilities typically lie primarily with the board chair and vice chair, board committee chairs, and the executive director. It is the responsibility of this leadership group to insist on maintaining good trustee and senior executive conduct, based on a written and board approved Code of Conduct contained in a Governance Policy Manual.

The chair typically has seven major duties:

1. Preside over meetings, approve the agenda for those meetings, and maintain order in conducting the business of the board.
2. Oversee the setting of the system's strategic agenda and priorities.
3. Oversee board communications and collaboration with the executive director.
4. Ensure the board receives adequate and appropriate materials in a timely fashion.
5. Monitor and assess board performance and counsel board members.
6. Appoint and rotate terms of committee members.
7. Act in coordination with the executive director as spokesperson for the board and as an ambassador to stakeholders.

The vice-chair, whether for the full board or a committee, acts as chair in absence of the chair.

1. The vice-chair may lead selected board initiatives, at the discretion of the chair.
2. The vice-chair can provide balanced representation.

Prevailing practice in the vast majority of states is for the board to elect its chair from among sitting members, although in a few states the chair is appointed by the governor or an ex officio member is the standing chair.

Term Limits

Most systems do not have term limits for board or committee chairs or vice chairs. Generally, this is not a problem because there is a rotation of officers. However, it is a lagging practice to have long-standing chairs and vice chairs. As noted in BoardSource, "Board chairs play a critical role in board leadership and development, devoting considerable time to the organization and exerting considerable influence over the board.

Term limits help prevent board chairs from burning out by shortening the duration of their commitment. Term limits also enable the board to adjust its leadership to suit changing organizational needs and help protect the board and chief executive from an ineffective chair. Board chairs are more likely than other officers to have term limits. According to *Leading with Intent*, the most common chair structure is two consecutive one-year terms."

FAS research indicates that some boards do not have specified terms, some are for one year, and others for two years. FAS believes two-year terms with a two-term limit will improve continuity and reduce the board administrative burden of annual elections. In practice, most systems re-elect committee chairs and vice chairs for at least a second year.

The chair also has responsibility for leading meetings and conducts the meeting based upon agreed upon rules. A typical challenge is ensuring that no one trustee dominates a meeting, and that all trustees have the opportunity to be heard and participate. As noted earlier, diversity of opinion is essential to avoid the perils of groupthink. Therefore, minority opinions need to be respected. Ultimately, however, that diversity should be used to focus a board on development of a cohesive policy direction. See also the earlier discussion on policy option summaries and the documentation of pros and cons of various options and dissenting opinions.

Vice-Chair

FAS research shows that over 90% of public retirement systems have a vice-chair of the board. Often, the vice chair position, both at the board level and with committees, is considered to be preparation for taking on the chair position with the next transition. Sometimes this is stated in policy and, in other cases, it is standard practice but not in policy. The election of the chair should take succession planning into account. Where practical, the vice-chair should succeed the chair.

Board interactions

The executive team (Deputies and Chiefs) should ensure that all interactions between staff and board members and between staff and external consultants/advisors are respectful and collegial. Meanwhile, the PSERB and committee chairs should ensure formal and respectful behavior from trustees. The executive director is responsible for the actions of the staff. At times, the PSERB chair may need to coach a fellow trustee, and leadership training is sometimes included in senior staff and board education.

Elections and Appointments

It is prevailing practice for a board chair to appoint committee members after consulting with them about their interests and experience. Prevailing practice is for board committees to elect their own chair and, if they have the position, the committee vice chair.

Board Secretary

It is typical for the executive director to be the board secretary as defined in board by-laws, and for the ED to be responsible for recording complete and correct minutes (amended if necessary and approved at the next board meeting). The executive director is responsible for maintaining board minutes and documentation in a searchable and accessible manner.

Information Requests

The ED, in-house legal counsel, and public information officer are usually responsible for all public record requests in accordance with ‘Right to Know” laws. It is leading practice to have a board policy which requires substantive requests for information from board members to go through the board chair and executive director to be prioritized and tracked for follow-up.

Similarly, board committee chairs, with the agreement of the board chair, can also make information requests on behalf of their committee. This helps ensure that all reasonable requests are tracked for a response but also allows the board chair and executive director to consider workload implications and priorities when there is a work-intensive request.

Change Management Process

Generally, when a board approves a significant change program, oversight responsibilities would be assigned to trustees and staff or consultants/advisors for implementation. The plan would contain associated target completion dates and approved resources, as required.

A monitoring process would be established where the board receives regular follow-up reports, typically at every meeting at the beginning and then less frequently as tasks are completed and the remaining ones are longer-term in nature. The board chair, or sometimes a committee chair, would usually have overall responsibility to work with the executive director to monitor progress.

Findings and Conclusions

Most PSERS trustees have been complimentary of the Chair and his handling of meetings. They felt that everyone is being heard and that meetings are well run. However, most also expressed frustration with the length of meetings and agenda items which are not resolved in a timely manner.

PSERS does not have a multi-year strategic plan and, consequently, the PSERB does not have a multi-year strategic agenda and calendar nor a formal stakeholder communications plan. This was addressed in detail in section *1.1 Develop a strategic plan and improve stakeholder communications*.

A near-universal complaint from trustees was the large volume of information in the board books which is provided without adequate lead time to review. Although board book distribution among peers ranges from 5 to 10 business days before the meeting, PSERB's materials are typically uploaded just a week in advance of a meeting. Even then some key materials are delayed several days or more and, in some cases, just before the meeting, severely limiting time for review.

The PSERB needs to articulate how much lead time it needs. For instance, require that packages should be posted to the portal 10 business days prior to a PSERB or Committee meeting. The PSERB Chair needs to work with the Executive Director to ensure the new timing is met and is aligned with the notice of meetings.

A number of Trustees referred to past incidents when Trustees or Designees were disrespectful to staff or consultants/advisors and, conversely, when staff were disrespectful to Trustees, despite attempts by the PSERB Chair or Committee Chair to maintain order and civility. Policy disagreements have become viewed as personal, or "taking sides".

The PSERS Executive Director is appointed as the PSERB Secretary in the PSERS Bylaws. PSERB and committee minutes are prepared on a timely basis and maintained per requirements.

PSERS does not have a formal policy of tracking information requests from PSERB members. Often, requests are made from a PSERB member directly to staff. While some trustees felt staff were consistently responsive to their requests, others complained of lack of staff responsiveness. A formal process would help to improve responsiveness and ensure requests are followed up appropriately.

Recommendation

4.1 Clarify PSERB leadership roles, responsibilities and terms of office.

Implementation Guidance

4.1.1 Clarify the roles of chair and vice chair of the PSERB.

4.1.2 Chairs / Vice-Chairs should insist on mutual respect and decorum at all times.

4.1.4 The PSERB Chair should make Committee appointments based on the skills and interests of trustees and the needs of the System.

4.1.5 Elect the PSERB officers and appoint committee members to two-year terms.

4.1.6 Plan for the succession of the Chair for both the full PSERB and each committee.

4.1.7 Committee chairs / vice chairs should be elected to two-year terms by each committee.

4.1.8 Establish a term limit of two terms for the PSERB Chair and Vice Chair and three terms for committee officers.

4.1.9 Establish a policy and process for prioritizing and tracking trustee requests for information from staff or PSERB consultants/advisors.

4.1.10 Monitor the change management process and implementation of the accepted recommendations from this review.

4.2 The Format and Content of the PSERB's Meeting Agendas, Minutes, and Related Materials

Overview and Peer Comparisons

Board meeting agenda content, development, and documentation are the responsibility of the board chair and the executive director (ED) primarily. In the case of committees, the committee chair and appropriate staff liaison collaborate to set the agenda, often with input from the ED if the ED is not the committee's staff liaison.

The board chair and ED collaborate on agenda setting and should be in regular contact between meetings. The ED has the primary responsibility to draft an agenda that is organized in a standard format around the "Powers Reserved for the Board" and is coordinated with the Board's strategic plan.

Individual board members, through the chair, have the opportunity to suggest agenda items. Leading practice is to organize and prioritize meeting agendas by powers reserved, i.e., set policy items first, recurring approvals second, conduct (e.g., ED evaluation, board self-assessment) third, and oversight (e.g., familiarity with due diligence processes, performance monitoring) items last. The majority of the agenda items should be focused on decisions ("set" or "approve") vs. oversight or informational items. There is typically a higher focus on oversight by committees rather than the full board, with each committee escalating important exceptions to the board, as appropriate.

As they arise, legislative updates are typically discussed with the board chair and presented by the ED. The ED should be in regular contact with the chair on legislative matters so there should be no surprises. Generally, the ED should take no action or speak on legislative issues (other than providing factual information about the system) without being guided by defined responsibilities and the input of the board or board chair.

A consent agenda is a board meeting practice that groups routine business and reports into one agenda item. The consent agenda can be approved in one action, rather than filing motions on each item separately. Using a consent agenda can save boards anywhere from a few minutes to a half hour. A consent agenda moves routine items along quickly so that the board has time for discussing more important issues. Consent agendas are a helpful efficiency tool for items which require board approval but do not typically require active board or committee discussion, such as approval of meeting minutes. Typically, items may be removed from the consent agenda and moved to the regular calendar at the request of any trustee.

Timing

If needed for good meeting management, the agenda will have set times for each agenda item. Including times on the agenda are also a courtesy to stakeholders and the public who may be interested in certain agenda items but not the entire meeting. The agenda timing plan should assume that trustees have read the board book materials and the presenter can focus on the executive summary and highlight key points without reviewing all of the details. This provides greater opportunity for discussion.

Findings and Conclusions

Volume of Information and Time to Review

A near-universal complaint from trustees was the large volume of information in the board books which is provided without adequate lead time to review. Although the standard for board book distribution is ten business days before the meeting, PSERB's materials are typically uploaded just a week in advance of a meeting. Even then some key materials are delayed several days or more and, in some cases, just before the meeting, severely limiting time for review. There may occasionally arise some emergency situations that require an exception to this requirement and should be approved by the Chair.

The PSERB needs to articulate how much lead time it needs. For instance, require that packages should be posted to the portal 10 business days prior to a PSERB or Committee meeting. The PSERB Chair needs to work with the Executive Director to ensure the new timing is met.

Agenda Setting and Item Timing

Although most PSERS Trustees said they were generally satisfied with the agenda setting process, several suggested it could be improved to better allow input from Trustees. There is also an acknowledgement by Trustees that there is not a longer-term policy perspective reflected on the PSERB calendar, as it is not based upon a strategic plan and the PSERB's strategic priorities.

Currently, PSERB's agendas are organized around approval of minutes, followed by visitors' comments, unfinished business (if applicable), new business, committee reports from each committee, then executive reports from the CFO, Chief Counsel, Deputy ED, and ED. This is a traditional approach used by many systems, but it does not prioritize the agenda based upon any specific criteria. Numerous Trustees commented that the ED's report often contained important information, but consideration was rushed, as it came at the end of the agenda. Consent agendas are generally not in use at PSERS.

Item Discussion

Many trustees remarked that meetings are taking longer, often due to specific agenda items which required much more time than anticipated due to discussion. Although it may not solve the time management challenge, having times listed for each agenda item can help manage expectations of how much time has been allowed for presentation and how much for questions and discussion.

One trustee comment was that presenters will use up their allotted time and not allow any planned time for questions and discussion. The PSERB Chair can encourage presenters to stick to their scheduled time, and to assume the presentation has been read in advance, so as to eliminate the need to repeat verbally what has been presented in writing. When the allotted discussion time is reached, assess whether or not it is appropriate to continue to discuss an item or to table it for a future meeting if more time is needed.

As is typical of nearly all boards, Trustees commented that some PSERB members arrive well prepared for a meeting and others apparently did not review the materials in advance. Although this can be another challenge, it is not appropriate for unprepared trustees to place unnecessary demands on other trustees who did prepare. Likewise, Trustees need materials sufficiently in advance to enable review. Materials need to be insightful and not just volumes of data.

One helpful approach is to have effective executive summaries, as discussed in section *1.3 Organize and streamline policy setting*. In any case, presenters should assume that each trustee is familiar with the materials. They should focus on the key points, rather than feeling obligated to read their presentation to the PSERB. It also emphasizes the need to have succinct summaries of the issues and options to enable better and faster understanding for informed decision-making.

Recommendation

4.2 Reset the timing, format and content of the PSERBS's meeting agendas, minutes, and related materials.

Implementation Guidance

4.2.1 Establish and maintain discipline on cut-off dates for timely receipt of reports to the PSERB, e.g., 10 business days in advance of meeting. Acknowledge that this means some information about the latest performance will be unavailable.

4.2.2 Develop a procedure for the inclusion of materials with less than the minimum notice on an emergency-only basis if approved by the Chair.

4.2.3 The PSERB Chair should annually and before each meeting, set the agenda in consultation with ED . Reinforce that it is the PSERB's agenda, not staff nor any individual member's agenda.

4.2.4 The ED should keep the PSERB calendar and populate the agenda in conformance with calendar and PSERB member requests. See also Recommendation 4.1.3 re: advance distribution of materials and our recommendations in Section 2. regarding more insightful presentations of information for PSERB decision-making.

4.2.5 Realign PSERB Meetings with the Powers Reserved for the PSERB. Clearly identify policy and action items and place them towards the beginning of the PSERB meeting.

4.2.6 Use consent agendas to utilize PSERB time more effectively.

4.2.7 Set time expectations for each agenda item.

4.2.8 Presenters should assume the PSERB/Committee has read the materials and use their limited time to highlight key points and enable informed discussion.

4.3 PSERB's use of executive sessions as related to the Sunshine Act.

Overview

Virtually all U.S. public retirement systems operate under an open meetings law, often also referred to as "Sunshine Law." Most provisions are set by state statute and the exceptions for what can be discussed in closed, or executive session, vary from state-to-state.

It is the responsibility of the board and the ED to comply with all Open Meeting Law requirements. In so doing, consultation with in-house legal counsel and the board's fiduciary counsel are standard practices. Where possible, it is important that the advice of the board's counsel and the in-house legal counsel are coordinated so that the board chair and ED are getting consistent legal support.

It is customary to provide public notice of executive sessions and for the subject matter to be clearly identified. All matters discussed during executive session should be consistent with the exceptions set forth in the Open Meetings Laws and such discussions should remain confidential.

The board may, in its discretion, exclude certain staff members from executive session, particularly when the discussion pertains to personnel or other highly confidential issues related to staff. Typically, it is appropriate for the ED and both in-house counsel and board counsel to remain present for the discussion, except in certain limited circumstances where the exclusion of staff or counsel is appropriate.

It is the responsibility of counsel and the board chair to ensure that the discussion remains limited to the topics permitted by the exceptions to the Open Meetings Laws. No official action may be taken in executive session; if appropriate, the board may vote when it resumes the public portion of the meeting.

It is important that the board strictly adhere to the legal and procedural requirements governing when an executive session is permitted and how it must be conducted, and the confidentiality requirements upon exiting executive session. Failure to comply with all legal and procedural requirements related to executive sessions could subject individual board members to statutory penalties, undermine the effectiveness of the board and its integrity, and any lapses may cause fractures and distrust among board members.

Peer Comparisons

Based upon a 2019 FAS governance benchmarking study, the Commonwealth's exceptions for PSERS are somewhat more limited than in other states as shown in the table below (PSERS responses are shown in green).

Figure 4.1 Open Meetings

	Yes	No
Does your jurisdiction or board policy require open meetings?	9	0
If you answered "yes", does your jurisdiction or board policy allow exceptions to the open meeting policy for any of the following reasons? Check all that apply.		
• Employee performance appraisals / personnel evaluations	9	0
• Litigation and legal matters	9	0
• Contract negotiations	7	2
• Investment decisions - public markets	6	3
• Investment decisions - private markets	6	3
• Fund strategy	6	3
• Information security / cybersecurity matters	6	3
• Invasion of privacy issues	5	4
• Disaster recovery / business interruption	5	4
• Governance / self-evaluation	4	5

Source: 2019 FAS Governance Benchmarking

Findings and Conclusions

As with most state retirement systems, the PSERB Chair, and each committee chair, consults with counsel concerning when an executive session is appropriate. This has been reinforced with the PSERB's fiduciary counsel who is present at each PSERB meeting and selected committee meetings.

There were no significant issues identified regarding the PSERB's use of executive sessions.

4.3 Recommendations to improve the PSERB's use of executive sessions as related to the Sunshine Act.

No recommendations

4.4 Communications and transparency of the PSERB and staff with external stakeholders.

Overview and Peer Comparisons

Leading practice is to have a stakeholder communications policy and plan, including general communications and crisis communication plans. This is addressed in more detail in Section *1.1 Develop a strategic plan and improve stakeholder communications*.

With the higher level of scrutiny from stakeholders, state public retirement systems have been increasingly live-streaming their board and committee meetings and providing video recordings on their website. With the onset of the COVID-19 pandemic, where most systems have moved their board and committee meetings to an online video-streaming tool such as Microsoft Teams, Zoom, or Webex, live streaming of public sessions quickly became the norm. It is not yet clear how prevalent access to the video recordings is on system websites, but transparency leaders were already doing this before COVID-19.

Findings and Conclusions

The Act 5 Report (PPMAIRC) stated that "30% (of 60 pension plans and investment boards) provide live stream, video, audio, and/or full transcripts of board meetings." The report went on to recommend "that each public board and committee meeting be live-streamed, and video and audio recordings of public board proceedings be published and archived."

FAS agrees with this recommendation and believes it would be appropriate to provide this increased transparency to stakeholders. SERS has already adopted this recommendation. Since PSERS is already live streaming meetings, making recordings available on its website would require little incremental cost or effort.

Recommendation

4.4 Stream, record and archive PSERB public meetings.

Implementation Guidance

No guidance

4.5 PSERB meeting frequency and duration is consistent with peers.

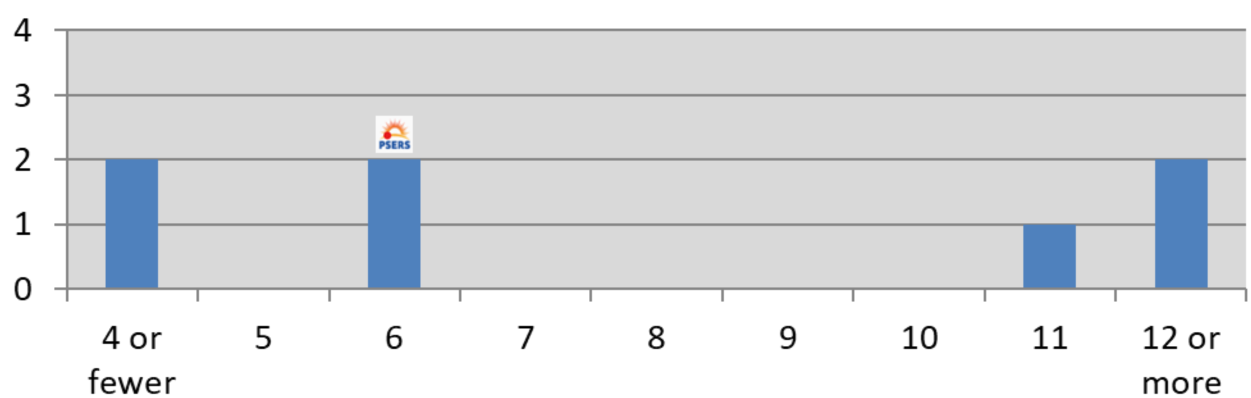
Overview and Peer Comparisons

The PSERB typically schedules 6 meetings per year, usually in January; March; May or June; August; October; and December. In some years, "special" meetings are also called if circumstances necessitate.

As shown in the chart below, peer system boards typically meet either approximately 11-12 times annually or 4-6 times. There is no singularly consistent peer practice. With increasing delegation to staff, however, there has been a trend over the past decade for some boards which were meeting monthly to meet less frequently. For example, CalPERS has recently moved from regular monthly meetings to every other month, with special meetings as required.

Figure 4.2 Board Meetings per year

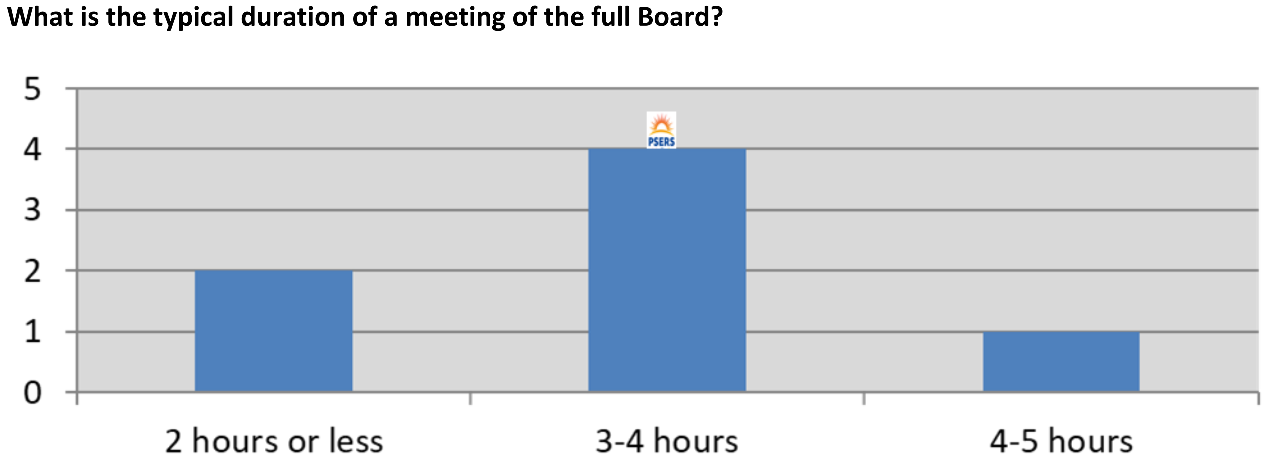
On average, how many times has your Board met annually over the past three years?



Source: 2015 FAS Benchmarking Study of State and County Retirement Agencies

As mentioned in the section on committee meetings, most board members spend more time in committee meetings than in full board meetings, as the committees play an important role in due diligence on policy decisions and providing ongoing oversight of the system. As a result, full board meetings typically last 2 to 5 hours at most systems. As shown below, the PSERB meetings, averaging 3-4 hours, are typical duration for the peer group.

Figure 4.3 Typical duration of Board Meetings



Source: 2015 FAS Benchmarking Study of State and County Retirement Agencies

Findings and Conclusions

Several trustees mentioned that PSERB and committee meetings were taking more time than they felt was appropriate, and that there are still issues which should be addressed in more depth.

The recommendations for streamlining the PSERS committee structure and other changes relating to the committees and overall PSERB oversight are designed to improve utilization of trustee time. The amount of time the full PSERB meets does not appear to be excessive in relation to peer practices and there are no recommendations in this area.

4.5 Recommendations to improve PSERB meeting frequency and duration.

See Committee recommendations Section 4.8

4.6 The functionality of the PSERB portal.

Overview

The purpose of a board portal should be to provide a single point of trustee access to the information needed to support the powers reserved for the board and thus improved governance, i.e., direction-setting and control. Until relatively recently, most boards received information in a physical board book, typically a binder. During the past five years, there has been a significant migration to the use of a growing number of digital platforms.

Typically, these platforms focus almost exclusively on the secure communication of board materials and agendas to the exclusion of the other powers reserved for a fiduciary board. Current functionality is thus largely restricted to support for the power reserved of "Conducting the Business of the Board / Committees". Thus far, the use of board portals has not solved the fiduciary need for easy access to reliable information – if anything they have exacerbated it.

Current platforms are not designed or are not utilized to enable most of the decision-making and oversight powers of the board including:

- Setting direction and policy and prudently delegating.
- Approving key decisions.
- Overseeing performance and risk.
- Obtaining verification that the reports received and issued by the board are reliable.

An effective board portal should have the following characteristics:

- Be easily navigable;
- Be searchable (within and across meetings and policies, drill down for detail / roll up for big picture, printable sections);
- Offer subject matter indices across all meetings / materials;
- Provide a glossary of frequently used terms and acronyms; and,
- Allow permissions to access various types of information that can be controlled by the administrator, i.e., confidential information can be kept confidential.

In sum, a board portal should offer functionality to address the full range of responsibilities and powers reserved for a board and enable easier access to key sources of information for decision-making. The chart below shows the types of capabilities needed to better support these powers.

Figure 4.4 Powers reserved and Board Portal Capabilities Needed

Power Reserved	Needed Portal Capabilities
Conducting business of the board and its committees.	Links from agenda items to supporting information
Setting direction and policy and prudently delegating.	Links from executive summaries to policies, Policy Option Summaries, Strategic Policy Calendars, prior board decisions, research and educational materials
Approving key decisions.	Links to supporting due diligence
Overseeing performance and risk.	Links from exception-based dashboards to supporting information
Obtaining verification that reports received and issued by the board are reliable.	Links to independent verification reports on the reliability of reports received and issued

Peer Comparisons

Peer use of board portals varies considerably. Few, if any, effectively utilize a portal to meet the broad range of board information needed to exercise the board's powers reserved and instead restrict themselves mostly to secure communication of board meeting materials. A growing number are beginning to use hyperlinks to supporting materials.

Prevailing practice among large public retirement systems, institutional investors and public companies is to use an electronic board portal to provide board packages to members as a secure means of organizing files to be reviewed in a specific meeting. Based upon a 2019 FAS benchmarking study of ten large state public retirement systems, nearly all retirement peer group funds (9 of 10 who responded) utilize a board portal; four continue to offer hard copies of board and committee packages to board members if that is their preference.

Figure 4.5 Use of Board Portal Software

Do you utilize board portal software to electronically provide information packages to your board?	Number of Responses (10)
Yes	9
No	1

While "Diligent Boards" is used by three peer funds for their board portal (including PSERS), three other packages are also used and two use custom-developed software.

Figure 4.6 Board Portal Software

What software do you use? Please check all that apply.	Number of Responses (9)
Diligent Boards	3
BoardDocs	1
Directors Desk	1
Boardvantage	1
Custom-developed software	2
Box with some ITS adjustments	1

Although most peer funds do not link their board books to other materials, several report they do provide links to prior decisions and supporting materials and related educational materials.

Figure 4.7 Accessibility to underlying information using the board portal

Do you regularly utilize any tools through your portal to improve Board accessibility to supporting and/or related information? Please check all that apply.	Number of Responses (10)
Yes, using our standard internal reporting systems	0
Hyperlinks to back-up presentations and supporting detail	2
Hyperlinks to business systems	1
Yes, using structured presentation software (e.g., Tableau, Prezi)	0
Yes, using capabilities in our board portal	0
Links to prior decisions and supporting materials	3
Links to related educational materials	4
Write-in: Board docs displays all meetings and materials going back five years	1
Write-in: Links to attachments and appendices	1

Findings and Conclusions

Numerous PSERS trustees and designees complained about data overload, the inability to search within or across meetings, the inability to print out selected sections, the lack of glossaries, subject matter indices, the lack of user friendliness, and the lack of proper orientation as to how to use the existing board portal.

Much of the frustration expressed by PSERS trustees / designees regarding the portal has to do with the volume of materials (to be addressed in part by exception reporting), the rigidity of the existing portal platform, and its limited focus on secure board meeting materials.

In addition, the board portal has not been seen as a very important strategic interface with the board. Its use and maintenance were assigned to an administrative person. Its functions are typically not well understood internally. There is an opportunity to enable much easier trustee access to materials needed for a broad range of board decision-making using alternative software such as Microsoft's SharePoint which is included as part of Microsoft 365.

A new portal should enable searches of prior meeting materials, contain dashboards for each vital retirement function with linkages to supporting presentation materials, linkages to independent verification of reports received and issued by the PSERB, a glossary of frequently used terms and acronyms, Policy Option Summaries, Strategic Policy Calendars for Committees and the full PSERB, and due diligence reports for board-required approvals. PSERB materials should be printable if desired.

Recommendation

4.6 Significantly improve the functionality of the PSERB portal to improve trustee insight and access to information.

Implementation Guidance

4.6.1 Create a functional, user-friendly and searchable PSERB portal.

4.6.2 Consider using alternative software to supplement or replace the existing board portal software.

4.6.3 Reassign responsibility within the Executive Team for responsibility for administration of the portal to elevate its significance. (Implemented). See also Recommendation 4.10.6 re: orientation on how to use the portal as part of the initial on-boarding of new trustees.

4.7 Designee Participation in Meetings

Overview and Peer Comparisons

Public retirement systems are unique in allowing certain trustee "seats" to be represented by "designees" who are conferred full voting rights and assume full fiduciary responsibilities when acting in the stead of the principal trustee. This is rarely allowed at corporate boards of directors, where each director is selected based upon their qualifications and experience.

In contrast to corporate boards, most state public retirement systems have at least one ex officio member, i.e., a trustee who is a member of the board by virtue of holding an elected or appointed state office. Among the 53 largest state public retirement systems, the average is 1.7 ex officio members. Seventeen, or 32%, do not have any ex officio member; in other words, they are all either appointed or elected trustees. Fourteen systems, or 26%, have one ex officio member; eight, or 15%, have two; and fourteen, or 26%, have two or more.

Because an ex officio member, by virtue of their office, may be a member of numerous public boards and commissions in addition to their day-to-day office duties, it is not uncommon for the governing statutes or board policies to allow that person to designate a subordinate to function as the trustee in their stead. For example, the Maryland State Retirement and Pension System governance policies state:

> "The following trustees, serving ex officio, may appoint a designee to serve on behalf of the ex officio trustee on the board:
>
> a. The State Treasurer, who may designate a deputy treasurer;
> b. The State Comptroller, who may designate a deputy comptroller; and
> c. The Secretary of Budget and Management, who may designate a deputy secretary."

Similarly, the Oklahoma Teachers Retirement System Board of Trustees Policy Manual states:

> "The Board shall consist of the following members and all appointees shall serve their terms at the pleasure of the appointing authority and may be removed or replaced without cause:
>
> a) The State Superintendent of Public Instruction, ex officio or a designee.
> b) The Director of the Office of Management and Enterprise Services, ex officio or a designee.
> c) The Director of the Oklahoma Department of Career and Technology Education, ex officio, or his or her designee.
> d) The State Treasurer, ex officio, or his or her designee."

In general, the peer practice is to allow the ex officio member to determine whether or not they have the interest and/or time availability to effectively serve on the board, or if their office would be better served by appointing a designee to fill that role. There are examples, such as CalPERS, where ex officio board members have multiple designees, but these are the exception. Most systems allow a single designee to act in the place of the ex officio member. In the case of CalPERS, only the principal board member or one of their designees is in the "trustee seat" in a meeting.

In summary, while the use of designees for ex officio members is authorized at some peer systems, most systems' board members use a consistent designee who is present at most (if not all) meetings. At certain systems, board members designate a primary and alternate designee; the alternate attends meetings only when the primary is unavailable. FAS has not identified any other state systems which have a practice of permitting the contemporaneous participation in a meeting by multiple designees, together with the principal.

There is a very limited number of states which have legislators as pension board members like Pennsylvania, with Louisiana and Missouri being the only other ones among the 53 largest state systems. In MOSERS in Missouri, two ex officio members are allowed to appoint designees, but the four legislative members are not. At LASERS in Louisiana, the two ex officio and the two legislative board members are allowed to have designees.

Findings and Conclusions

First, it should be noted that, as stated elsewhere in this report, the PSERS composition is unusual in several respects:

- Compared to the 53 largest U.S. state integrated retirement systems, the PSERB:
    - Is larger, with 15 voting trustees (30 if all designees are included) compared with a median of 10 voting members;
    - Has more elected and ex officio members than average; and
    - Is somewhat unusual in having state legislators as voting trustees (only PA PSERS, PA SERS, MOSERS, MPERS (Mo.), and Louisiana PERS have legislators as voting trustees).
- Only PA PSERS, PA SERS, and MOSERS have a majority of trustees as elected and/or ex officio state officials.

The Public School Employees' Retirement Code (the "Code") provides that "each ex officio member of the board and each legislative member of the board may appoint a duly authorized designee to act in his stead." 24 Pa. C.S. §8501(a). The PSERS Bylaws provide that "[b]oth ex-officio and legislative members may authorize more than one designee either in priority preference or as alternates." The Bylaws further prescribe which designees must be officers or employees of the ex officio member's agency (each designee of the Secretary of Education must be an officer or employee of the Commonwealth appointed by the Secretary or Governor; each designee of the Treasurer must be an officer or employee of the Department of the Treasury; each designee of the Executive Secretary of the School Boards Association must be an employee of such association). The Bylaws further require that each designee be bound by the oath of office and act as a fiduciary in accordance with the standard of care. Use of alternating designees at the same meeting is allowed as long as only one designee speaks to an agenda item unless the Chair's consent is obtained.

While designation of an alternate to substitute at a meeting for a busy public officer board member is not prevalent, it is also not unusual amongst peers. However, the PSERB's practice of permitting the use of multiple rotating designees, even at the same meeting, in the place of a single PSERB member is not consistent with prevailing peer practices and can be considered a lagging practice. It may also not be consistent with the Retirement Code which states "in his stead" not "in addition to the member". The use of multiple rotating designees is a disfavored practice because of its detrimental impact on effectiveness of boards. Indeed, our Trustee and designee interviews identified several of these adverse effects at PSERS.

