

**Fiduciary Performance Audit of  
the Ohio School Employees Retirement System**

**Conducted on behalf of  
the Ohio Retirement Study Council**

**Final Report**



**Submitted: February 6, 2017**

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## Executive Summary

Overall, the School Employees Retirement System of Ohio (SERS) is a well-run organization. The Board is appropriately authorized and actively engaged. The staff are competent. Delegations are prudent. Oversight is diligent. Roles and accountabilities are clear. SERS is compliant with pertinent legislation and regulation. Investment policy and oversight are robust. The investment organization has matured. Controls appear effective. The Internal Audit department does an effective job of providing independent reassurance that management's reports are reliable.

Broadly speaking, SERS is at different stages of development in different areas of the organization. The Investment Department has matured and is functioning at a high level after three years of new leadership and with investment management authority delegated by the Board. The governance, policies, processes and controls are leading, or, at a minimum, prevailing practice in the investment function, though the implementation of the Environmental, Social and Governance (ESG) policy is at an early stage of maturity.

In pension administration, SERS has functioned satisfactorily utilizing an outdated technology platform which is about to be replaced in the first quarter of calendar year 2017. This new platform will position SERS to significantly improve its scope, level and cost of member services from average among its peers to potentially leading practice. It should also provide an opportunity to redeploy resources to improve services to employers and member education.

The IT organization, which has been highly-focused on implementing the new pension administration technology platform, called SMART (SERS Member and Retiree Tracking), has worked effectively under new leadership over the past three years, and it appears that SMART will launch successfully in 2017. Once this implementation is completed, the entire SERS organization will need to recalibrate its IT priorities and return to a "normal" environment where a more typical portfolio of IT projects is planned and maintained. There is also an opportunity to build upon the effective practices employed by SERS for the SMART project into a more holistic IT governing framework to ensure this progress is maintained.

Throughout the organization, we found examples of what we consider leading practices as well as practices that are consistent with prevailing practices at their peers. As good as SERS is, there is always room for improvement. Our recommendations are designed to help SERS improve its already good performance. It is up to SERS to determine what's best for SERS.

It should also be noted that the SERS organization is at an inflection point. It is about to select a new Executive Director to lead the system into the future. This selection will be an important decision for the Board. How the Board handles this transition will have a major influence on SERS. There is a very solid foundation, with a strong and competent supporting team, for this new leader to build upon. We hope that this review can provide a useful tool to assist the organization to continue its development as a high-performing public retirement system.

## 1. SERS' Governance and Administration

The powers reserved for the SERS Board are generally consistent with its fiduciary duties. The Board's delegation of investment-decision making to staff is leading practice that has served the fund and its participants well. There are clear lines of responsibility, with accountability, prudent delegation, diligent oversight and independent reassurance of compliance with Board policy and legal requirements. Conflicts of interest policies are appropriate.

Budgeting and monitoring are effective but manually intensive and slow. Administrative (both office and pension) costs are slightly above the median for its peers. There are opportunities for cost reduction. Trustee continuing education requirements are met. Stakeholder communication is functioning well.

## 2. SERS' Organizational Structure and Staffing

The Executive Director recently retired and the Deputy Executive Director is acting as the Interim Executive Director. A smooth transition to a new Executive Director is essential to maintain the SERS forward momentum. SERS' organization structure, staffing and capabilities are consistent with prevailing practice. Human Resources policies and practices function effectively. Staff qualifications, hiring and evaluation processes appear effective. SERS' compensation policies and structure are clear.

SERS' can improve its processes for monitoring, measuring and improving member satisfaction. SERS' staff training, continuing education policies and program are effective. Tuition and professional certification reimbursement policies are leading practice.

## 3. Investment Policy and Oversight

SERS' investment operations have robust policies and procedures and a stable, credentialed professional staff. A number of SERS' practices are at leading levels, including the delegation of manager selection to staff and the use of a separate operational due diligence team in manager selection and monitoring. The investment program is staffed and resourced adequately, although backup for the risk management and analytics function would be an improvement. Interviews with external providers indicate a consistent pattern of professionalism, appropriate knowledge, and diligence. On-boarding of new managers is routinized and efficient. The Board and investment staff are compliant with Ohio laws and SERS investment policies.

There has been improvement in a number of areas over the past few years. The public equity procurement process has been streamlined and planning has improved for private equity. Costs have been reduced and the organizational structure has been revamped to provide for back-up to all asset class investment officers. Investment risk management has matured and become more integrated into the investment program. Most importantly, the Staff Investment Committee (SIC) has become the focal point for the investment program and has proven effective and efficient. There is an opportunity to improve the implementation of the ESG program, consistent with the stated investment beliefs in the Statement of Investment Policy.

The Treasurer of State's (TOS) office has recently worked collaboratively with SERS to renew the relationship with SERS' domestic custodial bank and to select a new international custodial bank. The transition to the new international custodial bank has proceeded smoothly. However, the designation of the TOS as custodian and the requirement for the bank to be "located in the state" to qualify as the custodian should be reviewed by the legislature, as they result in higher costs and complexity for SERS. Nearly all major pension funds in the U.S. utilize other global custodial banks which are not available to SERS based upon this statute and its interpretation. This is one area where SERS' statutory authority is not aligned with its fiduciary responsibilities.

#### 4. Legal Compliance

SERS' communications with the IRS and monitoring of the plan's Internal Revenue Code compliance are appropriate. Internal and external legal counsel appear to be well qualified, and SERS' use of legal services is consistent with its peers. Ethics training, compliance programs and compliance reporting processes meet applicable requirements. Our examination of a sample of investment transaction legal documents found they are consistent with guidelines and legal requirements covered by this review.

#### 5. Risk Management and Controls

SERS' financial controls are adequate for the preparation and integrity of the financial statements. Accounting processes meet current regulatory and accounting pronouncements. Financial and operational reports to management and the Board are appropriate and deemed reliable. Independent reassurance regarding the reliability of management's reports and assurances are provided by Internal Audit, External Audit and Enterprise Risk Management (ERM). SERS' record-keeping systems and associated processes are adequate for the retention, destruction and governance of records but lack the ability to track custody and authorization after destruction of the record.

Holistic risk management within SERS is challenged by a lack of a commonly accepted approach to managing risk. Current risk assessments potentially under-estimate residual risk based on the use of qualitative 'likelihood' factors. Finally, there appears to be some confusion regarding the understanding of the relative responsibilities between the assurance and reassurance roles that SERS' management team (assurance) and the ERM Officer perform (reassurance).

#### 6. IT Operations

Activities related to the SMART program are dominating everyone's agenda. Although SERS does not employ a single comprehensive standard for the governance of IT and IT Security, governance is substantially achieved through risk assessments, budget management and periodic update reporting. IT Security reports to the ERM Officer.

The periodic reporting regime appears to be robust. The pace of reporting is appropriate. Governance activities provide adequate insight and transparency for the IT and IT Security departments' respective stakeholders.

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SERS supports multiple infrastructure platforms across its computing environment. IT assets are managed internally. IT personnel are cross-trained to support SERS' portfolio of technologies and as a means for helping employees expand their skillsets. Budget constraints may affect manpower.

As noted above, IT project and portfolio management is currently sharply focused on the SMART implementation. The project organization and use of third parties to oversee risk management is leading practice.

Management has identified several conditions related to the SMART implementation that should be addressed before go-live. Among these are security weaknesses noted by third-party firms and slow system responses identified by users during user acceptance testing. The Program leadership has a well-defined process to triage and risk assess issues for appropriate response.

The Payment Card Industry Data Security Standard (PCI DSS) standard utilized by SERS for security seems appropriate. Third-party contractors are engaged as external experts in, for example, vulnerability testing and IT security. Management has well documented plans outlining cyber-risks and planned responses. SERS also uses third parties effectively to monitor, evaluate and assess its IT security and SMART implementation. This is leading practice.

Approximately 6 weeks after the SMART software goes live, FAS will perform a limited post-implementation review and submit an addendum to this report.

## Report Overview

### Background

The general purpose of the Ohio Retirement Study Council (ORSC) is to advise and inform the state legislature on all matters relating to the benefits, funding, investment, and administration of the five statewide retirement systems in Ohio including the School Employees Retirement System, covering non-teaching school employees. The Ohio Revised Code (O.R.C.) mandates that the ORSC shall (among other statutory duties) have conducted a fiduciary performance audit of each system at least once every ten years (R.C. 171.04(F)). After a competitive process, Funston Advisory Services LLC, was selected by the ORSC to conduct the 2016 fiduciary performance audit of the School Employees Retirement System (SERS) of Ohio.

SERS is a defined benefit public pension fund that provides pensions and access to health care coverage for over 124,000 active school employees, nearly 7,000 inactive members, and over 76,000 benefit recipients. SERS serves 1,070 employing agencies across Ohio. Total assets managed by SERS at the end of fiscal 2016 were \$13.2 billion.

### Purpose and Scope of the Review

The purpose of this Fiduciary Performance Audit was to identify areas of strengths and weaknesses in the School Employees Retirement System of Ohio (SERS), compare SERS' operations with leading practices of other public pension plans, and make recommendations for improvement. There were six major areas reviewed as part of the Fiduciary Performance Audit as defined by the Request for Proposal:

1. Board Governance and Administration;
2. Organizational Structure and Staffing;
3. Investment Policy and Oversight;
4. Legal Compliance;
5. Risk Management and Controls; and,
6. IT Operations.

Appendix A describes the detailed scope for each of the above. The report is organized by each of the six areas. Each of the six sections of the report has a common structure in which we describe: a summary overview of our conclusions; the specific scope of the review; our review activities; our expectations and the standard for comparison; our specific findings and conclusions in relation to those expectations; and, our recommendations for improvement. Each section begins with the specification from the RFP, describing the overall objective for the section and the areas included in the scope, in *blue italicized text*.

Please note that a Fiduciary Performance Audit is not a review of the integrity of the financial statements, a comprehensive compliance audit or a forensic investigation. While it provides assurance on the items

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covered, a fiduciary performance audit is limited by its scope and is not a guarantee of compliance or future performance. FAS is not a law firm or registered investment adviser. This Report is not intended to, and should not, be treated as investment or legal advice. Also, scope of the project does not contemplate updates to the Report or its contents to reflect developments after its delivery.

## Methodology

To complete our assessment and comparison to leading, prevailing and lagging practices, we reviewed over 200 SERS policies and procedures, internal and external reports, board and committee charters and reports to the Board. We conducted interviews with all trustees and over 30 SERS executives, as well as over 20 outside service providers, including the external auditor, the actuary, the investment consultants, 10 external asset managers, the securities lending agent, the custodial banks, the TOS staff, and IT consultants. While we believe the information used from these interviews is reliable, the project scope did not contemplate the conduct of independent verification. In addition, we drew upon our prior experience and our benchmarking knowledge bases to reach our conclusions.

Whether a practice is leading is a matter of opinion which involves the exercise of professional judgment. Our opinion is based on our experience and our reviews of a wide-range of public pension systems. At the least, a practice should be consistent with prevailing industry practice. Where appropriate, we have identified opportunities for improvement. In all cases, we have tried to be practical. SERS can then determine what is best given its current stage of development.

## Benchmarking Data

Throughout this report, we include peer benchmarking data, when it is available and relevant. This is based upon a series of proprietary FAS benchmarking studies completed since 2011. SERS provided responses to our survey questionnaire, which the FAS team used to compare SERS' policies and practices to peer public pension funds, and the SERS responses are indicated by green shading in the charts included in this report. Benchmarking data was received from SERS and third parties and is correspondingly subject to accuracy of that information. See Appendix B for a list of benchmarking studies.

## Summary of Recommendations

### 1. Board Governance and Administration

#### 1.1. SERS' Overall Governance Structure, Board Composition, and Lines of Reporting

*R1.1.1 The SERS Board should meet annually with the general investment consultant to discuss past performance and expectations for the upcoming year to ensure that the Board is receiving the independent reassurance it desires.*

#### 1.2. Policies and Role of the Board vis-à-vis SERS Staff, Advisors, and External Managers

*R1.2.1 The Chief Investment Officer and investment staff should consider whether there are additional investment consultant resources that could be accessed and used in strategy development and oversight.*

#### 1.3. Board Oversight and Monitoring Activities, including Succession Planning for Key Positions

*R1.3.1 After the process for replacing the Executive Director is completed, the Board should evaluate how well the direct report succession policy worked in practice and make any needed modifications.*

#### 1.4. Board and Staff Processes for Compliance with Applicable Laws, Administrative Rules and Policies

*No recommendations*

#### 1.5. Conflict of Interest Policies and Procedures

*R1.5.1 The Board may wish to amend the Ethics Policy to describe how Board members may report conflicts of interest or ethics violations and/or reference the whistleblower policy (i.e., the Reporting of Suspected Misconduct Policy).*

*R1.5.2 The Board should consider adopting a policy or procedure to have the General Counsel review Board members' Financial Disclosure Statements in order to address potential conflicts of interests at the Board level.*

#### 1.6. SERS Board authorities and performance and areas where the Board is unduly limited

*R1.6.1 If the SERS Board is not given authority to select its custodial bank and oversee the custodial relationship, SERS should request that the Treasurer of State comply with ethics and compliance assurance standards similar to those required for other providers of fiduciary services.*

## 1.7. SERS' Budgeting and Monitoring Processes

- R1.7.1 *SERS should consider implementing a budgeting module which integrates with the existing accounting general ledger system to improve timeliness of reporting and reduce manual effort.*
- R1.7.2 *SERS' Finance should ensure that the current travel administration policies for use of SERS credit cards is known throughout the organization to encourage broader implementation.*
- R1.7.3 *SERS should consider alternative approaches for travel expense administration, including potentially acquiring a travel administration application or utilizing the services of a third-party travel administrator.*

## 1.8. SERS' Administrative Costs

- R1.8.1 *Once implementation of the SMART system is completed and operating smoothly, SERS should undertake a review of each pension administration process to optimize staffing and, as appropriate, redeploy staff to other areas.*
- R1.8.2 *SERS should consider an office occupancy review and determine if its current office space could be utilized more effectively and downsized to allow for more space to be leased to outside parties.*

## 1.9. SERS' Board Continuing Education Program and Ongoing Costs

- R1.9.1 *SERS should continue to participate in joint training programs with the other Ohio public pension funds and explore addition of new topics or segments that are of mutual interest.*
- R1.9.2. *SERS should consider including additional topics in SERS internal Trustee training program, such as financial acuity, emerging trends, strategy, board leadership and public/stakeholder relations.*
- R1.9.3. *SERS should also consider additional ways to improve effectiveness of Trustee training, such as:*
- *Initiating a Trustee mentoring program to pair an experienced Trustee with each new Board member;*
  - *Ensuring that orientation is offered prior to a new Trustee attending the first meeting;*
  - *Including an opportunity during orientation to be introduced to each senior staff member and have a chance to become familiar with their area;*
  - *Establishing a more disciplined schedule for Board meeting refreshers on key practical topics such as fiduciary duty, ethics code provisions, funding and high level actuarial principles, Board policy provisions, and fundamental*

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*investment, employee benefits and risk management oversight responsibilities; and,*

- *Encourage Trustees to attend quality third-party training opportunities to create a more rounded educational program.*

*R1.9.4. The Board should consider modifications to SERS' training protocol to link it with Board and Committee self-assessment results or an inventory of needed Board skills to address areas where collective Board member skill development is needed or would be useful.*

## 1.10. SERS' Stakeholder Communications and Plans

*R1.10.1 SERS could consider modifying its communications policy to specify a procedure for designation of a Board spokesperson in case the need for one were to arise, address limits on personal use of social media for SERS communications and reference any fiduciary limits on expenditure of plan funds for communications on unrelated matters.*

*R1.10.2 Consideration could be given to whether SERS should prioritize efforts to encourage participant personal savings for retirement through the deferred compensation program or other vehicles.*

## 1.11. Board Self-Assessment

*R1.11.1 The Board should consider whether it is feasible to adopt a meaningful self-assessment process within the public records and meetings law provisions in Ohio. If so, the process could be evolutionary.*

*R1.11.2 The Board should work with its Chief Counsel to identify how public records and public meetings access requirements relate to self-assessment results and determine whether there is an appropriate process that would facilitate an honest and useful process by assuring the confidentiality of sensitive information.*

*R1.11.3 The Board may wish to collaborate with other Ohio public pension funds if it believes that pursuit of legislation to provide the same level of self-assessment confidentiality as is enjoyed by peer investment fiduciaries in other states is needed.*

## 2. Organizational Structure and Staffing

### 2.1. Organization Structure, Staffing and Capabilities of SERS

*R2.1.1 SERS should consider having its Chief Financial Officer report directly to the Executive Director rather than through the Deputy Executive Director to ensure greater independence for financial reporting.*

## 2.2. Human Resources Policies and Practices

- R2.2.1 *After it has successfully implemented its new, leading-practice succession and replacement planning processes, SERS should develop a formal policy which recognizes these practices as official SERS policy to ensure continuity.*

## 2.3. Staff Qualifications, Hiring and Evaluation Processes

- R2.3.1 *SERS should consider how to more effectively utilize its website, in addition to its use of social media and other digital channels, to further support its recruiting efforts.*