The use of multiple rotating designees can have the practical effect of creating:

- Lack of consistency in knowledge, expertise, understanding of prior PSERB deliberations and coherence in policy positions across issues;
- Inefficiency in PSERB deliberations and decision-making processes, i.e., from adding interactions with up to an additional 15 designees to an already relatively large board of 15 primary members;
- Inconsistency in messaging and perspective from a single board seat;
- Difficulty in building consistent working relationships between PSERB members and vis a vis staff;
- Ambiguity with respect to responsibility for implementation of fiduciary obligations from changing lines of personal accountability.

It appears that these effects may have been compounded by the transition to virtual meetings caused by COVID-19 and associated challenges with support of multiple rotating designees—e.g., technology, Diligent licenses, education, and compliance.

Nevertheless, it is important to distinguish between full use of a Trustee's own staff resources and the relevant expertise available to each Trustee and the use of multiple rotating designees at a single meeting. The benefits of consistency and clear personal accountability on board effectiveness should in no way preclude a PSERB member from making full use of his or her designee(s). In addition, some designees may have longer-term experience on the PSERB than their principal and can provide additional institutional memory on prior issues.

The Pennsylvania Auditor General reached similar conclusions in its May 2017 PSERS performance audit report. The Auditor General found the PSERB's use of designees for certain members to be an area of concern. The report highlighted that designees are not evaluated for their level of investment knowledge and therefore may not be prepared to address investment decisions. Also, the Auditor General concluded that due to PSERB members and their multiple designees continuously alternating attendance at PSERB meetings, the PSERB was exposed to a lack of continuity and its ability to make informed decisions could be compromised (see pages 50 – 53 of the 2017 audit report).[22]

The PSERB should reexamine its approach and set a definitive expectation that members adhere to the apparent intent of the Retirement Code which says that a designee serves "in his stead," meaning in the absence of rather than in addition to the member. This would also address the findings of the Auditor General by having PSERS adopt new Bylaw provisions to enable the *effective* use of designees, consistent with prevailing peer practices which recognize the importance of stability in Board meeting participation and clear personal accountability. Ex officio and legislative Board members should consider appointing a primary, plus one back-up designee. In selecting designees, Board members should be encouraged to identify and consider the expertise and background of designee candidates in order to improve overall Board effectiveness.

See Exhibit 4.7 Designee Participation in Meetings – Policy Option Summary for more information.

Recommendation

4.7 Clarify designee participation especially in online meetings.

Implementation Guidance

4.7.1 Apply the plain meaning of the Retirement Code provision which states that a designee serves for the appointing member at meetings "in his stead" rather than in addition to the member.

4.7.2 Consider relevant skill sets, experience and time availability in appointing designees.

4.7.3 In order to assure a smooth process and minimize disruption, the Chair should consider each request to substitute a member by a primary designee or of the primary designee by the alternate designee during a meeting based on its own merit.

4.7.4 Include compliance with designee Bylaw procedures in PSERB self-evaluations.

4.8 PSERB Committees.

Overview and Peer Comparisons

At most public retirement systems, committees do the bulk of the work of the board. Trustees typically spend more time in committee meetings than in board meetings, so it is important to ensure committees are effective. For example, based upon a FAS benchmarking study of large public retirement systems, a typical trustee, on average, spent 74 hours per year in committee meetings of which he or she was a member, versus 43 hours annually in full board meetings.

Well-functioning board committees can significantly enhance a board's efficiency and effectiveness. Each committee should have a strategic focus, as defined by its charter, and must be able to exercise important oversight functions. Insight is essential to both effective direction setting and oversight.

Committees are empowered to research issues and options, obtain the advice and recommendations of staff and consultants, and make recommendations to the full board. Committees allow board members to exercise a greater level of decision due diligence than the board likely would as a whole.

Committees help the board to exercise its fiduciary responsibilities by:

- Improving trustee insight into complex issues, the range of options available, and the related pros and cons, to enable more effective direction and policy setting; committees can advise and make insightful recommendations to the full board on direction and policy.
- More thoroughly reviewing, understanding and challenging staff and consultants' due diligence that underpins recommendations for decisions that require board approval.
- Overseeing those aspects of system performance within their respective mandates, better understanding and interpreting the key metrics associated with their scope and identifying and escalating exceptions to the full board.
- Completing much of the work of the board for those activities that the board must conduct itself, for example, the goal-setting and performance evaluation of the executive director, providing feedback to board consultants, conducting the board self-assessment, etc. All these, of course, are reported out to the full board.
- Finally, ensuring information reported to the board is reliable by commissioning and receiving reports from those who are independent of management, for example, internal audit, external audit, and third parties such as fiduciary auditors and general investment consultants.

Committee Charters

Committee charters should describe all key aspects of the committee's governance and operations, including:

1. Purpose and authority (including officer elections)
2. Composition (including any required qualifications and staff liaisons)
3. Meeting frequency and process
4. Responsibilities
5. Reporting process to the full board
6. Self-evaluation requirements
7. Charter review and update frequency and history

Committee Structure and Size

Every committee should have a well-defined purpose and clearly-articulated responsibilities for advising the board on strategy and decision-making; providing ongoing oversight and obtaining independent reassurance on the effectiveness of controls and the reliability of management's reports.

The committee structure should be aligned with the system functions and organization structure to facilitate:

- Effective comprehensive oversight of the system's vital functions (e.g., asset management, pension administration, health care, financial management, etc.), and

- Consistent and constructive committee-board, committee-staff and committee-consultant interaction.

Boards of state retirement systems typically have no more than 6-7 standing committees. The most common standing committees are Audit (often including Risk) and Investment. Nearly all large integrated public funds have these two committees. The next most prevalent are: Personnel and Compensation; Board Governance; Finance and Administration; Actuarial and Benefits; and Appeals and Disability Reviews. There are sometimes also committees which focus on legislation and external affairs, or a standalone risk committee, or an executive committee, but these are not typical. Although there had been many instances of a committee whose focus is on corporate governance or ESG, most funds are moving this responsibility into the Investment Committee.

Committees should be structured to have a reasonably balanced workload, both from the standpoint that all committees should have significant responsibilities, and the assignments should result in a steady workload over time without ongoing excessive workload or long periods when the committee is not required to meet.

Each committee should be as small as practical; a good rule of thumb is about three to five members per committee (with an odd number to avoid tie votes), with the Investment committee having potentially up to seven members. "Committees of the whole" provide the illusion of delegation and defeat the purpose of appointing a committee; a committee of the whole is often an indication of the topic being too important/sensitive for delegation or that there is a dysfunctional governance dynamic which should be recognized (e.g., lack of trust, micromanagement, need for added trustee expertise or training).

Use of Agency and Ad Hoc Committees

Although staff and consultants may perform most of the work and report to committees and to the full board, only trustees should be voting members of committees. Staff are support to committees and the full board and serve under the direction of and at the pleasure of the board.

The standing committee structure should result in only the infrequent need for ad hoc committees; i.e., ad hoc committees should only be required when there is an unusual one-time event or time-limited requirement.

The Process for Committee Selection

It is typical for the board chair, in consultation with each member, to select and appoint trustees to each committee, with the approval of the entire board. It is also prevailing practice for each newly-appointed committee to elect its own chair and vice chair at their first meeting.

While prevailing practice is to appoint committee members and chairs to one-year terms, with the majority being reappointed each year, some boards have two-year committee terms, which can reduce the need for an annual appointment. This same principle applies to committee leadership, with the chair and vice chair having two-year terms.

Committee Agenda Setting

Prevailing practice is for committee chairs to work with staff to identify policy development / review priorities for the next cycle. Leading practice is for the committee policy agenda and activities to be linked to an overall board policy agenda. The committee reviews and approves the agenda for recommendation to and approval by the board.

Committee Work Plans

Consistent with the committee strategic agenda, certain committee responsibilities repeat annually at the same time of the year; however; other responsibilities may occur over a longer cycle or may tie to a 3-5-year strategic plan.

Committee Meeting Frequency and Duration

Committee meeting frequency varies by committee. The most common committee, which exists on nearly every board, is the Audit Committee. They typically meet 4-6 times per year, based upon annual auditing activities and responsibilities.

The Investment Committee is the second most prevalent committee. Meeting frequency varies based upon the level of delegation to staff. For example, when a board has delegated investment manager selection to staff and has appropriate oversight and checks and balances in place, it may only meet 4-5 times per year (e.g., Teacher Retirement System of Texas).

Boards that have not delegated manager selection typically meet much more frequently, often as frequently as monthly (and sometimes more often on an hoc basis when needed to consider an investment into a time-limited opportunity). For boards that have an Appeals Committee, the meeting frequency is often monthly. However, at many systems this is handled as an administrative function and is not a function of the board (though subject to board oversight).

Each committee should have responsibilities which require it to meet at least 3-4 times annually; if not, the committee should be a candidate for consolidation into another committee.

Committee Reporting to the Board

Leading practice is for the committee chair to provide a report to the board at the next regularly scheduled board meeting to update the board as to its activities, findings, recommendations, and any other relevant issues, and for committee meeting minutes to be distributed to the board. Any recommendations brought to the board for approval would be documented and included in the board book package.

The committee chair should also share the agenda for the next upcoming committee meeting with the entire board at the board meeting taking place immediately prior to the committee meeting. This can also be accomplished by including the upcoming committee agenda in the board book package.

Committee Questions

Lay boards often encounter the situation of not knowing what questions to ask of their consultants/advisors and staff. The use of checklists and "questions to ask" for each committee can be helpful as thought starters. For example, the American Institute of Certified Public Accountants (AICPA), in their brief "10 Key Internal Audit Topics for Audit Committee Consideration," provides a list of Ten Key Questions for Audit Committees. The AICPA also offers additional toolkits to aid audit committee effectiveness.

Findings and Conclusions

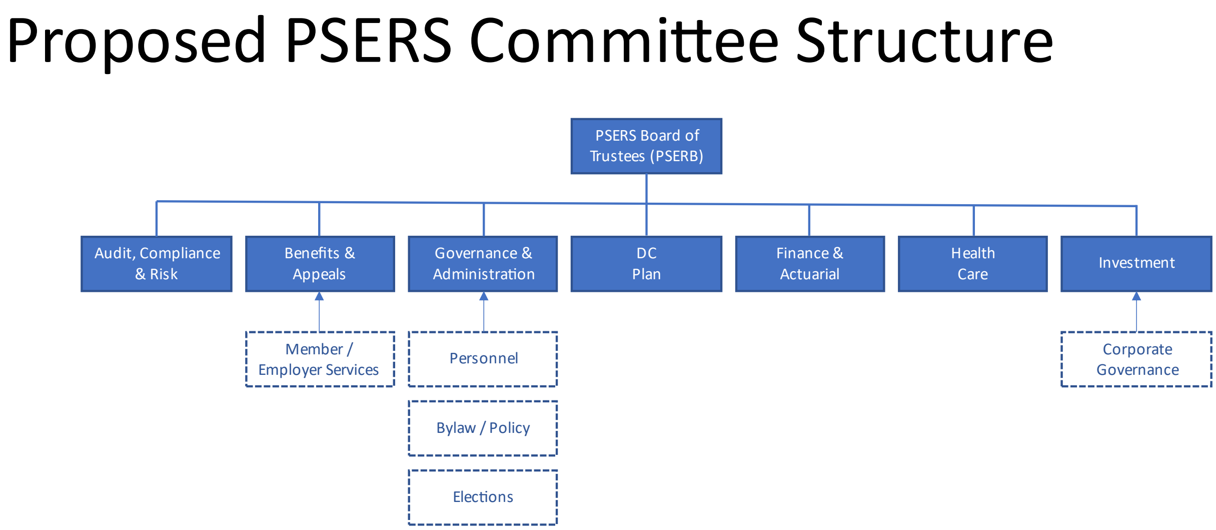
PSERB Committee Structure

There are currently 10 standing committees of the PSERB, which is nearly twice as many board committees as a typical peer system (10 vs. 5-6). The size of PSERS committees is also larger than most peer system committees (7 members vs. typically 4-6). The Investment Committee, as a committee of the whole, appears to be recognized as not best practice by trustees; however, the PSERB's prior experience with a limited Investment Committee proved unpopular among Trustees and was not approved for the committee.

Among the 53 largest integrated state public retirement systems, 41 have an investment committee, with a median investment committee size of 7 voting members, including those with a committee of the whole (11 of those 41).

A review of existing PSERS Bylaws revealed a random listing of committee responsibilities and (with the possible exception of the Audit/Compliance and DC Plan Committees), lack any formal charters.

Figure 4.8 Proposed PSERS Committee Structure



The only committee with a formal, board-approved charter is the Audit/Compliance Committee. There is a DC Plan Committee charter which has not been reviewed and approved by the PSERB. While helpful, these two charters do not have all of the components of a leading practice charter.

Model Charters

FAS has supplied PSERS with model charter outlines for each of the recommended committees. These models are organized around the Powers Reserved for the PSERB and aligned with the role of each Committee.

Provided separately, detailed draft committee charters have already been provided to staff as a starting point to develop new charters for the proposed new committee structure. Staff have been reviewing these model charts to further customize them to PSERS. The staff plan to submit these draft charters to the PSERB for discussion and approval.

A model committee charter is attached as Exhibit 4.2. In addition, the SERS committee charters (see Exhibits 4.2.1-4.2.7 were developed with FAS assistance) provide an additional potential model that could be customized to PSERS. Committee operational details currently contained in the Bylaws should be moved to the charters.

Use of Agency and Ad Hoc Committees

PSERS' use of agency committees is unusual. As mentioned in the peer comparisons, while staff and consultants may perform most of the work and report to committees and to the full PSERB, only trustees (and in the case of advisory committees, external experts) are typically voting members of committees.

The use of agency committees at PSERS, with staff as voting members, has undermined many trustees' perceptions of the independence of external consultants/advisors who have been selected by Ad Hoc RFP Committees which utilize the agency committee approach.

PSERS' frequent use of Ad Hoc Board Committees is also unusual, particularly with the large number of standing committees. At most retirement systems, the committee structure results in only infrequent needs for ad hoc committees, typically when there is an unusual one-time event or time-limited requirement.

The Process for Committee Selection

The PSERS practice of the PSERB Chair meeting with each trustee, discussing their interests, and assigning them to specific committees for a one-year term is prevailing practice. The practice of the PSERB Chair also assigning the chair and vice chair of each committee is not typical; prevailing practice is for each committee to elect its own chair and vice chair. Although the use of one-year terms for committee membership is prevailing practice, it has been suggested that two-year terms would be more efficient and provide more continuity.

Committee Agenda Setting

Committee agendas are normally set by staff but reviewed with committee chairs by assigned staff liaisons to committees. Leading practice would be to develop a committee policy agenda and activities linked to an overall PSERB policy agenda and strategic plan. The committee would review and approve the agenda for recommendation to and approval by the PSERB.

Committee Work Plans

It does not appear that PSERB committees have annual work plans or a prioritized policy development agenda but seem to be based upon a recurring annual cycle. The approach does not explicitly consider requirements for longer-term strategic plans and activities that may not recur annually and link to the PSERB's policy agenda and education requirements.

Committee Meeting Frequency and Duration

For some PSERS committees, the number of meetings per year is less than peers (Personnel, Budget/Finance, Board Governance, Corporate Governance, Appeals and Member/Employer Services). The Elections Committee only meets when required, typically once annually, and the Corporate Governance Committee meets very infrequently. With the exception of the Appeals and Member/Employer Services Committee, the duration of most PSERS committee meetings is similar to that reported by peers.

Committee Reporting to the PSERB

Currently most trustees, or their designee, attend most committee meetings, even if they are not a member of the committee. As a result, there is not a formal report-out process to the full PSERB, although the committee chair, with the assistance of staff, typically does provide a report on the committee's activities and recommendations.

Committee Questions

Currently, as noted earlier, the PSERS Audit Committee uses the AICPA checklist for Internal Control. However, lists of relevant questions need to be developed for the other committees.

Recommendation

4.8 Streamline PSERB's committees, establish clear charters and institute new procedures.

Implementation Guidance

4.8.1 Improve the efficiency and effectiveness of PSERB's committees by consolidating the current 10 committees into 7 committees with enhanced oversight responsibilities. See Figure 4.8 and Exhibit 4.6 Proposed Committee Consolidation

4.8.2 Develop committee charters to include standard elements. See Exhibit 4.2 Model Committee Charter

4.8.3 Eliminate agency committees that include trustees, as well as ad hoc RFP committees.

4.8.4 Reduce the size of each committee (e.g., not more than five members, although the Investment Committee can be larger) and schedule concurrent committee meetings to improve utilization of trustee time.

4.8.5 Annually, each Committee should identify its proposed policy priorities for approval by the PSERB, based on the PSERB's strategic calendar and the Committee's oversight responsibilities. The annual workplan of each committee should be reported to the PSERB by the Committee Chair and approved by the PSERB.

4.8.6 Selection of each external consultant/advisor to the PSERB should be assigned to the appropriate PSERB committee and Ad Hoc RFP Committees should be eliminated.

4.8.7 External PSERB consultants/advisors should be evaluated annually by the relevant committee; in addition, the committee should meet with each consultant/advisor in executive session (to the extent allowed under public meetings law) at least annually without staff present.

4.8.8 Committees should elect their Chairs and Vice Chairs.

4.8.9 Consistent with Recommendation 4.4.1, public committee meetings should be streamed, recorded and archived.

4.8.10 New committee members should receive an orientation to the purpose, background and issues likely to be considered by the committee.

4.8.11 Each committee, with support from staff and external consultants/advisors, should develop checklists and a list of relevant questions that should be regularly asked by that committee; for example, ten questions the Audit Compliance and Risk Committee should always ask.

4.9 PSERS's Bylaws

Overview and Peer Comparisons

Most state public retirement systems have either bylaws, a board charter, or both. There is not a standard prevailing practice. Regardless of what it is called, the bylaws or board charter typically include such information as:

- Background, organizational purpose, and authorities
- Board composition and structure
- Code of conduct and ethics
- Role of the board and powers
- Meetings
- Board officers
- Duties and responsibilities of board members
- Delegations and reporting relationships
- Committee structure
- Board self-assessment process
- Board continuing education process

Findings and Conclusions

The PSERS Bylaws are substantially longer (at 50 pages) and contain more footnotes and detail on some subjects than is typical compared to peers' bylaws. In addition, a desire for simplification of the Bylaws was a common theme raised during trustee and designee interviews.

While the current PSERS Bylaws are appropriate as to the topics covered, they could be made more concise and simplified. In addition, some of the details regarding committees and indemnification could be moved to committee charters and separate PSERB governance policies. FAS has also made other recommendations that could result in amendment of some current Bylaw provisions.

The SERS Bylaws offer a model template for revision of the PSERS Bylaws. A comparison of the PSERS and SERS Bylaws, with suggested PSERS adjustments, is attached as Exhibit 4.1 Model Bylaws Matrix (PSERS/SERS).

Recommendation

4.9 Streamline PSERS's Bylaws

Implementation Guidance

4.9.1 Clarify and streamline by-laws (simplify/plain language) and incorporate the approved recommendations from this review (see Exhibit 4.1 Model Bylaws Matrix).

4.10 PSERB Education and Development

Overview and Peer Comparisons

Trustees are appointed, elected or ex officio. There are no ex-ante requirements for education, understanding or experience in investment, governance or administration. There are often steep and prolonged learning curves for new public retirement system trustees. Thus, on-boarding and continuing education are critical for lay boards such as PSERS. In addition, most trustee continuing education programs are not tailored to individual needs and are typically focused primarily on investment often at a fairly sophisticated level.

In some states where there are multiple retirement systems, the statutes provide for joint board continuing education efforts. For example, in Ohio, new trustee orientation and annual continuing education must cover board member duties and responsibilities, retirement system member benefits and health care management, ethics, governance processes and procedures, actuarial soundness, investments, and any other subject matter the Ohio retirement boards believe is reasonably related to the duties of a board member.

Orientation must be provided within 90 days after commencing board service, and at least two components of continuing education must be attended annually. The primary training program is jointly developed and paid for by all of the Ohio retirement funds, although each system typically provides supplemental Trustee education as a regular component of board meetings.

Leading peer practice for a public retirement system board continuing education program includes:

- A description of the experiences and/or expertise required for trustees to fulfill their duties;
- An inventory of experience and expertise of current trustees;
- Mandated education for trustees in areas which include: fiduciary responsibilities; investments; ethics; pensions; and governance;
- Board training plan for the full board, individual members, and new board members (onboarding); and,
- An onboarding process which extends throughout at least the first year of a new trustee's tenure and is tailored to address the needs of the individual trustee.

Findings and Conclusions

PA Act 5 of 2017 added a new continuing education requirement which states, "Each member of the board will be required to obtain eight hours of mandatory training in investment strategies, actuarial cost analysis and retirement portfolio management on an annual basis."

Currently, on-boarding of new trustees is done via 6 hours of PSERS-specific orientation, (see Exhibit 4.3 for Current and Proposed PSERS Onboarding). The orientation process usually gets positive reviews by participants. However, some have expressed concern that the amount of information is overwhelming and very difficult to absorb in a single sitting. Most members easily achieve the required 8 hours annually.

Staff report they try to embed 1-2 hours of eligible training into each PSERB meeting. Some PSERB members have complained this takes up too much of the PSERB meeting time and would prefer to have all training separately.

House Bill 1962 (2020 Act 128), created two changes which would alter trustee and designee continuing education requirements:[23]

> *f. Board training. "Each member of the board will be required to obtain* ***10*** *hours of mandatory training in investment strategies, actuarial cost analysis**,** asset allocation, risk assessment and retirement portfolio management on an annual basis."*
>
> *g. Committees. In order to be appointed to the Audit/Compliance Committee as a voting member, a board member must complete at least 16 hours of training in risk assessments, internal controls and auditing standards within 90 days of appointment to the committee. The 16 hours of training are inclusive of the hours indicated for board training. The Committee on Sponsoring Organizations Enterprise risk management guidelines may be considered as a guide to the training. Individuals who are members of the Audit/Compliance Committee on the effective date of this paragraph shall be exempt from the initial 16-hour requirement. In order to continue serving as a voting member of the Audit/Compliance Committee following initial appointment, a board member must complete at least eight hours of continuing education in risk assessments, internal controls and auditing standards each calendar year thereafter."*

Virtual training is now available, after initial technical limitations. Self-assessments are not regularly conducted; however, an independent assessment was done as part of Pennsylvania's Auditor General Performance Audit in 2017. The Auditor General made eight recommendations regarding Board Education and Development as shown in the table below.

Figure 4.9 Status of 2017 DAG Recommendations re: Trustee Education

PA Office of General Auditor Recommendations 2017	Status 2021
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.	Not adopted
2. Require that all new board members or designees be mandated to attend a board orientation session when appointed to the board.	Adopted by PSERS and incorporated in Bylaws and Education Policy
3. Mandate a minimum amount of continuing education or training each Board member/designee must obtain annually, specifying the minimum number of hours of training and the core subject matters the trainings must encompass.	Included in Education Policy
4. Clarify that designees are subject to the same mandated training and education as members.	Included in Education Policy
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).	Not adopted
We recommend that PSERS:	
1. Obtain and maintain biographies of each Board member/designee to evidence educational, career, or other experience related to key Board processes, including institutional investments.	Partially adopted
2. Include Board member biographies on the PSERS website to increase transparency.	17 of 30 are posted to the website
3. 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.	Not adopted
b. The Board to determine the subject matters addressed at education sessions and to what extent each topic needs to be discussed.	Not adopted
c. A minimum amount of mandatory education or training each Board member/designee must obtain each year, specifying the minimum number of hours of training and the core subject matters the trainings must encompass.	Included in Education Policy
d. The Board Liaison document and retain when each new Board member/designee completes the new member orientation program.	Partially addressed in Education Policy
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.	Provided for in Education Policy

See also Exhibit 4.4 Example Education Needs Assessment

Selection of Educational Topics

There is currently no structured process for selecting educational topics for Board continuing education. As mentioned in peer comparisons, leading practice includes developing a description of the experiences and/or expertise required for trustees to fulfill their duties; an inventory of experience and expertise of current trustees; and a training plan for the full PSERB and each individual member.

Regularity and Timing of Education

Continuing education is offered as part of PSERB meetings as well as in-person conference attendance pre-COVID-19. A number of trustees/designees have expressed concern about the amount of time involved and whether meeting time could be put to better use or greater use be made of on-line training.

Required and Advisable Areas of Expertise

Currently there are no requirements since trustees are elected, appointed or ex officio. Advisable areas of expertise have not been previously explicitly identified (see recommendations for On-Boarding and Continuing Education and Exhibit 4.4). PSERS does provide biographies for 17 of the 30 trustees and designees (the Governor's appointment has been vacant until recently) consistent with the recommendations of the Pennsylvania Auditor General's 2017 report. However, there are inconsistencies in that some trustee and designee biographies are missing.

Avoiding Conflicts of Interest with Firms Providing Education

During the interviews, trustees and designees expressed concerns about the independence of those providing training and noted that these sessions often come across as sales pitches when presented by service providers. Typically, these are presentations from investment managers rather than PSERS' investment consultants, although the investment consultants do occasionally provide training.

It is common practice for peers to use service providers to make educational presentations to trustees. The providers usually do so without extra cost (in some cases educational services are included in the provider's contract), may be present at board meetings anyway and were selected because of their expertise. However, both the PSERB and staff should communicate clear expectations that, when service providers give educational presentations, they do so without bias or self-serving promotion. PSERB evaluations of educational sessions could be used to identify situations where independence was lacking or the content did not meet expectations. Issues could be conveyed to presenters and considered in future quality of service evaluations.

In addition, the PSERB's education plan should include use of multiple sources (see Recommendation 4.10.10). Education sessions from fully independent experts (at PSERB retreats or otherwise) could be integrated into the education plan. To ensure diversity of opinion and exposure to new information and evolving leading practices are received by trustees, conferences, classes, on-line learning resources, industry publications, peer-sponsored joint education events and other resources should be incorporated into the education plan and updated regularly to reflect PSERB self-evaluation results and skills development needs. These should be curated to the specific needs of PSERB rather than simply lists of events.

FAS notes that the current Education Policy addresses compliance with Retirement Code education requirements by both Board Members and Designees and contemplates some degree of education planning, with PSERB approval. However, FAS believes the policy should provide more detailed guidance and also be included as a planning responsibility in the charter of the appropriate committee. The SERS Governance Policy Manual contains documents which could be used as a model and customized for PSERS.

PSERB Self-Evaluation Process and Recommendations

Considering that this report recommends ways to improve PSERB's performance, for the next two years, the PSERB should focus on the implementation of the recommendations which it accepts from this report. See Exhibit 4.5 for Example Board Self-Evaluation Criteria.

Onboarding for New Trustees and Designees

See Exhibit 4.3 for a list of PSERS current on-boarding topics. The initial on-boarding has apparently been well-received by new trustees. However, there is a tremendous amount of information included and it is difficult to absorb all in one sitting. Several trustees suggested that aids to navigate and find information would be helpful. They also suggested breaking the on-boarding into smaller, more digestible sessions.

Recommendation

4.10. Enhance trustee education and development.

Implementation Guidance

4.10.1 Develop an inventory of trustee skills, learning priorities and learning preferences (see Exhibit 4.4).

4.10.2 Following the initial implementation period, the PSERB should conduct a biennial self-evaluation process (see Exhibit 4.5), potentially with external assistance. The Self-Evaluation should help to inform educational priorities.

4.10.3 Create an intranet directory of PSERS specific orientation materials for rapid trustee access.

4.10.4 Consider also including an overview of where the information is located and how to access / navigate the directory.

4.10.5 The orientation should include how to use Diligent / Portal software.

4.10.6 Improve on-boarding / orientation to emphasize the fiduciary duties, code of conduct, PSERS mission and strategy, and an orientation to the portal.

4.10.7 Expand knowledge requirements beyond investment to include all vital retirement functions.

4.10.8 Ensure Audit Committee members complete at least 16 hours of training in risk assessments, internal controls and auditing standards within 90 days of appointment to the committee.

4.10.9 Ensure education is received in adequate time before a decision relating to that topic is required (see ALM cycle example).

4.10.10 The PSERB Governance Committee should develop a Continuing Education plan using internal and external sources tied to the PSERB's policy agenda, e.g., the strategic plan and the Asset Liability Management (ALM) cycle (see Exhibit 1.4).

4.10.11 Provide common continuing education on key topics with an opportunity for full PSERB discussion, including performance and risk management, actuarial processes, code of conduct, governance, and institutional investing.

4.10.12 Explore multiple ways to deliver continuing education, taking into account the individual preferences of trustees and designees, e.g., on-line, in-person, in meeting, hybrid, etc.

4.10.13 PSERS should continue to track trustee/designee participation in and completion of continuing education.

4.10.14 Ensure the independence of PSERS' education/training providers (should not be sales pitches)

4.10.15 Develop guidelines for education sessions by existing or potential future service providers. The requirement to provide education services should be included in service agreements.

4.10.16 Fiduciary education should be conducted annually.

5. PSERB approval of key decisions.

Scope

A. Key decisions by the PSERB which are not included in the scope of this review:

- Board approvals of recurring annual decisions, e.g., budget requests (administrative, investment-related, defined contribution, premium assistance, Health Options program, directed commissions recapture), financial statements, audit plans, audit reports, and medical benefits and premium rates
- Board approval of key third-party providers, e.g., health programs, proxy advisors, technology providers
- Board approval of actuarial valuation reports, factors, assumptions, methodologies, and employer contribution rates
- Board approval of the shared risk calculation every three years

B. Key decisions addressed in this review:

5.1 Board policy on approval of key decisions.
5.2 Board approval of hiring or termination of investment managers and general partners.
5.3 Board role in handling of disability reviews and appeals.

5.1 Board policy on approval of key decisions

Overview and Peer Comparisons

All public retirement system boards have a number of decisions they must address on a recurring basis. These are not policy decisions, but rather approvals of recurring proposals and decisions, typically prepared by staff, that require board approval as part of a normal system of checks and balances.

Although these decisions may not receive the same level of board scrutiny and discussion as key policy decisions, and at times can appear to be routine due to their recurring nature, they still require an exercise of care by the board in meeting its fiduciary duty.

Most of these board decisions fall within the responsibilities of one of its committees which has oversight responsibility and make recommendations to the board for approval. As a result, typically the committee, under the direction of the committee chair, works with staff to identify the appropriate decision's diligence processes and standards required for board approval.

Because there are various types of decisions with varying levels of risk and impact to the system, leading practice is to have a defined decision-making process which considers the unique requirements for that decision. Particularly important and impactful decisions (e.g., actuarial assumptions, audit plans, investment manager selection) will typically have a board policy defining the board's requirements for approval.

Some approvals recur on a regular basis, typically annually, or sometimes every two or more years. These typically include, for example, budgets, financial statements, audit plans, hiring of important third-party service providers, and actuarial assumptions and rates.

For this type of recurring decision, there is typically a defined process staff and consultants/advisors follow in preparing the recommended action to the board. The formal process description will generally include timing of the decision, roles and responsibilities, policies that govern, comparisons with prior performance and approvals, and explanations of variances from or differences with prior requested approvals.

A. Key decisions by the Board which are not included in the scope of this review:

The PSERB approves a variety of decisions which are not considered setting policy or conducting the business of the board. Included among the recurring and ad hoc approvals over the past five years are:

- Budget requests (annual)
    - Administrative budget
    - Investment-related expenses budget
    - Defined contribution plan budget
    - Health insurance account (premium assistance) budget
    - Health Options Program budget
    - Directed commissions recapture program budget
- Financial statements and ratification of payments (annual)
- Actuarial valuation, including actuarial factors, assumptions, and methodologies (annual)
- Member contribution rate certification in accordance with shared risk provisions (3 years)
- Five-year actuarial experience review – demographic and other assumptions (5-year)
- Actuarial audit (5 years)
- Medical plan benefit changes and premium rates (annual)
    - Health Option Plan (HOP)
    - Pre-65 Medical Plan
    - Value Medical Plan
    - Basic Medicare Rx Plan
    - Value Medicare Rx Plan
    - Enhanced Medicare Rx Plan
    - Retire Dental Plan
    - Retiree Vision Plan
- DC Plan Document adoption and changes (ad hoc)
- Third Party Administrator and other provider contracts
    - Health Options program (3+ years)
    - Pharmacy benefit manager (3+ years)
    - CMS Part D Compliance Activities Services and Pharmacy Benefit Consulting (2+ years)
    - DC Plan recordkeeper (5 years)
    - Proxy research and voting services (5 years)
    - Investment Book of Record (IBOR) consultant (5 years)
    - Securities litigation consultant (5 years)
- Designated signatory changes (ad hoc)
- Creation of investment professional positions (ad hoc)

- Acceptance of third-party reports (e.g., Internal Audit study) (ad hoc)
- Other third-party contracts
    - Cyber insurance

Certain approvals are now addressed in the Audit, Compliance and Risk Committee proposed revised charter.

- Independent auditors' report (annual)
- Audit and compliance monitoring plan (annual)
- Internal control assessments and monitoring plan (annual)

Findings and Conclusions

The PSERB has not systematically identified all decisions which must come to the Board and set decision standards for each one. As a result, there is no clear direction to staff on the PSERB's expectations for decision diligence and the requirements for its approval. In addition, lack of committee charters has resulted in lack of clarity regarding the responsibilities for each committee in supporting PSERB decision making.

Although not in the scope of this review, FAS makes a general recommendation that the PSERB review this list of recurring approvals and ensure that, where appropriate based upon potential impact and risk, decision diligence standards and a formal process are articulated to ensure that PSERB approvals occur on a timely basis, with adequate review and independent verification. PSERB committees should play an important role in assisting in setting decision diligence standards and processes.

5.1 Develop decision diligence standards and processes for each key PSERB decision.

Implementation Guidance

5.1.1 Clarify due diligence and verification requirements and processes for each PSERB approval.

5.1.2 Identify and confirm criteria for decisions requiring PSERB approval and assign them to the appropriate committee.

5.2 Investment Manager Hiring or Termination

Overview and Peer Comparisons

Based upon FAS research that examined the 62 U.S. integrated Board-managed state retirement funds (excludes the three funds managed by a sole fiduciary (New York State CRF, North Carolina, and Connecticut) with assets under management of at least $10 billion, the following profile of board delegation of investment manager selection was developed:

Figure 5.1 AUM and Delegation

Systems by AUM	Delegated Selection	Have Internally-Managed Portfolios	Average % Alternatives Allocation [1/]
Twenty largest ($426 – $57 billion)	80% [2/]	85%	31%
Next 20 largest ($54 – $22 billion)	55%	20%	30%
Next 22 largest ($22 – $10 billion)	41%	18%	27%
PSERS ($59 billion)	No	Yes	49%

[1/] Based upon Boston College study; includes private equity, hedge funds, commodities, real estate and miscellaneous alternatives
[2/] Note: was 60% 10 years ago

Among the twenty largest funds, the only other fund besides PSERS with significant internal investment management and where the board still approves external managers is New York State Teachers. As indicated, among the twenty largest funds, the percentage where the board has delegated manager selection has increased from 60% to 80 % since 2010.

Large state public retirement systems with relatively high levels of alternative assets, similar to PSERS, overwhelmingly delegate manager selection to investment staff as indicated by the table below that includes all of the top 62 state funds with at least 40% alternatives in their allocation.

Figure 5.2 AUM, Allocation to Alternatives and Delegation

State Fund	AUM ($billions)	% Alts. [1/]	Mgr. Sel. Delegated
Teacher Retirement System of Texas	$163	47%	Yes
Washington State Investment Board	$129	45%	Yes
Virginia Retirement System	$90	42%	Yes
State of Michigan Investment Board	$87	44%	Yes
Oregon PERS	$83	47%	Yes
Pennsylvania PSERS	$59	49%	No
Maryland State Retirement and Pension System	$57	45%	Yes
Utah Retirement Systems	$43	40%	Yes
Arizona State Retirement System	$42	40%	Yes
Indiana PRS	$39	49%	Yes
Alaska Retirement Board	$36	43%	Yes
Texas County & District	$32	60%	Yes
Maine PERS	$15	53%	No
New Mexico ERS	$13	42%	Yes
Arizona Public Safety	$11	57%	Yes

[1/] Based upon Boston College study; includes private equity, hedge funds, commodities, real estate and miscellaneous alternatives

Funds with substantial full-time in-house investment staff and a robust internal investment committee vetting process typically spend many person-weeks conducting due diligence on an investment with the assistance of other full-time experts from the board's consultants. Most boards recognize it would be inappropriate to accept or reject a recommended manager based upon a 20–30-minute board discussion.

Despite the trend for increased delegation noted above, some boards still retain approval of hiring or termination of investment managers. If so, it is usually a much more frequent type of recurring approval, typically at every board meeting.

Findings and Conclusions

Investment Manager Hiring or Termination

Compared to its peers, PSERS is an outlier. As mentioned above, among the twenty largest funds, the only other fund besides PSERS with significant internal investment management and where the board still approves external managers is New York State Teachers. As indicated, among the twenty largest funds, the percentage where the board has delegated manager selection has increased from 60% to 80% since 2010.

However, PSERS may wish to implement preliminary governance recommendations before considering greater delegation of PSERS investment decision-making. Some of the suggestions for improving both the trust with staff and the effectiveness of PSERB meetings are addressed in recommendations from this governance review, including:

- Providing PSERB materials on a more-timely basis to allow trustees to adequately prepare for meetings.
- Making presentations more focused and briefer to allow more time for PSERB questions and discussion.
- Creating key performance and risk metrics which are independently verified.
- Ensuring that consultants/advisors to the PSERB report to the Board, are independent of management, and provide independent advice.
- Further clarifying of roles and responsibilities, including the powers reserved for the PSERB and delegations to staff.
- Developing a strategic plan to articulate the long-term direction for PSERS and the Board strategic priorities.
- Implementing a policy and process for prioritizing and tracking trustee requests for information from staff or PSERB consultants/advisors to ensure follow-up.

PSERS has created a staff investment office committee (Asset Implementation Committee) responsible for internal and external manager due diligence, analysis and performance oversight) and which analyses and monitors asset allocation. PSERS investment due diligence processes were not within the scope of this review. From an overall governance perspective, FAS recommends a number of policy and practice improvements which could help improve the PSERB's relationships with and use of staff and consultants/advisors and potentially ultimately provide a basis for substantial delegation of investment manager selection and termination to investment staff at some point in the future.

For further discussion of options and related pros and cons regarding the Delegation of Manger Selection, see Exhibit 5.1.

Recommendation

5.2 Delegate manager selection and termination once fundamental governance improvements have been made.

Implementation Guidance

5.2.1 When appropriate, the PSERB should consider delegating manager selection to professional staff, with limits, but only when certain conditions have been met and the PSERB is satisfied that necessary checks and balances are in place (see Exhibit 5.1).

5.2.2 Any new portfolios, whether internal or external, and material changes to the portfolio (large new allocations, terminations) should be documented and presented to the Investment Committee of the PSERB as an informational item at the next IC meeting following the decision to proceed.

5.2.3 Risk measurement of any new portfolio, whether internal or external, should be modeled both as a stand-alone, vis-à-vis the asset class, and in terms of its portfolio impact on the entire PSERS portfolio.

5.2.4 Standard risk scenarios (e.g., parallel or twist interest rate shocks, the 2008 financial crisis, etc., liquidity) should be specified and provided to the Allocation Implementation Committee (AIC) prior to any new portfolio approval.

5.2.5 Annual updated investment and operational due diligence reports should be presented to the AIC. Any member of the AIC may "flag" that portfolio for further investigation and potential termination (or other mitigation) by the AIC based on those reports.

5.2.6 The CIO should provide a report at each Investment Committee (IC) meeting that identifies which investment managers and/or general partners are being considered for upcoming investments for informational purposes, as well as reporting on what has occurred since the previous IC meeting.

5.2.7 A discussion of the due diligence process should be included in all annual asset class reviews.

5.2.8 The general investment consultant (and relevant specialty consultant) should opine to the PSERB/IC regarding any potential improvements to the PSERS due diligence processes based upon industry leading practices.

5.2.9 The Audit and Compliance Committee, with input from the IC, should ensure that the internal audit plan includes appropriate reviews of investment processes and controls.

5.2.10 If necessary, to obtain adequate specialized internal auditing skills, the Chief Auditor should be authorized to engage third-party auditor resources to supplement internal resources.

5.2.11 Compliance should regularly report to the IC regarding investment compliance results, on an exception reporting basis.

5.2.12 Compliance to affirm to the PSERB IC that all new portfolios have been established in accordance with policies and procedures.

5.2.13 General investment consultant opines to the PSERB IC on proposed changes to investment policies.

5.2.14 CEM or other such reports should be provided to the IC of the PSERB.

5.2.15 All external managers and broker/dealers should affirm compliance with PSERS rules annually.

5.3 Board Role in Handling of Disability Reviews and Appeals

Overview and Peer Comparisons

Prevailing practice with public retirement systems is to have a hierarchy of decision processes and checks and balances in reviewing disability claims and appeals, as this is the nature of the appeals process. Often, disability appeals are handled by an administrative law judge. If a member files an appeal, the system legal staff typically handles the response, sometimes with the assistance of a consultant.

Each state is somewhat different in the procedural requirements for handling disability reviews and appeals, but funds generally have some kind type or medical review or medical advisory board which reviews and then recommends to staff for acceptance or denial based on the medical documentation and legal requirements. Legal staff guide the process and compliance with legal standards unique to the system and state's administrative procedures requirements.

In some states, if a settlement is not reached the appeal will again go to a judge for resolution. In other states, the system's fiduciary board has final jurisdiction. Handling of disability reviews and appeals is also a more-frequent board approval activity at systems where the board is involved. Although this process can vary dramatically from one system to another, it typically follows a set of standard procedures and protocols to ensure compliance with all rules and regulations and fair outcomes.

Findings and Conclusions

The PSERB's handling of disability reviews and appeals generally is well managed and over the years has functioned well. PSERS' process seems generally well-defined and thoughtful. PSERS utilizes multiple Medical Examiners and other specialty physicians who review disability requests. Recommendations come to the Board Appeals and Member/Employer Services Committee from the Executive Staff Review Committee (ESRC) for acceptance. The ERSC is supported by in-house legal staff.

The Appeals and Member/Employer Services Committee is usually given 30 minutes to handle all matters; this amount of time is typically adequate but occasionally is extended if there are significant questions. The Appeals and Member/Employer Services Committee Chair provides a report to the full PSERB with recommendations for final approval.

Recommendation

No recommendations at this time.

6. Governing Structure / Legislation

Scope

In this section, the statutory and other Commonwealth laws that establish PSERS' governing structure are discussed:

- Relevant statutes, regulations, rules, and policies applicable to the Board
- Board composition, organization, and structure
- Term limits for Board officers
- Board authorities
- Procurement process and authorities
- Trustee removal policy

Overview

PSERS is governed by the Public School Employees' Retirement Code, and numerous other statutory codifications and unconsolidated laws of the Commonwealth of Pennsylvania. Among relevant enactments outside the Retirement Code itself are (to use short titles or popular names) the Administrative Agency Law, the Administrative Code, the Adverse Interest Act, the Commonwealth Attorneys Act, the Fiscal Code, the Public Official and Employee Ethics Law, the Right-to-Know Law, and the Sunshine Act.

Other pertinent rules that apply to the PSERB, whether of binding force or merely precatory, include the Governor's Code of Conduct, other rules and regulations of the Executive Board, and the General Counsel's interpretations of the Sunshine Act. While FAS did not seek to compile an exhaustive list of every legal requirement relating to PSERS, the provisions identified in Exhibit 6.1 appear to represent the primary statutory and code governing provisions.

Exhibit 6.1 not only describes the topics covered by the statute and code provisions identified, it also lists the corresponding authority and regulatory requirements, as well as our comments where appropriate. Nearly all of the findings and recommendations contained in this report relate to improvements that do not require legislative or regulatory actions. In the following pages, recommendations are made to improve alignment and identify a number of inconsistencies between the legislation and PSERS' Bylaws and policies.

As a result, discussions of our findings and recommendations that relate to these governing statutes and codes are contained throughout this report. Exhibit 6.1 also provides a roadmap to the specific report sections. Since this was not a compliance audit, findings on compliance and implementation practices related to these governing statutory, bylaw and policy provisions were beyond the scope of this review.

Peer Comparisons

Staggered Terms

Data and information regarding peer governing legislation are provided throughout this Report, and the relevant sections are referenced in Exhibit 6.1. In addition, FAS notes that PSERB departs from prevailing or trending peer governance structures in the absence of mandates for staggered board member terms and consideration of relevant experience or skill sets by appointing authorities when selecting board appointees.

Our research shows an increasing trend toward use of staggered terms. Twelve of the 17 participants in a 2011 FAS benchmarking study had staggered terms. A 2014 FAS retirement system benchmarking study had 5 of 7 with staggered terms. The 9 systems in our 2018 benchmarking database (a diverse mix of systems) were 9 of 9 with staggered terms.

Expertise Requirements

It is the same for expertise requirements. The FAS 2011 benchmarking study found that 14 of 17 systems had an experience and/or expertise requirement. Our 2014 investment board benchmarking study had 3 of 7 with an experience requirement. In the 2014 FAS retirement system report, 4 of 7 had an experience requirement. In our 2018 benchmarking database, 6 of 9 had an experience/expertise requirement for at least one trustee. It is reasonable to expect that these requirements have increased with time.

In addition, the Clapman Report 2.0 Model Governance Provisions to Support Pension Fund Best Practice Principles recommends that boards "should engage in an annual evaluation of trustee skills and, where appropriate, should develop a plan for improving and expanding the board's competencies."

The 2017 audit report of the Auditor General made a similar observation, cited peer requirements and recommended that the General Assembly amend the Public School Employees Retirement Code to "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."

PSERB Authorities

Although many peer retirement systems have more autonomy, which is leading practice, PSERS' more restrictive authorities are typical for its peer group, for example with budgeting, headcount, legal services, and compensation. NASRA research shows "Key areas of retirement system governance—setting benefit levels, design and funding—in most cases are not delegated to public retirement system boards or staff, but rather are the responsibility of elected legislative bodies and the chief executive (*of the jurisdiction*)."[24]

The PSERS Board has authority for selecting the actuary, auditor and outside legal counsel which is consistent with prevailing practice. For most non-investment purchases, PSERS is required to follow standard Commonwealth procurement policies and practices. This is typical for many public retirement systems, although leading practice is for the fiduciary board to have the authority to set procurement policy. PSERS purchasing exceptions for investment services, and limitations vis-à-vis standard state policies for all other services, are consistent with most peer funds which require the system to follow state procurement rules.

Findings and Conclusions

PSERB has compensation setting authority for investment professionals, investment release expenses and healthcare administration. Although the Commonwealth is well represented on the PSERS Board of Trustees by legislators and ex officio members who constitute a majority, the PSERS Board lacks autonomy for pension administration, defined contribution administration and directed commissions budgets.

As a fiduciary board, PSERB oversees $60 billion in investments, yet it does not have the autonomy to hire an additional employee, set compensation for non-investment employees, or obtain external legal counsel without executive branch approval, or increase its budget without legislative approval. This lack of autonomy can impair the PSERB from exercising its fiduciary duties. Once governance reforms have been implemented, it would be reasonable to expect that, particularly with the large contingent of PSERB legislative and ex officio trustees providing direct fiduciary oversight by elected officials, the PSERB should be more autonomous in managing its own staffing and budgets.

The current requirements for open meetings and exceptions for executive session, while somewhat more stringent than some other states, do not appear to be an impediment for the PSERS Board to exercise its fiduciary duties although the meeting notice time requirements may inhibit rapid responses when needed.

PSERS compliance with the Commonwealth procurement policies and processes can result in a lengthy process because it is very sequential rather than concurrent. However, this does not appear to be a major impediment to successful operation of PSERS. The selection of investment managers and general partners is exempt from the standard Commonwealth policies and processes, which is prevailing practice for public retirement systems. The Executive Director does have discretion to invoke an emergency procurement procedure if there is an emergency requirement.

With regard to investment-related services such as investment consultants or advisors, PSERS has typically formed RFP committees with both trustees and staff as voting members. Recommendations for changes to this process are included in section 4, Board Committees.

In Exhibit 6.1, FAS identifies a number of governance structure recommendations and notes apparent inconsistencies between PSERS statutory governance framework and its Bylaws and policies. FAS also believes that (a) required staggering of Board member terms for elected and appointed trustees would improve PSERB's ability to maintain a more consistent level of experienced Board membership over time and avoid recurring periods of destabilizing institutional memory loss; and (b) consideration by appointing authorities, when selecting appointees of the experience, skills, diversity, and time availability needs of PSERB would increase the Board's overall effectiveness. This would also be consistent with our recommendation on selection of designees with relevant experience (see Recommendation 4.7).

In addition, legislation is usually provided in lists instead of categories which makes it harder for the lay person to comprehend. FAS has taken the liberty of organizing PSERS primary governing law into six categories: Fiduciary Duty; State Supervision; Governance; DC Plan, DB Plan, Retirement Functions. This organization is shown in Figure 6.1.

Recommendation

6. Seek better alignment of appointed trustee terms and qualifications.

Implementation Guidance

6.1 If legislative changes in PSERB membership are made, request that staggering of appointed member terms be included to the extent feasible.

6.2 Include a provision in the charter of the PSERB Board Governance committee that provides for annual or biennial recommendations to the Board of a PSERB communication to appointing authorities that identifies preferred experience, skills and diversity attributes that would improve overall composition of the PSERB.

6.3 Alternatively, if legislative changes are made to PSERB, request that appointing authorities be required to select appointees with relevant expertise, experience or other characteristics that would improve the PSERB's overall competence.

Figure 6.1 Categorization of PA PSERS Governing Law

1. Fiduciary duty

1.1 Fiduciary duty
1.2 Standard of Care
- 1.2.1 Penalty for fraud

1.3 Conflict of Interest—Ethics Act
- 1.3.1 Code of Conduct

2. State supervision

2.1 Insurance Department
2.2 Governor
2.3 Legislature

3. Governance

3.1 Limited liability
3.2 Board Composition
- 3.2.1 Ex-officio and Legislative Members; Designees
- 3.2.2 Oath of Office
- 3.2.3 Board Chair
- 3.2.4 Trustee Removal
- 3.2.5 Corporate Power and legal advisor

3.3 Meetings
- 3.3.1 Public meeting
- 3.3.2 Executive Session
- 3.3.3 Records

3.4 Board Training
3.5 Committees
- 3.5.1 Audit Committee
- 3.5.2 Investment Committee

3.6 Professional advisors
3.7 Employees
- 3.7.1 Compensation of staff

3.8 Annual Budget
3.9 Administrative Rules
3.10 Annual financial statements
- 3.10.1 Certification of employer contributions
- 3.10.2 Adjustment of errors

3.11 Independent audit
- 3.11.1 Audit
- 3.11.2 Catch all and employer audit rights

3.12 Procurement
3.13 Definitions

4. DC Plan

4.1 Board Powers and Duties
4.2 Board Administration and Investment
4.3 Exclusive Benefit Rule

5. DB Plan

5.1 Actuarial procedures
- 5.1.1 Actuarial issues
- 5.1.2 Adopting actuarial assumptions

5.2 Stress test
5.3 Investment
- 5.3.1 Control and management of fund
- 5.3.2 Custodian
- 5.3.3 Private investments
- 5.3.4 Joint ownership permitted
- 5.3.5 Public Markets Emerging Manager Investment Program
- 5.3.6 Non-mandatory "limitation" on fees

6. Retirement Functions

6.1 Benefit Delivery
- 6.1.1 Disability
- 6.1.2 Adjudicate various benefit appeals

6.2 Health insurance
- 6.2.1 Health insurance premium assistance program

Exhibits

Exhibit 1.1 Differences between Public and Private Sectors

Dimension	Public Sector	Private Sector
Fiduciary Standard	• Highest standard of duty	• Lower standard of duty
Transparency and Access to Information	• Limited ability to keep matters private	• Private with very limited public access other than mandated disclosures
Decision Making	• Non-competitive • Often constrained	• Competitive • Largely unconstrained
Choice of Board	Highly restricted – legislatively mandated lay boards • Elected • Appointed • Ex Officio	• Generally unrestricted – nominating committees / professional selection for corporate boards, often using a needs assessment matrix. • Corporate officials for defined contribution plan boards • Joint management/labor for Taft-Hartley defined benefit plans • Generally unrestricted – nominating committees/ professional selection for mutual fund and other investment boards, often using a needs assessment matrix.
Flexibility in resource allocation	• Often low	• High
Budgetary and Procurement Authorities	• Often limited	• High flexibility
Compensation and benefits	• Lower compensation, higher benefits, greater job security.	• Higher compensation, lower benefits, less job security.
Turnover	• Can be high	• Often lower
External Oversight, Compliance, and Control	• High transparency, accountability, and ethics rules • External oversight from sponsors (e.g., State oversight from legislatures, special oversight bodies, attorneys general) • Frequent press and social media coverage	• Varies depending on level of industry regulation • Sporadic press and media coverage

Exhibit 1.2 PSERS' By-Laws according to Powers Reserved.

Conduct the business of the board/committees	**Set** direction and policy and prudently delegate	**Approve** key decisions	**Oversee** execution of direction within policy	**Independent Verification and Reporting**
1.3. The members of the Board, as trustees of the Fund, have exclusive control and management of the Fund and full power to invest the fund.[1]	1.3. Adopt and amend the mission statement.	4.2(b[2])The Budget/Finance Committee shall review and approve the annual fiscal year budget request prepared by the Office of Financial Management	4.2(b) Audit/Compliance Committee shall oversee the auditing of all financial information;	8.2 The Board shall provide for an annual audit of eth System and the Plan by an independent certified public accounting firm.
1.3. The Board performs other functions as are required for the administration of the System, including the payment of benefits.	4.2(c) The Bylaws/Policy Committee shall review and make recommendations to the Board on all policies and any amendments thereto governing the internal operations of the Board	4.2(i) Personnel Committee will review matters related to compensation and terms and conditions of employment of Board direct report for Board approval. Will also interview candidates for "senior management positions" and make recommendations to the Board for approval.	4.2(e) DC Plan Committee will oversee the administration of the Plan and Trust, investment options and performance, and performance of service providers.	4.2(b) Audit/Compliance Committee will meet with external auditors to review audit plan and identify areas for audit.

[1] In some cases, statutory and regulatory language has been incorporated into the Bylaws. *See* §8521(a).

[2] NTD—note for cleanup—two subparagraphs (b)

Conduct the business of the board/committees	**Set** direction and policy and prudently delegate	**Approve** key decisions	**Oversee** execution of direction within policy	**Independent Verification and Reporting**
2.2. Each ex officio and legislative member may appoint a duly authorized designee.	4.2(g) IC will *annually* review and recommend the asset allocation for the following year.	4.2(d) Corporate Governance Committee will recommend proxy voting and securities litigation policies to be adopted by the Board. Also responsible for engagement with corporations and other shareholder organizations.	4.2(g) Investment Committee shall oversee the implementation of Board policies and monitor performance.	4.2(b) Audit/Compliance Committee shall review the effectiveness of the internal audit function by having an external quality assessment completed.
2.6. Remove a Board member upon conviction of certain crimes and/or offenses related to public office.[3]	4.3 Board may by resolution delegate to any Standing Committee any power, authority, duty or responsibility conferred on the Board by law.		4.2(h) Health Care Committee shall monitor and review operations of the health insurance and premium assistance programs. Will make recommendations to the Board re benefit level changes.	
3.1 Elect a chair and vice-chair and grant powers to such persons.	10.2 Board may suspend any rule by majority vote.		8.1 Preparation of financial reports for each fiscal year, and the annuals statement to the Governor and General Assembly.	

[3] Article VI, §6 of the Constitution; Title 65 P.S. §121

Conduct the business of the board/committees	**Set** direction and policy and prudently delegate	**Approve** key decisions	**Oversee** execution of direction within policy	**Independent Verification and Reporting**
3.4 Employ chief counsel and outside counsel as it deems necessary.	10.3 Board may amend, repeal, or adopt new Bylaws by 2/3 vote.		4.2(b) Audit/Compliance Committee will review the System’s and the Plan’s methodology for assessing, monitoring, and controlling significant risks or exposures, and oversee the evaluation and monitoring of internal controls by the internal and external auditors.	
4.1 Standing committees of the Board. (Statutory references to: Investment Committee, Audit/Compliance Committee, Bylaws/Policy Committee, Budget/Finance Committee, but no explicit statutory requirement)			4.2(b) Audit/Compliance Committee will ensure that the internal audit office performs compliance reviews.	
4.2(a) Appeals and Member/Employer	1.3. Determine the terms and provisions of the		4.2(b) Audit/Compliance Committee will oversee	

Conduct the business of the board/committees	**Set** direction and policy and prudently delegate	**Approve** key decisions	**Oversee** execution of direction within policy	**Independent Verification and Reporting**
Services Committee shall conduct quasi-judicial deliberations in formal appeals under the Administrative Agency Law and make its recommendations for Board action	School Employees' Defined Contribution Plan ("DC Plan")), the available investment options, and administer the DC Plan.		special investigations and whistleblower cases.	
4.4 The Chair may establish ad hoc committees.	1.3. The Board performs other functions as are required for the administration of the System, including the payment of benefits.		4.2(g) Investment Committee will make recommendations to the Board regarding investment proposals.	
4.5 The Chair may appoint Board members to serve on agency committees (staff committees).	4.2(e) DC Plan Committee will make Plan design and administration recommendations to the Board.			

Exhibit 1.3 Fiduciary Duty Excerpts from SERS Governance Manual

SERS includes the following summary in its Governance Manual Statement of Governing Laws, Mission and Guiding Principles:

As trustees, members of the SERS Board have fiduciary responsibilities. These legal duties of investment fiduciaries contain standards of conduct which are generally stricter than those observed by other public officials or directors of corporations. The primary fiduciary responsibilities imposed on SERS Board members and other SERS fiduciaries by 71 Pa. C.S.A. §5931 include:

Duty of Loyalty

SERS fiduciaries are subject to the exclusive benefit standard, which requires them to act solely in the interests of the plan's participants and beneficiaries, and for the exclusive purpose of providing benefits to participants and beneficiaries.

Duty of Care

In exercising this fiduciary responsibility, SERS fiduciaries are governed by the "prudent investor" standard. They must exercise their responsibilities "with the 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 funds, considering the probable income to be derived therefrom as well as the probable safety of their capital."

Common Law Fiduciary Duties

In addition to the above statutory provisions, fiduciary duties in trust law contain the following principles:

• Duty to Diversify: Trustees must diversify investments so as to minimize the risk of loss, unless under the circumstances it is clearly not prudent to do so.

• Duty to Delegate: Trustees may delegate functions that a prudent trustee would delegate under the circumstances, provided they exercise reasonable care in selecting, instructing and monitoring the delegated agents

• Duty to Control Costs: Trustees may incur costs that are appropriate and reasonable to prudently accomplish the purposes of the trust.

• Duty of Impartiality: Trustees must discharge their duties impartially, taking into account any differing interests of various participants and beneficiaries.

• Duty of Good Faith: Trustees must exercise their responsibilities in accordance with a good-faith interpretation of applicable law and governing documents.

Exhibit 1.4 Example Four-year Asset Liability Management (ALM) Cycle

	Year 1	Year 2	Year 3	Year 4
Meeting 1	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk
				Presentation/ Discussion of capital markets assumptions by asset class and benchmark discussions
Meeting 2	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk
	Education on Asset Classes	Education on Asset Classes	Education on Capital Market Assumptions and Benchmarks	Adoption of capital market assumptions and benchmarks
	Asset class performance review (high level, short, with emphasis on areas of opportunity or concerns/issues)	Asset class performance review (high level, short, with emphasis on areas of opportunity or concerns/issues)	Asset class performance review (high level, short, with emphasis on areas of opportunity or concerns/issues)	Asset class performance review (high level, short, with emphasis on areas of opportunity or concerns/issues)
	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)
Meeting 3	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk
	Presentation of asset class annual plans and review of the performance of each asset class (high level, short, with emphasis on areas of opportunity or concerns/issues)	Presentation of asset class annual plans and review of the performance of each asset class (high level, short, with emphasis on areas of opportunity or concerns/issues)	Presentation of asset class annual plans and review of the performance of each asset class (high level, short, with emphasis on areas of opportunity or concerns/issues)	Presentation of asset class annual plans and review of the performance of each asset class (high level, short, with emphasis on areas of opportunity or concerns/issues)
	Deep dive - Annual plan review (actual targets vs. actual; implementation issues, tactical tilts, planned changes, personnel issues, etc.)	Deep dive - Annual plan review (actual targets vs. actual; implementation issues, tactical tilts, planned changes, personnel issues, etc.)	Deep dive - Annual plan review (actual targets vs. actual; implementation issues, tactical tilts, planned changes, personnel issues, etc.)	Deep dive - Annual plan review (actual targets vs. actual; implementation issues, tactical tilts, planned changes, personnel issues, etc.)
				Discuss potential assumed return rate
				Agreement on asset allocation technical processes (simulations, stress tests, scenario testing, asset classes to be included, constraints, asset/liability modeling, etc.)
				Trustees identify sensitivities to be considered in modeling the potential asset allocation mixes (e.g., tail risk, liquidity, complexity, etc.)
Meeting 4	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk
	Review Annual Stress Test (Required by Law)	Review Annual Stress Test (Required by Law)	Review Annual Stress Test (Required by Law)	Review Annual Stress Test (Required by Law)
	Review investment management fees (both staff review and CEM)	Review investment management fees (both staff review and CEM)	Review investment management fees (both staff review and CEM)	Review investment management fees (both staff review and CEM)
	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)
				Initial presentation of potential asset allocations and discussion; review draft asset/liability study, stress tests, and liquidity analysis
				Initial discussion of assumed (target) rate of return
Meeting 5	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk
	Investment Policy Statement Review - Part 1 Review drafts proposed by staff in consultation with our outside partners (managers, consultants)	Investment Policy Statement Review - Part 1 Review drafts proposed by staff in consultation with our outside partners (managers, consultants)	Investment Policy Statement Review - Part 1 Review drafts proposed by staff in consultation with our outside partners (managers, consultants)	Investment Policy Statement Review - Part 1 Review drafts proposed by staff in consultation with our outside partners (managers, consultants)
	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)
			Review Investment Beliefs (and implications thereof)	Adopt Asset Allocation, Review Asset/Liability Study, Stress Tests, and Liquidity Analysis
			Investment Beliefs Discussion, including: Investment philosophy, value creation, risk tolerances and sensitivities, PSERS unique demands (eg liquidity, headline risk), PSERS strategic advantages/disadvantages.	Investment office presents migration plan for adoption.
				Adopt assumed (target) rate of return
Meeting 6	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk	Review and Discussion on Outlier Items in the Investment Committee Dashboard for Asset Allocation, Liquidity, and Risk
	Investment Policy Statement Review - Part 2 present final drafts for approval.	Investment Policy Statement Review - Part 2 present final drafts for approval.	Investment Policy Statement Review - Part 2 present final drafts for approval.	Investment Policy Statement Review - Part 2 present final drafts for approval.
	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)	Quarterly Performance Review with focus on outlier performance vs. expectations (both good and bad)
			Initial Presentaton of Capital Market Assumptions	Update on migration to new asset allocation plan
			Preview of capital market assumption process – who will provide expected risk, expected return, expected correlation numbers.	