## 2.4. SERS' Compensation Policies and Structure

*No Recommendations*

## 2.5. SERS' Processes for Monitoring, Measuring and Improving Member Satisfaction

- R2.5.1 *After the SMART system implementation is complete, SERS should review its monitoring and reporting of member services metrics and significantly increase its level of performance tracking.*

## 2.6. SERS' Staff Training, Continuing Education Policies and Program

- R2.6.1 *SERS should develop and approve an employee training and continuing education policy which incorporates the de facto policies and practices already in place and specifies minimum acceptable levels of training annually.*

## 3. Investment Policy and Oversight

### 3.1. Statement of Investment Policy (SIP) Development and Updating

- R 3.1.1. *While the investment staff has input into the annual updating of the SIP, SERS should better formalize that input. One way would be for the updating to be an agenda item at a Staff Investment Committee (SIC) meeting scheduled adequately in advance of the submission of the updated SIP to the Board.*

### 3.2. Content and Quality of the SIP

*No Recommendations*

### 3.3. Consistency Between the SIP, Asset Allocation Asset/Liability Study and Experience Study

*No Recommendations*

### 3.4. Rebalancing

- R 3.4.1 *Investments should amend the existing rebalancing policy to include a more detailed description of the rebalancing process, consistent with current practice, and including the specific responsibilities of risk management, the Chief Investment Officer, and the investment staff.*

### 3.5. Documentation of Investment Decisions

- R 3.5.1 *SERS may consider creating flexibility in the Investment Committee policy by permitting the Investment Compliance Analyst to sign the signature cover page in lieu of the Enterprise Risk Management Officer and the Investments Assistant Director in lieu of the CIO (provided the appropriate review and analysis has been done).*

### 3.6. SERS Compliance with Documented Investment Policies and Procedures

- R 3.6.1 *SERS may consider updating its template side letter to include the provisions of Section VI.D of the Statement of Investment Policy or revise the Statement of Investment Policy to clarify that such provisions apply only to certain asset classes.*
- R 3.6.2 *SERS should broaden and deepen the implementation of its ESG program, consistent with the Investment Beliefs in the SIP.*

### 3.7. SERS Board and Staff Policies and Processes for Periodic Review and Updating of Investment Policies, Guidelines and Procedures

- R 3.7.1 *Continue to develop a policy describing how often investment policies will be reviewed and updated and identifying responsible parties.*

### 3.8. SERS' Processes for Monitoring and Controlling Transaction Costs

- R 3.8.1 *The legislature should consider eliminating the required goal to increase utilization by SERS of Ohio-qualified agents to reduce administrative burden and ensure SERS is not unduly restricted in their options for trading.*

### 3.9. Performance Benchmarks and Performance Monitoring

- R 3.9.1 *As has been its policy in the past, SERS should use the opportunity of the asset liability study to review all benchmarks.*
- *Specifically, to the extent that the study results in more granular allocations (e.g. to emerging market debt or high yield debt, rather than “core plus” fixed income) SERS should adopt specific relative return benchmarks appropriate to those asset classes, rather than use composite benchmarks which add a hurdle rate to the broader asset class benchmark.*
  - *SERS should review the existing, multiple benchmarks for the strategy*

*allocations, explicitly differentiating between their function as hurdle rates to inform investment staff and as measures of market opportunities to allow the Board and senior investment staff to monitor performance.*

- *SERS should review the benchmark for real assets following the asset allocation, particularly if the Board determines to include more non-real estate assets in the allocation.*

### 3.10. External Manager Compensation and Payment Processes

*R3.10.1 SERS should continue to work with ILPA and SERS' peers in support of the Transparency Initiative.*

### 3.11. External Manager Conflict of Interest Policies and Compliance Procedures

*No Recommendations*

### 3.12. Investment Manager Due Diligence, Selection, Monitoring and Controls

*No Recommendations*

### 3.13. Investment Controls and Fiduciary Risk

*R3.13.1 SERS should provide for back up to the investment risk manager.*

### 3.14. Breadth and Quality of Services Provided by the Custodial Banks to SERS

*R3.14.1 SERS should be allowed to contract directly with a single global custodial bank in order to receive comparable services at a significantly lower cost.*

### 3.15. The Ohio Custody Model and Custodial Bank Oversight Structure

*R3.15.1 The SERS Board of Trustees should be given authority to select the SERS custodial bank. This could be accomplished in one of two ways:*

- a. The Treasurer of State could delegate authority to the SERS Board; or,*
- b. The legislature could consider authorizing the SERS Board of Trustees to select its custodial bank and oversee the relationship.*

*R3.15.2 The legislature should eliminate the requirement for the SERS custodial bank to have a presence in Ohio to allow for a single global custodial bank to serve SERS.*

## 4. Legal Compliance

### 4.1. Communications with the IRS

No Recommendations

### 4.2. SERS' Monitoring of Compliance with IRS Requirements

No Recommendations

### 4.3. Use of Legal Services

No Recommendations

### 4.4. Ethics Training and Compliance Programs and Compliance Reporting Processes

*R4.4.1 SERS may consider updating the Continuing Education Policy to identify the educational topics that are required by statute, including ethics, and desired by the Board (if any).*

*R4.4.2 SERS may wish to supplement the Continuing Education Policy to identify how SERS will implement ethics training requirements of Section 3309.042 of the Ohio Revised Code, in respect to which apply to staff.*

### 4.5. Transaction Compliance and Legal Requirements

*No Recommendations*

## 5. Risk Management and Controls

### 5.1. Financial Control Structure

*No Recommendations*

### 5.2. Financial Statements and Reporting

*R.5.2.1 SERS should consider implementing a management sub-certification process to ensure the integrity of financial reporting by increasing manager accountability for accuracy and compliance with financial reporting standards.*

*R.5.2.2 Management should continue to document desk procedures to ensure consistency in the execution of transactions, reporting and performance of duties.*

*R.5.2.3 Management should improve the timeliness of internal financial and budget reporting.*

*R.5.2.4 Management should automate tools to help improve the budgeting process.*

### 5.3. Purchasing Policies and Procedures

- R.5.3.1 *The Finance team should continue to implement tools to enable efficient and effective centralization of contract monitoring, allowing leadership to be more strategic in working with third party vendors and service providers.*
- R.5.3.2 *The Purchasing team should ensure that the document retention needs for purchasing activities and contracts are considered in SERS' records retention strategy.*
- R.5.3.3 *Once centralized processes are effectively working; the Purchasing team should work more strategically within SERS.*

### 5.4. Accounting Processes

- R.5.4.1 *SERS should strive to issue monthly and quarterly financial statements more timely.*
- R.5.4.2 *SERS should consider developing an upgrade plan to the most recent version of its accounting software applications.*
- R.5.4.3 *SERS should continue to refine its travel expense reimbursement process along with implementing a system to ensure consistent approval procedures, timely recording and reimbursement of business related expenditures.*

### 5.5. Internal Audit

- R.5.5.1 *The Board should continue to periodically assess the relationships between Internal Audit, the Board and management.*
- R.5.5.2 *The Chief Audit Officer (CAO) and Enterprise Risk Management (ERM) officer should harmonize risk assessment approaches using the measures of inherent and residual risk.*

### 5.6. External Auditor

- R.5.6.1 *SERS should consider providing external auditors with updates on significant system implementations which may impact audit timing and approach.*
- R.5.6.2 *SERS should consider updating its Audit Committee Charter to include their role in appointing the external financial auditing firm.*

### 5.7. Record Keeping

- R.5.7.1 *SERS should continue to pursue identifying and implementing a record retention tool that retains the custody trail after destruction and update the needs of departments for document management and retention.*

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- R.5.7.2. *For records management, the role of security of records should be clearly articulated and agreed upon between Information Security, Administrative Services and Record Agents within the departments.*
- R.5.7.3. *SERS should develop a long-term strategy for records management including linkage to the mission of SERS and capabilities plan.*

## 5.8. Holistic Risk Management

- R.5.8.1 *A common or holistic approach to risk management should be required throughout SERS.*
- R.5.8.2 *Internal Audit (IA) and Enterprise Risk Management (ERM) should continue to work together to harmonize their risk assessment approaches to promote consistency and a common language of risk and risk assessment.*
- R.5.8.3 *Internal Audit and Enterprise Risk Management should evaluate the utility of using subjective assessments of likelihood as a measure of inherent risk. They should instead consider likelihood as a subjective metric for allocating resources to equivalent high residual risks.*
- R.5.8.4 *Primary responsibilities for assurance and independent reassurance should be clarified between operating management and Internal Audit and Enterprise Risk Management.*
- R.5.8.5 *Each risk owner should be responsible for providing reasonable assurances to the Executive Director and the Board that risks for which they have responsibility have been identified, robustly assessed and are being managed within the exposures limits established by the Board. If such limits do not currently exist, they should propose them.*
- R.5.8.6 *Each risk owner should represent / certify their risk assessments to the Board.*
- R.5.8.7 *Internal audit should continue to focus its auditing efforts on those risks which have high inherent impact and low residual risk to provide independent reassurance that the controls the organization is counting on to be effective can be relied upon. IA's consulting activities should focus on ways to reduce high residual exposures.*
- R.5.8.8 *Specific individual responsibilities for risk ownership and accountability should be clearly assigned by the Executive Director.*
- R.5.8.9 *Operating management's performance appraisals should include the quality of risk assessment, risk management and reporting.*
- R.5.8.10 *The results of the Enterprise Risk Management risk assessment should be presented to the Board by operating management using an agreed-upon format.*

## 6. IT Operations

### 6.1. IT Organization and Governance

- R6.1.1 *Management should identify a comprehensive IT process model and associated maturity model for managing the development and growth of the IT function.*
- R6.1.2 *Management should identify appropriate and specific executives and a committee of the board to sponsor the IT function through routine reporting and oversight processes. In addition, IT executives should be accountable for specific activities, risks and outcomes.*

### 6.2. IT Infrastructure and Services

- R6.2.1 *Management should consider developing an infrastructure roadmap defining its “future state” computing environment based on vendor roadmaps and current and projected computing and management needs of the organization. This exercise should be initiated shortly after the SMART system go-live event.*
- R6.2.2 *Management should consider using a third-party backup and recovery service and re-deploying the assets invested in disaster recovery.*
- R6.2.3 *Management should consider developing high-level principles to direct strategy and planning. (For example, buy vs. build, outsource vs. hire, or hire vs. train.) Such principles could also support decisions to support changes to the current staffing model or to make exceptions to compensation rules to acquire and retain talent.*

### 6.3. IT Project and Portfolio Management

- R6.3.1 *Management should continue monitoring and testing the system implementation for performance, data integrity and user acceptance to identify and manage risks that threaten a successful launch.*

### 6.4. IT Operations and Security

- R6.4.1 *Management should continually evaluate its sourcing strategy for all IT services to ensure risk and resource usage are optimized.*
- R6.4.2 *The activities involved in producing and reviewing the risk register should be folded into a formal IT risk assessment; preferably as part of an overall enterprise risk assessment process. Risk Assessment is a key element in internal control and management should consider developing a continual risk assessment process.*

### 6.5. Monitor, Evaluate and Assess

*No Recommendations*

### 6.6. IT Risk and Controls Report

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- R6.6.1 *SERS should conduct additional third-party reviews to address how well the Payment Card Industry Data Security Standard (PCI/DSS) standard is being met; whether applicable privacy requirements of health care and/or financial compliance regulations are being met; and, whether another standard might be a better fit for this business.*
- R6.6.2 *SERS should commission a Business Impact Assessment intended to estimate the potential impact system downtime or data corruption could have on supported business processes.*
- R6.6.3 *SERS should establish a formal IT governance committee to develop specific performance objectives and Key Performance Indicators tying back to the enterprise's strategic plans.*
- R6.6.4 *SERS should adopt a disciplined decision-making framework incorporating opportunity costs and tied to a long-term technology roadmap and an all-encompassing framework (like ITIL or COBIT 5) to improve management's ability to consistently optimize risk and resource deployment.*

## 6.7. Planned Past-Implementation Review

*No Recommendations*

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# 1. Board Governance and Administration

## Overview

The legislated authorities of the Board are consistent with its fiduciary duties. There appear to be no undue restrictions. This is a leading practice. The powers reserved for the Board are consistent with its fiduciary duties. The powers reserved for the Board (its authorities) are consistent with prevailing practices at peers. Its prudent delegation of investment decision-making can be considered a leading practice.

The Board has established clear lines of accountability and responsibility. There is diligent oversight. The Board receives regular performance reports which enable effective oversight. The Board systematically considers risk as part of each investment and capital investment decision. The Board should require similar systematic consideration of risk for all other key decisions. Risk Management and Control is discussed further in Section 5.

Conflicts of interest policies are appropriate. SERS' Conflict of Interest Policies and Procedures accurately describe Board members' obligations with respect to conflicts of interest and provide appropriate guidance to Board members regarding their obligations. The Financial Disclosure Statements adequately identify and disclose potential conflicts of interest. The Investment and Business Opportunity Referrals Policy appears to adequately protect Board members from the appearance of impropriety. However, SERS can improve its tracking of ethics training.

SERS' budgeting and monitoring are effective but manually intensive and slow. There is heavy reliance on spreadsheets and lack of an integrated budgeting and reporting tool. This is lagging practice. Administrative (both office and pension) costs are slightly above the median for its peers.

There are opportunities for cost reduction. SERS' Administrative Costs appear to be slightly above the median overall. There may some redeployment opportunities after SMART is implemented. Based upon CEM Benchmarking Inc. (CEM) benchmarking cost analysis, SERS' cost per active member and annuitant is slightly higher than its peer group average; the major difference is in cost of office space.

SERS' pension administration costs, according to CEM, are about 7 percent higher than the peer average. However, SERS' costs have declined 6 percent over the past three years while the peer group has increased 8 percent. Many of SERS' activities are below the average costs of the peer group; but, out of 30 activities, seven are in the highest quartile of cost and may present an opportunity for reduction.

Trustee orientation and continuing education requirements are met. The SERS' Trustee education program is generally consistent with peer practices. However, there are opportunities for improving the SERS' Trustee training program. Training should be linked with Board self-assessment results. The joint educational program established by the five Ohio public pension funds appears to be an efficient and valuable training event which meets the statutory orientation and continuing education requirements.

Stakeholder communications can be improved. SERS has a stakeholder communications plan. SERS aims to improve participants' ability to interact with SERS and obtain current information electronically as part of the SMART project. SERS should consider whether additional provisions on designation of a Board

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spokesperson (in the event one is required), personal use of social media on SERS matters and recognition of fiduciary limitations on expenditure of plan funds on unrelated issues should be included in the stakeholder communications policy.

### Scope of Review

*The contractor will perform a review of the governance structure of SERS in terms of the make-up of its Board and level of monitoring and oversight provided in its policies, procedures, and practices. The contractor shall evaluate the adequacy of the policies concerning delineation of roles and responsibilities of the Board, staff, investment managers, and others with administrative or oversight responsibilities.*

*Specifically, this will include an analysis of:*

- *Board trustee education, training, and their associated costs;*
- *Whether SERS sufficiently delineates, communicates, and documents the lines of reporting and responsibility over staff responsibilities in general and in the investment program specifically and whether the role of the Board and staff are clearly defined for both;*
- *The statutes and administrative rules under which SERS operates to determine if the Board and staff comply with applicable statutes and rules as well as whether the statutes and administrative rules are sufficient to allow the Board and staff to meet their responsibilities;*
- *Comparison of the governance provisions and practices to industry standards and best practices in comparable systems.*
- *SERS' budget process and its adherence to Board approved budget;*
- *Written policies and procedures currently in place to monitor and guard against professional conflicts of interest;*
- *Succession planning for key positions;*
- *Administrative costs, including determining their appropriateness compared to comparable public systems; and*
- *Communication policies and procedures of SERS between the Board, its members, and its retirees.*

### Review Activities

For the Board governance and administration review we utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- Ohio statutes and administrative rules governing SERS;
- SERS' governance policies, including charters, delegations, position descriptions, ethics and standards of behavior policies and communications policy;
- SERS' Board education and training program and materials;
- SERS' communications policies and plans;
- Interviews with Board members and SERS executive staff;
- FAS governance leading policies and practices knowledgebase;
- Most recent three SERS annual operating budgets and financial and operating reports;
- SERS' staff development and succession planning documentation; and,

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- Most recent CEM pension administration benchmarking report for SERS.

Using this information, the FAS team:

1. Assessed the overall SERS governance structure, Board composition, and lines of reporting and compared them with leading practices at peer state retirement systems in the U.S., with particular emphasis on investment governance;
2. Reviewed the policies and role of the Board vis-à-vis SERS staff, advisors, and external managers;
3. Evaluated oversight and monitoring activities, including succession planning for key positions;
4. Reviewed Board and staff processes for compliance with applicable laws, administrative rules and policies;
5. Reviewed conflict of interest policies and procedures and compared them with leading practices;
6. Compared SERS' Board authorities and performance with leading, prevailing and lagging practices at peer funds and identified if there are areas where the Board is unduly limited by regulations from fulfilling its fiduciary duties;
7. Assessed SERS' budgeting and monitoring processes and how they compare with leading practices;
8. Compared SERS' administrative costs and how they compare to peer retirement systems;
9. Compared SERS' Board continuing education program and its ongoing costs with leading and prevailing practices at peer retirement systems; and,
10. Reviewed SERS' stakeholder communications policies and plans and compared to leading practices.