Exhibit 1.5. Governance Policy Benchmark Examples

Peer Comparisons

Do you utilize a standard template or structure for decision items (set policy and approve) which are presented to the Board or its Committees?	Number of Responses (10)
Yes	7
No	3

Which of the following are included in the template? Please check all that apply.	Number of Responses (6)
Executive summary	6
Background and statement of issues and contributing factors	6
Discussion of alternatives and options considered	4
Discussion of pros and cons of alternatives considered	3
Discussion of risks of each alternative, including risk of inaction	3
Business case with costs and benefits	2
Recommendation for approval	6
Dissenting opinions expressed by stakeholders	2
Recommended questions to be asked by the Board for this topic	2
Write-in: We also include pros/cons and budget impacts	1

How does the Board handle unanticipated strategic policy issues when they occur? Please check all that apply.	Number of Responses (10)
We consider all workload and re-prioritize to accommodate the new issue	7
We simply add it to the existing agenda without a re-prioritization process	4
Write-in: The policy issues are discussed by the Executive Committee of the Board and then incorporated in workload	1
Write-in: This depends on the committee, some are better at identifying the workload impacts and timing compared to others, we are inconsistent in our approach	1

How do the Board and its Committees set their anticipated strategic policy agenda and calendars which indicate when topics are scheduled for review or decisions? Please check all that apply.	Number of Responses (10)
We have developed a multi-year strategic policy agenda for the Board	5
We have a one-year (annual) strategic policy agenda for the Board	5
We do not have a strategic policy agenda, we deal with strategic policy issues as they arise	0
We have a strategic policy agenda and calendar for the full Board and for each committee	4
We have a strategic agenda and calendar for the full Board only	2
We do not have Board or committee strategic agendas or calendars which extend beyond the next meeting	0
We update the strategic agenda and calendars throughout the year on a rolling basis	6
The Board has one meeting annually when they formally discuss and set the strategic agenda and calendar for the upcoming year	3
The Board formally delegates topics to its committees, staff and consultants annually and sets target dates for bringing key policy items to the Board for approval	2
Write-in: The ED/CIO is responsible for implementing policies and procedures approved by the Board. There is an annual schedule for the Investment Committee and Board to discuss and approve policy related agenda items. At the annual board retreat, the Board and the ED/CIO discuss strategic policy issues.	1
Write-in: We develop a calendar for the full board and each committee 8 months ahead.	1
Write-in: It differs by committee, some are more mature at setting and establishing long term agendas then others	1

Which of the following approaches does your organization use to engage the Board and its committees in the policy development, policy setting, and approval (e.g., planning and budgeting, contracts, minutes, etc.) processes? Please check all that apply.	Number of Responses (10)
We have a systematic process for engaging the Board and its committees in identifying and evaluating policy options before a decision is made	10
We discuss why the issue is important and why only the Board can decide this issue	4
We discuss the range of alternatives to be considered and the related pros and cons of each alternatives	7
We advise the Board of dissenting stakeholder opinions	7
We link educational sessions to specific strategic agenda topics and schedule the training prior to decision making	6
Write-in: While agendas include an exec summary, recommendations, pros/cons, budget impact, added background material they do not consistently cover the all of the items listed above	1

How are agendas for each Board and committee meeting organized? Please check all that apply.	Number of Responses (10)
Our meeting agendas are organized and prioritized by the powers reserved, i.e., set policy items first, recurring approvals second, conduct third, and oversight (e.g., monitoring) items last	2
We put carryover items from prior meetings as first priority	1
We put the easy issues first	2
We put the toughest issues first	1
We have a set order of areas and topics which we have traditionally followed	9
We don't have a structured approach to agenda setting for each meeting	1
Write-in: We delegate detailed work to the committees and keep final approval and enterprise wide items for the full board.	1
Write-in: We have an inconsistent approach to agenda setting, the format is action consent, info consent, action items and informational items	1

Exhibit 1.6 Model Governance Manual Framework and PSERS Functional Policies

We recommend that the PSERS Governance Manual be amended as follows:

- Establish a standard policy format and framework
- Eliminate footnotes and restatements of law (other than the initial references to governing laws and fiduciary duties in the introduction)
- Draft a more comprehensive statement of fiduciary duties in the introduction that specifically references the standard of care under PA law, and the application of recent developments in trust law
- Eliminate legalese and outdated language
- Clarify permitted use of designees (see recommendation)
- Establish the requirement of an annual calendar for Board meetings
- Clarify requirements for special meetings
- Clarify committee governance
- Include separate sections for job descriptions (board member, chair, vice chair, and committee chairs), committee charters, and Board policies)
- Reference the entitlement to indemnification in the Bylaws with a cross-reference to the policy; however, move the text of the indemnification policy to the policy section
- Separate Board governance policies from functional policies; include only the Board governance policies and core functional policies in the Governance Manual
- Develop policies identified in recommendation 1.3.13

Model Governance Manual		
Article I. Bylaws	**Section 1: Introduction**	Introduction and Statement of Purpose
		Governing Statutes and Regulations
		Statement of Fiduciary Duties
	Section 2: Board Composition and Powers	Composition
		Appointment Qualifications
		Powers
		Term of Office
		Vacancies
		Designees
		Oath of Office
		Removal and Resignation from Office
		Compensation
		Attendance
		Statement of Economic Interests
		Delegation
		Board Direct Reports
	Section 3: Meetings of the Board	Place of Meetings
		Open Meetings
		Regular Meetings
		Special Meetings
		Emergency Meetings
		Meeting Agendas
		Annual Calendar
		Notice of Meetings
		Quorum and Voting
		Public Participation
		Executive Sessions
		Voting Conflicts
		Notional Voting
		Rules of Order
		Minutes of Meetings
	Section 4: Committees of the Board	Standing Committees
		Ad Hoc Committees
		Committee Membership
		Committee Member Terms
		Committee Chairs
		Committee Vice Chairs
		Committee Officers
		Committee Governance
	Section 5: Board Officers	Officers and Terms
		Powers and Duties of the Chairperson
		Powers and Duties of the Vice Chairperson
		Vacancies
		Chairperson Term Limits and Succession
		Powers and Duties of the Secretary/Executive Director

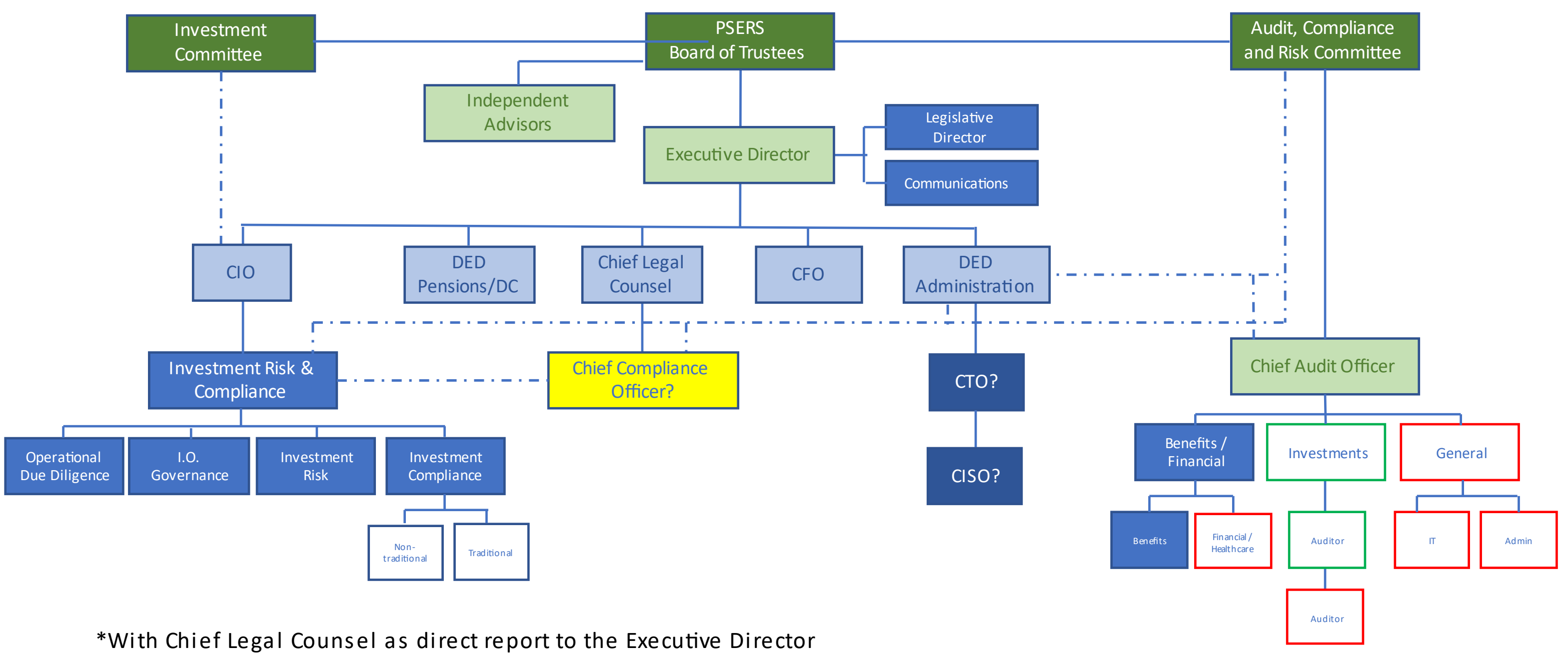
Model Governance Manual		
	Section 6: Legal Counsel	
	Section 7: Indemnification	
	Section 8: Amendments	
Article II. Committee Charters	**Section 1: Audit, Compliance and Risk Committee**	[Each charter to include model charter elements]
	Section 2: Benefits and Appeals Committee	
	Section 3: Board Governance Committee	
	Section 4: Defined Contribution Plan Committee	
	Section 5: Finance and Administration Committee	
	Section 6: Health Care Committee	
	Section 7: Investment Committee	
Article III. Positions Descriptions	**Section 1: Board Member Position Description**	
	Section 2: Board Chair Position Description	
	Section 3: Board Vice Chair Position Description	
	Section 4: Committee Chair Position Description	
	Section 5: Committee Vice Chair Position Description	
Article IV. Board Policies	**Section 1: Board Structure and Operations**	Strategic Planning Process
		Actuarial Services Policy
		Board Member Indemnification Policy
		Securities Litigation Policy
		Election Procedures and Guidelines Policy
	Section 2. Duties and Powers Reserved for the Board	Powers Expressly Reserved for the Board
	Section 3: Delegations	Delegations to Executive Director
		Performance Review Process for Executive Director
		Board-Staff Relations
	Section 4: Code of Conduct Ethics and Conflicts of Interest	Standards of Conduct
		Ethical Conduct Policy
		Recusal Policy
		Board Confidentiality
		Policy on Placement Agent Disclosures
		SEC "Pay-to-Play" Rule Compliance and Reporting Policy
		Financial Disclosure Policy
		Insider and Personal Trading Policy
		Referral of Investment Opportunities and Service Provider Candidates; Related Communications; Undue Influence

Model Governance Manual		
		Board Travel Policy
		Whistleblower and Reporting Policy
	Section 5: Board Development and Evaluation	Board Self-Assessment Policy
		Board Education Policy
		Fiduciary Review Policy
	Section 6: Stakeholder Relations/Communications	Board Communications Policy
		Stakeholder Communications
		Legislative Communications
		Crisis Communications
	Section 7: Performance, Risk and Compliance Oversight	EPRM Policy
		Compliance Policy
	Section 8: Independent Reassurance	Audit Policy
Article V. Core Functional Policies	**Section 1: Asset Management**	Investment Policy Statement
		Non-U.S. Proxy Voting Policy
		U.S. Proxy Voting Policy
		ESG Policy
	Section 2: Liability-Related	Funding Policy
	Section 3: DC Plan	Investment Policy Statement—DC Plan

Other PSERS Functional Policies (Not to be included in Governance Manual)		
	Current PSERS Policy	**Policy Type**
Asset Management	External Board Appointment and Attendance at Meetings Policy (LPAC Meetings)	
	Investment Transparency Policy	Administrative Rule
	Policy Manual for Investment Professional Staff	Employee policy
Health and Other Insurance	Health Options Program Prescription Drug Plan Code of Conduct	Employee policy
	Health Options Program Eligibility and Enrollment Policy	Administrative rule
	Fraud, Waste and Abuse Reporting and Investigation Policy	
Pension Benefits	Oral Argument Policy	Administrative procedure for hearings
Administration	Public Information Policy	Administrative rule
	Policy Manual for Investment Professional Staff	Employee policy

Exhibit 1.7 Enterprise Performance and Risk Management Reporting with Chief Legal Counsel as direct report to the Executive Director

Proposed Enterprise Performance and Risk Management Reporting*

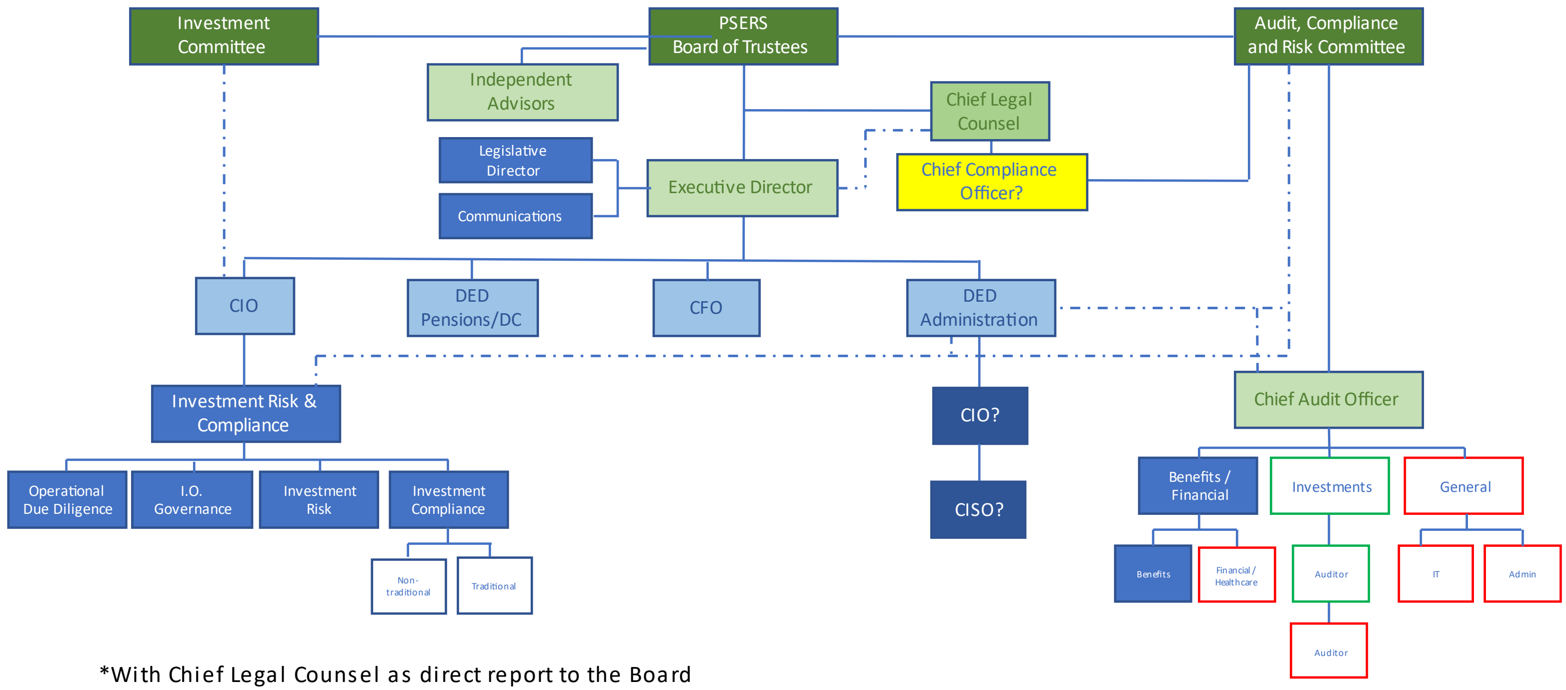


*With Chief Legal Counsel as direct report to the Executive Director

= Existing Complement ? = Relationship Undecided = Approved Complement = New Complement = Needed Complement

1.7.1 With Chief Legal Counsel as direct report to the Board

Enterprise Performance and Risk Management Reporting*



*With Chief Legal Counsel as direct report to the Board

= Existing Complement   ? = Relationship Undecided   = Approved Complement   = New Complement   = Needed Complement

Exhibit 1.8 Example Executive Director's Performance Evaluation Matrix

Example Metrics	Metric Weight	Target	Actual	Self-Rating	Board Rating	Comments
Ongoing Quantitative Metrics:						
A. Financial:						
1. Operating expenses vs. budget						
B. Investment Operations:						
1. Investment returns vs. benchmark						
2. Investment staff value added (from CEM)						
C. Benefit Operations:						
1. Cost per member						
2. Active member satisfaction score						
3. Retiree satisfaction score						
D. Human Resources:						
1. Staff turnover						
2. Staff satisfaction						
3. Control Environment						
E. Other (e.g., legislative relationships)						
Ongoing Qualitative Factors:						
A. Leadership:						
1. Leading the system internally and externally						
2. Supporting the Board						
B. Stakeholder Relations:						
C. Other						
Current Year Initiatives:						
A.						
B.						
C.						
Strategic Initiatives:						
A.						
B.						
C.						
Overall Rating						

Exhibit 2.1 Example PSERS Specific Dashboards

Vital Function: Financial Management Owner: Brian Carl	Vital Signs				
	Target	**Proposed Variation Tolerance**	**Actual**	**Measurement Frequency**	**Independent Verification**
Actual Employer Contribution Rate is equal to or less than Projected	Equal to or Less than Projection	0% - +/-.15%	34.94% actual vs 34.95% projected	Annual	Buck
Actuarial Required Contribution rate equals Actual Employer Contribution Rate (100% of ARC)	Actual rate equals or exceeds Actua	0% +/- 5%	34.94% actual vs 34.94% target	Annual	Buck/Board
Actual employer contributions paid from PDE appropriation is less than Budget Contributions (Commonwealth Share of Contributions bud	Actual is below budget	0% to - 2.00%	FY 19/20 was 1.2% below budget	Quarterly	GBO/Comptroller
Maintain an Administrative Cost per member less than CEM Peer Average	$10 under average	$1 to $10 under average	$13 under the CEM Average	Annual	CEM Survey
Negative External Cash flow (NECF) is better (lower) than public pension average	NECF < Public pension average	0.1% to 1% under average	Actual-2.0% vs. -2.7% target	Annual	NASRA Survey
Complete the fiscal year with actual expenditures less than budgeted (Admin.)	$2 million under budget	$500,000 to $2 million under budget	Actual Expenditures were $5.1 million under budget	Quarterly	SAP/GBO
Funded Ratio Improvement	Meet or exceed actual projection	0% to 1% within projection	Actual 59.1% vs 59.2% projected	Annual	Buck
Unfunded Actuarial Liability (UAL) Reduction	Meet or exceed actual projection	0 to $440 million or 1% of UAL vs projection	Actual $44.034.5 billion vs $43.945 million projected	Annual	Buck
COMPLIANCE	**Overall Compliance**				
Monthly Benefit Payments made as scheduled (Mission Critical Function) (Quantity > 234,000 per month)	100% are paid on last business day	99.8% to 100% are paid as scheduled	100%	Monthly	None
Authorize all allocations & wire requests by the contractually required dates (Mission Critical Function)	100% are made prior to value date	98% to 100% are made prior up to value date	100% were made by value date	Monthly	BNYM System/Invest partnerships
Authorize all investment management fee payments within timeframes required by the Investment Office (Mission Critical Function)	prior to request date	5 business days prior up to request date	100% were may within 5 days of request date	Monthly	BNYM System/Invest partnerships
Collect all delinquent contributions for which a subsidy deduction is available	100% of available subsidies are inte	95% to 100% of available subsidies are intercepted	100% of available subsidies were intercepted	Monthly	None
1099-R - Copy to Recipients by IRS required date - Quantity >260,000	100% are sent by January 31st	99% to 100% are sent by January 31st	100% were sent by January 31st	Annual	PSERS Members
Prepare and distribute audited GASB 68/75 Schedules to PSERS Employers	End of May	End of May to End of June	End of May	Annual	*CLA/PSERS Employers*
Complete Comprehensive Annual Financial Report (CAFR) and submit CAFR for GFOA award	By mid-November	End of October to End of November	By mid-November	Annual	*GFOA/CLA*
Earn the GFOA Excellence in Financial Reporting Award	Earn Unqualified Opinion	End of October to End December	By mid-November	Annual	*GFOA/CLA*
Complete Financial Audit with unqualified audit opinion and obtain Board approval by Commonwealth deadline	Early October	End of September to Early October	Early October	Annual	*CLA/Comptroller Operations*
1099-R File submitted electronically to the IRS by the required deadline	by March 31st	by March 31st	Filed by March 31st	Annual	IRS
Complete formal Budget Request Document within the timeframe required by the Governor's Budget Office	prior to required date	Between 5 business days prior to and required date	Completed by required date	Annual	GBO/General Assembly
Complete formal Rebudget Request Document within the timeframe required by the Governor's Budget Office	prior to required date	Between 5 business days prior to and required date	Completed by required date	Annual	GBO/General Assembly
Complete Budget Hearing Document within the timeframe required by the Governor's Budget Office and the Appropriations Committees	prior to required date	Between 5 business days prior to and required date	4 bus. days prior to required date	Annual	Date Sent/Posted/GBO/General Assembly

PSERS Investment Committee Dashboard
Asset Allocation
As of January 31, 2021
Owner: Jim Grossman, CIO

Investment Dashboard	Range	Target	Actual	Variance	Support	Independent Verification	Comments
Vital Signs							
Asset Allocation					Link	Internal Audit	
Actual vs. Target							
Equity Exposure	+/-5%	38.0%	38.9%	0.9%		Internal Audit	
Public Equity	+/-3%	23.5%	24.5%	0.9%		Internal Audit	
U.S. Equities	+/-3%	9.8%	9.2%	-0.6%		Internal Audit	
Non-U.S. Equities	+/-3%	13.7%	15.2%	1.5%		Internal Audit	
Private Equity	+/-5%	14.5%	14.4%	-0.1%		Internal Audit	
Fixed Income Exposure	+/-5%	38.0%	36.0%	-2.0%		Internal Audit	
Public Fixed Income	+/-5%	28.0%	27.0%	-1.0%		Internal Audit	
Investment Grade	+/-5%	10.5%	10.4%	-0.1%		Internal Audit	
Credit-Related	0-3%	1.0%	0.7%	-0.3%		Internal Audit	
Inflation Protected	+/-5%	16.5%	16.0%	-0.6%		Internal Audit	
Private Fixed Income		10.0%	8.9%			Internal Audit	
Private Credit	+/-3%	10.0%	8.9%	-1.1%		Internal Audit	
Real Asset Exposure	+/-5%	26.0%	26.5%	0.5%		Internal Audit	
Public Real Assets	+/-3%	18.0%	18.0%	0.0%		Internal Audit	
Infrastructure	+/-3%	5.5%	5.2%	-0.3%		Internal Audit	
Commodities	+/-3%	10.0%	10.3%	0.3%		Internal Audit	Moved recently to overweight and underweight cash
Real Estate	0-5%	2.5%	2.4%	-0.1%		Internal Audit	
Private Real Assets	+/-3%	8.0%	8.5%	0.5%		Internal Audit	
Infrastructure	0-3%	0.5%	0.7%	0.2%		Internal Audit	
Commodities		0.0%	0.4%	0.4%		Internal Audit	Legacy exposure
Real Estate	+/-3%	7.5%	7.5%	0.0%		Internal Audit	
Absolute Return	+/-3%	10.0%	9.7%	-0.3%		Internal Audit	
Net Leverage	10%-(20%)	-12.0%	-11.0%	1.0%		Internal Audit	
Totals		100.0%	100.0%			Internal Audit	
Internally-Managed Assets	+/- 10%	45.0%	48.0%	3.0%	Link	Internal Audit	Increase from 41% one year ago
Externally-Managed Assets	+/- 10%	55.0%	52.0%	-3.0%	Link	Internal Audit	

Key:	
In target range	(green)
Within 1% of breach or other	(yellow)
Outside range	(red)

PSERS Investment Committee Dashboard
Risk
As of January 31, 2021
Owner: Joe Sheva, Senior Manager, Risk & Compliance

Investment Dashboard	Limit	Maximum	Actual	Variance	Source	Independent Verification	Comments
Risk							
Short-term Asset Allocation Tracking Error	Max of 2.0%	2.0%	0.4%	-1.6%	Risk & Compliance	BlackRock Solutions	
Long-term Asset Allocaton Tracking Error	Max of 2.0%	2.0%	0.3%	-1.7%	Risk & Compliance	BlackRock Solutions	
Short-term Total Tracking Error	Max of 4.0%	4.0%	1.9%	-2.1%	Risk & Compliance	BlackRock Solutions	
Maximum Exposure to One External Manager	% Limits by Total Fund's Economic Exposure				Investment Operations	Internal Audit	Link to Manager Exposures > $1 billon; See comment for Absolute Return
Absolute Return							
Partnership or open-ended fund	10% of Absolute Return Portfolio				Investment Operations	Aksia	Permitted exemption for 1 manager/fund up to 25% (Bridgewater at 15.2%)
Internally-Managed Portfolios							Informational Purposes Only
Co-Investment and Secondary Investment Limits	Cumulative program	$ 4,000.0	$ 1,152.0	2,848.0	Investment Operations	Internal Audit	All sub-programs in compliance
Absolute Return Strategy Limits					Aksia	Aksia	
Public Market Active Risk/Tracking Error Ranges by Manager	Varies by Asset Class				Aon	Aon	All manager tracking errors within Board-established ranges

Key:	
In target range/compliant	(green)
Within 1% of breach or other	(yellow)
Outside range/not compliant	(red)

Currently using staff targets; no formal Board minimums

PSERS Investment Committee Dashboard
Liquidity
As of January 31, 2021
Dollars in millions
Owner: John Kemp, Managing Director of Operations, Risk, & Compliance

Investment Dashboard	Target	Minimum	Actual	Variance	Source	Support	Independent Verification	Comments
Liquidity					Investment Operations		Internal Audit	
Unencumbered Cash	2 months or more of benefit payments	$ 1,350	$ 3,490	$ 2,140		Link		
Total Cash	2 months or more of benefit payments	$ 1,350	$ 8,540	$ 7,190		Link		
Coverage Ratios (Using Potential Liquidity Available 0-30 Days):								
Estimated Next 12 Months of Benefit Payments	2x coverage	2.0	4.8	2.8		Link		
Subscription Line Exposure	5x coverage	5.0	24.3	19.3		Link		
Unfunded Commitments	1.2x coverage	1.2	2.8	1.6		Link		
Estimated Negative External Cash Flow through FY2022	2x coverage	2.0	30.7	28.7		Link		
Unfunded Commitments + Negative External Cash Flow through FY2022	1x coverage	1.0	2.6	1.6		Link		

Definitions:

Encumbered Cash - cash maintained for a specific future purpose, such as payments of benefits, pending capital calls or allocatons, or business expenditures
Subscription Line Exposure - money borrowed against our unfunded commitment by general partners and callable with 10 days notice
Unencumbered Cash - cash not currently designated for any purpose
Unfunded Commitment - amount of capital not drawn to date by a general partner to fund a contractual commitment and callable with 10 days notice

Key:
In target range
Within $500 million or 1.0 of breach or other
Outside range

Currently using staff targets; no formal Board minimums

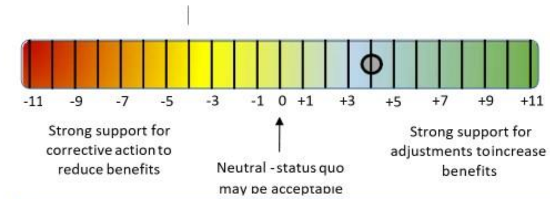
Vital Function: Bureau of Communications and Counseling Owner: Gene Robison	Vital Signs				
	Target	Proposed Variation Tolerance	Actual	Measurement Frequency	Independent Verification
Customer Service					
Call talk time for in and out bound calls is 6 minutes or less	6 minutes or less	+/- 1 minute	5:31 minutes	Monthly	No
Response to Member Secure Messages are responded to within two business days	48 Business Hours	+/- 1 business day	not measured yet	Monthly	No
Non-Exception Retirement Estimates are completed within 3 weeks from request	≤ 3 weeks	+/- 2 business days	2.23 weeks	Monthly	No
Conduct Employer Webinars and in-person visits with employers	200 total	+/- 30	257	Annual	No
Employer Call Abandonment Rate is less than 6%	≤6%	+/- 2%	6.22%	Monthly	No
Increase the number of MSS Registrants per year	30,000 new registrations per year	+/- 2,000	30,148	Annual	No
Maintain Retirement Counseling Attendance in comparison to Retirement Applications received	69% of retiring members	+/- 5%	58.80%	Annual	No
Maintain Member Call Abandonment Rate to less than 15%	≤ 15%	+/- 2%	15.38%	Monthly	No
Paperless Delivery participation	93%	+/-2%	94.63%	Annual	No
Maintenance of PSERS members for a valid address	≤4% of addresses are invalid	+/- 1%	96.53%	Annual	No
Increase the number of member communication pieces available, including videos, specialized publications and presentations	≥ 4 new communication pieces	+/- 1	not measured yet	Annual	No
Complete school employer reporting to generate Member Statements of Account	100% completed prior to December 1st	+/- 5 business days	5 business days	Annual	No
Mailing/Issuance of Member Statements of Account by the statutory deadline	100% completed by December 31st	none	12/21/2020	Annual	No
Power of Attorney requests responded to within seven business days	≤ 7 business days from workflow creation	none	Met	Monthly	No

Example Dashboard Ohio STRS

Health Care Plan Management Policy Scorecard - Preliminary Draft for 7/1/2018 - prepared in November, 2018

Category	Metric	Current Value	Score Range	2018 Score
Risk measure	Probability of 60 years of solvency	73%	-3 to +3	+2*
Current status	Funded ratio	176%	-2 to +2	+2
Stress tests	1) Gov't subsidies & investment returns	75%	-2 to +2	-1*
	2) Pre-Med. enrollment & investment returns	155%	-1 to +1	+1*
Funding potential	Pension funding period	17.8 yrs	-1 to +1	0
Economic context	10-year returns	6.8%	-1 to +1	0
	Spread between 10Y & 3M Treasuries	0.92%	-1 to +1	0

Current Summary Score	+4*
Prior Year Summary Score	NA

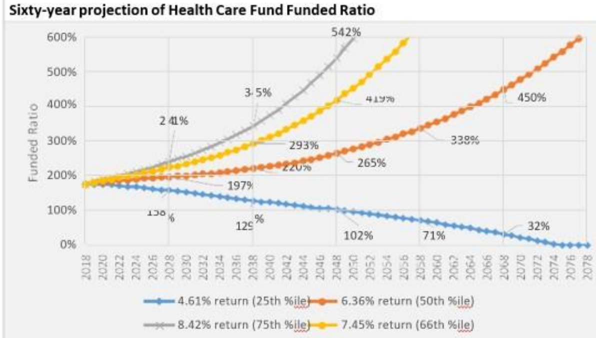


* These are speculative estimates based on internal models, subject to change when evaluated by Cheiron

EXAMPLE

A summary score below -5 suggests corrective action to reduce benefits may be necessary.
A summary score above +5 suggests adjustments to increase benefits may be supportable.

Sixty-year projection of Health Care Fund Funded Ratio



Economic context - 10 yr/3 mo Treasury spread

Example INPRS Scorecard

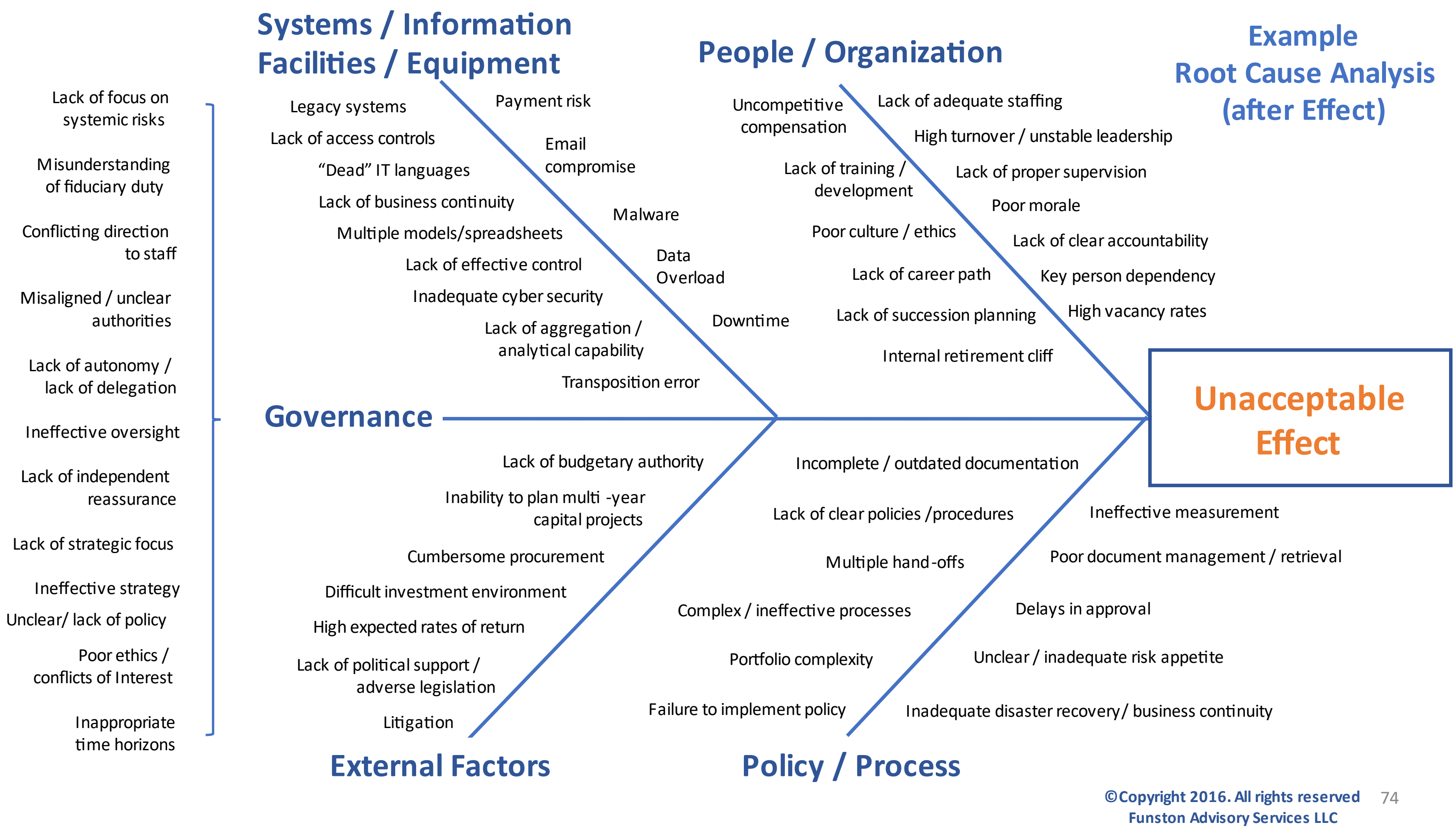
INPRS Working Balanced Scorecard

Date: March 24, 2021
Reporting Period: February 2021

Strategic Goal	E-Staff Champion	Type	Measure	Target	Actual & Escalation Status	Trend (Last 3 Reporting Periods)	FYE 2020	FYE 2019	FYE 2018	Update Frequency	Comments (Performance details "to tell the story" about the Actual results reported.)
Customer											
We're Trusted to Pay	D. Grotz	Lag	Funded Status -- Prefunded Plans	Positive Trend & ≥ 80%	90.6%		90.6%	88.1%	88.3%	Annually	
Goal 2: Deliver a quality member experience.	J. Hutson	Lag	Member Satisfaction: Call Center	>76.1	77.9%		81.6%	78.4%	--	Monthly	Ongoing discussions internally and with Voya regarding satisfaction
	J. Hutson	Lag	Member Satisfaction: Recent Retiree	>74.8	80.0%		75.1%	74.0%	--	Monthly	
	J. Hutson	Lag	Member Satisfaction: Website	>83.2	91.4%		92.1%	89.3%	--	Monthly	
	J. Hutson	Lag	Member Satisfaction: Counseling	>93.3	98.5%		96.1%	96.3%	--	Monthly	
	J. Hutson	Lag	Member Satisfaction: Workshops	>90.0	96.7%		90.0%	95.8%	--	Monthly	
Goal 3: Engage members through effective communication, education and collaborative relationships.	J. Hutson	Lag	CEM Member Engagement Survey	Top 1/3 of participating peers (above 5.57)	5.71	new metric	--	--	--	Biannually	The enagement score will be a twice-yearly active member score based upon the CEM Engagement Consortium method. **Replacing MyOrangeMoney.
Financial											
Goal 4: Deliver a quality employer experience.	D. Grotz	Lag	Employer Contributions	≥ 95%	99.0%		96%	96%	97%	Monthly	Sept, Oct 97%; Nov 96%; Dec 96%, Jan 97%, Feb 99%
Goal 5: Achieve the Defined Benefit (DB) target rate of return within accepted risk, cash flow and cost constraints.	D. Grotz	Lag	Actuarial Determined Contributions (ADC)	100%	112.4%		112.4%	116.6%	109.7%	Annually	ADC reported is All Funds.
	S. Davis	Lag	Defined Benefit Rate of Return Since 2012	Within 1 Std. Dev.	80.28%		58.45% Within 1 Std.Dev	46.96% Within 1 Std.Dev	43.98% Within 1 Std.Dev	Monthly	Std Dev: (-1) 31.22%, (+1) 136.43%
	S. Davis	Lag	Percent of DB Market Value with Fees at or Below Median Peer Fee	≥ 50%	55%		59%	68%	68%	Annually	Updated to 55% by CEM Nov 2020 (previously 59%)
	S. Davis	Lead	Minimum FY Investments Return	Levels to keep employer contributions: PERF -25%; TRF'96 -19%; '77	13.70%		2.55%	7%	9%	Monthly	
Goal 6: Provide competitive Defined Contribution (DC) investment options and services.	S. Davis	Lag	DC Investment Options (Five Year Performance Relative to Benchmark)	≥ 82%	94%		94%	94%	88%	Quarterly	
Process											

Exhibit 2.2 Example Performance and Risk Management Tools

2.2.1 Root Cause Analysis



2.2.2 Failure Modes and Effects Analysis

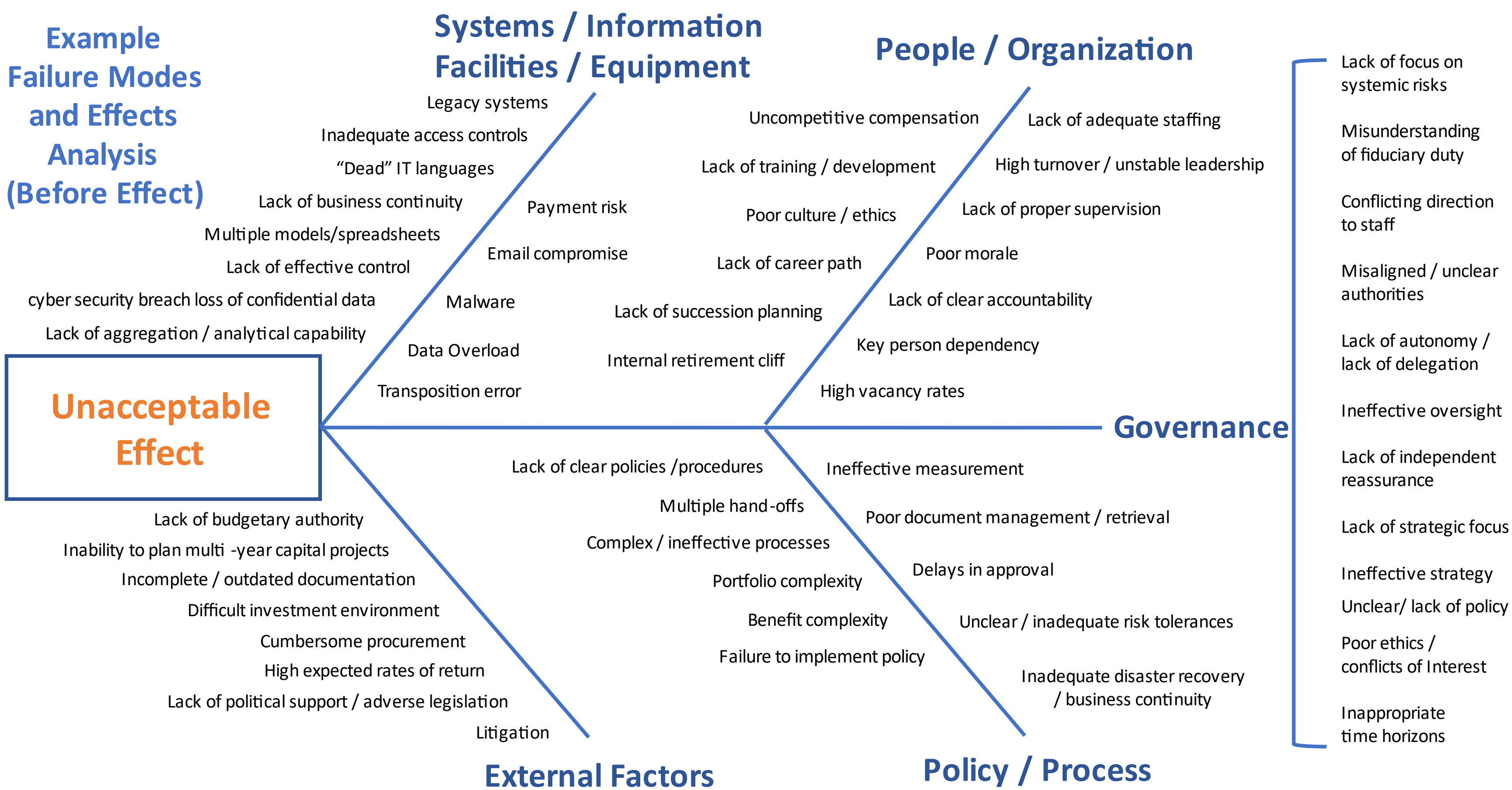


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Exhibit 3.1 Initiatives Undertaken in 2021 by Chief Audit Officer

- Formalized a SOC review process on third-parties.
    - SOC 1 reports are a review of the service organization's controls in support of the audit of a client's financial statements.
- Created training material on third party risk management specifically on SSAE!8 and SOC report review (focus on financial reporting risks).
- Trained the IAO team and training to the rest of the agency is scheduled on April 12, 2021 (for individuals identified in each area who work with third-parties). See attached the training material and the proposed formal review timeline.
- Followed up on the deficiencies identified in last year's internal control assessment (green book assessment); Planned and kicked off this year's assessment. Created a quarterly tracking report to track audits/assessments/issues/outstanding resolutions.
- Drafted a standard Risk Register template for enterprise risk assessment
- Created an initial Internal Audit Manual as reference in the IA Charter
- V3 system users access review – determined scope, created audit program/procedures and kicked off the audit
- Partnered with IT to conduct a joint assessment to assess IT and business risks and controls. Processes selected: investment allocation process and capital calls process from end to end (OFM and Investment Office). This assessment is not in the FY20-21 audit plan.
- HOP Program audit – requested by the Board but delayed due to resource issues. We are able to engage the business recently and we are in the final stage to finalize and agree on the audit scope.
- Quarterly Personal Securities Form – automated the process by switching to DocuSign (instead of hard copies and emails)
- Trained the IAO team on flowcharts. IAO has access to Visio and will begin drafting flowcharts as we discuss processes/perform audits with the businesses
- IAO will start building a control library to formally document our controls and ensure key controls/vital signs identified on our risk register are tested for effectiveness.
- IAO will begin tracking our audit hours to increase visibility for the A/C Committee.
- Review IAO tasks, identify streamlining opportunities to handle these tasks and identify compliance tasks that should be pushed back to the business.
- Working with external auditors to identify collaboration opportunities, align audit scope and sampling techniques and streamline testing strategies. Increase external auditor's leverage on internal audit work (increase efficiency, coverage) going forward.
- Security breach incidents – partnering with IT and the business to formalize a process to review and document incidents related to manual processes. IT has a robust process to review IT related issues and improvements can be made to standardize the process for all incidents.
- Partnering with IT to automate the Fraud Waste and Abuse process.

Exhibit 3.2 Example Chief Compliance Officer Job Description (PA SERS)

Position Purpose:

Describe the primary purpose of this position and how it contributes to the organization's objectives. Example: Provides clerical and office support within the Division to ensure its operations are conducted efficiently and effectively.

This position performs the entire spectrum of professional legal work of the highest degree of professional responsibility and specialized nature to the State Employees' Retirement Board ("Board"), State Employees' Retirement System ("SERS"), the Commonwealth's Deferred Compensation Plan, the State Employees' Defined Contribution Plan, the Benefits Completion Plan, and to SERS staff in support of the operations of the agency. (Use of "SERS" in this Position Description refers to all three plans.)

The position manages the SERS Compliance Program, which includes: (i) ensuring that the board, management, and employees are following the rules and regulations of federal, state, and regulatory agencies; (ii) that SERS policies and procedures are being followed; (iii) that behavior throughout the agency meets the commonwealth's and SERS' standards of conduct; and (iv) recommends any necessary action to ensure achievement of the objectives of an effective compliance program.

Reporting Relationship: This position reports to the Chief Counsel.

Description of Duties: Describe in detail the duties and responsibilities assigned to this position. Descriptions should include the major end result of the task. Example: Types of correspondence, reports, and other various documents from handwritten drafts for review and signature of the supervisor.

Counsel

Provides legal services to the Board and to the staff of SERS. Such legal services include, without limitation:

- Provides in-house legal counsel, litigation strategy, and legal representation on labor and employment related matters, which may include, but not limited to: (i) representation of SERS in Pennsylvania administrative forums including but not limited to the Civil Service Commission, Human Relations Commission, Unemployment Compensation Board of Review, and Workers' Compensation Appeal Board, and in any appellate court with jurisdiction over those administrative bodies, and (ii) other employment related issues, including wage and hour law, employee/labor relations, employee benefits, FMLA matters, other employment related litigation, and generally assists the Chief Counsel and Human Resources Office.
- Renders legal advice and opinions to the Board and staff on benefits, administrative, and investment matters.
- Advises and assists with general administrative agency functions.
- Prosecutes and/or defends in litigation matters filed by or against SERS in accordance with the Commonwealth Attorneys Act.

- Drafts, reviews, and approves SERS contracts for form and legality.
- Provides legal advice and representation on corporate governance matters.
- Prepares materials for and attends Board and committee meetings as requested. Serves as the assigned legal counsel to the Board Governance and Personnel Committee and the Audit, Risk, and Compliance Committee.
- Reviews and approves, for form and legality, forms and publications utilized or submitted to SERS. Plans, directs, and controls the use of outside counsel retained by SERS.
- Reviews and approves Requests for Proposals (RFPs), Requests for Quotes (RFQs), and Invitations for Bids (IFBs) issued by SERS.
- Researches and drafts proposed legislation and related materials and attends and participates in discussions related to potential or draft legislation.
- Assists in the selection of outside counsel and engages with outside counsel as required. Performs other related duties as assigned by the Chief Counsel.

Chief Compliance Officer

- Leads the agency's Compliance Program. Recommends, develops, and revises policies and procedures for the general operation of SERS' Compliance Program and its related activities to prevent illegal, unethical, or improper conduct.
- Prepares reports on compliance initiatives and best practices and presents them to senior leadership.
- Ensures that applicable policies and safeguards are working as intended with respect to violations of rules, regulations, policies, procedures, and standards of conduct.
- Ensures compliance with applicable whistleblower laws.
- Collaborates with management and staff to direct compliance issues to appropriate existing channels for investigation and resolution.
- Receives all board member-initiated referrals of investments or service provider opportunities, and acts as the central repository of communication of these investments or service provider opportunities throughout the due diligence period.
- Obtains and monitors all board member financial and ethical disclosure documents. Stays apprised of new and proposed regulatory issues and updates.
- Monitors the compliance activities of the Investment Office. Identifies potential areas of compliance vulnerability and risk; develops and oversees corrective action plans for resolution of problematic issues; and provides general guidance on how to avoid or deal with similar situations in the future.
- Develops and prepares quarterly and as needed reports to the Audit, Risk, and Compliance Committee and senior management to keep them informed of the operation and progress of compliance efforts.
- Ensures proper reporting of violations or potential violations to the appropriate internal or external entity.
- Institutes and maintains an effective compliance communication program, including a heightened awareness and understanding of new and existing standards of conduct, and new and existing compliance-related policies and procedures.

- Works with the Human Resources Office and others as appropriate to develop an effective compliance training program, including introductory training for new employees and ongoing training for all employees on the SERS Employee Code of Conduct.
- Collaborates with Internal Audit Office to design testing protocols and frequency of reviews based on risk for compliance activities.
- Works with SERS Executive Office to coordinate topics for Board member training pursuant to the Board Education Policy.
- Monitors the performance of the Compliance Program and related activities on an ongoing basis, taking appropriate steps to improve effectiveness.
- Works with SERS counsel assigned to assist the Chief Compliance Officer in overseeing the SERS Compliance Program.
- Interacts with external business partners, consultants, and regulatory agencies as needed. Performs related duties as required.

Decision Making:

Describe the types of decisions made by the incumbent of this position and the types of decisions referred to others. Identify the problems or issues that can be resolved at the level of this position, versus those that must be referred to the supervisor. Example: In response to a customer inquiry, this work involves researching the status of an activity and preparing a formal response for the supervisor's signature.

Counsel

Decisions are made based on the applicable statutes, regulations, Commonwealth directives and orders, as well as policies adopted by the Board. The attorney is expected to handle a full load of assigned duties and to complete legal matters with the utmost independence, and general supervision is received from the Chief Counsel. Incumbent is expected to research, formulate recommendations, and respond to the most difficult, novel, and important legal matters.

Chief Compliance Officer

Serves as agency subject matter expert on compliance issues. For compliance functions, this position reports functionally to the Audit, Risk, and Compliance Committee and administratively to the Chief Counsel. Work performed requires the ability to remain objective and free of actual and perceived conflicts of interest. Work requires making well-informed, practical judgment calls on how to handle various situations.

Exhibit 3.3 Example Independent Verification of Vital Signs Template

Vital Function	Vital Signs	Source of Independent Verification		
		Internal	2021 IA plan?	External
Administration (Enterprise)				
Financial Management				
Information Technology				
Benefits Administration				
Retiree Health Insurance				
Procurement				
Human Resources				
Investment Operations				
Traditional Investments				
Non-Traditional Investments				
Fixed Income				
Defined Contribution Investments				
Risk and Compliance				
Other (specify)				

Exhibit 3.4 Revised Audit and Compliance Committee Responsibilities

PSERS Audit & Compliance Committee Charter	Existing	APPFA[4]	GFOA[5]
Membership Requirements			
All members of the audit committee should possess or obtain a basic understanding of governmental financial reporting and auditing. The audit committee also should have access to the services of at least one financial expert, either a committee member or an outside party engaged by the committee for this purpose.			√
All members of the audit committee should be members of the governing body.			√
Members of the audit committee should be educated regarding both the role of the audit committee and their personal responsibility as members, including their duty to exercise an appropriate degree of professional skepticism.			√
Delegate / Conduct			
Institute and oversee special investigations, as needed.		√	
Direct the Chief Audit Executive (CAE), external auditors, or consultants to conduct an audit, review, and/or investigation into any matters within the Committee's scope of responsibility.		√	
Hire outside experts and consultants in risk management as necessary.		√	
Provide a forum for the resolution of all disputes between management and the internal and/or external auditors regarding the financial reporting process, risk assessment, internal control and other compliance issues.	√		
Obtain information and/or training to enhance the Committee's understanding of the organization's financial reports and the related financial reporting processes.		√	
Seek any information it requires from employees – all of whom are directed by the Board to cooperate with the Committee's requests – external auditors, consultants, and external parties.		√	
Conduct an annual self-assessment of the performance of the Audit Committee			
Oversee			
Oversee the Internal Audit Office	√		
In addition to their financial and fiduciary responsibilities, also monitor risk, financial and otherwise, and ensure the creation and maintenance of an appropriate whistleblower mechanism for reporting any fraud noncompliance, and/or inappropriate activities.		√	√
Oversee the auditing of all financial information;	√		
Oversee special investigations and whistleblower cases, as needed	√		

[4] Model Audit Committee Charter endorsed by the Association of Public Pension Fund Auditors

[5] Government Finance Officers Association Audit Committee Best Practices

PSERS Audit & Compliance Committee Charter	Existing	APPFA[4]	GFOA[5]
Meet with the external financial auditors each year prior to the annual financial audit to review the audit plan and to identify other areas of the operations that should be reviewed;	√		
Meet with the external financial auditors at the conclusion of the financial audit to review the audit results, including any recommendations, difficulties encountered and any significant adjustments proposed by the auditors;	√		
Ensure the creation and maintenance of an appropriate whistleblower mechanism for reporting any fraud, noncompliance, and/or inappropriate activities.		√	
Meet with management, external and internal auditors, or outside counsel as necessary.	√		
Provide an open avenue of communication between the internal auditors, external auditors, management, and the Board.		√	
Review significant accounting and reporting issues, including complex or unusual transactions, and recent professional and regulatory pronouncements, and understand their impact on the financial statements.		√	
Review the effectiveness of the Agency's system for assessing, monitoring, and controlling significant risks or exposures;	√		
Oversee the evaluation and monitoring of the internal control system by internal and external auditors;	√		
Review the findings and recommendations of the external auditors along with management's responses and actions taken to implement the audit recommendations;			
On a regular basis, meet separately with the external auditors to discuss any matters that the Committee or auditors believe should be discussed privately. {Note: Subject to open meeting laws.}		√	
Review the effectiveness of the organization's system for monitoring compliance with laws, regulations, contracts, and policies and the results of management's investigation and follow-up (including disciplinary action) of any instances of noncompliance.		√	
Review the findings and recommendations of any examination by regulatory agencies, any auditor's observations related to compliance, management's responses and actions taken to implement the audit observations/recommendations;	√		
Meet with the Internal Auditor to review the status of audits, review the audit findings and recommendations, management's responses, and actions taken to implement the audit recommendations;	√		
Review the effectiveness of the internal audit function by having an external quality assessment completed; and	√		
Provide input to the Executive Director on the performance of the Internal Auditor, at least annually.	√		
Ensure there are no unjustified restrictions or limitations on the internal audit function (see below)	√		

PSERS Audit & Compliance Committee Charter	Existing	APPFA[4]	GFOA[5]
Ensure the Internal Audit Office performs compliance reviews with applicable laws, regulations, rules, board and management policies, directives and generally accepted business practices related to benefits administration, investments, finance, healthcare, information technology and communications; and	Delete		
Approve			
Appoint, compensate, and oversee the work of all public accounting firms employed by the organization.		√	
Resolve any disagreements between management and the external auditors regarding financial reporting.		√	
Approve the appointment, retention, or discharge of the external auditors. Obtain input from the CAE, management, and other parties as appropriate.		√	
Retain independent counsel, accountants, or others to advise or assist the Committee in the performance of its responsibilities.		√	
Approve the consultants, or others retained by the organization to assist in the conduct of an audit, review, and/or a special investigation.		√	
Meet with the Internal Auditor to review and adopt the Agency's annual audit plan and receive periodic updates on the audit plan;	√		
Review and approve the Internal Audit Charter;	√		

Exhibit 3.5 Control Environment Survey

Example Control Environment Survey©

The Control Environment Survey measures how well the organization is prepared to manage performance and risk..

1. Senior management and the Board consistently demonstrate high standards of ethical conduct.
2. The organization regularly confirms understanding and compliance with the organization's code of conduct, policies regarding acceptable behavior, and applicable laws and regulations.
3. The organization responds quickly and effectively to unacceptable behavior.
4. Management and the Board are receptive to reports of problems or bad news.
5. Management has clear, primary responsibility for the effectiveness of performance and risk management and internal control.
6. The organization has clearly defined and communicated to personnel its performance and risk management policies and procedures, including its tolerance for risk.
7. Personnel have a clear understanding of their performance and risk management responsibilities and decision -making authority.
8. The organization has a consistent and coordinated process for identifying, assessing, and prioritizing performance and risk exposure.
9. Performance and risk assessment and prioritization are integral parts of the organization's business planning, budgeting, capital allocation, and audit planning processes.
10. Performance and risk management and control activities are coordinated across different functions.
11. Performance, risks, controls, and exposures are systematically reviewed at intervals that are appropriate to the volatility of the organization's business conditions.
12. Internal audit activities are strategically aligned with the organization's strategies, objectives, and vital signs.
13. Personnel are held accountable for their decisions and actions.
14. Personnel have the necessary knowledge and skills to identify and manage the performance and risks associated with their jobs.
15. Timely and reliable information is available to personnel to manage performance and risk properly and achieve the organization's objectives.
16. The organization has clearly defined metrics and early-warning indicators to identify when risk tolerances are about to be exceeded.
17. Senior management and board members are promptly informed of issues that may have a significant impact on performance and risk management and control.
18. When a risk occurs, the organization systematically conducts reviews to identify and correct root causes.
19. The organization follows up to ensure that mitigation strategies and corrective actions are effective.
20. Performance and risk -management and internal -control leading practices are shared to accelerate organizational learning.

Exhibit 4.1 Model Bylaws Matrix (PSERS/SERS)

Model Bylaws		SERS	PSERS	Comments
Introduction		Preamble to Governance Manual: Governing Laws, Mission and Guiding Principle	X	
Statement of Fiduciary Duties		Governing Laws, Mission and Guiding Principle	X	Could draft a more comprehensive statement of fiduciary duties.
Governing Statutes and Regulations		Governing Laws, Mission and Guiding Principle	Governing laws referenced in introduction	
Board Composition and Powers				
	Composition	X	X	
	Appointment Qualifications			
	Powers	X		
	Term of Office	X	X	
	Vacancies	X	X	
	Designees	X	X	Clarify permitted use of designees
	Oath of Office	X	X	

Model Bylaws		SERS	PSERS	Comments
	Removal and Resignation from Office	X	X	
	Compensation	X	X	
	Attendance	X		
	Statement of Economic Interests	X	X	
	Delegation		x	Addresses delegation to committees
	Board Direct Reports			
Meetings of the Board				
	Place of Meetings	X	X	
	Open Meetings	X	X	
	Regular Meetings	X	X	
	Special Meetings	X		References special meetings in the notice section, but does not indicate the requirements /protocol for calling a special meeting
	Emergency Meetings	X	X	
	Meeting Agendas	X	X	

Model Bylaws		SERS	PSERS	Comments
	Annual Calendar			
	Notice of Meetings	X	X	
	Quorum and Voting	X	X	
	Public Participation		X	
	Executive Sessions	X	X	
	Voting Conflicts	X	X	
	Notional Voting	X	X	
	Rules of Order	X	X	
	Minutes of Meetings	X	X	
Committees				
	Standing Committees	X	X	
	Ad Hoc Committees		X	
	Committee Membership	X		
	Committee Member Terms	X		
	Committee Chairs	X		
	Committee Vice Chairs	X		
	Committee Officers	X		

Model Bylaws		SERS	PSERS	Comments
	Committee Governance	X		
Officers				
	Officers and Terms	X	X	
	Powers and Duties of the Chairperson	X	X	
	Powers and Duties of the Vice Chairperson	X	X	
	Vacancies		X	
	Chairperson Term Limits and Succession		x	Vice chair succession discussed in Vacancies section; however, succession planning and term limits not otherwise addressed.
	Powers and Duties of the Secretary/Executive Director	X	X	
Legal Counsel			X	
Amendments		X	X	Addressed in Article X
Indemnification		X	x	Indemnification policy in Article VII

Exhibit 4.2 Model Committee Charter

a. Purpose and Authority
   i. Overall purpose and responsibilities
   ii. Any approval authorities delegated by the Board, if applicable
   iii. Election of chair / vice-chair
b. Composition
   i. Qualifications, number of members, appointments and term
   ii. Election of chair / vice-chair
   iii. Board Chair remains ex-officio for all committees
   iv. Staffing and Advisors
c. Meetings
   i. Define the meeting schedule
d. Responsibilities (by Powers Reserved)
   i. Recommend direction and policy to the full Board
      a. Annually identify anticipated policy priorities
      b. Establish a calendar of anticipated policy decisions
      c. Recommend vital signs for the relevant functions to the committee's mandate.
      d. Recommend tolerances for acceptable vs/ unacceptable variability in performance.
   ii. Recommend approval of key decisions.
      a. Recommend the selection of independent advisors within the committee's scope.
   iii. Oversee Board–approved direction is executed within policy by monitoring the vital signs to ensure they remain within approved tolerances or that the policy implications of unacceptable variation are quickly identified.
   iv. Obtain independent verification of the reliability of reports received and issued.
      a. Receive reports from independent sources such as internal audit, risk and compliance and third parties regarding the reliability of the reports the committee receives and issues.
e. Reporting to the Board
   i. Oversee the reliability of the information reported to the Board
   ii. Provide written reports of the committee's deliberations
f. Self-Evaluation
   i. Conduct an annual self-evaluation of the Committee's performance
   ii. Identify unmet trustee continuing education needs
g. Frequency of Review / History

4.2.1 Audit, Compliance and Risk Committee Charter

I. Purpose and Authority

The primary purpose of the Audit, Compliance and Risk Committee (“Committee”) is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to external and internal audits, compliance, risk management, special investigations, and other sources of verification and independent reassurance.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of three (3) to five (5) current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Chief Internal Auditor (CAO), the Chief Compliance Officer (CCO), the Deputy Executive Director for Enterprise Performance and Risk, and the Chief Counsel (CC) will be the primary staff liaisons with the Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least four (4) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

A. Conduct activities on behalf of the Board

1. With the assistance of staff, hire, evaluate, and, as appropriate, terminate and plan for the succession of the Chief Audit Officer; make recommendations on CAO compensation to the Executive Director.

2. Conduct the search for the independent external auditor, with the assistance of staff, and make recommendations to the Board. The Committee should ensure that an RFP is issued for the independent external auditor contract at least every five (5) years unless the Board chooses otherwise.

3. As necessary, with the assistance of staff, identify the need for independent advisors and/or investigators for special situations, conduct a search, and make recommendations to the Board.

4. Evaluate the performance of all external audit, internal audit, compliance, and risk management service providers necessary or desirable for PSERS. The Committee should ensure that RFPs are conducted for each key service provider contract at least every five (5) years unless the Board chooses otherwise.

5. At least annually, meet individually with: the CAO; the external auditor; the CCO; and the head of risk management, without other staff present, to ensure there has been no undue influence on their activities or reporting to the Committee or the Board.

B. Recommend direction and policy to the full Board

1. Annually identify anticipated audit, compliance and risk policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.

2. Review and make recommendations to the Board on all policies and any amendments governing audit, compliance or risk, with the exception of policies that come within the duties and responsibilities of another committee.

C. Recommend approval of key decisions

1. Recommend approval of the Internal Audit Charter.

2. Recommend approval of the staffing complement for the Internal Audit Office, Compliance, and Performance and Risk Management to the Board.

3. Recommend engagement of and budget for external consultants and advisors, as appropriate, to ensure adequate resources for Internal Audit, Compliance, and Performance and Risk Management.

4. Recommend approval of the Independent Auditor's Report, Independent Audited Financial Statements, and Management Letter.

5. Recommend approval of positions on proposed legislation or regulations affecting audits, compliance, enterprise risk, or ethics.

6. Recommend approval of enterprise risk appetite and tolerances (excluding investment risk).

D. Oversee Board-approved direction

1. Oversee the Internal Audit Office, including:

   - Meet with the Chief Audit Officer to review and approve the Agency's annual audit plan and receive periodic updates on progress vis-à-vis the audit plan.

   - Ensure the annual Internal Audit Plan is adequate to meet PSERS' needs.

   - Ensure that the Internal Audit Office has adequate resources to meet its responsibilities.

- Meet with the CAO to review the status of audits, review the audit findings and recommendations, management's responses, and actions taken to implement the audit recommendations.
- Review and approve the Internal Audit Charter.
- Ensure there are no unjustified restrictions or limitations on the internal audit function.
- Provide input to the Executive Director on the performance of the CAO, at least annually.

2. Oversee the auditing of all financial information, including:

- Meet with the external financial auditors each year prior to the annual financial audit to review the audit plan and to identify other areas of the operations that should be reviewed.
- Approve the Independent Auditor's Annual Audit Plan.
- Meet with the external financial auditors at the conclusion of the financial audit to review the audit results, including any recommendations, difficulties encountered and any significant adjustments proposed by the auditors.
- Oversee the evaluation and monitoring of the internal control system by internal and external auditors.
- Review the findings and recommendations of the external auditors along with management's responses and actions taken to implement the audit recommendations.
- Review the findings and recommendations of any examination by regulatory agencies, any auditor's observations related to compliance, management's responses and actions taken to implement the audit observations/recommendations.
- Provide a forum for the resolution of all disputes between management and the internal and/or external auditors regarding the financial reporting process, risk assessment, internal control and other compliance issues.

3. Oversee PSERS compliance with statutes, policies, and standard business practices including:

- Oversee the design and implementation of the Compliance Program, including the policies and procedures to help prevent and detect violations of law and to promote business ethics.
- Review and approve the annual compliance plan and ensure that the Compliance function has adequate resources to meet its responsibilities.
- Ensure the Compliance function performs compliance reviews with applicable laws, regulations, rules, board and management policies, directives and generally accepted business practices related to benefits administration, investments, finance, healthcare, information technology and communications.
- Oversee key compliance and ethics activities and reports to include: enterprise program compliance, enterprise and Board policy compliance, service provider compliance, and privacy and security compliance.

4. Oversee PSERS performance and risk management activities, including:

    - Review and approve performance and risk management plans annually and ensure that the Performance and Risk Management function has adequate resources to meet its responsibilities.
    - Review the effectiveness of the Agency's system for assessing, monitoring, and controlling significant risks or exposures.
    - Oversee enterprise risk appetite and tolerances (excluding investment risk).
    - Review emerging and significant risks specific to the area of responsibility of the committee, and report those risks to the board.

5. Oversee any other PSERS audit, compliance, risk, or related activities, including:

    - Oversee PSERS' policies and procedures for the receipt and handling of allegations of suspected misconduct and receive reports on a periodic and as-needed basis regarding significant reports received.
    - Oversee special investigations and whistleblower cases, as needed, on behalf of the Board.
    - Oversee ethics-related complaints, processes, and findings.

E. Obtain independent verification.

1. Ensure that there is appropriate independent verification of the performance and exception reports issued by management.
2. Review the effectiveness of the internal audit function by having an external quality assessment completed at least every three years.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing PSERS governance.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

4.2.2 Benefits and Appeals Committee Charter

I. Purpose and Authority

The primary purpose of the Benefits and Appeals Committee ("Committee") is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to benefits administration, member services, employer services, appeals, cybersecurity, and information technology.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of three (3) to five (5) current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Deputy Executive Director Pensions and Deputy Director Performance and Risk will be the primary staff liaisons with the Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least four (4) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

F. Conduct activities on behalf of the Board

6. Conduct quasi-judicial deliberations in formal appeals and make recommendations for Board action, including the issuance of proposed opinions and orders.

G. Recommend direction and policy to the full Board

3. Annually identify anticipated benefits policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.

4. Recommend vital signs and metrics for member and employer services and identify tolerances for acceptable vs. unacceptable variability in performance.

5. Review, discuss, and make recommendations to the Board for their approval policies, actions, and on other matters related to the System's administration of the rights, duties, and benefits of System members and the duties of employers.

H. Recommend approval of key decisions

1. Review, discuss and make recommendations to the Board on customer service issues relating to the System's members and employers, including the dissemination of information to members, employer relations and the System's field services program.
2. Review and recommend to the Board any major information technology initiatives, including for cybersecurity and information security.

I. Oversee Board-approved direction

6. Oversee member and employer service levels.
7. Oversee cost effectiveness of member and employer services.
8. Oversee information technology plans and budgets, in particular as they directly impact member services functions and operations.
9. Oversee cybersecurity and information security.
10. Oversee management of risks related to the responsibilities of this committee.

J. Obtain independent verification

3. Direct staff to commission periodic peer benchmarking studies regarding pension administration costs, services levels, and other performance and to present the results to the Board.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing PSERS governance.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

4.2.3 Board Governance Committee Charter

I. Purpose and Authority

The primary purpose of the Board Governance Committee ("Committee") is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to Board governance (including bylaws, charters and policies), trustee elections, hiring, goal-setting, evaluation, and termination of the Executive Director, executive succession planning, human resources, strategic planning, Board self-evaluation, and Board onboarding and continuing education.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of three (3) to five (5) current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Executive Director and Chief Counsel will be the primary staff liaisons with the Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least four (4) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

K. Conduct activities on behalf of the Board

11. Conduct the Board self-evaluation process, including development of a Board self-evaluation policy. The Committee Chair should lead the process and is authorized to seek external assistance if desired.

12. Conduct the annual Executive Director performance evaluation process on behalf of the Board, seeking input from all trustees. Collaborate with the Executive Director in developing annual performance goals linked to the strategic plan and recommend to the Board for approval.

13. Make recommendations to the Board regarding selection and hiring of the independent fiduciary counsel. The Committee should ensure that an RFP is issued for the independent fiduciary counsel contract at least every five (5) years unless the Board chooses otherwise.
14. Oversee and evaluate the performance of the Board's fiduciary counsel and ensure the Board meets with fiduciary counsel without staff at least once annually.