## 1.1 Overall SERS' Governance Structure, Board Composition, and Lines of Reporting

### Review Activities

The FAS team compared SERS' policies and practices with leading practices at peer state retirement systems in the U.S., with the emphasis on investment governance. We reviewed the Ohio statutes and administrative rules governing SERS, reviewed the SERS organization structure and position descriptions of key executives, interviewed all SERS trustees and senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' governance structure, Board composition and lines of reporting.

### Expectations and Standard of Comparison

There are several forms of governance models for public retirement systems in use in the U.S. today. The structure under which SERS operates is the most common structure i.e., an integrated investment and pension administration organization with a single fiduciary board. The Executive Director or CEO is responsible for the entire organization and reports to a board which has authority for investments and pension administration and delegates its authorities through the CEO. Thirty-four of the largest fifty-five, or 62 percent, of state public pension funds in the U.S. utilize this structure. In our comparisons to peer funds, we consider other state public retirement systems with a similar structure.

In addition to the legal structure mentioned above, one of the most significant changes SERS implemented for its investment program was the delegation of investment decision-making to the CIO and staff. This policy was implemented in 2012. In our experience, it is a leading practice for public pension boards to delegate external investment manager selection, as well as authority to manage selected internal investment portfolios, to an appropriately skilled and resourced investment staff.

This policy both allows the Board, which has limited time available for oversight of the retirement system, to spend sufficient time on the oversight of the overall investment strategy and other important matters. It also moves investment management decision-making responsibility into the hands of full-time investment professionals who have both the skills and time to adequately assess investment opportunities.

In order for a public pension board of trustees to continue to provide effective oversight of its investment program under this type of delegated investment authority, leading practice is to have strong capabilities in a number of areas which provide the appropriate assurance and independent reassurance that are necessary for the Board to exercise its fiduciary responsibilities. Leading practices include:

- A clearly-articulated investment policy statement (IPS) which identifies the board's investment beliefs and risk tolerance, investment allocation decisions, and related policies to be implemented;
- Transparency to the board of decision rationale for investments made by investment staff;

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- An internal investment decision-making committee or group which provides a peer review of each investment opportunity and includes other key staff such as general counsel, compliance, and operational due diligence;
- Organizational checks and balances which provide effective controls and minimize the potential for single point of failure decision making;
- Effective investment risk management policies, procedures and reporting;
- An effective internal audit capability and process which monitors investment processes and controls;
- An effective investment compliance function which ensures investments remain within policy guidelines;
- A general investment consultant which is hired by the board, provides counsel to both the board and investment staff, and opines on investment staff decisions; and,
- Other external sources of independent reassurance to the Board, for example, an investment consultant independent of staff, peer investment performance benchmarking or fiduciary reviews.

## Findings and Conclusions

### ***C1.1.1 The size and composition of the SERS Board appears to be appropriate and prevailing practice and the Board generally seems to function well.***

The SERS Board of Trustees is comprised of six elected and three appointed members; there are no ex officio members. Of the six elected members, four are active employees and two are retirees. One trustee is appointed by the Governor of Ohio, one is appointed by the Treasurer of State, and one is appointed jointly by the Speaker of the House of Representatives and the President of the Senate. The three appointed trustees “must have direct experience in the management, analysis, supervision, or investment of assets” according to O.R.C. 3309.05.

Based upon the FAS database which includes thirty-one state funds with trustee boards, the median size of those boards is between nine and ten members. The combination of elected and appointed members is also prevailing practice, with more elected members than appointed being typical, although this varies considerably state-to-state. The requirement for the appointed members to have expertise in investment management is also a common practice, with 22 of the 31 trustee boards in the FAS database having some type of expertise as a requirement for at least one trustee.

We noted that there has been a vacancy on the SERS Board since the Treasurer’s appointee resigned during May 2016. During our review, we were informed that this position has been filled and the new appointee participated in the December 2016 meeting. Several trustees expressed a strong desire for this position to be filled promptly, as they feel having a third trustee with investment expertise is a strong asset.

### ***C1.1.2 The reporting structure to the Board is appropriate and leading practice.***

The Executive Director (ED) is the single direct operating executive reporting directly to the Board of Trustees, which is a leading and prevailing practice, as it provides a single, clear line of authority. The Chief Audit Officer (CAO) also reports directly to the Board through the Audit Committee. This is also a

leading and prevailing practice as it provides a source of reassurance to the Board which is independent of operating management. Eighteen of the 31 state pension systems in the FAS database have the CAO report directly to the Board.

All powers delegated by the Board flow through the ED, who in turn delegates day-to-day authorities, as appropriate, to direct reports or third party service providers. For example, the Statement of Investment Policy (SIP), which is approved by the Board, clearly identifies the responsibilities of the Board, the Executive Director, the Chief Investment Officer (CIO), the Investment Committee, Investment Staff, Investment Service Providers, Investment Managers, Investment Consultants, and the Investment Compliance Analyst.

***C1.1.3 SERS has developed a strong governance framework which provides effective Board oversight of investment manager selection.***

As mentioned in the Standard of Comparison in this section, the delegation of authority for selecting, hiring and terminating investment managers by the Board in 2012 was a very important decision for SERS. Our experience with other public pension funds indicates that more funds are moving in this direction, although it appears that investment decisions have been delegated to staff in only about 25-30 percent of funds with AUM larger than \$10 billion.

When properly implemented, with qualified investment staff, clear guidelines, periodic monitoring, appropriate assurance and independent reassurance to the Board, delegation is a leading practice which allows the Board to more effectively fulfill its oversight role for the entire organization and not spend the majority of its time meeting with and selecting investment managers. However, it is critical that the reporting mechanisms to the Board function well and the Board receives the information it needs to provide effective oversight. Our assessment concludes that, while still evolving in some areas, SERS has done an effective job of transitioning to delegated manager selection. We base this assessment on the following observations:

1. The SIP includes the Board's statement of investment beliefs and risk tolerance, its investment allocations by asset class and strategy, and a series of related policies and performance expectations;
2. The CIO provides the Board with a complete summary of transactions completed on a monthly basis. The summaries include the Staff Investment Committee (SIC) minutes, due diligence process, and decision rationale;
3. The SIC, as chartered in the SIP, is chaired by the CIO, and includes other investment officers as voting members. The Executive Director, Investment Operations, Enterprise Risk Management Officer, General Counsel and Chief Financial Officer attend all meetings as non-voting members. Each investment must have two sponsors, and the sponsors must provide the investment thesis, their recommendation, and supporting documentation. As a result, there is a rigorous vetting process;
4. The ED, as a non-voting member of the SIC, is in a position to participate in the vetting of every proposed investment and, ultimately, has veto authority;

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5. SERS utilizes the BarraOne risk management system, and prepares risk reports to the Board on a regular basis. Several Board members commented that they are comfortable with the risk reports they receive;
6. The SERS Internal Audit function, while still developing, has been significantly improved over the past two years and is functioning effectively. The Board, through the Audit Committee, is actively engaged with the CAO and receives regular reports from him;
7. Daily compliance screens are run on SERS' holdings using the Master Record Keeper's Compliance Monitor software. Monthly and quarterly investment compliance reports are reviewed by the Executive Director and CIO and are provided to the Board;
8. The Board was actively involved in selecting the current general investment consultant, and the consultant understands that they report to the Board, while at the same time providing assistance to the investment staff. However, the Board has not consistently conducted an annual evaluation of the consultant's services, which was one of the FAS 2013 Report recommendations; and,
9. SERS regularly engages CEM Benchmarking to benchmark and evaluate SERS' investment program from a cost and performance standpoint. In addition, in 2012 SERS Board engaged FAS to conduct a fiduciary performance audit of investment operations.

We conclude that SERS has effectively developed the Board assurance and independent reassurance processes which should allow the delegated investment program to continue to function with effective Board oversight.

### Recommendations for Improvement

The SERS governance structure and reporting to the Board are generally sound and effective. Recommendations for potential improvement are:

- R1.1.1 The SERS Board should meet annually with the general investment consultant to discuss past performance and expectations for the upcoming year to ensure that the Board is receiving the independent reassurance it desires.***

Ideally, these meetings with the general investment consultant would be in executive session to allow open dialogue and feedback to the Board regarding the investment strategy and performance and the performance of the SERS investment staff. However, we understand that the current Ohio open meetings statute may not allow for this discussion to be in executive session.

## 1.2 Policies and Role of the Board vis-à-vis SERS Staff, Advisors, and External Managers

### Review Activities

For this segment of our review, the FAS team reviewed SERS' governing statutes and rules, including Chapter 3309 of the Ohio Revised Code, the Board's governance policies, Statement of Investment Policy and related policies. Board reports and communication with staff, Internal Audit reports, senior staff position descriptions, external manager contracts, service provider reports and monitoring analyses, the CEM benchmarking report and the FAS Benchmark Survey Report were also reviewed. In addition, the FAS team interviewed senior SERS staff members, all Board members and selected outside managers and service providers.

The FAS team compared SERS' policies and practices to those of peer public retirement systems and to pension industry leading practices. This includes data from the CEM and FAS benchmark surveys and the FAS team's experience working with other public pension funds.

### Expectations and Standard of Comparison

As the governing body for the pension system, the SERS Board is responsible for implementing the obligations assigned to it by law. These responsibilities include establishing mechanisms for prudent selection, instruction and monitoring of staff, advisors and managers. The Board's fiduciary duties contemplate that it delegates to qualified agents who have the expertise and capacity to implement the policies and assigned tasks. Pension fund industry policies and practices provide a standard of comparison for evaluating whether it appears that SERS is meeting its obligations.

While peer practices of similar pension funds should not be imposed as a one-size-fits-all standard, they do provide a point of reference for evaluating reasonableness of practices. Nevertheless, comparisons should recognize any differences in characteristics of the respective funds (e.g., structure, staffing levels, budget authority, risk appetite). In the case of SERS, this includes recognition that it is amongst the funds which have adopted the leading practice of delegating authority for selection of external investment managers to expert investment staff. FAS has taken this into consideration in evaluation of SERS policies and practices relating to selection and oversight of investment managers

### Findings and Conclusions

***C1.2.1 The Board's policies and practices for interacting with staff, advisors and managers is consistent with similar peers' policies and, in some instances, are amongst industry leading practices.***

When staff has a sufficient level of investment expertise, the trend amongst SERS' peers is for the Board to delegate primary responsibility for selection, termination and oversight of external investment managers to the staff internal experts. SERS investment staff and CIO appear well qualified to perform

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these functions, and the Board has broadly delegated investment responsibilities to them within established policies. Investment staff is supported by recommendations from SERS' investment advisory in exercising manager selection duties. The Board continues to monitor this delegation and reviews various risk and performance reports on a regular basis.

Table 1.1 shows that SERS' peers are equally split on where the board retains or delegates primary risk management and investment manager selection responsibilities. (SERS practices are identified in green.) The trend has been toward building internal staff investment expertise and delegation of these duties to staff. SERS practices are consistent with this trend and with practices of other funds that have also delegated manager selection to investment staff. (See tables 1.1 and 1.2.)

*Table 1.1: Board Decision-Making*

What are the roles of each of the following groups for the indicated activities of the investment fund? Please indicate from the drop-down menu whether the role for that group is:	Number of Responses (N=15)				
	1. Approve	2. Oversee	3. Recommend	4. Monitor	Not Applicable
Investment risk management - Fiduciary (Trustee or Board)	7			6	
Investment risk management - Advisory Committee		1	2	1	
Investment risk management - Investment Staff	6	1	6	1	
Investment risk management - Consultant		2	4	1	
Manager hiring and termination - Fiduciary (Trustee or Board)	8	2		4	
Manager hiring and termination - Advisory Committee		1	2	1	
Manager hiring and termination - Investment Staff	8		7		
Manager hiring and termination - Consultant	1	1	7		

Source: 2012 NYS CRF Study

*C1.2.2 SERS does not appear to consistently make as much use of its investment consultant's expertise as do some peer funds.*

As it is at SERS, ongoing investment manager evaluation and internal staff evaluation are typically delegated at similar peer funds to the investment staff. (See Table 1.2 below.) This seems appropriate, given the Board's delegation of investment authority and the expertise of SERS' investment staff.

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While SERS' investment staff uses the investment advisor's data and analyses in making manager selection decisions, it appears that SERS could make greater use of its investment consultant on related matters, such as strategy development. In our experience, peers tend to make greater use of their consultants and investment advisors in this area. Some of this could be the result of SERS' level of internal expertise especially on risk management and some is due to SERS' desire to have the investment consultant provide a truly independent viewpoint, rather than work so closely with staff that groupthink develops. One result of that can be that a consultant is not as familiar with the strategic thinking of the investment officers as would be desired. Additionally, the recent change in investment consultants means that SERS asset class heads are not as familiar with the capabilities of its new consultant. While protecting the consultant's independence is leading practice. SERS might be passing up an opportunity to access additional information and expert perspectives. Accelerating the onboarding process to deepen the knowledge of the SERS staff as to the consultant's capabilities by asset class could mitigate that risk, while maintaining the appropriate level of independence.

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Table 1.2: Board Decision-Making

What are the roles of each of the following groups for the indicated activities of the investment fund? Please indicate from the drop-down menu whether the role for that group is:	Number of Responses (N=15)				
	1. Approve	2. Oversee	3. Recommend	4. Monitor	Not Applicable
Ongoing investment manager evaluation - Fiduciary (Trustee or Board)	1	2		8	
Ongoing investment manager evaluation - Advisory Committee			1	1	
Ongoing investment manager evaluation - Investment Staff	11	2	1		
Ongoing investment manager evaluation - Consultant	1	4	3	1	
Ongoing internal investment staff evaluation - Fiduciary (Trustee or Board)		4		6	
Ongoing internal investment staff evaluation - Advisory Committee		1		1	
Ongoing internal investment staff evaluation - Investment Staff	11				
Ongoing internal investment staff evaluation - Consultant	1	2			
SERS: The Board confirms or rejects the Executive Director’s appointment of CIO. The Executive Director is tasked with appointing, discharging, and retaining the CIO and the investment staff.					
SERS: The CIO monitors and evaluates Investment Staff performance.					

Source: 2012 NYS CRF Study

### Recommendations for Improvement

The Board's policies and practices in using staff, advisors and managers appear to be consistent with similar peers and appropriate for SERS. However, there might be an opportunity to more effectively use the data and expertise of SERS' investment advisor in additional areas.

***R1.2.1 The Chief Investment Officer and investment staff should consider whether there are additional investment consultant resources that could be accessed and used in strategy development and oversight.***

This recommendation supplements R1.1.1, above, which recommends that the Board meet with the consultant and periodically evaluate the delivery and use of its services.

## 1.3 Board Oversight and Monitoring Activities, including Succession Planning for Key Positions

### Review Activities

To evaluate the Board's oversight and monitoring activities, we reviewed Board-related provisions in Chapter 3309 of the Ohio Revised Code, SERS' policies, audit reports, investment benchmarks, Board meeting summaries and Board reports, including those on strategic plans, risk and return. We also evaluated the succession plans for positions that report directly to the Board.

### Expectations and Standard of Comparison

The standards of comparison used by FAS include both peer practices and the legal duties of the SERS Board under the Ohio Revised Code.

### Findings and Conclusions

The standards of Board oversight and monitoring duties are evident in the results of our review, including evaluations of the policies, quality of direct Board hires, delegations of responsibility, Statement of Investment Policy, assurance and reassurance practices, risk and return analyses and other Board meeting materials. The findings and conclusions set forth throughout this report also relate to the effectiveness of the Board's oversight and monitoring activities. The general conclusions below should be read in conjunction with the remainder of this report.

***C1.3.1 Except as mentioned elsewhere in this report, the Board's oversight and monitoring activities appear to be reasonable and appropriate in comparison with peers.***

Virtually all of SERS' peers have their investment staff or advisors report to the Board either quarterly or monthly. SERS is amongst the one-third of funds that do monthly reporting.

Table 1.3: Investment Reporting to the Board

What is the frequency of activity reports to the fiduciary from the investment staff and/or investment agent(s) to whom investment decisions have been delegated?	Number of Responses (N=15)				
	Monthly	Quarterly	Semi-Annually	Annually	Other
Public Assets	5	9	0	0	1
Private Assets	4	10	0	0	1
Cash and Liquid Assets	6	8	0	0	1

Source: 2012 NYS CRF Study

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***C1.3.2 The SERS Board has adopted a comprehensive set of policies that are consistent with its peers.***

The FAS peer survey found that SERS has nearly all of the key policies in place that have been adopted by its peers. The exception is a policy on Board self-assessment, which is discussed in subsections 1.9 and 1.11.