L. *Recommend direction and policy to the full Board.*

1. Annually identify anticipated governance policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.
2. Review and make recommendations to the Board on all policies and any amendments thereto governing the internal operations of the Board, with the exception of policies that come within the duties and responsibilities of another committee. Collaborate with the other PSERS committees, the Executive Director, and Chief Counsel to review the bylaws and committee charters at least every three years.
3. Review and make recommendations to the Board on the manner in which elections of the elective members of the Board are conducted and on the selection of providers of goods and services deemed necessary for the conduct of such elections.
4. Collaborate with executive staff to develop Board self-assessment policies and procedures.
5. Collaborate with executive staff to develop the trustee onboarding and continuing education curriculum, including education to be provided during Board meetings or workshops and individual education opportunities. Utilize input from the Board self-assessment to refine and improve the continuing education program.
6. Review and make recommendations to the Board on delegations to the Executive Director. The delegations should be reviewed at least every three years and any proposed revisions recommended to the Board.
7. Recommend to the Board positions on proposed legislation affecting board governance.

M. *Recommend approval of key decisions.*

7. Report on and cause to be certified to the Board the results of each election.
8. Interview candidates for filling newly created or vacant senior management positions in the System and report and make recommendations to the Board.
9. As needed, make recommendations to the Board regarding selection and hiring of external Board advisors such as governance consultants.
10. As needed, collaborate with staff to oversee executive searches when the need to hire a new Executive Director arises. Recommend discipline or termination of the Executive Director, if appropriate.

N. *Oversee Board-approved direction.*

15. Oversee the PSERS strategic planning process, including development of a PSERS strategic planning policy which describes the process and roles and responsibilities. Ensure that the Board participates in the strategic planning process and monitors plan implementation.
16. Oversee stakeholder relations and collaborate with staff in development of a stakeholder relations plan which identifies key stakeholder groups, who is responsible for communications at PSERS, and key messaging to be communicated.
17. Oversee human resources and organizational development, including human resources policies, succession planning for the direct reports to the Board and ensuring that the Executive Director has effective leadership succession planning in place for staff.
18. Oversee all matters concerning the classification, pay, and other terms and conditions of employment for employees of the Board, including total personnel complement.

O. Obtain independent verification of the reliability of reports received and issued.

4. Direct staff to commission periodic staff compensation reviews with an independent compensation consultant to compare PSERS staff compensation with peers.
5. Direct staff to periodically (e.g., every two or three years) obtain peer governance assessments of PSERS and provide the results to the Board.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing PSERS governance.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

4.2.4 DC Committee Charter

I. Purpose and Authority

The primary purpose of the Defined Contribution Plan Committee ("Committee") is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to the School Employees' Defined Contribution Plan and Trust ("PSERS DC Plan") established by the Act of June 12, 2017 (P.L. 11, No. 5) for the exclusive benefit of participants and their beneficiaries subject to the specific terms of the PSERS DC Plan document, the Public School Employees Retirement Code ("Retirement Code"), and other applicable law.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of three (3) to five (5) current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Director of Defined Contribution Investments ("Director") will be the primary staff liaison with Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least two (2) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

P. *Conduct activities on behalf of the Board*

8. Conduct the search for the DC plan consultant, with the assistance of staff, and make recommendations to the Board. The Committee should ensure that an RFP is issued for the DC plan consultant contract at least every five (5) years unless the Board chooses otherwise.

9. Evaluate the performance of all plan service providers necessary or desirable for the administration of the PSERS DC Plan, including but not limited to a consultant, a third-party administrator, a trustee or trustees, a custodian, and other such service providers as shall be necessary or appropriate for the administration and operation of the plan. The Committee

should ensure that RFPs are conducted for each key service provider contract at least every five (5) years unless the Board chooses otherwise.

Q. Recommend direction and policy to the full Board

1. Annually identify anticipated PSERS DC Plan policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.
2. Recommend vital signs and metrics for the DC plan and identify tolerances for acceptable vs. unacceptable variability in performance.
3. Review and recommend to the Board amendments to the PSERS DC Plan and regulations that are deemed necessary or desirable to facilitate the administration of the plan and/or to maintain or bring the plan into compliance with the Retirement Code, Internal Revenue Code, and other applicable law.

R. Recommend approval of key decisions

11. Make recommendations to the Board on decisions related to investment options, investment providers, vendors, recordkeeper, other consultants, and other plan service providers.
12. Recommend to the Board any positions regarding legislative proposals related to the PSERS DC Plan.

S. Oversee Board-approved direction

19. Oversee the implementation of investment policy statements and other policies related to the PSERS DC Plan.
20. Monitor fees and expenses that are charged to plan assets and/or paid by participants, including but not limited to investment fees, trustee fees, fees paid to other plan service providers, and PSERS' administrative fee for the ongoing administration of the PSERS DC Plan.
21. Monitor the performance, cost, and management of the PSERS DC Plan investment options, investment providers, vendors, recordkeeper, consultants, and other plan service providers.
22. Monitor the plan participation and ongoing effectiveness of member education related to the PSERS DC Plan.

T. Obtain independent verification

6. Annually obtain benchmarking reports related to Plan performance and fees.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing the PSERS DC Plan.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

4.2.5 Finance and Administration Committee Charter

I. Purpose and Authority

The primary purpose of the Finance and Administration Committee ("Committee") is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to budgeting and financial management of the system, investment valuations, actuarial assumptions and contribution rates, the member shared risk contribution rate, and option factors.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of three (3) to five (5) current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Chief Financial Officer (CFO) will be the primary staff liaison with the Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least four (4) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

U. Conduct activities on behalf of the Board

13. Make recommendations to the Board regarding selection and hiring of the independent external actuary. The Committee should ensure that an RFP is issued for the independent external actuary contract at least every five (5) years unless the Board chooses otherwise.

14. At least annually, meet individually with the CFO and the independent external actuary without other staff present to ensure there has been no undue influence on their activities or reporting to the Committee or the Board.

15. Evaluate the performance of the independent external actuary annually and provide feedback regarding performance and future expectations.

V. Recommend direction and policy to the full Board

6. Annually identify anticipated financial, investment valuation, actuarial, contribution, and shared risk contribution policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.
7. Review and make recommendations to the Board on all policies and any amendments governing financial, investment valuation, actuarial, contribution, and shared risk contribution issues.
8. Review and make recommendations to the Board regarding funding risk through an asset liability management framework to guide investment strategy and actuarial policies.
9. Recommend to the Board positions on proposed legislation affecting anticipated financial, investment valuation, actuarial, contribution, and shared risk contribution policy.
10. Review and make recommendations to the Board on significant financial principles, asset liability management and funding risk methodologies, and actuarial methods.

W. Recommend approval of key decisions

1. Review and approve the annual fiscal year budget request prepared by the Office of Financial Management for the pension administrative, defined contribution administrative, directed commissions, healthcare-PSERS administrative and investment-related budgets for the next fiscal year prior to their submission to the GBO
2. Review and recommend adoption of the actuarial factors, assumptions and methodologies included in the valuation to calculate the employer contribution rate.
3. Review and recommend certification, each December, of the total employer contribution rate for use by employers in the next fiscal year as recommended by PSERS' external actuary.
4. Review and recommend certification of the member shared risk contribution rate for the next three fiscal years as recommended by PSERS' external actuary for class T-E, TF, T-G and T-H members.
5. Review and recommend adoption of the actuarial factors, demographic and economic assumptions, and methodologies recommended by PSERS' external actuary and Agency staff.
6. Review and recommend approval of new option factors, as needed, and the date to implement the factors in PSERS' benefits administration system as recommended by Agency staff and PSERS' external actuary.

X. Oversee Board-approved direction

23. Oversee the financial soundness of the overall PSERS System, including annual review of unfunded liability, overall pension soundness and sustainability, the health programs, and any other programs offered.
24. Review and evaluate periodic updates on the status of the current year budget with Office of Financial Management staff; shall Review and approve for publication the System's annual fiscal

year financial statements prepared by the Office of Financial Management each fall and no later than December 31st.

25. Oversee financial reporting and controls over financial reporting and processes, including the preparation of the Annual Financial Statements.

26. Oversee liquidity and cash management practices of the organization to ensure sufficient cash is available to pay benefits and other PSERS obligations.

27. Ratify all payments reflected in the annual fiscal year financial statements.

28. Review the annual valuation results for the fiscal year as presented by PSERS' external actuary each fall, but no later than December 31st.

29. Oversee organizational operations and cost effectiveness.

30. Oversee business continuity and disaster recovery planning and processes.

31. Review the results of the actuarial experience study by PSERS' external actuary every five years.

32. Meet periodically with Office of Financial Management staff to discuss other financial management activities and policies on an as needed basis as determined by the Chair, Chief Financial Officer and/or Executive Director.

Y. Obtain independent verification

7. Ensure that there is appropriate independent verification of the performance and exception reports issued by management.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing PSERS governance.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

4.2.6 Health Care Committee Charter

I. Purpose and Authority

The primary purpose of the Health Care Committee (“Committee”) is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to the health insurance program.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of three (3) to five (5) current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Deputy Executive Director Pensions will be the primary staff liaison with the Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least four (4) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

Z. Conduct activities on behalf of the Board

16. Conduct the search for the health plan consultant, with the assistance of staff, and make recommendations to the Board. The Committee should ensure that an RFP is issued for the health plan consultant contract at least every five (5) years unless the Board chooses otherwise.

17. Evaluate the performance of all health plan service providers necessary or desirable for the administration of the health plan annually. The Committee should ensure that RFPs are conducted for each key service provider contract at least every five (5) years unless the Board chooses otherwise.

AA. Recommend direction and policy to the full Board

11. Annually identify anticipated health insurance policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.

12. Recommend vital signs and metrics for health insurance and identify tolerances for acceptable vs. unacceptable variability in performance.

13. Make recommendations to the Board regarding changes to the health insurance programs and to the Premium Assistance Program, including, but not limited to, changes to the type or level of benefits offered to retirees and the scope of the health insurance programs; and shall recommend the annual administrative budgets for the health insurance and Premium Assistance Programs.

BB. Recommend approval of key decisions

2. Review and make recommendations to the Board on the manner in which elections of the elective members of the Board are conducted and on the selection of providers of goods and services deemed necessary for the conduct of such elections.

3. Report on and cause to be certified to the Board the results of each election.

CC. Oversee Board-approved direction

1. Monitor and review the operations of the health insurance programs which the System offers to its retirees and their dependents.

2. Monitor and review the Premium Assistance Program which the System administers for the purpose of reimbursing eligible retirees for out-of-pocket health insurance premium expenses

DD. Obtain independent verification

8. Direct staff to obtain appropriate health plan benchmarking information which compares the PSERS health insurance program to peer programs with respect to cost and outcomes.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing PSERS governance.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

4.2.7 Investment Committee Charter

I. Purpose and Authority

The primary purpose of the Investment Committee (“Committee”) is to assist the Board in fulfilling its fiduciary oversight responsibilities with respect to investments, including the asset allocation, investment advisors, external investment managers, types of allowable investments, investment policies, and overall fund performance.

The Board hereby delegates all necessary power and authority to the Committee for the Committee to perform the duties and responsibilities described in this Charter. Nothing in this Charter shall be construed as giving the Committee the authority to take any action on behalf of the Board or Board Chairperson without first obtaining the approval of the Board.

II. Composition

The Committee shall consist of X current members of the Board, who may be the designees of Board members ("Committee Members"), appointed by the Board Chair, in consultation with each Board member, as provided in the Bylaws.

The terms of appointment for Committee Members shall be as provided for in the Bylaws.

The Committee shall elect its Chair and Vice-Chair as provided for in the Bylaws.

The Board Chair remains an ex-officio member of the Committee as provided in the Bylaws.

The Chief Investment Officer (CIO) will be the primary staff liaison with the Committee.

III. Meetings

Committee meetings shall be conducted in accordance with the Bylaws. The Committee shall meet at least six (6) times every year. The Committee Chair, after consulting with the Committee Members, shall set the dates and times of the committee meetings and request that the Secretary of the Board provide notice of meetings in accordance with the Bylaws.

IV. Responsibilities

EE. Conduct activities on behalf of the Board

18. Conduct the search for the Board general investment consultant, with the assistance of staff, and make recommendations to the Board. The Committee should ensure that an RFP is issued for the general investment consultant contract at least every five (5) years unless the Board chooses otherwise

19. As needed, make recommendations to the Board regarding selection and hiring of additional external Board independent investment advisors.

20. Evaluate the performance of the general investment consultant annually.

21. At least annually, meet with the general investment consultant, without staff present, to ensure there has been no undue influence on their activities or reporting to the Committee or the Board.

22. At least annually, meet with the asset class investment consultants, without other staff present, to ensure there has been no undue influence on their activities or reporting to the Committee or the Board.

FF. Recommend direction and policy to the full Board

14. Annually identify anticipated investment policy priorities and establish a calendar of anticipated policy decisions and discuss with the Board.
15. Develop and recommend a statement of investment beliefs to guide investment strategies and review and update in advance of the next strategic asset allocation process.
16. Develop and recommend investment risk appetite and tolerances and review and update in advance of the next strategic asset allocation process.
17. No less than every five years review and recommend the strategic asset allocation for the Fund and the timeframe for completing implementation of any recommended changes to the allocation.
18. No less than every five years review and recommend the targeted rate of return for the fund.
19. Annually review and recommend updates to the investment policy statement, as appropriate.
20. Recommend proxy voting policies and, from time to time, policy revisions for adoption by the Board.
21. Recommend securities litigation policies and, from time to time, policy revisions for adoption by the Board.
22. Develop and recommend the PSERS beliefs and approach for Environmental, Social, and Governance (ESG) investing and the ESG program, if the Board chooses to implement one.
23. Review and make recommendations to the Board on delegations to the Executive Director or Chief Investment Officer. The delegations should be reviewed at least every three years and any proposed revisions recommended to the Board.
24. Recommend to the Board positions on proposed legislation affecting investments.

GG. Recommend approval of key decisions

1. Review and recommend total fund and asset class policy benchmarks.
2. Oversee searches for new investment managers and general partners and make recommendations to the Board.
3. Receive, review and make recommendations to the Board regarding investment proposals presented as required by the Board's standard specifications.
4. Recommend approval of the initiation or settlement of investment-related litigation involving material sums or having a substantial impact on investment goals or investment operations.

HH. Oversee Board-approved direction

33. Oversee the implementation of the Board's mission statement in its relation to the investments of the Fund in accordance with the prudent investor standard set forth in 24 Pa. C.S. §8521(a).
34. Review and oversee the implementation of the Board's investment objectives and guidelines and from time to time make recommendations for their modification.
35. Oversee investment risk and compliance with investment policies.
36. Oversee asset class strategic plans and portfolio construction guidelines and meet at least annually with the asset class consultants.
37. Oversee fund liquidity management, including ensuring that the fund has sufficient liquid assets to respond to market conditions and meet investment obligations (e.g., capital calls, collateral calls).
38. Oversee cost effectiveness of the investment program.
39. Oversee the investment manager due diligence and monitoring standards and processes and the internal investment decision-making processes.
40. Monitor the performance of investment managers and make recommendations to the Board in cases of underperformance or other unsatisfactory performance or risk.
41. Monitor the performance of internally-managed investment portfolios and make recommendations to the Board in cases of underperformance or other unsatisfactory performance or risk.
42. Oversee the Environmental, Social, and Governance (ESG) investing program should the Board approve one.
43. Keep abreast of and review and report on current developments in financial instruments and other asset classes as to their suitability for investment by the Fund, as well as new investment techniques which may be compatible with the Board's investment policy and practices.
44. Oversee the performance of the Investment Office and it resource complement and ensure that resources are adequate to effectively manage the fund with appropriate risk management and internal controls.
45. Inform itself about and review issues of corporate performance, corporate governance, and shareholder rights as they affect the System’s legal or beneficial ownership of voting securities and the value of its investments.
46. Monitor the System’s implementation of proxy voting policies generally and advise the Board on particular proxy voting or portfolio company matters of significance.
47. Monitor the System’s implementation of its securities litigation policy generally and advise the Board on particular security litigation matters of significance.

II. Obtain independent verification

9. Direct staff to commission periodic investment performance and cost effectiveness reviews with an independent consultant to compare PSERS performance and investment management costs with peers.

10. Ensure that there is appropriate independent verification of the performance and exception reports issued by management.

V. Reporting to the Board

The Committee Chair, with the support of staff, is responsible for reporting on the Committee's activities and recommendations to the Board. Subsequent to each Committee meeting, the Chair should provide:

- Minutes summarizing the Committee's deliberations;
- Documentation in support of any recommendations to the Board; and
- The planned agenda for the next Committee meeting.

The Chair should ensure that the Board receives sufficient and reliable information to enable the Board to fulfill its fiduciary responsibility of monitoring and overseeing PSERS governance.

VI. Self-Evaluation

The committee shall conduct a self-evaluation of the Committee's performance as part of the Board's self-evaluation process. In addition to identifying opportunities for the committee to improve, the self-evaluation should also seek to identify unmet trustee continuing education needs to be communicated to the Board Governance Committee to add to the curriculum.

VII. Frequency of Review / History

The Committee shall collaborate with PSERS staff and Office of the General Counsel to review this Committee Charter at least every three years. The Committee shall recommend any changes to the Board, as appropriate.

Exhibit 4.3 Current and Proposed PSERS On-Boarding

In current Board Education Policy (A-R):

The PSERB Member orientation program should, at a minimum, include the following elements:

A. A brief history and overview of PSERS, including the mission and vision of PSERS.
B. A description of the principal laws governing PSERS and PSERB.
C. A description of PSERB and the fiduciary duties of PSERB Members under the prudent investor rule
D. A review of the PSERB Committees and their purposes
E. A review of the existing PSERB policies
F. A review of the legislative process and PSERS' relation to it
G. A review of the actuarial valuation process and funding of PSERS
H. A briefing on current issues
I. A briefing on the Investment Office functions
J. A review of PSERS' pension benefits plan design
K. A review of the School Employees' Defined Contribution Plan and the School Employees' Defined Contribution Trust
L. A review of PSERS' health care programs
M. A briefing on the administrative operations of PSERS, including its operating funds and financial management.
N. A list of the names and addresses of all PSERB Members and Designees
O. The current schedule of PSERB and Committee meetings
P. A list of PSERS' key service providers
Q. An optional tour of the PSERS' Headquarters
R. Instructions on how to access the PSERB's secure website.

Proposed New:

S. How to navigate and use Diligent and/or other software to find information related to the orientation topics, including glossaries and subject matter indexes

Any other relevant information or documents deemed appropriate by the Secretary of the PSERB.

Exhibit 4.4 Example Educational Needs Assessment

Learning Topic	Learning Priority HML	Preferred Learning Style e.g., in-person, in meeting, virtual
Part A - Overview of Public Retirement Systems in the 21st Century		
1. Retirement System Basics		
The State of Public Pensions (Economic Stability / Funded Status)		
Key Differences Between Defined Benefit and Defined Contribution Plans		
Annual Required Contribution Basics		
Expected Rate of Return Basics		
Differences Between the US and Canadian Models Planned		
Pension Fundamentals: Public v. Private Sector Plans		
Pension Soundness Basics (Long-term Solvency)		
Pension Plan Funding and Actuarial Processes		
2. Governance Basics		
Fiduciary Fundamentals		
The Role of the Fiduciary Board		
Powers of the Fiduciary Board		
Public Pension Governance Structures		
Board Self-Evaluation		
Ethics, Code of Conduct, Conflicts of Interest		
3. Conducting the Business of the Board		
Hiring, Evaluating, Compensating and Succession Planning for the CEO/CIO		
The Role of Committees		
The Role of Chair and Vice-Chairs		
Board Use of Third-Party Service Providers		
4. Setting Direction and Policy and Prudent Delegation		
The Board's Focus on Strategy		
Stakeholder Engagement / Communications		
Policy setting		
Roles, responsibilities, authorities and accountabilities of the Board, its advisors and professional staff		
Succession planning for Board direct reports		
5. The Role of the Board in Oversight of Performance and Risk		
Enterprise Risk and Performance Oversight		
Enterprise Risk Management and Risk Assessment		
Optimizing Use of the Board Portal		
Operational Risk		
Peer Benchmarking		

Learning Topic	Learning Priority HML	Preferred Learning Style e.g., in-person, in meeting, virtual
Financial Management		
6. Trust but Verify		
Enterprise Reassurance and Verification (The Role of Internal Audit, Compliance and Risk, External Audit, and Other Third Parties)		
Compliance and Controls		
Other		
Part B Understanding Directing and Overseeing Vital Retirement Functions		
7. Investment Basics		
Asset Allocation Basics		
Understanding Investment Risk		
Maintaining / adjusting the Asset Allocation		
Investment Beliefs		
Overseeing Investment Operations		
Outsourcing Investment Management		
Pros and Cons of Internal Asset Management?		
Board Oversight of Delegated Investment Strategy		
Investment Strategies and Policies Review		
The Basics of Private Equity Investing and Costs		
Board Oversight of Private Equity		
Due Diligence and Monitoring		
Performance Reporting, Valuations, Investment Accounting		
A Primer on Asset Classes		
Corporate Governance and Proxy Voting – An Overview		
Corporate Governance in the US		
ESG and International Corporate Governance		
The Key Investment Theories		
8. Pension Administration		
Actuarial Basics for Defined Benefit Plans		
Defined Benefit Plan Design and Rules		
Hybrid Pension Plans		
Appeals and Rules Interpretation		
Basics of Pension Operations and Board Oversight		
9. Defined Contribution/Deferred Compensation Plans Series		
Types of Public Sector Defined Contribution and Deferred Compensation Plans (401(a), 403(b), 457, etc.)		
DC Plans		
Fiduciary Responsibilities of DC Boards		

Learning Topic	Learning Priority HML	Preferred Learning Style e.g., in-person, in meeting, virtual
Selecting DC Service Providers: Record Keepers, Consultants, Fee Management		
DC Plan Participant Education and Optimizing Participation		
DC Investment Options		
Benchmarking DC Performance Health Benefits Management Series Planned		
10. Health Insurance Administration		
Health Care Plans		
Health Insurance Triple Aim (Care, Health, Cost)		
Health Insurance in Workforce Recruitment and Retention		
Health Insurance Benchmarking: Vital Signs of Vital Functions		
Health Care Management		
Pharmacy Management		
11. Enterprise Administration		
The Chief Financial Officer’s Role		
Information Technology and the Board’s Role		
Security and Cybersecurity		
Human Resources		
Organization and Staff Operations		
Procurement / Vendor Relationships		
Resourcing and Budgeting		
Legal Support		
Other		

Exhibit 4.5 Example Board Self-Evaluation Criteria

The Self-Evaluation Process should address the following components and examples:

A. Powers Reserved for the PSERS Board

1. Conduct the business of the Board and its Committees.
    a. By-Laws, Charters, Policies
    b. Board meeting functioning
    c. Board Committee Structure
    d. Board Committee functioning
    e. Quality of information provided to the Board
    f. Timeliness of information provided to the Board
    g. The Board Portal
    h. Board Education & Development

2. Set direction and policy and prudently delegate
    a. Strategic plan
    b. Stakeholder Communications
    c. ALM cycle
    d. Strategic policy calendar
    e. Independent External Advisors
    f. Direct Reports / Interactions with Staff
    g. Evaluation of direct / indirect reports

3. Approve key decisions required by the Board.
    a. Due Diligences
4. Oversee the implementation of direction within policy.
5. Verify the reliability of reports received and issued.

Part B. Powers reserved for Others

1. Enabling Legislation and Governance Structure

Exhibit 4.6 Proposed Committee Consolidation

a. Audit, Compliance and Risk Committee (currently Audit/Compliance)
    i. Expand to include oversight of performance and risk management processes;
    ii. Rename the Audit, Risk and Compliance Committee and refine the charter
b. Benefits and Appeals Committee (currently Appeals and Member/Employer Services)
    i. Expand responsibilities of Member/ Employer Services to include ongoing oversight of member and employer services, including employer services and third-party providers
    ii. Rename the Benefits and Appeals Committee and develop a charter
c. Board Governance Committee (currently Ad Hoc Board Governance)
    - Merge three standing committees (Personnel, Bylaw/Policy, Elections) and Ad Hoc Governance Committee into new standing Board Governance Committee
    - Expand responsibilities to include: elections, strategic planning oversight, Board self-assessment, oversight of HR, IT and Board continuing education and reflect in new charter

d. Defined Contribution Plan Committee – refine the committee charter to be consistent with the elements recommended in 4.1.3
e. Finance and Actuarial Committee (currently Budget/Finance)

    i. Expand responsibilities to include information technology oversight
    ii. Rename the Finance and Actuarial Committee and develop a charter

b. Health Care Committee – develop a committee charter
c. Investment Committee

    i. Merge the Corporate Governance Committee into the Investment Committee
    ii. Develop a committee charter.

Proposed PSERS Committee Structure

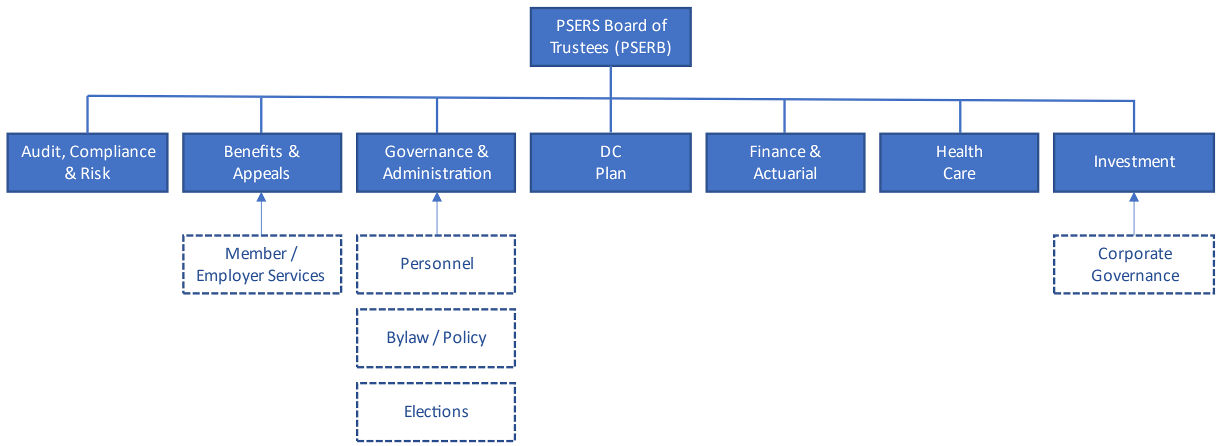

Exhibit 4.7 Designee Participation in Meetings Policy Options Summary

Policy Options Summary – Bylaw amendments on appointment and use of designees in meetings

Executive Summary

Recommendation: Amend PSERS' bylaws on appointment and use of designees at meetings

i. **Implement the plain meaning of the Retirement Code provision which states that a designee serves for the appointing member "in his stead" rather than in addition to the member, consistent with the legislative intent in creating a 15-member Board.**

ii. **Appoint only a primary and back-up designee, without limiting a Board member's ability to benefit from other staff resources.**

iii. **Consider relevant skill sets, experience and time availability in appointing designees.**

iv. **Limit rotating substitution of a member by a primary designee or of the primary designee by the alternate designee during a meeting without announcement of the reason and Chair approval.**

v. **Include compliance with designee Bylaw procedures in Board self-evaluations.**

The Public School Employees' Retirement Code (the "Code") creates the PSERB as a 15-member board and provides that "each ex officio member of the board and each legislative member of the board may appoint a duly authorized designee to act in his stead." 24 Pa. C.S. §8501(a). The PSERS Bylaws provide that "[b]oth ex-officio and legislative members may authorize more than one designee either in priority preference or as alternates." The Bylaws further prescribe the designees must be officers or employees of the ex officio member's agency (each designee of the Secretary of Education must be an officer or employee of the Commonwealth appointed by the Secretary or Governor; each designee of the Treasurer must be an officer or employee of the Department of the Treasury; each designee of the Executive Secretary of the School Boards Association must be an employee of such association). The Bylaws further require each designee be bound by the oath of office and act as a fiduciary in accordance with the standard of care. Use of alternating designees at the same meeting is allowed as long as only one designee speaks to an agenda item unless the Chair's consent is obtained.

While designation of an alternate to substitute at a meeting for a busy public officer board member is not unusual amongst peers, the Board's practice of permitting the use of multiple rotating designees, even at the same meeting, in the place of a single Board member is not consistent with prevailing peer practices and can be considered a lagging practice. It may also not be consistent with the Retirement Code which states "in his stead" not "in addition to the member". The use of multiple rotating designees is a disfavored practice because of its detrimental impact on effectiveness of boards. Indeed, our Trustee and designee interviews identified several of these adverse effects at PSERS.

The use of multiple rotating designees can have the practical effect of creating:

Lack of consistency in knowledge, expertise, understanding of prior Board deliberations and coherence in policy positions across issues;

Inefficiency in Board deliberations and decision-making processes, i.e., from adding interactions with up to an additional 16 designees to an already relatively large Board of 15 primary members;

Inconsistency in messaging and perspective from a single Board seat;

Difficulty in building consistent working relationships between Board members and vis a vis staff, with as many as 31 rotating individuals participating in deliberations;

Ambiguity with respect to responsibility for implementation of fiduciary obligations from changing lines of personal accountability.

It appears that these effects may have been compounded by the transition to virtual meetings and associated challenges with support of multiple rotating designees—e.g., technology, Diligent licenses, education, compliance.

Nevertheless, it is important to distinguish between full use of a Trustee's own staff resources and other relevant expertise available to each Trustee and the use of multiple rotating designees. The benefits of consistency and clear personal accountability on Board effectiveness should in no way preclude a Board member from making full use of available staff resources and expertise to inform the primary Board member and his or her designee.

The Pennsylvania Auditor General reached similar conclusions in the May 2017 PSERS performance audit report. The Auditor General found the Board's use of designees for certain members to be an area of concern. The report highlighted that designees are not evaluated for their level of investment knowledge and therefore may not be prepared to address investment decisions. Also, the Auditor General concluded that due to Board members and their multiple designees continuously alternating attendance at Board meetings, the Board was exposed to a lack of continuity and its ability to make informed decisions could be compromised (see pages 50 – 53 of the 2017 audit report).

We recommend that the Board reexamine its approach and set a definitive expectation that members adhere to the apparent intent of the Retirement Code which says that a designee serves "in his stead," meaning in the absence of rather than in addition to the member. This recommendation would also address findings of the Auditor General by having PSERS adopt new Bylaw provisions to enable the *effective* use of designees, consistent with prevailing peer practices which recognize the importance of stability in Board meeting participation and clear personal accountability. Ex officio and legislative Board members should be limited to a primary, plus one designee. In selecting designees, Board members could be encouraged to identify and consider the expertise and background of designee candidates in order to improve overall Board effectiveness.

Background and analysis

Issues and potential consequences if no action taken

The contemporaneous or serial use of multiple designees by ex officio and legislative Board members creates a number of fiduciary and practical challenges for the PSERS Board. For example, the lack of a consistent person sitting in a Board seat creates potential for a gap in stability of experience and knowledge that is typically acquired through consistent Board meeting participation. In addition to creating a knowledge gap, information can often be incomplete and/or mischaracterized when communicated and re-communicated as between multiple parties who were not present—i.e., the "broken telephone" effect.[1] These issues were identified by the Auditor General in 2017 but have not yet been addressed.

Another challenge presented by the contemporaneous or serial use of multiple designees is the added complexity of inter-personal Board member relationships associated with making a large Board even larger, as well as the inconsistency that this introduces into the Board deliberation and decision-making processes. We note that the current PSERS Board composition of 15 members is on the larger side as compared to other U.S. public pension fund peers. For U.S. public pension funds representing participant state employees and teachers, the average number of board members is 9.2 and 10, respectively.[2] It is axiomatic that a large board results in many different opinions and perspectives, and too large of a board can be unwieldy. It can become difficult for all board members to have the time be heard and understood. In addition, the sense of personal responsibility declines with increasing board size. Fifteen members is already at or above the size recommended for an effectively functioning board.

Practices at companies, while not directly applicable, reinforce these concerns. Use of alternate designee board members is rare on public company boards, for the reasons cited above. Corporate boards are typically smaller than the PSERS Board, with 15 members being at the upper end.[3]

The consistent contemporaneous participation in PSERS Board meetings by multiple designees essentially changes the Board composition in a manner not anticipated by the governing statute, which creates a 15-member Board. This could result in a putative Board of up to 31 members, which complicates Board deliberations and decision-making processes. Further, the practice of utilizing multiple designees encourages inconsistent messaging and direction from a single seat. This can cause confusion amongst Board members, staff, and stakeholders. Moreover, the use of multiple designees makes it difficult for Board members to establish rapport and effective working relationships with each other and with staff; thus, making it difficult to gain consensus to establish, articulate and execute a unified and cohesive direction.