*Table 1.4: Board Policies*

Please indicate whether your system has the following policies and, if so, if they are defined by the Board or in state statute.	Board-defined policy	Defined in statute	Defined by a state agency	Staff-defined policy	No defined policy
Audit policy	5	1	1		
Board contacts with staff and requests for information	2			1	4
Board education policy	5	1	1		
Board ethics and standards of conduct	3	4			
Board self-assessment policy			2		5
Contacts with board members during RFP process and reporting	1	2	1		3
Expense reimbursement policy	1	2	4		
Funding and valuation policies	1	5			1
Gift policy		4	1		2
Human resources policy		1	2	1	2
Indemnification/insurance policy		3		1	3
Privacy policy	1	4		1	1
Procurement policy	2	3	2		
Vendor referrals by Board members		1		1	5
Whistleblower and/or complaint handling policy	1	2	2		2

Source: 2014 SC PEBA Study

***C1.3.3 The Board has prepared succession plans for the key positions that report to it (the ED and Internal Audit Director).***

The 2013 FAS Report recommended that SERS prioritize succession planning. That recommendation has been satisfactorily implemented with the preparation of succession plans for the ED and Audit Director. The ED plan has been put into operation with the recent retirement of Lisa Morris. The staff succession planning process is discussed in C2.2.4.

Recommendations

***R1.3.1 After the process for replacing the Executive Director is completed, the Board should evaluate how well the direct report succession policy worked in practice and make any needed modifications.***

## 1.4 Board and Staff Processes for Compliance with Applicable Laws, Administrative Rules and Policies

### Review Activities

Chapter 3309 of the Ohio Revised Code and related Administrative Code sections within scope of the review were examined in conjunction with Board policies and practices.

### Expectations and Standard of Comparison

The Ohio Statutes establish legal requirements that govern SERS and the Board. In turn, the Board interprets and implements those laws through creation of Administrative Code provisions and policies. SERS practices were evaluated in the context of those legal obligations.

### Findings and Conclusions

***C1.4.1 During the course of our review, we did not identify any material statutory, rule or policy non-compliance issues within scope of the project. However, related concerns regarding the Ohio structure for selection and contracting of the SERS custodian by the Treasurer of State are discussed in section 3. D.***

## 1.5 Conflict of Interest Policies and Procedures

### Review Activities

The FAS team reviewed the relevant conflict of interest policies that apply to the Board, which are the Ethics Policy and the Investment and Business Opportunity Referrals. We also reviewed Attorney General opinions, Chapter 102 of the Ohio Revised Code and other statutes that address conflicts of interest, including Chapter 2921 and 3309 of the Ohio Revised Code.

### Expectations and Standard of Comparison

The FAS team compared SERS' policies and practices to identify and address conflicts of interest with the leading practices at peer state retirement systems in the U.S. The SERS Board may be less likely to encounter conflicts of interest than other state retirement systems because it does not review and approve investment transactions.

### Findings and Conclusions

***C1.5.1 The Ethics Policy accurately describes Board members' obligations with respect to conflicts of interest and provides appropriate guidance to Board members regarding their obligations.***

SERS has adopted an Ethics Policy applicable to Board members and staff, which is required by statute. The Ethics Policy must be approved by the Ohio Ethics Commission and submitted to the Ohio Retirement Study Council for review, so it is somewhat difficult to amend.

The Ethics Policy is comparable to those at benchmark funds and provides appropriate guidance to Board members so they may comply with their fiduciary duties. The Ethics Policy incorporates Board members' ethics responsibilities in a single policy, which makes the policy more user-friendly than many peer funds. Many provisions in the Ethics Policy also apply to employees, but employees must also refer to a separate policy, Additional Standards of Professional and Ethical Conduct, which addresses standards of conduct and conflicts of interest applicable to employees.

The Ethics Policy effectively describes the obligations of Board members under Chapter 102 of the Ohio Revised Code in a concise, three-page policy. The brevity and legal language used in the Ethics Policy may make it somewhat difficult to understand and apply, but SERS has attached a publication from the Ohio Ethics Commission that describes Board members' responsibilities in plain English.

In the 2013 Final Report, FAS suggested that SERS incorporate references to the whistleblower policy into the ethics policies. We understand that SERS' whistleblower policy, Reporting of Suspected Misconduct, was adopted in 2015. SERS may consider revising the Ethics Policy to provide guidance for Board members on reporting conflicts of interests or simply direct them to the Reporting of Suspected Misconduct Policy.

***C1.5.2 The Financial Disclosure Statements adequately identify and disclose potential conflicts of interest.***

The Ethics Policy requires that Board members submit an annual Financial Disclosure Statement identifying Board members' sources of income, gifts, business contacts, creditors, debtors and certain investments. Board members submit the Financial Disclosure Statement upon appointment or election to the Board and acknowledge receipt of the Statement and the ethics laws in writing. Board members submit an updated Financial Disclosure Statement every year thereafter. The Financial Disclosure Statements are submitted to the Ohio Ethics Commission and become public record.

In the 2013 Final Report, FAS suggested that SERS review the Financial Disclosure Statements submitted by staff to identify any activity that should generate further inquiry or follow-up. To implement the recommendation, SERS' Internal Audit team conducts an annual compliance review of the investment staff's conflicts of interest disclosures. However, it is not clear whether the Board's Financial Disclosure Statements are subject to a similar review when filed at the Ethics Commission, nor is the SERS Audit Committee made aware of any violations. SERS may wish to develop a policy or procedure to have the General Counsel review Board members' Financial Disclosure Statements to ensure that the Board is made aware of conflicts disclosed by Board members in their Financial Disclosure Statements.

***C1.5.3 The Investment and Business Opportunity Referrals Policy adequately protects Board members from the appearance of impropriety.***

The Board has adopted the Investment and Business Opportunity Referrals Policy to guide Board member conduct in response to proposals for investments or other business opportunities. The policy instructs Board members to refer such proposals to the CIO or Executive Director, which is consistent with leading practices among other U.S. pension plans.

## Recommendations for Improvement

The policies and procedures adopted by the Board to address conflicts of interest are generally sound and effective. Recommendations for potential improvement are:

***R1.5.1 The Board may wish to amend the Ethics Policy to describe how Board members may report conflicts of interest or ethics violations and/or reference the whistleblower policy (i.e., the Reporting of Suspected Misconduct Policy).***

***R1.5.2 The Board should consider adopting a policy or procedure to have the General Counsel review Board members' Financial Disclosure Statements to address potential conflicts of interests at the Board level.***

## 1.6 SERS Board authorities and performance and areas where the Board is unduly limited

### Review Activities

The FAS team reviewed the Ohio statutes and administrative rules governing SERS, interviewed all SERS trustees and senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' Board authorities.

### Expectations and Standard of Comparison

A key aspect of the governance structure for a public retirement system is the oversight structure established through state law and regulation. The critical differentiator among public pension funds tends to be the ability of the board to fulfill its fiduciary duties unimpeded by legal or legislative constraints. Common examples of impediments or constraints are:

- Control of budgets and headcount often remains with the legislature or state budget-setting apparatus. Our research indicates that about half the state funds require legislative approval for their annual operating budget, even though the funding comes directly from pension fund earnings, not state general funds. Restricting budgets and headcounts often results in understaffing in critical areas such as investment management, risk management, due diligence, and compliance as well as key support functions such as information technology.
- When pension fund executives are compensated according to a civil service or otherwise imposed salary structure, compensation packages are often not competitive with the private sector. As a result, the fiduciary board does not have the ability to offer market-based compensation packages to hire and retain appropriate staff expertise. This typically results in a higher level of external investment management and significantly higher investment management costs borne by the fund. According to our research, about half the state funds must comply with imposed compensation guidelines for investment staff salaries and bonuses.
- There are many examples of legal lists for allowable investments that limit investment options (in our research this applies to the majority of funds). Such limits may prevent those fiduciary boards from making the most prudent investment decisions for the fund or could trigger sub-optimal required rebalancing activity.
- Most public pension funds are exempt from standard state procurement processes for hiring of investment managers and investment consultants. However, there are instances where information systems and non-investment-related third party support procurements must comply with standard state purchasing policies and processes. This can inhibit the ability of a fund to implement and update its infrastructure in a timely fashion to adapt to the increasing complexities of investments found in most portfolios today.

- The custodial bank is an integral part of the day-to-day operations of a public retirement system which manages a complex investment portfolio. There are several states (the FAS team is aware of three, including Ohio) where the retirement system Board of Trustees is not allowed to select their custodial bank and oversee the relationship, as this has been reserved by statute for the state treasurer. While this can operate effectively, it depends significantly upon the relationship between the retirement system and the state treasurer, and there have been instances where a poor relationship resulted in significant dysfunction.

## Findings and Conclusions

### ***C1.6.1 The current Ohio statutes do not place undue restrictions on the SERS Board regarding its annual budget or ability to hire staff, as necessary for the effective operation of the retirement system.***

The portion of the state code which addresses the SERS administrative budget is over 50 years old, but provides for the SERS Board to annually approve and transfer to the expense fund those amounts necessary to defray estimated administration costs. Based upon FAS team experience with other public funds, this could be considered a leading practice because it appropriately aligns authority for resourcing the retirement system with those who have fiduciary responsibility for managing the system and the trust funds.

According to O.R.C. Section 3309.62 Estimating expenses annually: “The school employees retirement board shall estimate annually the amount required to defray expenses of administration in the ensuing year and may apportion such expenses among the members. The amount so apportioned in any year shall not exceed three dollars per member. If the amount estimated to be required to meet the expenses of the board exceeds the amounts apportioned by the board, the amount of such excess shall be paid from the guarantee fund. If, in the judgment of the board, as evidenced by a resolution of that board recorded in its minutes, the amount in the guarantee fund exceeds the amount necessary to cover the ordinary requirement of that fund, the board may transfer to the expense fund such excess amount not exceeding the entire amount required to cover the expenses as estimated for the year and the board may then apportion the remaining amount required for the expense fund among the contributors. Effective Date: 08-01-1959”

Although the SERS Board is required to submit its annual administrative operating budget to the Ohio Retirement Study Council in advance of the fiscal year, this is an appropriate oversight function for the ORSC and is not an undue burden on SERS.

### ***C1.6.2 The current Ohio statutes do not unduly restrict the ability of SERS to appropriately compensate its staff.***

The SERS Board is allowed to hire and compensate retirement system staff as it deems appropriate, with budget oversight by the ORSC. O.R.C. Section 3309.041 (B) allows for the SERS Board to award investment staff bonuses, with the rules governing the bonus program subject to review and oversight by the ORSC, similar to the overall administrative budget. This allows SERS to attract and retain a competent, motivated

staff. Allowing the Board of Trustees flexibility to appropriately compensate system staff can be considered a leading practice because it also aligns authority and responsibility with the Board.

***C1.6.3 The investment authorities conveyed upon the SERS Board are leading practice for a public pension fund and the Board is not unduly restricted in any way in the types of investments it may hold nor the quantities.***

The investment authorities granted to the SERS Board are defined in O.R.C. Section 3309.15 Investment and fiduciary duties of board, which states that the SERS Board is expected to invest the funds of the retirement system according to the prudent person standard, specifically, investing “with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.” In addition, Section 3309.15 states; “The board may establish a partnership, trust, limited liability company, corporation, including a corporation exempt from taxation under the Internal Revenue Code, 100 Stat. 2085, 26 U.S.C.A. 1, as amended, or any other legal entity authorized to transact business in this state.”

There do not appear to be any significant restrictions on the types of investments SERS may hold, nor any limitations on the amount of each type of investment in the portfolio so long as it meets the prudent person standard. While there is additional scrutiny and reporting on investments in Iran and Sudan, these are quite common among public pension funds. Nevertheless, creation of legislative restrictions could become a concern if they were an impediment to SERS fulfilling its fiduciary obligations.

***C1.6.4 SERS is not impeded by state statute with respect to procurement of goods and services necessary to effectively operate the retirement system.***

SERS is not required to follow any state-determined procurement processes for goods or services it purchases. As such, it has adopted its own policies and processes which it utilizes to successfully operate the retirement system. This can also be considered a leading practice, as state restrictions on retirement system procurements typically hinder effective day-to-day and long-term operations by impeding timely procurement of supporting risk management and other key information systems and/or important third party services.

***C1.6.5 The Ohio statute which designates the Treasurer of State as the SERS custodian of funds is unusual and, depending upon the relationship between the TOS and SERS, can result in a suboptimal choice of custodial bank and unnecessary controls and delays due to added layers of oversight.***

O.R.C. Section 3309.12 states that “The treasurer of state shall be the custodian of the funds of the school employees retirement system, and all disbursements therefrom shall be paid by the treasurer of state only upon instruments duly authorized by the school employees retirement board and bearing the signatures of the board.”

See section 3.d.16 and 17 for a full discussion about the TOS role with the selection and oversight of the custodial banks.

## Recommendations for Improvement

***R1.6.1 If the SERS Board is not given authority to select its custodial bank and oversee the custodial relationship, SERS should request that the TOS comply with ethics and compliance assurance standards similar to those required for other providers of fiduciary services.***

While the current TOS has put procedures in place to allow greater SERS participation in selection of the custodian, there are potential risks and financial costs associated with the Ohio structure that should be recognized and addressed. As was noted in the 2013 Report, the Ohio Attorney General opined in 1993 (Ohio Op. Atty. Gen. No. 93-054) that the Treasurer of State is subject to fiduciary standards of care when performing investment-related activities. The same assurance processes as apply to other SERS fiduciaries should be used with the TOS.

## 1.7 SERS' Budgeting and Monitoring Processes

### Review Activities

The FAS team reviewed the SERS budget policy and budget reporting policy, interviewed all SERS trustees and senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' budgeting and monitoring processes.

### Expectations and Standard of Comparison

According to the Greater Washington Society of CPAs Educational Foundation, "A good budgeting process engages those who are responsible for adhering to the budget and implementing the organization's objectives in creating the budget. Both finance committee and senior staff participation is built into the process and a timeline is established leaving adequate time for research, review, feedback, revisions, etc. before the budget is ready for presentation to the full board. The annual budgeting process should be documented, with tasks, responsibility assignments and deadlines clearly stated. A good budgeting process also incorporates strategic planning initiatives and stipulates that income is budgeted before expenses. Fixed costs are identified and related to reliable revenue. Budgeting decisions are driven both by mission priorities and fiscal accountability."

One of the key aspects included in the above statement is the linkage to strategic planning initiatives. A public retirement system typically does not have a capital planning process which identifies key capital investment needs, so it is very important that longer-term project spending is identified and appropriately included in the annual budget.

Since a significant portion of the administrative costs of a retirement system are personnel related, prevailing practice is to budget and monitor staffing headcount by department.

Costs in a number of operational areas in a public retirement system can be driven by volume of activity – for example, costs related to processing new retirees, or costs related to updating member files to conform to rule changes. An effective budgeting process identifies those costs which are primarily fixed and not sensitive to changes in activity levels and those costs which are significantly subject to fluctuation. For those costs which are activity-level dependent, the budget assumptions should specifically include the anticipated volumes which drive costs so that any variance, either over or under budget, can be readily understood.

Regarding budget monitoring, we would expect to find the annual budget to be calendared monthly to allow tracking and reporting on a monthly process. Each department head who is responsible for their budget would receive monthly performance reports on a timely basis, would become aware of any significant variances, and would report to the executive team regarding the source of the variance and whether or not any corrective action was warranted.

## Findings and Conclusions

### ***C1.7.1 SERS has a comprehensive budget policy which is implemented effectively.***

SERS has a detailed Budget Policy which has recently been updated. The Chief Financial Officer (CFO) leads the process, reviews the proposed budget with the Executive Director, and the Board approves the final budget. Prior to Board approval, a two- to three-page summary of the proposed budget is submitted to the Ohio Retirement Study Council (ORSC) for review and comments.

The annual budget includes three components:

1. SERS' Administrative Budget
2. Requests for capital contributions to SERS-controlled Limited Liability Companies (LLCs)
3. Investment Costs and External Manager Fees

The budget policy states: "The Administrative Budget shall be divided into Major Categories and the expenditure authority given by the Retirement Board shall be at the Major Category level. The Executive Director has the authority to exceed the Administrative Budget for a Major Category by 10%, provided that total expenditures for the System do not exceed the total budgeted.

The Executive Director and staff shall take all reasonable steps to see that expenditures do not exceed the approved level. Expenditures that cumulatively exceed 110% of the approved Administrative Budget for any Major Category or total expenditures in excess of total budgeted expenditures require prior approval of the Retirement Board.

Expenditures for general furniture and equipment shall be capitalized or expensed in accordance with the System's Capitalization/Expensing of Assets Policy (FIN1-008). The Executive Director may adjust the Administrative Budget between expenses and capital within the Administrative Budget for these items."

The five Major Categories currently utilized in the SERS budget process are: Personnel Services; Professional Services; Communications Expense; Other Operating Expense; and Administrative Capital.

The Budget Policy describes the responsibilities of the Board, the ED, the CFO, the Controller, the Budget Analyst, Budget Administrators in each department, the Purchasing Agent, Investment Accounting, Administrative Services, and Human Resources.

According to the Budget Policy, the required information requested of each department when submitting their budget request includes:

- Explanation of the basis of budgeting
- Concise descriptions of the expenditures budgeted
- Requested budgeted amount and headcount compared to most recent current budget and headcount
- Current year forecasted actual expenses
- Supporting details of direct expenses

Requirements for budgeted capital expenditures include groupings by major project, organizational goal, and operational guidance requirements.

The Budget Policy document includes:

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- The annual schedule of activities
- Detailed instructions for preparing the administrative budget for each cost center
- Detailed instructions for furniture and equipment budgeting
- Detailed instructions for planning and estimating investment costs and external manager fees
- Detailed instructions for personnel budgeting, including the role of Human Resources
- Instructions for preparing the overall SERS budget for presentation to the ORSC
- The SERS budget approval process
- Budget administration and security requirements

The Budget Policy also describes the process for potential revisions to an approved budget should a forecast indicate that annual expenses may exceed the ED's budget authority.

Based upon our interviews with SERS staff, the Budget Policy appears to be followed appropriately. The Controller, who reports to the CFO, coordinates preparation of the operational budget. She describes the process as a "zero-based approach" where each department must justify each operational cost element, in addition to explaining any proposed variances to the prior year. Staff headcount is an important element of each departmental budget.

***C1.7.2 The SERS budget reporting policy and process is effective.***

SERS also has a Budget Reporting Policy which addresses annual and ad hoc reporting to the ORSC and monthly variance reporting to SERS executives and the Board. The policy also includes the requirement for a forecast of actual-to-budget expenditures to be prepared during the third quarter of each fiscal year for the administrative budget and OSERS Broad Street LLC, which owns and manages the office building in which SERS operates.

The Budget Reporting Policy includes detailed instructions on requirements for four types of reports:

- Monthly and year-to-date variance reports for department heads and the ED
- Quarterly financial statements and budget reports to be presented to the Board
- Annual third quarter forecast of actual expenditures to budget for presentation to the ED and staff
- Annual SERS budget report to the ORSC

Based upon interviews with staff, the Budget Reporting Policy appears to be followed appropriately and functions effectively. The monthly reports are prepared and distributed and are an important management tool for SERS. There are occasionally issues with meeting the timing target of the twelfth day of the following business month. Board members stated that they are satisfied with the quarterly financial reports they receive. No other concerns were expressed to the FAS team concerning the budget reporting process.

***C1.7.3 The SERS budgeting and budget reporting processes are manually intensive, relying heavily on spreadsheets, and lack an integrated budgeting and reporting tool.***

SERS has developed effective budget policies and processes, but the processes are manually intensive, relying extensively on spreadsheets. SERS does not have a budgeting system which is integrated into its accounting general ledger system. As a result, the entire budgeting process relies on extensive use of spreadsheets which can be pre-populated with general ledger information, but must be manually

manipulated and collated into the overall SERS budget. SERS does use a reporting application to assist in preparing the monthly budget reports.

With the new SMART system being implemented during the first quarter of calendar year 2017, replacing the current MARS (Member and Retiree System) system, there should be some workflow improvements which streamline the budgeting and reporting processes. However, the SMART system will not fundamentally automate the budgeting and budget reporting process.

***C1.7.4 The SERS travel and expense reporting processes appear to have effective controls, but are heavily manual and inefficient and a lagging practice.***

One specific area of the overall budgeting process which is also coordinated by the Controller's Office is travel expenses. SERS has an Education, Travel and Expense Reimbursement Policy which applies to both trustees and staff. The policies are typical for a public retirement system and specify allowed expenses and guidelines for Board and staff travel.

SERS makes credit cards for travel expenses available to staff upon request. However, this is a relatively recent change and it appears that many staff who travel frequently are not aware of the current policy and utilize personal credit cards for business travel.

Travel expense data is submitted by an employee to their department travel liaison via spreadsheet. After the department head approves the expenses, they are submitted to the Controller's Office for review, then to the ED for final approval.

While the travel expense reimbursement process appears to be effective, with multiple levels of control, it also appears to be very inefficient and requires more manual intervention than should be required. Most organizations utilize travel and expense reimbursement tools, often web-enabled, which automate much of the process and facilitate a workflow approval process. A third-party travel administrator is also an option utilized by some organizations to both obtain favorable pricing and to automate travel administration.

## Recommendations for Improvement

The SERS budgeting and budget reporting policies and processes are sound and operate effectively. However, the processes are manually intensive and could be more timely.

***R1.7.1 SERS should consider implementing a budgeting module which integrates with the existing accounting general ledger system to improve timeliness of reporting and reduce manual effort.***

***R1.7.2 SERS Finance should ensure that the current travel administration policies for use of SERS credit cards is known throughout the organization to encourage broader implementation.***

***R1.7.3 SERS should consider alternative approaches for travel expense administration, including potentially acquiring a travel administration application or utilizing the services of a third-party travel administrator.***

## 1.8 SERS' Administrative Costs

### Review Activities

The FAS team reviewed the budget reports, the CEM Pension Administration and Investment Cost Benchmarking Reports, interviewed all SERS trustees and senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' administrative costs.

### Expectations and Standard of Comparison

The scope of this section of the review includes the administrative costs of the retirement system. Investment-related costs are addressed separately in Section Three: Investment Policy and Oversight.

SERS participates in periodic benchmarking of pension administration costs and service levels through studies conducted by CEM Benchmarking Inc. of Toronto, Canada. The CEM benchmarking analysis compares the cost of SERS' key activities to those of a selected peer group. The report provided by CEM provides a baseline against which SERS' performance can be measured. It is intended to be a tool to help manage performance by developing achievable goals in the areas of cost, service and transaction volumes, and considers pension administration cost relative to service levels achieved.

This review of SERS' administrative costs by FAS relies significantly upon the most recent CEM Benchmarking report which was submitted to SERS in April 2016 and compared SERS pension administration costs for fiscal year 2015 to those of 10 peer state public retirement systems.

Our analysis also includes a headcount comparison, by department, based upon a benchmarking study conducted by FAS on behalf of the South Carolina Public Employee Benefit Authority in late 2014. This study included seven public pension administration agencies, five of which also administer health insurance programs for their retirees.

### Findings and Conclusions

***C1.8.1 SERS' administrative staffing, based upon benchmarking data, appears to be slightly above the median overall; there may be an opportunity to redeploy Member Services staff after the SMART implementation is completed.***

FAS obtained headcount information from SERS for each administrative department. We excluded the investment management staff. We then compared SERS' administrative headcount to seven peer retirement systems who participated in a benchmarking study conducted in 2014. The results are shown on the following page in the first table. The second table shows headcount normalized for number of DB members served and/or health insurance lives covered, as appropriate.

This type of headcount comparison is crude because retirement systems can have different departmental definitions, some services can be outsourced, and a system can deliver a different range of member and

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employer services. In addition, this is a relatively small peer group. Therefore, the data should not be used to directly imply that SERS is over- or under-staffed in any particular area. Nonetheless, it does provide a point of reference which can be useful, particularly when combined with the CEM benchmarking analysis.

*Table 1.5: Administrative Headcount by Function*

Function (excludes investment management and health and insurance administration)	Number of Employees			
	Low	High	Median	SERS
Retirement administration	4	110	62	10
Member services	12	107	64	51
Employer services	0	45	4	9
Information technology	2	72	35	35
Legal	1	17	7	4
Finance and accounting	5	89	29	15.5
Other general administration and support	4	60	25	23
Other	0	73	6	7
<b>Total</b>	<b>29</b>	<b>368</b>	<b>242</b>	<b>154.5</b>

Source: 2014 SC PEBA Study

On the next chart, this headcount benchmarking data is normalized to peers based upon staffing in each area relative to number of members and/or lives covered. Compared to the median of the peer group, SERS is more heavily staffed in Information Technology, and has fewer staff, on a relative basis, devoted to Retirement Administration, Employer Services, and Finance and Accounting.

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*Table 1.6: Normalized Administrative Headcount by Function*

Function (excludes investment management)	Number of Employees			
	Low	High	Median	SERS
Retirement Administration FTEs per 100,000 DB Members	2.7	122.2	17.5	5.1
Member Services FTEs per 100,000 DB Members + Lives Covered *	68.2	261.1	75.0	211.4
Employer Services FTEs per 1,000 Employers	0	24.3	6.2	4.2
IT FTEs per 100,000 DB Members	3.4	32.3	9.3	17.8
Legal FTEs per 100,000 DB Members	0.3	11.2	1.7	2.0
Finance and Accounting FTEs per 100,000 DB Members + Lives Covered	3.0	22.8	8.5	6.4
Total FTEs per 100,000 DB Members	49.1	265.0	66.5	85.3

\* Excludes two agencies which do not administer health insurance

Source: 2014 SC PEBA Study

The largest staffing difference appears to be in Member Services, where SERS has nearly triple the median of the peer group, although not the largest in the group. While some of this may be due to categorization (i.e., some Member Services staff may be performing duties categorized as Retirement Administration by other systems), this could be due to the older MARS IT platform which is being replaced by SMART. Perhaps some of the Member Services headcount could be redeployed once the new SMART system is operational. IT staffing is above the median, but not nearly the highest in the group, and may be somewhat higher than normal due to the SMART implementation currently underway.

Based upon this data, it appears SERS overall is somewhat above the median in administrative staffing, but in the third quartile.

***C1.8.2 Based upon the CEM benchmarking cost analysis, SERS' cost per active member and annuitant is slightly higher than its peer group average; the major difference is in cost of office space.***

The CEM benchmarking analysis addresses pension administration costs only, but includes all costs, internal and external, is normalized for system size and volume of activity, and is broken down into a significant level of detail to understand why costs may be different among the peer group.

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*Table 1.7: Cost per Member and Annuitant by Cost Category*

Category	\$ per Active Member and Annuitant		Total \$(000)
	SERS	Peer Avg.	SERS
Member Transactions	\$ 14.38	\$ 11.81	\$ 3,004
Member Communication	\$ 12.64	\$ 13.05	\$ 2,640
Collections and Data Maintenance	\$ 4.85	\$ 7.13	\$ 1,014
Governance and Financial Control	\$ 11.48	\$ 7.18	\$ 2,397
Major Projects	\$ -	\$ 6.86	\$ -
Information Technology	\$ 19.28	\$ 16.84	\$ 4,026
Support Services and Other	\$ 21.56	\$ 15.84	\$ 4,502
<b>Total Pension Administration</b>	<b>\$ 84.19</b>	<b>\$ 78.71</b>	<b>\$ 17,583</b>

Source: FY2015 CEM Defined Benefit Administration Benchmarking Analysis

As shown in the summary table above, in FY 2015 the SERS cost per annuitant was \$84.19 versus a peer group average of \$78.71, or about 7 percent above the peer average, and the total annual cost was about \$17.6 million. This total excluded the fully-attributed cost of administering healthcare, and optional and third-party administered benefits of \$3.9 million.

The difference of \$5.49 per annuitant (\$84.19 - \$78.71) was explained by CEM as resulting from the following difference as compared to the peer group:

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*Table 1.8: CEM Analysis of Cost per Member and Annuitant Differences*

Reason	Impact O/(U)
1. Economies of scale disadvantage	\$0.81
2. Higher transactions per member (workloads)	\$0.19
3. Higher transactions per FTE (productivity)	\$(3.42)
4. Higher overall costs per FTE	\$13.06
5. Higher third-party and other costs in front-office activities	\$1.01
6. Paying more/-less for back-office activities:	
- Governance and Financial Control	\$ 3.86
- Major Projects	\$(7.72)
- IT Strategy, Database, Applications (excl. major projects)	\$0.62
- Actuarial, Legal, Audit, Other Support Services	\$1.68
<b>Total</b>	<b>\$5.49</b>

Source: FY2015 CEM Defined Benefit Administration Benchmarking Analysis

The major reason for SERS’ pension administration costs being higher than the peer group results from higher overall cost per FTE (full-time equivalent staff person), which accounted for more than double the net difference.

CEM explained the difference in cost per FTE as follows:

“Differences in what you pay per FTE reflect differences in:

- Cost environment. Labor costs in your area were 12% above the peer average.
- Square footage of office space per FTE.
- Organization structure, strategy and history.
- Using consultants for functions associated with high salaries. This will reduce your salary cost per FTE, but increase your third party cost.”

Of these cost variances, the largest was the Building and Utilities cost, which was about 2.5 times the peer average. This cost accounted for about half of the “Higher overall cost per FTE” variance.

If SERS were at the average cost for the peer group its pension administration costs would be lower by about \$1.1 million.

***C1.8.3 SERS' pension administration costs, according to CEM, are about 7 percent higher than the peer average; however, SERS costs have declined 6 percent over the past three years while the peer group has increased 8 percent.***

In total, the SERS pension administration cost, as measured and analyzed by CEM, has declined from \$89.49 to \$84.19 per active member and annuitant from 2012 through 2015, a reduction of 6 percent over three years. The peer average in 2015 was \$78.24, about 7 percent less than SERS, but the peer average has increased 8 percent over the past three years while SERS has decreased 6 percent.

It appears that SERS has been effectively utilizing the CEM benchmarking reports to continually lower its cost to serve over the past three years.

***C1.8.4 Many of SERS activities are below the average costs of the peer group; however, out of 30 activities, seven are in the highest quartile of cost and may be an opportunity for reduction.***

The CEM analysis also broke down expenses by 30 detailed activities across seven major categories and compared the cost of each activity to the peer group. The relative cost of performing individual activities as compared to peers and reported in the CEM report varies significantly.

In eight activities, SERS' cost is in the lowest quartile and could be considered low cost. SERS is in the highest quartile cost in seven activities as defined by CEM:

Pension inceptions:	\$298,000 over peer average
Mass communication:	\$347,000 over peer average
Financial administration and control:	\$209,000 over peer average
Government and public relations:	\$309,000 over peer average
Building and utilities:	\$1,320,000 over peer average
Human resources:	\$139,000 over peer average
Other support services:	\$406,000 over peer average

Some of these higher-cost activities will potentially be lower cost after the implementation of the new SMART pension administration system; for example, pension inceptions were higher cost primarily because of lower productivity per FTE. In addition, it appears that a significant portion of the higher costs in "other support services" was IT-related, which may also be able to be reduced.

SERS could consider changing practices in some areas which appear to be driving higher costs, for example:

- SERS mails 100% of member statements to active members' homes compared to 69% on average for the peer group and also sends a brochure to all active members every year, which is the practice at only 18% of peers.

The higher local salary costs in Columbus and higher occupancy costs in the SERS offices compared to the peer group, which drives some of the higher activity costs, is a more challenging cost factor and likely cannot easily be addressed in the short-term.

### Recommendations for Improvement

It appears that SERS has been focused on reducing its administrative cost in the pension area and has been steadily reducing the cost per member and annuitant, but is still slightly above peer costs. Potential opportunities to consider include:

***R1.8.1 Once implementation of the SMART system is completed and operating smoothly, SERS should undertake a review of each pension administration process to optimize staffing and, as appropriate, redeploy staff to other areas.***

***R1.8.2 SERS should consider an office occupancy review and determine if its current office space could be utilized more effectively and downsized to allow for more space to be leased to outside parties.***

## 1.9 SERS' Board Continuing Education Program and Ongoing Costs

### Review Activities

The FAS team reviewed provisions of the Ohio Revised Code and SERS policies relating to Board education. We also examined training materials, records and related budget information. Each of the Trustees was interviewed and asked about educational activities.

### Expectations and Standard of Comparison

Sections 3309.051 and 171.50 of the Ohio Revised Code set the standards for orientation and continuing education of SERS Trustees. 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, though SERS also provides supplemental Trustee education as a regular component of Board meetings.

Compliance with these statutory requirements was evaluated. We also compared SERS Board education activities with similar peer programs.

### Findings and Conclusions

***C1.9.1. The joint educational program established by the five Ohio public pension funds appears to be an efficient and valuable training event which implements the statutory orientation and continuing education requirements.***

The collaborative approach used by the five Ohio funds is a leading practice for providing Trustee orientation and continuing education. Participation by SERS Trustees and senior staff is an efficient way to receive training in a cost-effective manner.

***C1.9.2. Trustees have met their orientation and continuing education requirements. SERS Trustee education program is generally consistent with peer practices. However, there are opportunities for improving the SERS' Trustee training program.***

The combination of SERS' own Trustee orientation program, availability of session DVDs and integration of regular training into Board meetings appears to be an effective training process. Trustee participation is tracked and requirements are being met.

Education topics covered in SERS' Trustee training are consistent with practices of its peers. Additional areas included in some peer trustee education programs include financial acuity, emerging trends,

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strategy, board leadership and public/stakeholder relations. (See Table 1.9, below.) SERS may want to consider whether inclusion of these topics in its Trustee training would be beneficial.