The participation in Board deliberations of multiple designees also creates ambiguity around fiduciary obligations, as the lines of accountability become unclear. Typically, the appointment of a designee acts as a delegation of fiduciary responsibility, whereby the designee stands in the shoes of the principal, and the principal has the obligation to select, instruct and monitor the designee with reasonable care. Concurrent participation in Board deliberations by a principal and his or her designees introduces a lack of clarity about who is the accountable fiduciary in any given circumstance. It could create added liability exposure, costs and litigation complexity in the event a legal action were to be filed against the Board. Assuming that the principal Board member is the ultimate fiduciary with oversight responsibilities for designated agents, any liability for harm caused by an act or omission of multiple designees could presumptively flow back and include the principal for failure to reasonably define the

[1] The Broken Telephone Effect, D.M. Lucas &J.G. Wigmore. Canadian Society for Forensic Sciences Journal. Vol.22 No. 2(1989) Pages 225-226 | Published online: 22 Nov 2013.
[2] Hughes, *U.S. Public Pension Handbook* (2019), citing 2001 data from Mitchell, McCarthy, Wisniewski, and Zorn, *Developments in State and Local Pension Plans*.
[3] The mean size of Russell 3000 boards is 9.0 and the mean size for S&P 500 boards is 12. *Corporate Board Practices in the Russell 3000 and the S&P 500*, The Conference Board (2019 Edition).

scope of the delegations and/or monitor the designees. Consequently, litigation against the Board could conceivably involve 31 or more defendant fiduciaries.

While the use designees is authorized at some peer systems, most of the systems surveyed indicated that their board members use a consistent designee who is present at most (if not all) meetings. At certain systems, board members designate a primary and alternate designee; such alternate attends meeting only when the primary is unavailable. None of the surveyed systems had a practice of permitting the contemporaneous participation in a meeting by multiple designees. (*See* Exhibit A: Peer Comparison—Trustee Designees).

Key assumptions

1. Principal Trustees have the legal authority to appoint multiple designees.
2. The use of multiple designees is not effective for the primary Board member or the Board as a whole, because <u>multiple designees may send inconsistent messages, undermine clear accountability and dilute Board effectiveness</u> where stable relationships are not developed with other Board members, and increased Board size makes interactions more complex.
3. Peer practices in appointment and use of designees are a point of comparison under the fiduciary duty of prudence and should be considered in development of PSERS Board processes.

Policy Options considered (least to most)

1. Make no changes to the policy or practices governing the use of designees.
2. Revise the Bylaws to apply the plain meaning of the Retirement Code provision which states that a designee serves for the appointing member at meetings "in his stead" rather than in addition to the member. Address the Auditor General's 2017 report findings and adopt a policy consistent with the most effective prevailing peer practice. This policy would encourage the ex officio and legislative Board members to appoint a designee and potentially an alternate designee, while utilizing other staff resources as a source of information but not for Board meeting participation. Consistent meeting attendance could be encouraged by limiting rotation of designees at a meeting without both announcement of the reason and approval of the Board Chair. Board members who appoint designees could also be encouraged to consider experience, expertise and time availability when selecting a designee in order to improve overall Board effectiveness.
3. Revisit the current legal interpretation of the statute as authorizing the appointment of multiple designees with rotating participation in Board meetings or ask the legislature for a statutory clarification of the scope of the authorization.

Pros and cons of each option, including risks of action and inaction

1. <u>No Change</u>.

As noted in the analysis section, the current practice of permitting contemporaneous or sequential participation by multiple designees creates a number of challenges to efficient and effective Board governance. It is also unclear whether the policy currently set forth in the Bylaws (and PSERS' current practices) are consistent with the statutory intent of the designee authorization and with statutory intent in creation of a 15-member board.

In addition, the current interpretation of the rule leaves substantial discretion to the Chair to determine the level of participation by designees, when the principal Board member permits broad participation by designees without an opportunity for input from other Board members. This opaque practice encourages inconsistency in the application of the rule by permitting the Chair to recognize multiple designees during a meeting, and has historically been unwieldy.

Maintaining the current practice may be easier in the short term, as Board members, designees, and staff would not have to draft new policies or restructure communication protocols. Indeed, when the Board returns to in-person meetings, some of the current challenges that are exaggerated by remote participation will no longer be of concern. Nonetheless, continuing with a sub-optimal process that is both inconsistent with peer practices and creates a barrier to efficient and effective Board governance, appears to not be in the best interest of the System.

Current practice also creates potential fiduciary liability exposure associated with the Board's failure to address related issues raised in a 2017 audit report and resulting from the ongoing departure from prevailing peer practices in use of a practice which appears to introduce added complexity, inefficiencies and inconsistencies. This could reduce Board effectiveness, complicate decision making and undermine clear lines of fiduciary responsibility, as well as result in an exceptionally large operational board with twice the number of participating members as intended by statute.

2. <u>Revise the Bylaws</u>.

By applying the plain meaning of "in his stead" and revising the Bylaws to establish the Board's expectations for a more structured approach to the use of designees would facilitate greater formality and accountability, which is fundamental to demonstrating a prudent process. The new rule should encourage the principal Board member to appoint no more than a primary and an alternate backup designee. It could include a Bylaw provision favoring appointment of available candidates that have relevant skills, experience and expertise. For example, the Bylaws could specify that designees, if available, should have investment, accounting, actuarial, legal, health care, or other specialized expertise that is relevant to public pensions generally and/or the principal Board member's committee assignment. In addition, the principal Board member could be required to determine that the primary designee has sufficient time to dedicate to his or her responsibilities as a Board member.

The Bylaws could assign either the Board member or primary designee to have responsibility for ensuring consistent messaging from the Board seat. The principal Board member and his or her designee would be encouraged to utilize their agency staff resources to research and inform decisions; however, only one designee would occupy the principal Board member's seat at any Board or committee meeting unless the reason for doing so is disclosed at the meeting and approved by the Board Chair after an opportunity for input from other members.

<u>Cons</u>: Implementing the new designee rule may require more planning and coordination on the part of the principal Trustee and his or her designees. In addition, it would require further vetting and analysis by the principal Board member of the experience and competencies of potential designees, and ongoing monitoring of such designees. Ex officio and legislative Board members may also fail to comply and take the position that the Board does not have authority to modify the existing interpretation of the statutes, which has historically allowed the appointment of multiple rotating designees, without limit.

Pros: Adoption of the plain meaning application of "in his stead" would address the main concern of having both principal and multiple designees participating simultaneously in meetings. The use of a primary and alternate designee structure would improve consistency in Board participation and familiarity with ongoing Board proceedings and facilitate greater stability in the working relationship between Board members and the staff. In addition, the new structure would facilitate: (1) greater clarity in the principal Board member and designee roles and accountabilities, (2) consistent messaging from a single Board seat, and (3) and more efficient and informed Board decision-making. It may also reduce the Board's exposure to fiduciary liability.

3. Revisit the Statutory Interpretation.

We note that the Section 8501 of the Code permits an ex officio or legislative member of the Board to "appoint a duly authorized designee" to serve "in his stead." [Emphasis added.] A strict constructionist approach would interpret the Code as authorizing the appointment of only a *single* designee and using only one designee to serve in place of the member. However, in drafting the Bylaws and in practice, PSERS' has broadly construed the statute as permitting the appointment of multiple designees with rotating participation at the same meeting (indeed, a few other systems with similarly narrow statutory language have liberally construed the authority to appoint more than one designee). Nonetheless, if the Board desires greater certainty regarding the scope of statutory authorization to appoint designees, it could request a legal opinion from legal counsel or seek further clarification from the Legislature. Of course, there would be an additional expense and time associated with seeking the advice of outside legal counsel or pursuing statutory clarification, and the outcome could further constrain the Board's discretion to determine its own practices.

Due diligence results, including key stakeholder input and dissenting opinions.

We identified a universe of ten peer U.S. retirement systems whose board members are permitted to appoint designees. We reviewed the relevant statutes, bylaws, and reached out to the systems' general counsels for clarification regarding local practices. (*See* Exhibit A: Peer Comparison—Trustee Designees) We found that the use of multiple designees is not a prevailing practice at peer retirement systems; rather, board members typically appoint a single designee or a designee and sometimes an alternate. Other than CalPERS and PSERS, no other system had the practice of permitting multiple designees to participate in any given meeting. In addition, we note that none of the peer systems indicated any challenges with Board members adhering to the limitations on designee use.

The negative effects of using multiple designees is evident at PSERS.

During our staff and Board interviews, we were told that inconsistent input and varying positions were sometimes conveyed from the same Board seat, depending on which designee or primary board member happened to be sitting in the chair at the time. This was said to have caused confusion and made Board decision-making more difficult. We actually experienced this dynamic first-hand over the course of the multiple FAS interview rounds, when conflicting information was conveyed by different designees of the same Board member.

Moreover, with the addition of Committee level responsibilities under other recommendations in this report, the continued use of multiple rotating designees could create the potential for policy position inconsistency between Committee and Board deliberations. In addition, other recommendations in the report relating to Board size and membership might impact consideration of this recommendation.

Recommendation

Recommended decision – Bylaw change (option 2).

Resources required – Other than for drafting the Bylaw provision, the change should reduce the demand on PSERS resources and improve Board efficiency.

Accountabilities – The Governance Committee could be responsible for development of the Bylaw recommendation; appointing Trustees would select designee and backups; Board and Committee Chairs would implement the new Bylaw at meetings, as necessary.

Timing – The Bylaw change could be a priority 1 or 2 action under the FAS report. Current Bylaws require 15 days advance notice of a proposed Bylaw change.

Monitoring process/reporting – Bylaws should be periodically reviewed and compliance should be evaluated by the Audit, Compliance and Risk Committee (or another committee) and be included in Board self-evaluations.

4.7.1 Peer Comparison – Trustee Designees

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
CalPERS* (* indicates System responded to Reinhart's request for information)	Elected official of a contracting agency and Director of Human Resources may designate a deputy[1]; three ex officio members may each appoint designee (State Controller, State Treasurer, and head of CalHR).	Deputy who is employed under the official's authority.[2]	One designee at a time for head of CalHR. No limitation on number of designees for other members. In practice, all three appoint multiple delegates, and rotate from committee to committee or agenda item to agenda item.	None identified.	Board governance policy applies to both Board members and designees. Delegations must be prudently selected with care, limited to defined authority, monitored, and subject to corrective action where appropriate. Delegations should be memorialized in writing.	13
CalSTRS	Ex officio members: Superintendent of Public Instruction, Controller, Treasurer, and Director of Finance;	None identified.	No limitation on delegates.	CEO may not delegate authority required by board resolution or motion to be	CalSTRS Board members and their delegates shall, upon taking office, sign a pledge confirming their independence and their understanding of fiduciary duties.	11

[1] Statutory authorization for appointment of deputy in the Government Code; the source of authority for other ex officio members to appoint designees is unclear (Note: there does not seem to be a functional distinction).
[2] Statutory limitation on who may be deputized under Section 20090 of the Gov't Code.

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
	CEO; Board members			performed personally.		
Kentucky Teachers Retirement System*	Two ex officio members: chief state school officer and the State Treasurer. Only one has appointed a designee.	None.	One designee. No alternates are permitted.	One designee permitted to attend meeting.	None identified.	11
Indiana Public Retirement System Board	Ex officio member: the Director of the State Budget Agency; Executive Director; Chief Communication Officer	Budget agency director's designee shall serve as permanent designee until replaced by budget agency director.	No clear limitation.	None identified.	Designee of budget agency director's office must take an oath of office.	9
Maryland State Retirement and Pension System*	Three ex officio trustees: State Treasurer, State Comptroller, Secretary of Budget and Management	Must be a deputy of the appointing ex officio member.	No statutory limit, but, in practice, only one designee per member.	Board members expected to attend meetings personally. One designee may attend per ex officio member. Limitation with	Designees required to comply with general code of conduct and fiduciary duties applicable to trustees.	15

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
				respect to electronic participation in a board or committee meeting—one employee of the ex officio trustee's staff and only upon advance notice to the executive director. Only ex officio trustees may vote by proxy.		
Missouri State Employees' Retirement System	Chief Counsel, Executive Director, Trustees[1], Board Chair	None identified.	None identified.	All policy provisions applicable to Trustees also applicable to designees. Board Chair may delegate duties to conduct or	None identified.	11

[1] Introduction to MOSERS Governance Manual provides that "[a]ll policy provisions applicable to Trustees also apply to a designee of a Trustee […]." Source of authority to appoint designees is unclear.

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
				preside over board meetings, but remains accountable for execution.		
NYC BERS*	Ex officio members – for BERS, only Chancellor of Schools	May delegate to any subordinate officers or employees as deemed appropriate.	Practice has been to name two (a designee and an alternate)	Typically one person attends at a time, but multiples would theoretically be permitted. If multiples attended, only one would vote or contribute to any conversation.	None.	NYCERS – 11 NY TRS – 7 BERS – 17 (+2 alternate members) Police – 12 Fire – 12
Ohio State Teachers' Retirement System*	Superintendent of public instruction; Treasurer	Designee required qualifications: 1) resident of the state, 2) has not been employed by or provided services to any state	One designee, no alternates. If an appointee/designee is not able to attend a meeting, no one else may attend in his/her place. No issue-based rotation.	None.	None.	11

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
		retirement system within the last 3 years, and 3) has direct experience in the management, analysis, supervision, or investment of assets; Treasurer's designee may not be currently employed by the State.				
Pennsylvania State Employees' Retirement System	Ex officio Members and each Legislative Member	Designees of an Ex officio Member shall be an officer or employee of the Ex officio Member's agency	One or more duly authorized designees (and if more than one, either in priority preference or as alternates)		Each appointment shall be made in writing signed by the member and filed with the Executive Director of the System.	15

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
Public School and Education Employee Retirement Systems of Missouri	Executive Director, Trustees	None identified.	No limit identified.	Executive Director may delegate certain ministerial duties (*e.g.*, respond to information requests, media inquiries, review meeting material for technical accuracy). Trustee designees contemplated only in the context of political communications on behalf of the System.	None identified.	7
State of Wisconsin Investment Board	Secretary of administration	None identified.	Practice has been that only one designee is allowed at a time.	None identified.	Written designation and administration of Oath of Office required	9

System	Board members who may appoint designees	Limitations on *who* may be a designee	Limitation on the number of designees	Limitation on participation by designees	Appointment Formalities	Number of board members
Wyoming Retirement System Board*	State Treasurer may appoint a designee; other Board members entitled to vote by proxy.	None identified.	One designee at any time by Treasurer. However, different representatives may participate in different meetings (*e.g.*, CIO for investment meetings, legal counsel for other board matters). Only one representative may vote on behalf of the Treasurer.	None, although the Treasurer generally attends in person.	Proxy appointments should be for a specific purpose and in writing.	11

Exhibit 5.1 Leading Practices in Delegation of Manager Selection

Executive Summary

Scope

Powers Reserved for the Board and Delegations, Delegation of Authority and Responsibilities. This analysis is a detailed review of the PSERS investment manager selection and termination as part of that effort.

Compared to its peers, PSERS is an outlier with regard to manager selection, retention and termination. Selection and termination of external investment managers is a decision-making process that has, with few exceptions, been increasingly delegated by PSERS' peers to their professional investment staff. Currently, with the exception of co-investments in private equity, any externally-managed investments must be approved by the PSERS Board. However, initiating a new internally-managed portfolio in an existing asset class does not require Board approval. PSERS has grown its internal management of investments significantly and now manages approximately 41 percent of its assets internally.

There are six primary reasons why the PSERS Board should give serious consideration to further delegation of investment-related decisions to the PSERS Executive Director and Chief Investment Officer:

1. Evolving fiduciary standards and definition of prudence can increase trustee exposure to fiduciary liability when the Board directly approves individual investments.
2. Prevailing peer practices at peer public retirement systems are to delegate manager selection and termination to staff.
3. Staff are professional investment professionals skilled in due diligence and analysis. The ability of a lay board to add value to manager selection is limited. That is not to say that the Board cannot add value on policy questions, such as asset allocation, sensitivity to ESG issues, appropriate levels of liquidity and leverage, etc., but those are strategic issues that overarch all manager selections and can be dealt with through policy direction to the staff.
4. The PSERS Board could improve effectiveness and efficiency of Board and committee time. That time would be better used to robustly debate investment policy issues.
5. Current PSERS delegations to staff are inconsistent.
6. For defined contribution plans, changes in investment options require coordination with a number of outside vendors and participants, so changes can take 90 days or more. Once a decision has been made to change an investment option for underperformance or any other reason, there is fiduciary risk in allowing that manager to continue to manage participants money for longer than the minimum period needed to facilitate the change.

If no changes are instituted, the PSERS Board will continue to spend significant time reviewing proposed investment manager approvals. Trustees acknowledge that important direction and policy-setting decisions do not receive adequate Board time for discussion and that they would also like meetings to be shorter duration.

At peer funds, even with what we are describing as full delegation, there are typically limits and certain types of investment decisions that still require Board approval, for example, investments in new asset classes, or investments larger than a specified level, or investments that utilize new types of securities. In addition, there can be provisions that allow the Board to request any investment opportunity scheduled for consideration to be submitted for Board consideration on an exception basis.

Moreover, peer funds with full delegation tend to have strong governance practices in the form of checks and balances in place. These support effective delegation, help ensure the Board is providing appropriate oversight, and reinforce the principle of "trust but verify". Although PSERS already utilizes many of these practices, further delegation would require additional provisions.

Examples of these additional checks and balances include the following:

- Add representatives from Compliance and the General Counsel's office as voting members of the Allocation Implementation Committee (AIC).
- Give the Executive Director veto authority over investments. If utilized, such a veto should be immediately reported to the Investment Committee of the Board.
- Utilize enhanced risk modeling for each investment; as a stand-alone investment; for asset class portfolio impact; and for impact on the entire PSERS fund; as well as standard risk scenarios, prior to any new approval.
- Require the CIO to provide a report at each Investment Committee meeting that identifies investment managers and/or general partners who are being considered for upcoming investments for informational purposes, expected changes to allocations, and any changes that have occurred since the last Investment Committee meeting.
- Include a discussion of due diligence and monitoring processes in all annual asset class reviews.
- Require the general investment consultant to provide their independent opinion to the Board/Investment Committee regarding:
    - Any potential improvements to the PSERS due diligence processes based upon industry leading practices.
    - Adequacy of investment office resources, both quantitatively and quantitatively
- Require a proposed new manager hiring to be signed off in writing on by the senior investment officer sponsoring that manager, the CIO, and the relevant investment consultant. Both the PSERS and investment consultant diligence reports should be documented and available for review, should the Investment Committee decide to do so.
- The Audit and Compliance Committee, with input from the Investment Committee, should ensure that the internal audit plan includes appropriate reviews of investment processes and controls.
- Require Compliance to regularly report to the Board regarding investment compliance results, on an exception reporting basis.
- Require Compliance to affirm to Board Investment Committee that all new portfolios have been established in accordance with policies and procedures.
- Provide CEM or other such benchmarking reports to the Investment Committee of the Board.
- If necessary, to satisfy the Board's needs for independent advice, engage a separate Board consultant to advise on asset allocation and investment policies.

Options Available

Alternative 1: Status Quo – Continue to bring all new external manager hires and manager terminations to the Board for approval

Alternative 2: Delegate additional selected types of investment decisions to staff

Alternative 2A: Delegate approval of all new investments or funds with existing managers and general partners to an internal investment committee. ("Re-ups", or follow-on funds with existing managers could be approved by staff.)

Alternative 2B: Delegate approval of all external investment selections to an internal investment committee up to a limited amount. The amount could vary, depending upon asset class.

Alternative 2C: Delegate approval of external investment selections to an internal investment committee within selected asset classes

Alternative 3: Develop a plan for migration to a policy of delegation of most external manager hires and terminations to staff. This would include a specific list of conditions necessary to satisfy the Board, and the criteria which would demonstrate satisfaction of those conditions.

Recommendation:

We recommend that the PSERS Board of Trustees discuss these alternatives and determine:

1. If, when, under what conditions and how much the Board should delegate most investment manager selection and termination to staff.
2. An implementation roadmap that includes timing for:
   a. Improved investment decision-making oversight governance practices
   b. Incremental investment decision-making delegations

Background and Analysis

Issues and reasons why the Board should consider action

History and context

As stated in the PSERS Investment Policy Statement under III. Roles and Responsibilities, "The Board also appoints the Chief Investment Officer (CIO), External Managers, and Investment Consultants". With the exception of co-investments in private equity, any externally-managed investments must be approved by the Board.

Initiating a new internally-managed portfolio in an existing asset class does not require Board approval. PSERS has grown its internal management of investments significantly and now manages approximately 41 percent of its assets under management internally.

Current need for action

There are six primary reasons why the PSERS Board should give serious consideration to further delegation of investment-related decisions to the PSERS Executive Director and Chief Investment Officer: 1) keep pace with evolving fiduciary standards and definition of prudence; 2) be consistent with leading and prevailing peer practices; 3) allow investment professionals to best utilize their due diligence and analytical skills, 4) make more effective and efficient use of Board and committee time and free up time to focus on more strategic policy matters; 5) resolve inconsistencies in current PSERS delegations to staff, and 6) minimize the time for switching a defined contribution investment manager once a problem has been identified. Each is described in more detail below.

Fiduciary Duty

The Restatement (Third) of Trusts (1992; a. 2003) provides that a "trustee has a duty to perform the responsibilities of trusteeship personally, except as a prudent person of comparable skill might delegate those responsibilities to others." This represented a significant shift in trust law and a reversal of the prior constraints on delegation under Restatement (Second). Prudent delegation is a subjective analysis that looks at what a trustee with comparative skill might do.

The Restatement (Third) provides further that "[a] trustee's discretionary authority in matters of delegation may be abused by imprudent failure to delegate as well as by making an imprudent decision to delegate." This has been interpreted in the context of public pension funds to create an affirmative duty to delegate where a board does not have the requisite investment skill or experience (or the time) to make informed investment decisions.

Both the Uniform Prudent Investor Act ("UPIA") and the Uniform Prudent Management of Institutional Funds Act ("UPMIFA") take a substantially similar approach. Section 9(a) of the UPIA provides that "[a] trustee may delegate investment and management functions that a prudent trustee of comparable skills could properly delegate under the circumstances. The trustee shall exercise reasonable care, skill and caution in (1) selecting an agent; (2) establishing the scope and terms of the delegation, consistent with the purposes and terms of the trust; and (3) periodically reviewing the agent's actions in order to monitor the agent's performance and compliance with the terms of the delegation."

The emergence of these model laws and their widespread adoption by the states allowed public pension plans to rely on qualified staff, investment advisors and investment managers to make informed investment decisions in a dynamic environment where investment products are increasingly complex. Board members should focus their attention on the growing list of important direction setting, such as asset allocation policy, as well as oversight functions such as ongoing monitoring and evaluation of performance, risk and delegated responsibilities.

Leading and Prevailing Peer Practices

Based upon Funston Advisory Services' research that examined the 62 U.S. Board-managed state retirement funds (excludes the three funds managed by a sole fiduciary (New York State CRF, North Carolina, and Connecticut) with assets under management of at least $10 billion, the following profile of Board delegation of investment manager selection was developed:

Systems by AUM	Delegated Selection	Have Internally-Managed Portfolios	Average % Alternatives Allocation [1/]
Twenty largest ($426 – $57 billion)	80% [2/]	85%	31%
Next 20 largest ($54 – $22 billion)	55%	20%	30%
Next 22 largest ($22 – $10 billion)	41%	18%	27%
PSERS ($59 billion)	No	Yes	49%

[1/] Based upon Boston College study; includes private equity, hedge funds, commodities, real estate and miscellaneous alternatives
[2/] Note: was 60% 10 years ago

Compared to its peers, PSERS is an outlier. Among the twenty largest funds, the only other fund besides PSERS with significant internal investment management and where the Board still approves external managers is New York State Teachers. As indicated, among the twenty largest funds, the percentage where the Board has delegated manager selection has increased from 60% to 80 % since 2010.

State funds with relatively high levels of alternative assets, similar to PSERS, overwhelmingly delegate manager selection to investment staff as indicated by the table below that includes all of the top 62 state funds with at least 40% alternatives in their allocation. Delegation of manager selection is also often helpful in improving the timeliness of investment decisions, particularly in facilitating participation in early closings that can result in improved fee levels and participation in Limited Partnership Advisory Committees (LPACs).

State Fund	AUM ($billions)	% Alts. [1/]	Mgr. Sel. Delegated
Teacher Retirement System of Texas	$163	47%	Yes
Washington State Investment Board	$129	45%	Yes
Virginia Retirement System	$90	42%	Yes
State of Michigan Investment Board	$87	44%	Yes
Oregon PERS	$83	47%	Yes
Pennsylvania PSERS	$59	49%	No
Maryland State Retirement and Pension System	$57	45%	Yes
Utah Retirement Systems	$43	40%	Yes
Arizona State Retirement System	$42	40%	Yes
Indiana PRS	$39	49%	Yes
Alaska Retirement Board	$36	43%	Yes
Texas County & District	$32	60%	Yes
Maine PERS	$15	53%	No
New Mexico ERS	$13	42%	Yes
Arizona Public Safety	$11	57%	Yes

[1/] Based upon Boston College study; includes private equity, hedge funds, commodities, real estate and miscellaneous alternatives

Appropriate Focus and Expertise

Funds with substantial full-time in-house investment staff and a robust internal investment committee vetting process typically spend many person-weeks conducting due diligence on an investment with the assistance of other full-time experts from the Board's consultants. Most boards recognize it would be inappropriate to reject a recommended manager based upon a 20–30-minute board discussion.

Effective and Efficient Use of Board and Committee Time

Based upon an analysis of PSERS Board packages for regular meetings over the past three years, about half of the average 1457 pages in a typical PSERS Board book contain Investment Committee materials, and over half of those materials are related to investment manager selection. The Board spends a significant amount of time discussing and approving selection of investment managers.

Based upon feedback from trustees and designees, there is a lack of consensus among Board members regarding investment beliefs and the current asset allocation; the appropriate level of private equity and associated fees and fee transparency; liquidity risks, explicit and embedded leverage, and sustainability of employer contribution rates. With reduced demands on Board time related to manager selection, the Board would have more time available to address more strategic issues such as these.

Inconsistencies in Current PSERS Delegations to Staff

Although the PSERS Board has generally not delegated investment manager selection to the Executive Director or Chief Investment Officer, investment staff do have significant discretion in two areas:

1. Staff has authority to select private market co-investments, up to $50 million initially and $75 million on subsequent investments; for Infrastructure, the limits are $100 million and $150 million.

2. Staff can initiate an internally-managed portfolio without Board approval, but an identical externally-managed mandate would require the Board to approve the external manager.

Both these areas are generally considered as requiring a higher level of staff expertise and resources than manager selection, as co-investments require understanding individual deals (underwriting skill) and internal management requires trading and operational ability.

Specific issues relating to defined contribution plans

While much of the focus has been on manager selection at the defined benefit plan, PSERS also sponsors a relatively new defined contribution plan. Because of the interplay between PSERS, the record-keeper, participants, and school districts it can take more than 90 days to change a plan investment option once a decision has been made to replace a manager for underperformance or other reasons. Delegation can shorten the upfront decision time period, thereby minimizing the time participants stay in investment options that PSERS has determined to be sub-optimal.

Potential consequences if no action taken

If no changes are instituted, the PSERS Board will continue to spend significant time reviewing proposed investment managers. PSERS trustees have acknowledged that important direction-setting and policy decisions do not receive as much Board attention and time as required and that they would also like meetings to be shorter duration.

Key assumptions and peer practices

Peer Practices

As mentioned in the Current Need for Action section above, prevailing peer practice for a state public retirement system similar in scale to PSERS is for the Board to have delegated investment manager selection, monitoring, and termination to professional staff, with decisions vetted by an internal staff investment committee. Among the largest state public funds in the U.S., PSERS is an outlier where the Board still approves external manager selection despite significant internal investment management expertise. The trend over the past several decades has been for Boards to delegate external manager selection to staff as an implementation responsibility. Especially those funds with the highest levels of alternative investments, which typically results in the most complex portfolios, delegate manager selection to full-time professional staff.

Peer Example

It should be noted that even with what we are describing as full delegation, there are typically limits and certain types of investment decisions that still require Board approval. For example, Teacher Retirement System (TRS) of Texas generally has fully delegated investment decisions to staff. However, the TRS Investment Policy Statement (IPS) contains an Appendix B – IIC Approval Authority and Manager Organization Allocation Limits. Any potential decision that exceeds those limits must come to the Board for approval. The authorization limits are shown in the table below from the TRS IPS:

Article Affected	Portfolio	Initial Allocation or Commitment with Manager, by Portfolio	Additional or Follow-On Allocation or Commitment with the same Manager, by Portfolio	Total Manager Organization Market Value Limits, by Portfolio	Total Manager Organization Exposure Limits, by Portfolio
2	Public Markets Portfolios	0.5%	1%	3%	5%
4.2	Private Equity Portfolio	0.5%	1%	3%	5%
5.2	Real Estate Portfolio	0.5%	1%	3%	5%
6.2	Energy, Natural Resources and Infrastructure Portfolio	0.5%	1%	3%	5%
	Total IIC Approval Authority, each Manager Organization			6%	10%
All allocation or commitment limits are expressed as a percentage of the Total Fund value and are to be calculated as of the date the applicable investment is approved by the IIC or other investment authorization. Exposure is defined as the sum of the market value and unfunded commitments for the purposes of Appendix B. All external investments must be assigned to one of the four portfolios at the time of approval.					

The TRS IPS also includes a provision for the Board to request that any planned investment come to the Board for approval on an exception basis: "If a Board member desires that any investment opportunity scheduled for consideration by the IIC be submitted for Board consideration, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board and the appropriate Board committee, as applicable, before the anticipated closing date."

Delegated Investment Manager Selection Governance and Oversight

It is critical to have strong governance practices and robust checks and balances in place that support effective delegation and help ensure the Board is providing effective and prudent oversight.

Funston Advisory Services LLC has identified leading governance practices for a public retirement system with a fiduciary board and investment manager selection and termination delegated to the Executive Director and/or Chief Investment Officer. These practices are described in the following table, along with an assessment of PSERS' current practices and recommendations that would align PSERS with leading practices and any recommendations for improvement in the event that the Board should delegate investment manager selection and termination.

Leading Governance Practice	Assessment of PSERS Current Status	Recommendations
1. Identified Investment Beliefs and a clearly-articulated investment policy statement (IPS) that identifies the board's risk appetite, asset allocation decisions, and related policies to be implemented.	• IPS clearly identifies allocations and policies. • IPS has a high-level statement of investment beliefs. • The IPS is based upon principles, which facilitates staff discretion.	• The IPS should be modified to allow delegation of selection of external managers and general partners to the Chief Investment Officer consistent with the recommendations contained within this document.
2. Well-documented transparency to the board of decision rationale for investments made by investment staff.	• Contained in current manager selection materials presented to the AIC and, subsequently, the Board for each new investment	• Any new portfolios, whether internal or external, and material changes to the portfolio (large new allocations, terminations) should be documented and presented to the Investment Committee of the Board as an informational item at the next IC meeting following the decision to proceed.
3. An internal investment decision-making committee or group that provides a peer review of each investment opportunity and includes other key staff such as general counsel, compliance, and operational due diligence, with the ability of non-investment office staff to either veto, or escalate the decision on, investments for operational or legal reasons.	• PSERS has an Allocation Implementation Committee (AIC) chaired by a Deputy CIO, chosen by the CIO, and includes as standing committee members the CIO, Deputy Chief Investment Officer(s), and Managing Director (Director) of Operations as well as other rotating IOP that may be added/removed from time to time by the chair. In addition, the Risk Manager or designee has an observer role • Does not include a representative from the Chief Counsel's Office or Compliance	• A representative from Compliance and the General Counsel's office should be added as a voting member of the AIC.
4. Organizational checks and balances that provide effective controls	• Currently final approval is with the Board	• Upon delegation to the CIO, the Executive Director should be given veto authority. Such

Leading Governance Practice	Assessment of PSERS Current Status	Recommendations
and minimize the potential for single point of failure decision making.	• The Executive Director does not currently have a vote or veto authority	vetoes should be documented and presented to the Board's Investment Committee at the IC meeting immediately following the decision.
5. Effective investment risk management policies, procedures, and reporting.	• PSERS has adequate risk measuring and risk measurement capacities that will be improved with the completion of the IBOR project.	• Risk measurement of any new portfolio, whether internal or external, should be modeled both as a stand-alone, vis a vis the asset class, and in terms of its portfolio impact on the entire PSERS portfolio. • Standard risk scenarios (e.g., parallel or twist interest rate shocks, the 2008 financial crisis, etc., liquidity) should be specified and provided to the AIC prior to any new portfolio approval.
6. Periodic risk and return reports, as well as operational reviews of external managers, to flag issues so as to allow appropriate oversight.	• General consultant (or relevant specialty consultant) currently does operational due diligence as part of overall selection process. • Investment operations is notified of potential new securities and needs.	• Annual updated investment and operational due diligence reports should be presented to the AIC. Any member of the AIC may "flag" that portfolio for further investigation and potential termination (or other mitigation) by the AIC based on those reports.
7. Pipeline reports of contemplated investment changes so as to, as much as possible, create a "no surprises" environment for the Board.	• The CIO typically provides advance notice of agenda items for future meetings, but these do not include specific managers or general partners being considered for new or add-on investments.	• The CIO should provide a report at each IC meeting that identifies which investment managers and/or general partners are being considered for upcoming investments for informational purposes, as well as reporting on what has occurred since the previous IC meeting.
8. Annual asset class	• Current annual asset class	• A discussion of the due

Leading Governance Practice	Assessment of PSERS Current Status	Recommendations
reviews by the Board that include a discussion of the due diligence processes utilized for each investment, as well as its purpose in the portfolio and the expected added value and volatility.	reviews include a one-page overview of the due diligence process in some asset classes.	diligence process should be included in all annual asset class reviews. • The general investment consultant (and relevant specialty consultant) should opine to the Board/IC regarding any potential improvements to the PSERS due diligence processes based upon industry leading practices.
9. An effective internal audit capability and process that monitors investment processes and controls.	• Historically, Internal Audit resources have not been adequate to effectively monitor investment processes and controls. • Additional IA resources have been and will be hired.	• The Audit and Compliance Committee, with input from the Investment Committee, should ensure that the internal audit plan includes appropriate reviews of investment processes and controls. • If necessary, to obtain adequate specialized auditing skills, the Chief Auditor should be authorized to engage third-party auditor resources to supplement internal resources.
10. An effective investment compliance function that ensures investments remain within policy guidelines.	• Compliance is monitored by the internal investment compliance group and by a third-party investment compliance consultant (Constellation). • Utilize BlackRock Solutions for portfolio compliance.	• Compliance should regularly report to the Board regarding investment compliance results, on an exception reporting basis.
11. A general investment consultant that is hired by the board, provides counsel to both the board and investment staff, and opines on investment staff decisions.	• The decision to hire, retain, or terminate the Consultant is made by the Board, with advice from the CIO and Executive Director. • The Consultant attends regular meetings with the Board to both educate and provide an independent perspective on the	• General investment consultant to provide independent opinion on proposed investment manager to AIC. • Compliance to affirm to Board IC that all new portfolios have been established in accordance with policies and procedures. • General investment consultant

Leading Governance Practice	Assessment of PSERS Current Status	Recommendations
	goals, structure and performance within the investment portfolio. • The Consultant monitors financial, economic and political developments that may influence the investment portfolio. • Two asset class consultants are also hired by the Board and meet with the Board to address programs and investments in their asset classes.	opines to the IC/Board on proposed changes to investment policies. • If necessary, to satisfy Board's needs, engage a separate Board consultant to advise on asset allocation and investment policies.
12. Other external sources of independent reassurance to the board, for example, an investment consultant independent of staff, peer investment performance benchmarking, or fiduciary reviews.	• Utilize CEM Benchmarking or similar for independent investment cost and performance benchmarking. • Currently conducting a governance review.	• CEM or other such reports should be provided to the Investment Committee of the Board.
13. Strong ethics and compliance policies in place.	• IO Staff files appropriate ethics and disclosures.	• All external managers and broker/dealers should affirm compliance with PSERS rules annually.