*Table 1.9: Board Training Topics*

Type of Mandated Training	Responses	Type of Mandated Training	Responses
Fiduciary	14	Board Leadership	5
Investments	13	Public Relations	4
Ethics	13	Health Insurance	2
Pensions	11	Actuarial Management	1
Governance	10	PERS Legislative Process	1
Financial Acuity	6	Tax Code	1
Emerging Trends	6	New Member Orientation	1
Strategy	5	Sexual Harassment	1

Source: 2011 CalPERS Study

During the review interviews, we also received some feedback about opportunities to improve Trustee orientation and education. Suggestions included doing orientation earlier, so that new Board members are up-to-speed when they take office and initiating a Trustee mentor program for new Board members with experienced Trustees. In addition, the volume of information that must be absorbed by new Trustees is daunting. Meeting with each of the senior staff members to learn about their areas was also mentioned as a good orientation practice. It was suggested that repetition of key concepts through scheduled periodic refreshers at Board meetings might be helpful, especially in regard to application of fiduciary duty principles to specific issues that are likely to be encountered.

A desire for more third-party training, to ensure exposure to new ideas and different views, was also identified. While funding for attendance at external events was cited as a limiting factor, the current annual \$6,000 training budget for each Trustee to attend quality educational offerings outside of Ohio is consistent with peer expenditures. It is important for the Trustees to gain exposure to receive independent learning which allows them to learn broadly about the peer practices against which their fiduciary performance is measured. SERS existing policies which require Board approval for out-of-state Trustee travel, impose reasonable limits on expense reimbursements and provide for a report back to the Board on the training event should help to prevent inappropriate use of educational opportunities.

***C1.9.3. Training is not linked with Board self-assessment results.***

The FAS 2013 Report recommended that SERS link its continuing education program for Trustees to findings in the annual Board self-assessment. It stressed that the self-assessment and Trustee skills development process can be focused on improving the board as a whole and identify the collective areas where additional training would be helpful. The process need not be structured to single out individual Trustees. Prevailing and leading practice in board self-development includes a training plan for the entire

board, and might include individualized plans for each member, as well as a program for new members. (See Table 1.10, below.)

*Table 1.10: Board Training Plans*

Is there a training plan to address identified needs?	Yes	No
Overall board	12	5
Individual board members	9	8
New board members	15	2

Source: 2011 CalPERS Study

We understand that the Board did not choose to implement the prior FAS Report recommendation that a Board self-assessment be linked with training priorities. We believe this is a topic that should be reconsidered by the Board. See R 1.11.1 below. Even if the Board determines that it is not feasible to implement a meaningful self-assessment process under Ohio public records and meetings laws, a Trustee continuing education plan linked with needed skills development could be considered. The budget for Trustee training opportunities could also be tied to the skills development plan.

### Recommendations for Improvement

***R1.9.1 SERS should continue to participate in joint training programs with the other Ohio public pension funds and explore addition of new topics or segments that are of mutual interest.***

***R1.9.2. SERS should consider including additional topics in SERS internal Trustee training program, such as financial acuity, emerging trends, strategy, board leadership and public/stakeholder relations.***

***R1.9.3. SERS should also consider additional ways to improve effectiveness of Trustee training, such as:***

- ***Initiating a Trustee mentoring program to pair an experienced Trustee with each new Board member;***
- ***Ensuring that orientation is offered prior to a new Trustee attending the first meeting;***
- ***Including an opportunity during orientation to be introduced to each senior staff member and have a chance to become familiar with their area;***
- ***Establishing a more disciplined schedule for Board meeting refreshers on key practical topics such as fiduciary duty, ethics code provisions, funding and high level actuarial principles, Board policy provisions, and fundamental investment, employee benefits and risk management oversight responsibilities; and,***

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- *Encourage Trustees to attend quality third-party training opportunities to create a more rounded educational program.*

*R1.9.4. The Board should consider modifications to SERS' training protocol to link it with Board and Committee self-assessment results or an inventory of needed Board skills to address areas where collective Board member skill development is needed or would be useful. Also see section 1.11 on the implementation of a periodic Board self-assessment process.*

## 1.10 SERS' Stakeholder Communications and Plans

### Review Activities

For this part of the review, the FAS team reviewed statutes relating to SERS reporting requirements and interviewed Trustees and senior staff, including the External Communications Director. We also reviewed the SERS website, stakeholder communications policy and both the communications plan and crisis communications plan, as well as a sample of stakeholder communications.

### Expectations and Standard of Comparison

As a fiduciary, SERS has an obligation to provide accurate reports to its fund beneficiaries and employers on plan status and performance, as well as submit statutorily required statement of funds reports to participants, financial statements and various other reports. In addition, accurate stakeholder understanding of pension fund issues is critical to participants' retirement security, as well as to the plan's sustainability and success. We evaluated SERS communications practices in the context of these requirements and in relation to peer practices.

### Findings and Conclusions

***C1.10.1 SERS has a robust stakeholder communications policy, communications plan and crisis communications plan and intends to improve participants' ability to interact with SERS and obtain current information electronically as part of the SMART project.***

SERS' stakeholder communications policy, and its communication and crisis communication plans, are robust and consistent with leading peer practices. The crisis communication plan and new policy to develop customized versions of the SERS participant newsletter (to address the varying interests of younger and older participants) are leading practices. The program makes effective use of internal and external surveys, website and social media use metrics, peer benchmark comparisons and tracking of stakeholder contacts. In addition, the annual communications plan identifies objectives, target audiences, key messages and strategic initiatives. SERS' External Communications Director regularly reports to the Board. SERS' proactive engagement with stakeholders and its collaboration with other Ohio funds in responding to shared stakeholder concerns are also leading practices.

While the latest CEM benchmark survey noted that SERS' website lacks the same level of interactive participant functionality as most peers' websites, the SMART system is expected to provide tools to address that gap.

***C1.10.2 SERS might have an opportunity to improve its stakeholder communications policy, by considering other leading practice peer policy provisions.***

While SERS' communications policy and practices are well developed, a comparison to other leading peer policies indicates that there might be opportunities for improvement. For example, some funds have included policy provisions which designate a board spokesperson, establish a protocol for handling media

board contacts, address Trustee personal use of social media regarding pension fund matters and identify fiduciary limits on expenditure of plan funds for unrelated public policy or personal agenda purposes.

***C1.10.3 Inadequate plan participants' personal savings for retirement may be undermining their retirement readiness.***

During interviews, we were told that fund participants could benefit from more effective communications around the need for increased personal savings to ensure their retirement security. While SERS has an initiative in place which addresses this concern, consideration could be given to making it a higher priority.

Recommendations for Improvement

***R1.10.1 SERS could consider modifying its communications policy to specify a protocol for handling media contacts with Trustees and designation of a Board spokesperson, address limits on personal use of social media for SERS communications and reference any relevant fiduciary limits on expenditure of plan funds for unrelated matters.***

***R1.10.2 Consideration could be given to whether SERS should prioritize efforts to encourage participant personal savings for retirement through the deferred compensation program or other vehicles.***

## 1.11 Board Self-Assessment

### Review Activities

To make a comparison to leading, prevailing and lagging practices, we interviewed Board members and executive staff and we reviewed:

- SERS' governance policies, including charters, delegations, position descriptions, ethics and standards of behavior policies and communications policy;
- SERS' Board education and training program and materials;
- SERS' communications policies and plans;
- SERS' Audit Committee FY2016 Self-Assessment;
- A recent FAS benchmark survey on board self-assessment; and,
- FAS governance leading policies and practices knowledgebase;

### Expectations and Standards of Comparison

The performance of a public pension plan can be assessed in many ways. Fundamentally, the question is whether actual performance met or exceeded expected performance. The key to learning is feedback. The more frequent the feedback, the faster the learning. Olympic athletes, for example, depend heavily on feedback to continuously improve their performance. Given their fiduciary duties, trustees should likewise be seeking regular feedback. Trustees often show considerable interest in understanding how other public retirement systems operate and how their own system compares in terms of lagging, prevailing and leading practices. Required periodic self-assessments also provide an automatic mechanism to call out and address dysfunctional practices that might otherwise be difficult to bring up.

For trustees, regardless of their experience, feedback can come in many forms: peer benchmarking; independent reviews such as this one as well as self-assessment. In addition to Ohio, some jurisdictions such as Texas, South Carolina and New York require independent reviews.

Based on a recent FAS benchmarking survey of large public funds, 93% of the 14 boards in the study conducted regular self-assessments.<sup>1</sup> However, only 50% self-assess each committee and 43% assess each individual board member. Fifty percent of this peer group also perform their self-assessment using an external facilitator with a combination of questionnaires, interviews and open discussion. Although not common, leading practice is to provide individualized feedback and identify personal improvement goals for board members. Some jurisdictions require public disclosure of the assessment process and results, but most do not.

While most of the boards in our benchmark study conducted regular self-assessments, most do not assess each committee and individual board members.<sup>2</sup> Similarly, only a few use upward evaluation and peer-

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<sup>1</sup> Proprietary research by Funston Advisory Services LLC on "Public Pension Board Self-Assessment" 2016.

<sup>2</sup> We recognize that the SERS Audit Committee did conduct a self-assessment in 2016 which covered implementation of responsibilities contained in the Committee's charter.

to-peer evaluation. The 2013 FAS review of SERS investment operations recommended the Board adopt a self-assessment process with assistance from the Executive Director and an external facilitator.

## Findings and Conclusions

### ***C 1.11.1 The Board has not adopted a self-assessment process. This is a lagging practice.***

The Board considered but did not implement a 2013 recommendation regarding the adoption of a Board self-assessment process. Resistance to conducting a Board self-assessment appears to be related to concerns about: the purpose and context for the self-assessment; the process to be used and the amount of time required; how to ensure the results will be used constructively; how individual confidentiality will be protected; and, how objectivity and neutrality will be maintained. These concerns are not unusual but have been overcome by peer public pension fund boards. A clear understanding of the benefits of a self-assessment and how these concerns will be addressed should help to improve Trustee acceptance and could be cited as support for any legislation required to remove public records and meetings law roadblocks to the conduct of meaningful self-assessments.

When implementing a new process, it is very important that the first self-assessment be perceived as successful. Otherwise, there may be a lack of willingness to continue the process. When first beginning self-assessments, the use of an experienced facilitator can help improve the chances of success and ensure feedback is constructive. The Board could also use an evolutionary approach that begins with a limited self-assessment process utilizing criteria established by the Board that best reflect the level of knowledge of fiduciary and governance principles. Over time, the Board could further develop and implement an annual self-assessment process which assesses the whole Board, the chair and assistant chair (assuming the position exists), individual members, committees, and committee chairs and assistant chairs.

Given that some level of confidentiality is required to engage in a meaningful self-assessment, it is important to work with legal counsel in developing the process. A few jurisdictions recognize a self-assessment privilege and others allow results to remain confidential as related to Board personnel matters or privileged attorney-client communications regarding implementation of fiduciary duty liability prevention practices.

We recognize that Ohio law may not recognize such confidentiality privileges. If that is the case, we believe it would be appropriate to seek legislative changes based on existing precedent in other states. As fiduciaries, the Trustees are held to a standard of conduct which is imposed by fiduciary law and is stricter than what is expected of most other public officials. They owe legal obligations to fund participants, and allowing the Board to maintain confidentiality of self-evaluation information could help them improve governance practices so as to better fulfill those obligations.

### ***R1.11.1 The Board should consider whether it is feasible to adopt a meaningful self-assessment process within the public records and meetings law provisions in Ohio. If so, the process could be evolutionary.***

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***R1.11.2 The Board should work with its Chief Counsel to identify how public records and public meetings access requirements relate to self-assessment results and determine whether there is an appropriate process that would result in an honest and useful process by assuring the confidentiality of sensitive information.***

***R1.11.3 The Board may wish to collaborate with other Ohio public pension funds if it believes that pursuit of legislation to provide the same level of self-assessment confidentiality as is enjoyed by peer investment fiduciaries in other states is needed.***

## 2. Organizational Structure and Staffing

### Overview

SERS' organizational structure and management span of control is typical for a retirement system of SERS' scale, lines of authority are clear, and it appears to function effectively. SERS has a Chief Financial Officer (CFO), which is leading practice; however, the CFO does not report directly to the ED, which is leading practice. SERS has a separate organization with a Director-level leader for its health care insurance operations, which is a leading practice.

Despite having a separate health care organization, SERS effectively leverages its imaging, procurement and employer services functions to support both retirement administration and health care insurance operations.

Human Resources Policies and Practices function effectively. SERS has a comprehensive set of HR policies, many of which have been recently updated, which appear to function effectively and create a strong HR framework. SERS has been able to maintain healthy levels of staff turnover over the past three years. SERS has had a focus on its workplace culture and appears to have made progress over the past few years. SERS has developed and is implementing a leading practice succession planning process for public retirement systems.

Staff qualifications, hiring and evaluation processes appear effective. SERS' staff qualifications appear to be appropriate and staff are generally capable for those areas within the scope of our work. SERS' recruiting and hiring processes appear to be effective. SERS' performance management policies and processes are sound.

SERS' compensation policies and structure are clear. SERS has defined its compensation philosophy and compensation goals to guide its compensation policy and structure. The SERS Employee Compensation Policy defines the compensation approval processes and responsibilities for implementing the compensation philosophy. A comprehensive set of HR policies, which have recently been reviewed and updated, defines the overall SERS compensation and benefits program. SERS periodically benchmarks its salary structure through the use of an independent third party as its policy specifies.

SERS can improve its processes for monitoring, measuring and improving member satisfaction. The SERS strategic plan includes a focus on maintaining and improving levels of member service. While member service levels appear adequate today, SERS is anticipating that the new SMART system will provide a platform to make member service improvements. Although member service levels are satisfactory, SERS does not monitor some leading practice member services metrics.

SERS' staff training, continuing education policies and procedures are effective. Tuition and professional certification reimbursement policies are leading practice. SERS has effective training and continuing education practices, but not all are included in formal policy statements. SERS has a leading practice onboarding program for new employees which includes training and a structured review process. SERS has leading-practice tuition and professional certification reimbursement policies for their staff.

## Scope of Review

*The contractor will perform a review of the overall organizational structure of SERS and its capacity and effectiveness in implementing the policy and assignments delineated by the SERS Board and management. Specifically, this will include an analysis of:*

- *Staffing size, hiring procedures, staff qualifications, roles, compensation, performance evaluation requirements, and an analysis of these factors compared to other similar size public pensions;*
- *Adequacy of process to evaluate and improve customer/member satisfaction;*
- *Whether compensation levels are sufficient to facilitate SERS' ability to attract and retain qualified pension fund professionals; and,*
- *Monitoring and maintaining staff qualifications and continuing education requirements.*

## Sources of Information

For the organization staffing and structure review, we utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- SERS' human resources policies and procedures;
- SERS' staffing reports, including hiring, termination, vacancy and retirement eligibility;
- SERS' position descriptions;
- SERS' employee evaluation policies and procedures;
- SERS' internal employee satisfaction survey results;
- SERS member service reports;
- Most recent CEM pension administration benchmarking report for SERS;
- Most recent independent compensation study conducted for SERS;
- Interviews with SERS executives and staff, including the Director of Human Resources;
- SERS' employee continuing education and training program materials; and,
- FAS knowledgebase of retirement system staffing.

We relied upon existing compensation studies in evaluating the SERS compensation structure and also relied upon existing SERS and CEM pension administration reports in evaluating member satisfaction. Using the information described above, the FAS team:

1. Assessed the organization structure, staffing and capabilities of SERS as compared to peer retirement systems;
2. Reviewed human resources policies and practices and compared to leading practices;
3. Assessed staff qualifications and hiring and evaluation processes;
4. Evaluated SERS' compensation policies and structure;
5. Assessed SERS' processes for monitoring, measuring and improving member satisfaction; and,
6. Reviewed SERS' staff training and continuing education policies and program and compared to peer retirement systems.

## 2.1 Organization Structure, Staffing and Capabilities of SERS

### Review Activities

The FAS team compared SERS' organization structure, staffing and capabilities with leading practices at peer state retirement systems in the U.S. We reviewed the SERS organization structure and position descriptions of key executives, interviewed all SERS trustees and senior executives, conducted research on the organizations of 14 peer state integrated public retirement systems with Assets Under Management (AUM) between \$10 and \$20 billion, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' organization structure, staffing and capabilities.

### Expectations and Standard of Comparison

As referenced in Section 1 Board Governance and Administration, SERS is structured with the most common model among state public retirement systems, an integrated investment and pension administration organization with a single fiduciary board, with an Executive Director (ED) reporting to a Board of Trustees as the sole operating report. The organization structure and staffing also should take into consideration the services provided by SERS: defined benefit pensions and health insurance for annuitants. Our assessment in this review is based upon leading practices for this type of public retirement system which offers these services.

An effective organization structure facilitates overall organization performance. When assessing the organization structure of a public retirement system, key considerations include:

- Clarity of lines of reporting and responsibilities with appropriate spans of control:
- Appropriate assignment of responsibilities to operating departments to facilitate development of capabilities and coordination of work:
- Ability of support functions, combined with external service providers, to effectively serve operating departments;
- Segregation of duties from a control standpoint, where appropriate: and,
- Facilitation of information flow in support of internal and external communications requirements.

When evaluating the staffing and capabilities of a public retirement system and comparing to peer systems, it is important to understand any differences in services provided to members and annuitants, use of third-party providers vs. internal staffing, scale of operations, and any other areas which may not directly compare. Taking those factors into consideration, comparisons to peer retirement systems typically provide an indication of the appropriateness of a system's level of staffing. The capabilities of a system should be aligned with the services offered, regardless if they are internally-staffed or from a third-party provider.

## Findings and Conclusions

### ***C2.1.1 The SERS organization structure and management span of control is typical for a retirement system of SERS' scale, lines of authority are clear, and it appears to function effectively.***

The structure of the SERS organization starts with the Executive Director (ED), who has six direct reports, plus the Internal Auditor, who reports managerially to the Audit Committee but administratively to the ED. Based upon FAS research, of 14 integrated state pension funds between \$10 and \$20 AUM, the median span of control is between 4 and 5, but the slightly larger number of reports appears to work well at SERS.

### ***C2.1.2 SERS has a Chief Financial Officer (CFO), which is leading practice; however, the CFO does not report directly to the ED.***

Of the 14 peer funds included in our research, 10 have the position of CFO or its equivalent, which FAS considers a leading practice. Funds with a CFO typically have better capabilities in budgeting, financial reporting and internal controls than those who have an accounting department with a more limited scope of responsibilities.

SERS has a Deputy ED as one of the direct reports to the ED; this is the case at 12 of the 14 peer funds. The Deputy ED is an important position which has six direct reports including the Chief Financial Officer (CFO), Director of Member Services, Director of Health Care Services, Chief Technology Officer, Director of Human Resources, and Director of Administrative Services. The Deputy ED essentially has all retirement system operations reporting to her, as well as Finance.

Of the 10 funds in our peer research group which have a CFO position, five of those have the CFO report directly to the ED, which FAS considers leading practice. The CFO should generally report independently of the person who is responsible for operations, which is typically the Deputy ED, as is the case at SERS, or a Chief Operating Officer (COO). This is a more appropriate segregation of duties from an internal control and independence perspective and facilitates a more direct financial information flow to the ED and the Board.

### ***C2.1.3 SERS has a separate organization with a Director-level leader for its health care insurance operations, which is a leading practice.***

Health care insurance operations have characteristics which are very different than pension administration. For example, most services are typically provided by a third party; the market continues to rapidly evolve, requiring frequent plan changes and updates; having a health care insurance strategy which guides innovation and procurement planning is a critical factor; and, monitoring of third-party service levels is necessary to understand how to improve.

As a result of these and other factors, leading practice is to have a dedicated health care team led by a director-level leader who reports to the ED or Deputy ED. This is the case with SERS and, while reviewing health care operations was not in our mandate, we believe this is an appropriate organizational approach for effectively managing health care insurance operations within a public retirement system. As shown in Table 2.1 below, in a recent FAS benchmarking study of public retirement administration agencies, 4 out of 5 systems utilize this structure.

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*Table 2.1 Health Care Insurance Organizational Structure*

Which of the following statements apply to your organization? Only the five agencies who offer health insurance responded to these questions.	N = 5
We have a leader of our retirement programs who has responsibility for all retirement administration operations	2
We have a leader of our health care insurance programs who has responsibility for all health care insurance administration operations	4
We utilize a single member services function for all active and retired members	3
We utilize a single employer services function for all employers	2
We utilize a separate contracting and procurement department to support both retirement administration and health care plan administration	3
We utilize a single function to manage dormant accounts	0
Comment: We are in the process of replacing our benefits administration system and moving to a more integrated business model.	

Source: 2014 SC PEBA Study

***C2.1.4 Despite having a separate health care organization, SERS effectively leverages its imaging, procurement and employer services functions to support both retirement administration and health care insurance operations.***

SERS has developed capabilities in imaging, procurement and employer services which service both the retirement and health care operations. This is a leading practice approach which leverages the people, skills and capacities in each of these areas more cost effectively.

*Table 2.2 Use of Common Personnel, Processes and Tools*

Which of the following operational functions utilize common personnel, processes and tools for both retirement and health care administration? Only the five agencies who offer health insurance responded to these questions.	N = 5
Call centers	2
Imaging	3
Procurement	3
Employer services	2
Comment: Health insurance administration is for retired members only, so minimal interaction with employer services other than eligibility determinations upon retirement for some subsidies or premium offsets.	

Source: 2014 SC PEBA Study

Recommendations for Improvement

***R2.1.1 SERS should consider having its Chief Financial Officer report directly to the Executive Director rather than through the Deputy Executive Director to ensure greater independence for financial reporting.***

## 2.2 Human Resources Policies and Practices

### Review Activities

The FAS team compared SERS' human resources policies and practices with leading practices at peer state retirement systems in the U.S., interviewed SERS' senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' human resources policies and practices.

### Expectations and Standard of Comparison

It is important for a public retirement system to have comprehensive human resource (HR) policies to ensure that it can attract, develop, and retain a capable workforce. An effective set of human resource policies also helps protect the well-being of the staff, defines norms of behavior, and enhances the culture and workplace satisfaction.

We would expect to find well-articulated HR policies covering the following areas:

- Recruiting and hiring
- Training, development and succession planning
- Compensation
- Performance management
- Ethics, equal opportunity and employee behavior
- Employee classifications and benefits
- Work and holiday schedule
- Personal leave policies
- Termination
- Employee safety and emergency procedures

The effectiveness of HR in an organization depends not only upon having comprehensive HR policies, but also in applying those policies consistently throughout the organization. An organization with strong HR practices typically has a capable and stable workforce with low rates of turnover, typically less than 10% annually. While there will always be natural attrition due to retirements, staff leaving for other opportunities, and planned terminations, due to the high cost of recruitment and training for new employees and the lost productivity associated with onboarding new staff, there is a strong business case for maintaining consistently low turnover.

A high rate of unplanned turnover can signal poor HR policies and practices. Finally, it is leading practice to utilize a broad approach to succession planning, developing junior staff, anticipating potential retirements, and building bench strength to have the flexibility to fill capability gaps as a result of temporary or permanent staff departures.

## Findings and Conclusions

### ***C2.2.1 SERS has a comprehensive set of HR policies, many of which have been recently updated, which appear to function effectively and create a strong HR framework.***

SERS has a broad range of 55 HR policies which address all of the topical areas listed in the standard of comparison above. See Appendix 2.2 for more detail.

- Recruiting and hiring
- Training, development and succession planning:
- Compensation
- Performance management
- Ethics, equal opportunity and employee behavior
- Employee classifications and benefits
- Work and holiday schedule
- Personal leave policies
- Termination
- Employee safety and emergency procedures

Each policy statement includes a purpose, policy, procedure and definitions, as appropriate, as well as the policy owner and certifier.

### ***C2.2.2 SERS has been able to maintain healthy levels of staff turnover over the past three years.***

SERS has maintained a stable workforce with annual staff turnover under 10 percent, with 7 percent turnover during each of the past three fiscal years. There has been a mix of resignations, retirements and involuntary terminations. Over the past three years, there have been 3-4 retirements; 7-9 resignations; and 1-2 terminations annually. This low level of turnover typically reflects a very stable workforce.

### ***C2.2.3 SERS has had a focus on its workplace culture and appears to have made progress over the past few years.***

SERS has been working with an outside facilitator to improve the workplace culture and, as a result, improve organizational performance. As part of this process, employee surveys are periodically conducted to obtain feedback from the Board, executive management and staff as to their perceptions in a number of areas under the general framework of:

- Mission (Strategic Direction and Intent, Goals and Objectives, Vision)
- Consistency (Core Values, Agreement, Coordination and Integration)
- Involvement (Empowerment, Team Orientation, Capability Development)
- Adaptability (Creating Change, Customer Focus, Organizational Learning)

Based upon very detailed employee surveys, it appears that from 2013 to 2015 there was significant improvement in every area, on average, across the workforce. However, there were significant differences from department to department. For example, Investments showed dramatic improvement in every area, as did Finance and Information Technology, to a lesser extent. However, there were a few decreases in scores within departments, most notably in Team Orientation among the Executive Group and in Health Care, and slight decreases in most responses in Administrative Services. SERS' leadership

has explained that these were normal variations caused by organizational changes, and the results were used to identify and address those areas of concern.

***C2.2.4 SERS has developed and is implementing a leading practice succession planning process for public retirement systems.***

SERS tracks the number of staff who are retirement eligible. Currently, 17 percent of staff will be eligible to retire within the next year, and an additional 11 percent will become eligible within the next five years. Past experience suggests that staff will continue to retire at a rate in the range of 2-5 percent annually if there is not a one-time inducement to retire earlier, such as an impending change in retirement benefits.

Earlier in 2016, SERS developed a Succession and Replacement Planning guide to assist in maintaining customer service and business continuity. It states, “The primary task of succession planning is to identify and prepare internal talent for critical positions in advance of actual need.”

Elements of the SERS succession planning process include:

- “Identifying critical positions and highlighting potential vacancies
- Selecting key competencies and skills necessary for business continuity
- Focusing development of individuals to meet future business needs by grooming future leaders rather than recruiting outside the organization
- Safeguarding the departure of critical institutional knowledge
- Increasing employee engagement and loyalty by investing in staff
- Reinforcing our commitment to being a learning organization
- Surviving in a talent shortage environment as a result of baby-boomers retiring and low unemployment rates”

In addition to this leading practice approach to succession planning, SERS also has developed a process for what it calls replacement planning. According to the SERS guide, “Succession planning addresses long-range needs and the cultivation of qualified talent to satisfy those needs. Whereas replacement planning concentrates on immediate needs and a “snapshot” assessment of the availability of qualified backup for critical positions.”

The intent is for each department at SERS to have its succession plan completed by the end of the current fiscal year. When implemented, this will be a leading practice program which is not typically found at other public retirement systems. While the succession planning process recently developed by SERS is to be commended, it has not yet been reflected in SERS’ HR policy.

## Recommendations for Improvement

***R2.2.1 After it has successfully implemented its new, leading-practice succession and replacement planning processes, SERS should develop a formal policy which recognizes these practices as official SERS policy to ensure continuity.***

## 2.3 Staff Qualifications, Hiring and Evaluation Processes

### Review Activities

The FAS team reviewed the SERS position descriptions, staff background, and performance management policy and practices, interviewed senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' staff qualifications and hiring and evaluation practices.

### Expectations and Standard of Comparison

The identification of appropriate qualifications should include education and training and, if appropriate, specific types of experience necessary to successfully fulfill the requirements of a position. In some cases, qualifications can also require specific licensure or certifications. General experience is typically based upon the level of the position and may indicate that the individual has demonstrated the ability to acquire particular knowledge and skills. Specialized experience is typically required for positions above the entry level where the individual must have demonstrated that they possess the ability to successfully perform the duties of that position after a normal orientation period.

Effective hiring processes achieve success in three key respects: 1) attracting a strong pool of prospective candidates; 2) consistently selecting the best fit for the position; and, 3) hiring the best candidate and effectively onboarding them.

A leading employee evaluation process should help an employee to understand what is expected of them and provide regular feedback, at least annually, as to how they are performing relative to those expectations. The process should also provide constructive feedback to an employee on how they can best further develop their capabilities and aspire to additional responsibilities and career advancement. Processes should be documented to ensure that there is consistency and continuity of feedback.

### Findings and Conclusions

#### ***C2.3.1 SERS staff qualifications appear to be appropriate and staff are generally capable in areas we reviewed.***

The SERS job descriptions utilize a consistent format which includes a job summary, listing of duties and responsibilities, listing of educational and other requirements, and a listing of competencies required, organized by SERS-specific; leadership-specific; and position-specific. The job descriptions are specific and comprehensive.

The SERS executives and staff we interviewed appeared to be consistently capable and knowledgeable about their positions and responsibilities. We did not identify any situations where an individual did not have the experience, skills or competence to be able to perform their job among the over 30 executives we interviewed.

#### ***C2.3.2 SERS recruiting and hiring processes appear to be effective.***

Although public retirement systems typically have challenges in recruiting, we did not hear from any departments that they have had unusual levels of difficulty in attracting new staff. Since the beginning of 2015, the number of open positions with open searches has varied from 4 to 8 on a monthly basis, which appears to be a normal level for a public retirement system of this size. There was a potential concern raised about future hiring of IT professionals in consideration of the tight labor market for IT professionals in the Columbus area; this is also a typical challenge for peer systems.

The SERS recruiting process utilizes a variety of different approaches for identifying potential candidates. When external candidates are being sought, postings are made at recruiting websites, at local colleges, State of Ohio sites, post-military sites, and commercial sites. Business social network sites are also utilized. The SERS website has a page to post open positions with basic information and an email address and phone number.

SERS has not yet developed a consistent “SERS brand” on its website but HR does intend to address that in the future to better attract potential new employees.

### ***C2.3.3 SERS performance management policies and processes are sound.***

The SERS Performance Management Policy is based upon an annual cycle which begins with goal setting. Each employee develops a set of goals as either an individual contributor or a manager. The employee and his or her supervisor agree on 2-6 goals for the upcoming year, as appropriate for the position and SERS’ needs. The goal template includes an opportunity for the employee to document longer-term personal and career development goals.

The policy includes a formal mid-year review, which is a leading practice. This provides an opportunity for mid-course corrections and minimizes surprises at year-end due to poor employee-supervisor communications.

As fiscal year-end approaches, each employee documents their accomplishments and other relevant factors in their personal and professional development. The supervisor reviews and comments on the employee’s self-assessment and assigns a rating of 1-5 points according to a defined scale (half-point increments can be used). The supervisor submits the performance appraisal to his or her director, who reviews all the appraisals for the department.

The role of the director is to ensure evaluations and ratings are consistently applied across the department and to add any appropriate comments to each appraisal. If the director concludes that edits should be made to the rating, he or she may request that the supervisor modify their rating. The supervisor meets with the employee and they discuss the results. If the employee accepts the review, it is signed and submitted to HR. If the employee does not agree, there is an appeals process with the director and/or HR.

## **Recommendations for Improvement**

### ***R2.3.1 SERS should consider how to more effectively utilize its website, in addition to its use of social media and other digital channels, to further support its recruiting efforts.***

## 2.4 SERS' Compensation Policies and Structure

### Review Activities

The FAS team compared SERS' compensation policies and practices with leading practices at peer state retirement systems in the U.S. We reviewed the SERS compensation structure and the 2013 Compensation and Classification Study, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' compensation policies and structure.

### Expectations and Standard of Comparison

An effective compensation policy should be based upon a compensation philosophy designed to support the needs of the organization. The policy should operationalize the compensation philosophy and include detailed compensation practices, such as how the basis for compensation will be determined, determination of salary grading structure, guidelines for merit increases, and benefits.

Leading practice for maintaining an effective compensation structure includes periodically benchmarking compensation levels for each type of position and aligning the structure to current labor market conditions to ensure competitive compensation without significantly exceeding the objectives of the overall compensation philosophy.

### Findings and Conclusions

#### ***C2.4.1 SERS has defined its compensation philosophy and compensation goals to guide its compensation policy and structure.***

The SERS Employee Compensation Policy includes the compensation philosophy and objectives of the retirement system. The policy provides guidance for a competitive salary and benefits structure, differentiation of compensation based upon the nature of the position, and linkages to the performance management system.

Specifically, the SERS compensation philosophy targets the 50<sup>th</sup> percentile in the labor market for other retirement systems and private sector employers in the insurance and financial services industry.

In addition, the Purpose of the Compensation System Policy further defines how the compensation system should be implemented to ensure a fair system which achieves the goals of recruiting, retaining and rewarding employees.

#### ***C2.4.2 The SERS Employee Compensation Policy defines the compensation approval processes and responsibilities for implementing the compensation philosophy.***

The SERS Board of Trustees is responsible for approval of annual merit increases and the Annual Investment Incentive Plan. In addition, the Board approves commissioning of an independent compensation program review at least every five years, at the recommendation of the ED.

The Employee Compensation policy also defines the roles of the ED, Deputy ED, and HR in managing and administering the compensation program, including:

- Review of grade levels and position classifications
- Performance management processes
- Annual review of salary structure and merit increases and incentive awards

***C2.4.3 A comprehensive set of HR policies, which have recently been reviewed and updated, defines the overall SERS compensation and benefits program.***

In addition to the Employee Compensation Policy, there are 10 other HR policies which define other aspects of the compensation and benefits program at SERS. These include policies which address assignment of and modifications to salaries, employee recognition, compensation for unused leave time, and payroll.

***C2.4.4 SERS periodically benchmarks its salary structure through the use of an independent third party as its policy specifies.***

The last compensation and classification study commissioned by SERS was completed in early 2013. The objectives of this study were to:

- Determine market-competitive compensation for SERS' positions.
- Evaluate SERS' pay practices in comparison to the market to ensure that employees are paid competitively.
- Review salary ranges and recommend salary adjustments to enhance SERS' ability to attract, motivate and retain quality employees.
- Propose compensation policies to assist SERS in effective and consistent administration of the new compensation plan.
- Evaluate the Investment Department Incentive Plan and propose alternative features based on industry best practices.