Policy option analysis

Potential alternatives considered

We have identified three potential alternatives for addressing this issue:

Alternative 1: Status Quo – Continue to bring all new external manager hires and manager terminations to the Board for approval

Continue the policy and practice of requiring that any externally-managed investments be approved by the Board, with the exception of co-investments in private equity.

Alternative 2: Delegate additional selected types of investment decisions to staff

The Board could, with appropriate governance policies and checks and balances, choose additional selected types of investment decisions to be delegated to staff, but retain Board approval for others where it considers the Board provides valuable insights.

There could be at least three potential approaches to partial delegation:

Alternative 2A: Delegate approval of all new investments or funds with existing managers and general partners to an internal investment committee. ("Re-ups", or follow-on funds with existing managers could be approved by staff.)

Alternative 2B: Delegate approval of external investment selections to an internal investment committee up to a limited amount. The amount could vary, depending upon asset class.

Alternative 2C: Delegate approval of all external investment selections to an internal investment committee within selected asset classes.

Alternative 3: Develop a plan for migration to a policy of delegation of most external manager hires and terminations to staff This would include a specific list of conditions necessary to satisfy the Board, and the criteria which would demonstrate satisfaction of those conditions.

As indicated above, effective delegation of investment decision-making to staff by a fiduciary board requires appropriate policies and practices that allow the Board to maintain prudent and effective oversight of the decisions made by staff.

If the PSERS Board decides to move in the direction of increased delegation of investment manager selection, with the goal of ultimately having full delegation (perhaps with limits such as in the TRS of Texas example cited), then the most important consideration is on building the governance policies and structures that provide the Board assurance and reassurance that the decisions are being made prudently. As noted in the table above, there are numerous steps to building this governance and oversight structure.

This alternative would include an implementation roadmap to achieve full delegation over an appropriate time period that would allow all key governance and oversight checks and balances to be well-established. This could also include Alternative 2 as an interim measure to gain experience and a level of comfort with added delegation.

Pros and cons of each option, including risks of action and inaction

Alternative 1: Status Quo – Continue to bring all new external managers and manager terminations to the Board for approval

Pros:

- Some trustees may feel more comfortable overseeing each individual investment manager hiring and termination.
- Enables the Board to reaffirm sensitivities (e.g., fees, transparency, ESG) at each manager selection point.

Cons:

- Board continues to spend significant time reviewing manager recommendations and less on strategic issues. Strategic issues, when expressed as sensitivities to individual manager selection, may not be fully explored as policy issues.
- Continued trustee exposure to fiduciary liability.
- Slower selection, which may have particular impact in the defined contribution plan. (At other public funds, FAS has seen it also cause missed opportunities to participate in first- or earlier-closings for private investments and therefore affect terms and conditions. This does not appear to have been a particular issue for PSERS.)

Alternative 2: Delegate additional selected types of investment decisions to staff

Pros:

- Could provide the Board more time to focus on more strategic issues.
- Would be more consistent with standards of fiduciary prudence.
- Would potentially improve timeliness of some manager selection decisions.

Cons:

- Would not eliminate Board time spent on discussion of manager selection, only reduce it.

Alternative 3: Develop a plan for migration to a policy of delegation of most external manager hires and terminations to staff

Pros:

- Could provide the Board significantly more time to focus on strategic issues.
- Would be consistent with standards of fiduciary prudence.
- Would potentially improve timeliness of some manager selection decisions.

Cons:

- Some trustees may feel uncomfortable not overseeing each individual investment manager hiring and termination.

Results of due diligence, key stakeholder input, and dissenting opinions

During discussions with trustees and designees, it is clear that there are significant trust issues that must be overcome in order for more delegation of investment decision-making to be feasible. Multiple trustees expressed the sentiment that, "I could support the direction of more delegation, but the lack of trust is a barrier – I get a feeling that staff is trying to put something past us."

Some of the suggestions for improving both the trust with staff and the effectiveness of Board meetings are addressed in recommendations from this governance review, including:

- Providing Board materials on a more-timely basis to allow trustees to adequately prepare for meetings
- Making presentations more focused and briefer to allow more time for Board questions and discussion
- Creating key performance and risk metrics which are independently verified (trust but verify).
- Ensuring that advisors to the Board report to the Board, are independent of management, and provide independent advice
- Further clarifying of roles and responsibilities, including the powers reserved for the Board and delegations to staff
- Developing a strategic plan to articulate the long-term direction for PSERS and the Board strategic priorities
- Implementing a policy and process for prioritizing and tracking trustee requests for information from staff or Board advisors to ensure follow-up

Recommendation

We recommend that the PSERS Board of Trustees discuss these alternatives and determine:

1. If, when, and how much the Board should ultimately delegate investment manager selection and termination to staff
2. An implementation roadmap that includes timing for:
    a. Improved investment decision-making oversight governance practices
    b. Incremental investment decision-making delegations

Exhibit 6.1 PA PSERS Governing Law

Topic	Requirement/Authority	Statutory Reference	FAS Comments
1. Fiduciary Duty			
1.1 Fiduciary duty	The members of the board, employees of the board, and agents thereof shall stand in a fiduciary relationship to the members of the system regarding the investments and disbursements of any of the moneys of the fund and shall not profit either directly or indirectly with respect thereto. The board may, when possible and consistent with its fiduciary duties imposed by this subsection or other law, including its obligation to invest and manage the fund for the exclusive benefit of the members of the system, 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. The board shall, through the Governor, submit to the General Assembly annually, at the same time the board submits its budget covering administrative expenses, a report identifying the nature and amount of all existing investments made pursuant to this subsection.	24 Pa. C.S. §8521(e)	*Additional clarity and training on procedures for addressing common fiduciary duty standards of conduct compliance scenarios could be helpful. See Recommendation 1.3.13 (summary of fiduciary duties)*

Topic	Requirement/Authority	Statutory Reference	FAS Comments
1.2 Standard of Care	The members of the board shall be the trustees of the fund. Regardless of any other provision of law governing the investments of funds under the control of an administrative board of the State government, the trustees shall have exclusive control and management of the said fund and full power to invest the same, in accordance with the provisions of this section, subject, however, to the exercise of 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.	24 Pa. C.S. §8521(a)	PSERS has construed its statutory standard of care to apply the equivalent of a "prudent expert standard* and references it as such in the Bylaws. Additional clarity on the PSERS standard of care could foster greater understanding of the high standards it applies. See Recommendation 1.3.13 (summary of fiduciary duties)
1.2.1 Penalty for fraud	Any person who shall knowingly make any false statement or shall falsify or permit to be falsified any record or records of this system or plan in any attempt to defraud the system or plan as a result of such act shall be guilty of a misdemeanor of the second degree.	24 Pa. C.S. §8534(a).	No comments
1.3 Conflict of Interest—Ethics Act	The Public Official and Employee Ethics Act is applicable to the Board.	65 Pa. C.S. § 1102 d	See Recommendations under 1.3 (ethics policies and compliance improvements)
1.3.1 Code of Conduct	The Governor's Code of Conduct is applicable to the Board, except the State Treasurer and legislative members and any designees thereof.	4 Pa. Code §§ 7.151-.159, .161-.164, .171-.179	See Recommendations under 1.3 (ethics policies and compliance improvements)
2. State supervision	The fund and ledger accounts are subject to the supervision of the State Insurance Department.	24 Pa. C.S. §8532.	No comments
3. Governance			
3.1 Limited liability	The board in its prudent discretion may make any investments which meet the standard of prudence set forth in subsection (a) by acquiring any type of interest in a business organization existing under the laws of any jurisdiction, provided that, in any such case, the liability of the Public School Employees' Retirement Fund shall be limited to the amount of its investment.	24 Pa. C.S. §8521(i)	No comments

Topic	Requirement/Authority	Statutory Reference	FAS Comments
3.2 Board Composition	The Board shall consist of 15 members: a) ex officio: Secretary of Education, State Treasurer, Secretary of Banking and Securities, executive secretary of the Pennsylvania School Boards Association; b) two Senators; c) two members of the House of Representatives; d) one Governor appointee; e) three elected by the active professional members of the system and active professional participants in the plan; f) one elected by annuitants and Class DC participants receiving distributions; g) one elected by the active nonprofessional members of the system and active nonprofessional participants in the plan; and h) one elected by members of Pennsylvania public school boards.	24 Pa. C.S. §8501(a).	See discussion regarding peer practices in section 4.7 of the Report
3.2.1 Ex-officio and Legislative Members; Designees	Each ex officio member of the board and each legislative member of the board may appoint a duly authorized designee to act in his stead.	24 Pa. C.S. §8501(a).	See Recommendation 4.7 (designee selection and meeting participation)
3.2.2 Oath of Office	Each member of the Board and Designee is required to take the oath.	24 Pa. C.S. §8501(c).	No comments
3.2.3 Board Chair	The chairman of the board shall be elected by the board members.	24 Pa. C.S. §8501(a).	See Recommendation 4.1 (officer terms and clarification of roles)
3.2.4 Trustee Removal	A member of the Board shall be subject to removal from office only in accordance with applicable provisions of Article VI of the Constitution of Pennsylvania, or of 65 P.S. §121, or both.	65 P.S. Public Officers §121 and Art. VI, Pa. Const.	No comments
3.25 Corporate Power and legal advisor	The Board possesses the power and privileges of a corporation. The Board is an independent agency under Commonwealth Attorneys Act with the power to appoint its own chief counsel.	24 Pa. C.S. §8501(e).	See Recommendation 1.4.1 (clarity and consistency in chief counsel retention process)
3.3 Meetings	The Board shall hold at least six regular meetings annually and such other meetings as are deemed necessary.	24 Pa. C.S. §8502(d).	See Section 4 of the Report (improving the conduct of meetings)

Topic	Requirement/Authority	Statutory Reference	FAS Comments
3.3.1 Public meeting	"Meeting" is a prearranged gathering of the Board or committee which is attended or participated in by a quorum of the members thereof and held for the purpose of deliberating business or taking official action	Pennsylvania Sunshine Act, 65 Pa. C.S. §703 et seq.	See Recommendations 4.4.1 and 4.8 (stream and archive meeting recordings)
3.3.2 Executive Session	Executive session may include the discussion of personnel matters and labor relations, the purchase or lease of real property, pending or expected litigation, agency business which, if conducted in public, would violate a privilege, investigations, or quasi-judicial deliberations.	Sunshine Act, 65 Pa. C.S. §708(a)	No comments
3.3.3 Records	Public records exceptions for investments: a) sensitive investment or financial information relating to alternative investments; b) trade secrets (information that could cause competitive harm); or c) information that would cause substantial detrimental impact on the value of an investment if released or would cause a breach of the standard of care or fiduciary duty.	24 Pa. C.S. §8502(e).	No comments
3.4 Board Training	Each member required to obtain 8 [10] hours of training annually with respect to investment strategies, actuarial cost analysis, asset allocation, risk assessment and retirement portfolio management.	24 Pa. C.S. §8501(f), increased from 8 to 10 hours effective after 12-31-21.	New increased training requirement effective in 2022; will require updating of Education Policy, with continuation of compliance tracking and reporting
3.5 Committees	The Board may establish an executive committee, consisting of the board chair, the board vice chair, if one has been appointed, the chair of the Audit/Compliance Committee, the chair of the Bylaws/Policy Committee, the chair of the Investment Committee and the chair of the Budget/Finance Committee or other members of the Board as determined by the board.	24 Pa. C.S. §8501(g).	No comments
3.5.1 Audit Committee	Voting members of the Audit/Compliance Committee required to complete at least 16 hours of training in risk assessments, internal controls and auditing standards within 90 days of appointment to the Committee. Continuing requirement of 8 hours annual training on the above topics. Effective for new appointees beginning February 24, 2021.	24 Pa. C.S. §8501(g)(1), effective after 2-24-21.	New requirement effective 2-24-21; requires updating of Education Policy

Topic	Requirement/Authority	Statutory Reference	FAS Comments
3.5.2 Investment Committee	The board shall establish a function within the investment committee of an Asset Liability Contingency Operating capability, which shall be charged with evaluating the risk associated with the system's assets and liabilities. Effective February 24, 2021.	24 Pa. C.S. §8501(g)(3), effective February 24,2021.	New requirement; formalize implementation of function in Investment Committee Charter
3.6 Professional advisors	The board shall contract for the services of a chief medical examiner, an actuary, investment advisors, counselors, an investment coordinator, and such other professional personnel as it deems advisable.	24 Pa. C.S. §8502(b).	See Recommendations 3.5 and 4.8.7 (improve use and evaluation of advisors)
3.7 Employees	All other positions of the board shall be placed in either the classified or unclassified service according to the definition of the terms under the Civil Service Act.	24 Pa. C.S. §8502(a)(1).	No comments
3.7.1 Compensation of staff	The compensation of investment professionals and legal counsel shall be established by the board. The compensation of all other officers and employees of the board who are not covered by a collective bargaining agreement shall be established by the board consistent with the standards of compensation established by the Executive Board of the Commonwealth.	24 Pa. C.S. §8502(a)(2).	Update investment staff compensation policy to reflect inclusion of legal counsel positions
3.8 Annual Budget	The board shall, through the Governor, submit to the General Assembly annually a budget covering the administrative expenses of the system and a separate budget covering the administrative expenses of the plan. The separate budgets shall include those expenses necessary to establish the plan and trust.	24 Pa. C.S. §8502(c).	No comments
3.9 Administrative Rules	The board shall, with the advice of the Attorney General, legal counsel and the actuary, adopt and promulgate rules and regulations for the uniform administration of the system.	24 Pa. C.S. §8502(h).	No comments
3.10 Annual financial statements	Board shall prepare and publish financial statements.	24 Pa. C.S. §8502(n).	No comments
3.10.1 Certification of	Annual certification of employer contributions based on statutory formulas.	24 Pa. C.S. §8502(k).	No comments at this time

Topic	Requirement/Authority	Statutory Reference	FAS Comments
employer contributions			
3.10.2 Adjustment of errors	Should any change or mistake in records result in any member, participant, beneficiary, survivor annuitant or successor payee receiving from the system or plan more or less than he would have been entitled to receive had the records been correct, then regardless of the intentional or unintentional nature of the error and upon the discovery of such error, the board shall correct the error and if the error affects contributions to or payments from the system, then so far as practicable shall adjust the payments which may be made for and to such person in such a manner that the actuarial equivalent of the benefit to which he was correctly entitled shall be paid. If the error affects contributions to or payments from the plan, the board shall take such action as shall be provided for in the plan document.	24 Pa. C.S. §8534(b).	No comments
3.11 Independent audit	The board shall provide for annual audits of the system and the plan by an independent certified public accounting firm.	24 Pa. C.S. §8502(o).	No comments
3.11.1 Audit			
3.11.2 Catch all and employer audit rights	The board shall perform such other functions as are required for the execution of this part and shall have the right to inspect the employment records of employers.	24 Pa. C.S. §8502(f).	The AG performs cyclical audits on school districts and reports any of their findings to IAO; PSERS then ensures that the remediation is completed (if associated to reporting. See Section 3.2 of the report on improving audit practices.

Topic	Requirement/Authority	Statutory Reference	FAS Comments
3.12 Procurement	Procurements of investment advisors or managers selected by the Public School Employees' Retirement System or the State Employees' Retirement System.	Pa. DGS Procurement Handbook Part III Chapter 05 Sole Source Procurement of Services,	Consistent with peers; See Recommendation 4.8.3 (selection of Board consultants and advisors)
3.13 Definitions		24 Pa. C.S. §8102	No comments
4. DC Plan			
4.1 Board Powers and Duties	1) Commingle or pool assets with the assets of other persons or entities; 2) pay all administrative fees, cost and expenses from the balance of individual retirement accounts; 3) establish investment guidelines and limits on the types of investments; 4) change the terms of the plan to maintain tax qualification; 5) establish a process for plan election by non-mandatory members; 6) perform annual or more frequent reviews of fund managers; 7) allow for roll overs; 8) allow an inactive participant to maintain an individual investment account; 9) ensure plan qualification and IRC compliance; 10) establish benefit payment procedures; 11) interpret what constitutes termination of school service; 12) establish IRC compliant small account distribution procedures; 13) establish rules and procedures as necessary to administer and manage the Plan; 14) waive statutory reporting or information requirement that it deems unnecessary; 15) contract for services or duties, other than final adjudications, or delegate duties not reserved by law; (16) direct employer or participant information to the Board; 17) ensure that participants are provided educational materials about investment options; 18) offer certain investment options, in its discretion, that would be offered under the Protecting PA Investments Act.	24 Pa. C.S. §8411. Powers and duties of board.	No comments

Topic	Requirement/Authority	Statutory Reference	FAS Comments
4.2 Board Administration and Investment	The School Employees' Defined Contribution Trust is established as part of the plan in accordance with this part. The trust shall be comprised of the individual investment accounts, all assets and moneys in those accounts and any assets and moneys held by the board as part of the plan that are not allocated to the individual investment accounts. The members of the board shall be the trustees of the trust, which shall be administered exclusively for the benefit of those school employees who participate in the plan and their beneficiaries within the meaning of and in conformity with IRC § 401(a). The board shall determine the terms and provisions of the trust not inconsistent with this part, the IRC and other applicable law and shall provide for the investment and administration of the trust.	§8401(b) and (c), 8411, and 8413	No comments
4.3 Exclusive Benefit Rule	The board shall administer and manage the plan, which shall be a defined contribution plan exclusively for the benefit of those school employees who participate in the plan and their beneficiaries within the meaning of and in conformity with IRC § 401(a). The board shall determine the terms and provisions of the plan not inconsistent with this part, the IRC and other applicable law and shall provide for the plan's administration.	§8401(a) and (b) and 8411.	No comments
5. DB Plan			
5.1 Actuarial procedures	The actuary shall approve in writing all computational procedures used in the calculation of contributions and benefits pertaining to the system, and the board shall by resolution adopt such computational procedures, prior to their application by the board.	24 Pa. C.S. §8502(h).	No comments
5.1.1 Actuarial issues	Annual valuation and 5-year cycle for experience study.	24 Pa. C.S. §8502(j).	No comments
5.1.2 Adopting actuarial assumptions	The board shall by resolution adopt such tables as are necessary for the actuarial valuation of the fund and calculation of contributions, annuities, and other benefits based on the reports and recommendations of the actuary.	24 Pa. C.S. §8502(j).	No comments

Topic	Requirement/Authority	Statutory Reference	FAS Comments
5.2 Stress test	The board shall conduct an annual stress test of the system and submit the results of the stress test to the Governor, the General Assembly and the Independent Fiscal Office no later than January 1 of each year. The stress test shall include a scenario analysis, simulation analysis and sensitivity analysis. The board shall disclose in the report of the stress test results which industry standards were used and whether any changes to industry standards have been made.	24 Pa. C.S. §8510.	No comments
5.3 Investment	The trustees shall have the power to hold, purchase, sell, lend, assign, transfer, or dispose of any of the securities and investments in which any of the moneys in the fund shall have been invested as well as of the proceeds of said investments, including any directed commissions which have accrued to the benefit of the fund as a consequence of the investments, and of any moneys belonging to said fund, subject in every case to meeting the standard of prudence set forth in this subsection.	24 Pa. C.S. §8521(a)	No comments
5.3.1 Control and management of fund	The trustees shall have the power to hold, purchase, sell, lend, assign, transfer, or dispose of any of the securities and investments in which any of the moneys in the fund shall have been invested as well as of the proceeds of said investments, including any directed commissions which have accrued to the benefit of the fund as a consequence of the investments, and of any moneys belonging to said fund, subject in every case to meeting the standard of prudence set forth in this subsection.	24 Pa. C.S. §8521(a)	No comments
5.3.2 Custodian	The State Treasurer shall be the custodian of the fund.	24 Pa. C.S. §8521(c) Administrative Code of 1929, §707, 71 P.S. §247	No comments.

Topic	Requirement/Authority	Statutory Reference	FAS Comments
5.3.3 Private investments	The board in its prudent discretion may make any venture capital investment, private placement investment or other alternative investment of any kind, structure or manner which meets the standard of prudence set forth in subsection (a).	24 Pa. C.S. §8521(h)	See Recommendation 1.2 and Section 3.3 of the Report regarding asset allocation and compliance oversight
5.3.4 Joint ownership permitted	The General Assembly finds and declares that authorized investments of the fund made by or on behalf of the board under this section whereby the board becomes a joint owner or stockholder in any company, corporation, association or other lawful business organization are outside the scope of the original intent of and therefore do not violate the prohibition set forth in section 8 of Article VIII of the Constitution of Pennsylvania.	24 Pa. C.S. §8521(j)	No comments
	Minimum allocation of $250 million and not more than $1 billion to the program. No more than 10 managers in the program at any one time.	24 Pa. C.S. §8543.	No comments
	Preference given to investment managers: 1) headquartered in PA, 2) veteran-owned or service-disabled-veteran-owned, 3) minority-owned or women-owned firm approved by the Office of Minority and Women Business Enterprise	24 Pa. C.S. §8545.	No comments
5.3.5 Public Markets Emerging Manager Investment Program (July 2019)	Limitations on equity, commodity, absolute return, and fixed income exposure. Performance based fee requirement of exceeding hurdle rate and high-water mark. Limitation	24 Pa. C.S. §8546.	No comments
	3-5 years in program. If the investment manager generates strong risk adjusted returns, the Investment Office shall use best efforts to make a place in the main fund for the investment manager.	24 Pa. C.S. §8546(d).	No comments
	The board and the Investment Office may hire and fund any investment manager meeting the objectives, goals and criteria under this section.	24 Pa. C.S. §8547(a).	See Recommendation 5.1 (investment oversight improvements)

Topic	Requirement/Authority	Statutory Reference	FAS Comments
	Investment prohibitions: An investment may not be made into an investment vehicle that primarily includes private equity, private debt, venture capital or private real estate instruments. An investment in an absolute return strategy shall be subject to manager selection requirements within the absolute return policy.	24 Pa. C.S. §8547(b).	No comments
	The Investment Office shall appoint an Emerging Manager Portfolio Manager who shall be responsible for administering the program. The Emerging Manager Portfolio Manager shall recommend qualified investment managers for inclusion into the main fund and shall further advise the Investment Office if termination of an investment manager is recommended. <u>An investment manager may be terminated by the Emerging Manager Portfolio Manager</u>, with approval from the Investment Office, if the investment manager is underperforming, not generating strong risk adjusted returns, not meeting the criteria to move into the main fund, changes investment processes, has personnel turnover or any other reason which is deemed by the Investment Office to be in the best interests of the system.	24 Pa. C.S. §8547(c).	See Recommendation 5.1 (investment oversight improvements)
	Internal Review Committee: An investment manager considered for hiring into the program shall meet with the Internal Review Committee. The Internal Review Committee shall review each manager considered for inclusion in the program and provide feedback to the Emerging Manager Portfolio Manager. <u>Investment Office approval shall be required to hire a manager into the program</u>, including the Emerging Manager Portfolio Manager, the Emerging Manager Portfolio Manager's supervisor and the Chief Investment Officer.	24 Pa. C.S. §8547(d).	See Recommendation 5.1 (investment oversight improvements)
	Approval for exceptional investment manager.--If the Emerging Manager Portfolio Manager, the Chief Investment Officer or other qualified staff have located an exceptional investment manager that does not meet the required criteria established under this section, the Investment Office shall obtain board approval for hiring. The Investment Office shall present to the board the specific reasons for hiring the investment manager.	24 Pa. C.S. §8547(e).	See Recommendations 5.1 and 2.1 (investment oversight and reporting)
	Board approval shall be required for total capital allocations exceeding $100,000,000.	24 Pa. C.S. §8547(h).	

Topic	Requirement/Authority	Statutory Reference	FAS Comments
5.3.6 Non-mandatory “limitation” on fees	The Board shall strive to achieve the assumed rate of return at the least cost and maximum return to the fund, and shall: 1) consider the findings and recommendations of the Public Pension Management and Asset Investment Review Commission, and 2) review, identify and implement any investment fee reduction and cost avoidance strategies identified to be prudent by the board, to reduce expenditures for investment costs.	24 Pa. C.S. §8502(r).	No comments
6. Retirement functions			
6.1 Benefit Delivery			
6.1.1 Disability	Make disability determinations	24 Pa. C.S. §8505.	No comments
6.1.2 Adjudicate various benefit appeals	Hear and decide appeals	22 Pa. Code §201, et al.	No comments
6.2 Health insurance			
6.2.1 Health insurance premium assistance program	The board is authorized to expend an amount not to exceed 2% of the health insurance account each year to pay for the direct expense of administering the health insurance premium assistance program, which expenditure may be included in the board's consideration when it establishes the premium assistance contribution rate each year.	24 Pa. C.S. §8509.	No comments

Appendices

Appendix A. Partial List of Documents Reviewed

1. Pennsylvania statutes governing PSERS
2. PSERS governance manual/policies, including charters, delegations, trustee position descriptions, ethics and standards of behavior policies, and communications policy
    2.1 Communications Policy
3. Board ethics training materials used by PSERS
4. PSERS compliance reports for Board members
5. PSERS Board education and training program and materials
6. PSERS new trustee onboarding program and materials
7. PSERS Executive Director and Chief Information Officer succession planning documentation
8. PSERS organization structure and staffing
9. Most recent independent compensation study conducted for PSERS
10. PSERS current Investment Policy Statement (IPS)
    10.1 PSERS current DC Investment Policy Statement (IPS)
11. PSERS annual investment reports for past three years (Funston will need to clarify requirements)
12. PSERS most recent asset-liability study
13. PSERS most recent five-year experience review
14. PSERS Board and committee meeting agendas, materials and minutes from past two years
15. Most recent CEM investment benchmarking report
16. Investment performance reports from the general consultant and custodial bank
    16.1 DC investment performance reports from the general consultant
17. PSERS staff investment reports to the Board
18. External manager fee reports to the Board
    18.1 Fee Disclosure Statements
19. PSERS investment due diligence policies and procedures
    19.1 PSERS DC Plan due diligence policies and procedures
20. Risk reports and analyses provided to the PSERS Board over the past three years

21. Investment compliance reports to the Board from the past three years
22. Board strategic planning policy
23. PSERS risk policies and procedures
24. PSERS control plans and reviews prepared by internal audit or third parties
25. PSERS procurement policy and procedures
26. External audit reports for prior three years, including any management letters
27. Operational risk reports to the Board for the past three years
28. PSERS member disability and appeals Board policies and processes
29. Most recent CEM pension administration benchmarking report for PSERS, if available
30. Most recent PSERS member service satisfaction reports
31. PSERS IT governance policies
32. PSERS disaster recovery and business continuity policies
33. Health Care Documents
34. Request for Recommendation (RFR) Log—User Manual
35. ESRC Structure
36. Body of Knowledge Charter
37. Business Rule Approval Process
38. Introduction to RFR Process
39. RFF Process
40. Act 140/Slayer's Act Process
41. List of Business Rules by topic
42. Response to Commonwealth of Pennsylvania Department of the Auditor General Report

Appendix B. List of Interviews

Trustees / Designees	1st Round	2nd Round	3rd Round
Rep. Matt Bradford / Patrick Shaughnessy*	Y	Y*	
Sen. Patrick Browne / Stacey Connors*	Y*		
Jason Davis	Y	Y	
Eric DiTullio	Y	Y	
Treasurer Stacy Garrity / T. Clancy C. Craig, L. Ebright*	Y*		Y
Susan Lemmo	Y	Y	
Nathan Mains / J. Callahan	Y	Y	
Sen. Katie Muth, S. Kikeri, D. Vymazal		Y	
Secretary Noe Ortega / Patrick Lord*	Y*	Y*	
Rep. Frank Ryan* / J. Vecchio	Y	Y*	Y*
Christopher SantaMaria	Y	Y	Y
Joseph Torsella			
Secretary Richard Vague, Alan Flanagan, Jim Bloom	Y	Y	Y
Melva Vogler	Y	Y	Y

* When only this individual was interviewed

Appendix C. Original Scope and Report Location

In the scope listed below, the specific topics added are noted in ***bold italics***; all others were identified in the RFP document. We have added a column to enable tracking to the current location of the scope item.

Scope		Report Location
A.	Governance structure	
1	All relevant statutes, regulations, rules, and policies applicable to the Board	
2	The Board composition, organization, and structure	
3	Term limits for Board officers	
4	***Board authorities (budgets, staffing, compensation, outside service providers)***	
5	***Procurement process and authorities***	
6	***Trustee removal policy***	
B.	By-laws, charters, and policies	
1.	The By-Laws of the Board	4.8
2.	The Board Governance Manual	1.3.4
3.	The Board's adopted governance policies (including Trustee communications with external parties)	1.3.4
4.	***Clarity, accuracy, and completeness of Board committee charters***	4.7
C.	Powers reserved for the Board and delegations	
1	Roles and responsibilities of the Board and staff	1.4
2	Authorities of the Board Chair	4.1
3	Reporting relationships to the Board	1.4.1
4	Delegation of authority and responsibilities	1.4.2
5	Clarity of authority and accountability of Board and staff	1.4
6	***Board role in handling of disability reviews and appeals***	5.2
7	***Board role in strategic planning***	1.1
8	***Board use of third-party advisors***	3.2
D.	Board meetings and operations	
1	Leadership roles and responsibilities	4.1
2	Policy-making and decision processes	1.3
3	The format and content of the Board's Meeting agendas, minutes, and related materials	4.2
4	The Board's use of executive sessions as related to the Sunshine Act	4.3
5	Communication and transparency of the Board, staff, and external stakeholders	4.4
6	***Board meeting frequency and duration***	4.5

Scope	Report Location
7 Board agenda setting	4.2
8 Use or potential use of an electronic Board portal	4.6
E. Board oversight	
1. Assessment of the Board's oversight and independence	2.1
2. Reporting to the Board	2.1
3. Reporting on system operations and use of exception reporting	2.2
4. Risk management and oversight	2.3
5. Independent reassurance (internal/external audit, consultants, 3rd party reviews)	3.1
6. Compliance and controls	3.1
7. Cyber security and information security	3.1
F. Board committees	
1. Board committee structure	4.7
2. Use of Agency and Ad Hoc committees	4.7
3. The process for committee selection	4.7
4. Committee agenda setting	4.7
5. Committee work plans	4.7
6. Committee meeting frequency and duration	4.7
7. Committee reporting to the Board	4.7
G. Board education and development	
1. Selection of educational topics	4.9
2. Regularity and timing of education	4.9
3. Required and advisable areas of expertise	4.9
4. Avoiding conflicts of interest with firms providing education	4.9
5. Board self-evaluation process and recommendations	4.9
6. Onboarding for new trustees and representatives	4.9
H. Evaluation of the Board direct reports	
1. The Board's evaluation process for PSERS' Executive Director and Chief Investment Officer	1.5
2. Succession planning for Board direct reports	1.6

Appendix D. List of Figures

Appendix E. Example Implementation Roadmap

See separate worksheet

References

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