This study was conducted by one of the most respected public pension compensation consulting firms and the methodology utilized appears to be sound. Their public fund compensation database included data from 38 other U.S. retirement systems. Each position was benchmarked against the targeted median (50<sup>th</sup> percentile, as described in the SERS Employee Compensation Policy). SERS utilized this input to adjust their salary structure accordingly. The consultant has subsequently provided SERS annual updates to facilitate keeping the salary structure current with market conditions.

This compensation study also reviewed and benchmarked the SERS Investment Department Annual Incentive Plan in comparison to other public retirement systems and provided recommendations for adjustments to the plan. SERS stated that they plan to conduct a new compensation study during calendar year 2017.

## 2.5 SERS' Processes for Monitoring, Measuring and Improving Member Satisfaction

### Review Activities

The FAS team compared SERS' customer service monitoring policies and practices and results with leading practices at peer state retirement systems in the U.S. We reviewed SERS' strategic plans, customer service reports, and the most recent CEM Benchmarking pension administration report, interviewed senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' member satisfaction monitoring and management.

### Expectations and Standard of Comparison

A high-performing public retirement system has a strong focus on providing high-quality services to its members. To ensure that it is meeting its objectives, it has identified metrics which measure the effectiveness of key retirement administration processes and put in place monitoring and reporting which provides feedback to staff and allows management to understand how well the system is performing and where it can and should improve.

Key member services processes which are typically measured and monitored, according to CEM Benchmarking, include:

- On-time payment performance
- Pension inception without a cash flow interruption
- Disability turnaround time
- Call center outcomes
- Call center wait time
- Percentage of members counseled
- Percentage of members attending presentations
- Satisfaction with website capabilities

In addition, members and annuitants are surveyed on a regular basis, particularly those which have had direct interaction with the system, such as newly-retired members, members who have called the customer service center, members who have attended counseling sessions or presentations, or members who have made purchases or withdrawals. The survey data is an integral part of the system's member service performance management processes, and reports are regularly received by operating management. In addition, the Board receives periodic reports on member satisfaction, typically quarterly.

## Findings and Conclusions

### ***C2.5.1 The SERS strategic plan includes a focus on maintaining and improving levels of member service.***

The FY 2015-2019 strategic plan currently being implemented by SERS includes references to member service in multiple areas, including Education and Communications, Organization and Capacity, Health Care, and the SMART System. There appears to be a high-level awareness and focus on the need to have staff focused on member services, to create an environment where staff can effectively serve members, and the need to successfully implement the SMART system to facilitate member service improvements.

### ***C2.5.2 While member service levels appear satisfactory today, SERS is anticipating that the new SMART system will provide a platform to make member service improvements.***

The SMART system is expected to provide significant improvements in member services processes through:

1. The introduction of workflow capabilities which will allow tasks, information or documents to be passed from one employee to another for action, according to defined business processes;
2. A new secure member space on the SERS website, linked to the SMART system, which will allow members and annuitants to obtain information and enter data and update data at any time without assistance by SERS staff; and,
3. A new secure employer space on the SERS website, linked to the SMART system, which will allow employers to obtain information and enter data and update data at any time without assistance by SERS staff.

These new capabilities are expected to improve member service levels and satisfaction by improving existing member service processes, reducing the time required, eliminating errors, and providing improved access to information whenever needed. The SMART system will also include enhanced and automated reporting of key member services metrics.

### ***C2.5.3 Although member service levels are satisfactory, SERS does not monitor some leading practice member services metrics.***

CEM calculates a satisfaction surveying score in their pension administration benchmarking reports. In the most recent report submitted in April 2016, they rated SERS a score of 32 out of 100 versus a peer group median of 37. The highest score in the peer group was over 90.

Through internal metrics and surveys, SERS currently obtains feedback on its performance in:

- Member presentations
- Member telephone calls
- Pension inceptions
- Satisfaction with its website

However, SERS does not regularly obtain survey or other feedback regarding:

- One-on-one interviews
- Written pension estimates

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- Withdrawals and transfer-out
- Purchases and transfers-in
- Disability

Although SERS scores in the second quartile in the CEM peer group in terms of satisfaction surveying, it is far from the leader due to relatively limited formal feedback processes on key aspects of member satisfaction.

### Recommendations for Improvement

***R2.5.1 After the SMART system implementation is complete, SERS should review its monitoring and reporting of member services metrics and significantly increase its level of performance tracking.***

SERS does not appear to have any significant member service issues, and most member feedback is positive regarding their experiences with SERS staff. It should be noted that SERS' member service score from CEM is 78.5 compared to the peer average of 79. SERS' performance exceeded the peer group average in the following areas: pension payments; pension inceptions; withdrawals and transfers-out; purchases and transfers-in; call center; written pension estimates; and member statements. However, based upon the CEM Benchmarking study, SERS' level of monitoring of its member satisfaction is near the median level of its peer group and significantly below the leaders.

It should also be noted that the SMART system will introduce significant changes and improvements to SERS member services processes, which are anticipated to result in improvements in member satisfaction.

## 2.6 SERS' Staff Training, Continuing Education Policies and Program

### Review Activities

The FAS team compared SERS' policies and practices with leading practices at peer state retirement systems in the U.S. We reviewed the SERS' staff training and continuing education policies and program, interviewed senior executives, and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' staff training and continuing education policies and program.

### Expectations and Standard of Comparison

Leading practices for staff training and continuing education policies within public retirement systems include:

- A staff training policy which requires minimum annual levels of training
  - Mandatory for all employees (e.g., fiduciary, compliance, information security)
  - Department specific (e.g., investments, IT, member services)
  - Role-specific (e.g., leadership training for managers and directors)
- Training roles and responsibilities
- New employee orientation requirements
- Types of acceptable training (e.g., on-the-job training, on-site training classes, self-study including online, training available through other state agencies, external training programs)
- Employee reimbursement policy for external training
- Tuition reimbursement policy
- Professional certification expense reimbursement policy

A well-executed employee training program includes a comprehensive training plan and program for the organization which identifies training needs and monitors participation at the individual level. Typically, the Human Resources (HR) department has a central leadership and coordinating role in providing training which is common across the organization, and each department head has a lead role for department-specific training, with support from HR.

## Findings and Conclusions

### ***C2.6.1 SERS has effective training and continuing education practices, but not all are included in formal policy statements.***

In practice, SERS has an effective training and continuing education program. HR maintains a schedule of 21 categories of training which includes who participates, whether or not the training is mandatory or optional, and the frequency (e.g., upon hire, upon promotion, annually, biennially, triennially). This schedule is overseen by HR and managed at the department level. Departments are responsible for managing their own training budget as part of the annual budget-setting process, and also for their own department-specific training needs.

The SERS training program appears to be a priority for SERS leadership and operates successfully; however, there is no official approved policy which defines minimum training requirements or allowable types of training. The existing training program could be formalized into a SERS HR policy document.

### ***C2.6.2 SERS has a leading practice onboarding program for new employees which includes training and a structured review process.***

The standard SERS onboarding program for all employees includes:

- An orientation of the building and all departments
- A briefing on Enterprise Content Management
- Review of the HR Employee Handbook
- Orientation on the HR Self-Serve and Boulevard (intranet functions, including time reporting, performance reporting, and policy manager)
- Information security awareness training
- Ethics training
- An introduction to the PC and SERS network
- Phone training
- An orientation to the SERS benefits and wellness program
- Meet and greet with the Executive Director and Deputy Executive Director

Additional position-specific onboarding is provided by the new employee's department, as appropriate.

SERS has an orientation review period for new employees – 90 days for non-exempt employees and 180 days for exempt employees. At these milestone dates (90 days or 180 days), a performance review is conducted to review how well the employee has assumed their new role within SERS. The review process is initiated by the new employee's supervisor and the director has input prior to the employee receiving the feedback. With the concurrence of HR, the supervisor has the option of ending the orientation period, in rare cases extending the orientation period, or terminating the employee due to unsuccessful completion of the orientation period. Supervisors have an option to recommend giving an orientation period merit increase for exceptional performance if the personnel budget allows. After the review is discussed with the new employee and signed by the employee, supervisor, director and HR, the orientation period is considered completed.

***C2.6.3 SERS has leading-practice tuition and professional certification reimbursement policies for their staff.***

SERS has a Tuition Assistance Policy and a Certification and Professional Designation Program Policy.

The tuition assistance program, which has been in place for over 10 years, provides tuition assistance for college or university coursework which is completed on the employee's own time. SERS offers to pay 100% of tuition, books and other mandatory fees for one undergraduate degree and one graduate degree for eligible employees, up to a maximum of \$7,500 per fiscal year. All full-time employees who have been with SERS at least six months and are not subject to a performance improvement or disciplinary action plan are eligible. If the employee voluntarily terminates employment, they are subject to repay any tuition reimbursement received during the prior 24 months.

The SERS certification program will pay for attaining or maintaining a certification or professional designation needed for a current or future position within SERS, as well as any associated costs such as travel, study materials and examination fees. The same maximum annual reimbursement and eligibility applies as for tuition reimbursement, with the added requirement that approval is necessary from the department director and the ED or Deputy ED.

**Recommendations for Improvement**

***R2.6.1 SERS should develop and approve an employee training and continuing education policy which incorporates the de facto policies and practices already in place and specifies minimum acceptable levels of training annually.***

### 3. Investment Policy and Oversight

#### Overview

The SERS' investment operations are characterized by a robust set of policies and procedures, and a stable, credentialed professional staff that diligently applies those policies. A number of SERS' practices are at leading levels, including the delegation of manager selection to staff and the use of a separate operational due diligence team in manager selection and monitoring. The investment program is staffed and resourced adequately.

Interviews with external providers (investment managers, general partners, consultants, etc.) reveal a consistent pattern of professionalism, appropriate knowledge, and diligence. On-boarding of new managers is routinized and efficient. Staff's depth of knowledge of the investment and business processes of external investment providers was consistently and positively remarked upon.

Perhaps more important than a static, point-in-time view is the trend line over time. There has been improvement in a number of areas since the 2013 review, many in direct response to the findings and recommendations contained in that report.

The public equity procurement process has been streamlined and planning has improved for private equity. Checklists have been created for use at the Staff Investment Committee (SIC). Costs have been reduced and the organizational structure has been revamped to provide for back-up to all asset class investment officers. Investment risk management has matured and become more integrated into the investment program. Most importantly, the SIC has become the focal point for the investment program and has proven effective and efficient. While there are still improvements to be made, such as in developing an ESG policy and program which is consistent with the SIP, it would be unfair not to acknowledge the progress to date.

## A. Investment Policy

### Scope of Review

*The contractor will perform an evaluation of the Board investment policy and procedure. The contractor will:*

- *Review the process by which the investment policy is adopted and compare that process to best practices;*
- *Review the investment policy statement and compare it to industry best practices;*
- *Determine whether SERS' investment policy includes all critical elements, acknowledging an understanding of SERS' financial and actuarial characteristics, and in accordance with established investment and funding goals, and risk tolerances;*
- *Evaluate whether the asset allocation is tied to the investment policy statement;*
- *Evaluate whether SERS investment policy is compatible with the most recent asset/liability study and five-year experience review;*
- *Evaluate the adequacy of the mechanisms and decision-making processes utilized for setting, periodically reviewing, and rebalancing the asset allocation;*
- *Evaluate whether SERS' policy specifies to what extent the basis for particular investment decisions should be articulated in writing by the Board or SERS staff;*
- *The extent to which SERS observes its formal written investment policies and procedures, and identify what, if any, practical problems have resulted either on a systematic or isolated (but significant) basis; and*
- *How often and by what process the Board or staff reviews SERS' written policies, guidelines, and procedures.*

### Review Activities

For the investment policy review, we utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- SERS' current Statement of Investment Policy (SIP) and most recent prior two versions
- Interviews with SERS investment staff
- Interview with the general investment consultant
- Interview with the prior general investment consultant
- Interview with the MAS specialty consultant
- Interviews with 10 investment managers, two from each asset class, including the most recently hired (to understand the current processes) and those with the largest allocations (for risk management reasons)
- Interview with the SERS actuary
- FAS investment policy and operations knowledgebase
- SERS' annual investment reports for past three years

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- SERS' most recent asset-liability study (and multiple discussions regarding the asset-liability study now underway)
- SERS' most recent five-year experience review
- SERS' rebalancing reports from past three years
- SERS' Board minutes from past three years
- SERS' Investment Reports to the Board
- SERS' investment policy documents
- SERS' investment files related to specific investments
- SERS' internal audit review of SIC
- Staff Investment Committee (SIC) documentation
- SERS' memoranda relating to implementation of the previous FAS fiduciary review

We utilized the knowledge of our team members and the FAS knowledgebase to assess the contents of the SIP. The FAS team reviewed the SIP, the asset-liability study, investment reports and rebalancing reports to evaluate consistency of investment staff actions with policies. Using the information described above, the FAS team:

1. Assessed how the SIP is developed and updated and compared to leading and prevailing practices
2. Reviewed the content of the SIP and compared to peer leading practices
3. Assessed consistency between the SIP and the asset allocation, the asset/liability study, and the most recent five-year experience study
4. Reviewed mechanisms and decision-making processes for periodically reviewing and rebalancing the asset allocation
5. Evaluated SERS' policies and practices for documentation of investment decisions
6. Assessed SERS' compliance with documented investment policies and procedures and identified any issues
7. Reviewed SERS Board and staff policies and processes for periodic review and updating or investment policies, guidelines and procedures

## 3.1 Statement of Investment Policy (SIP) Development and Updating

### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, the most recent asset-liability study, the most recent five-year experience review, Board minutes from the past three years, Investment Reports to the Board, investment policy documents, internal audit review of the SIC, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, and the SERS actuary; and utilized the FAS investment policy and operations knowledgebase.

### Expectations and Standard of Comparison

A Statement of Investment Policy is the overarching document which governs a fund's investment program. As such, it should be approved by the ultimate fiduciary for the Fund, kept current, and be reflective of input from investment professionals.

### Findings and Conclusions

#### ***C 3.1.1 The process by which the SIP is developed and updated is at prevailing practice levels.***

The Board approves the SIP both on an annual and on an as-needed basis. Revisions to the SIP are recommended by the CIO following consultation with investment staff. This is leading practice. However, some members of the investment staff noted that they review the final written changes late in the update process and that changes at that point would be difficult.

### Recommendations for Improvement

#### ***R 3.1.1. While the investment staff has input into the annual updating of the SIP, SERS should better formalize that input. One way would be for the updating to be an agenda item at a Staff Investment Committee (SIC) meeting scheduled adequately in advance of the submission of the updated SIP to the Board.***

## 3.2 Content and Quality of the SIP

### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, the most recent asset-liability study (and multiple discussions regarding the asset-liability study now underway), the most recent five-year experience review, rebalancing reports from past three years, Board minutes from the past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, ten investment managers, two from each asset class, including the most recently hired (to understand the current processes) and those with the largest allocations (for risk management reasons), and the SERS actuary; and utilized the FAS investment policy and operations knowledgebase.

### Expectations and Standard of Comparison

A well-constructed SIP should include: an investment goal; an investment philosophy; a statement of risk tolerance (and a high-level demonstration of how the fund will be risk managed); a prudent set of procedures as to how investments will be made; a foundation for internal controls; and, guidance as to how the fund expects the investment strategy to be executed (e.g. asset allocation, permissible securities, etc.).

### Findings and Conclusions

***C. 3.2.1 The Statement of Investment Policy (SIP) is at leading practice levels. It specifies delegations and responsibilities, includes a statement of investment beliefs, defines the major risks and risk management approaches, as well as including the asset allocation, implementation approach, and performance benchmarks. It is detailed, yet clear and concise.***

SERS' SIP contains 10 parts:

Part I sets out the purpose of the investment program, succinctly references the relevant Ohio laws, and notes that the SIP establishes policies and a framework for making and monitoring investment decisions as well as communications between staff and the Board. It also states a desire to keep the SIP current.

Part II, the Investment Philosophy discusses prudence and fiduciary obligation. It then defines SERS' investment beliefs as to markets, appropriate investment processes and organizational requirements.

Part III defines the objectives of the investment program as assuring the ability to pay retirement benefits, to earn the net equivalent of the Actuarial Assumed Rate, and to do so in a prudent and cost-effective manner.

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Part IV explains the Board’s approach to Risk Management.

Part V discusses implementation, including what responsibilities are delegated to staff and the role of outside managers and funds. It also requires reporting to allow the Board to monitor compliance.

Part VI discusses the detailed organization of the investment program, including responsibilities of and powers reserved to the Board, the staff, outside contractors, Investment Managers, Investment Consultants, and Internal Compliance.

Part VII gives conditions and guidelines for deploying money to make investments.

Part VIII outlines the asset allocation, as well as the process and periodicity for establishing the asset allocation. It also contains guidance to the CIO on various specific policies to be adopted.

Part IX establishes performance benchmarks.

Part X establishes the framework for periodic performance reporting to the Board.

Technically, there is a part XI to the SIP. It is an appendix of the various key policies and procedures adopted by staff to fulfill their obligations under the SIP. The fact of its existence suggests the efficacy of the SIP; it has given adequate direction and guidance to staff to allow it to create 25 policies necessary to implement the SIP.

While many aspects of SERS’ SIP are commonly included in such statements, SERS’ detailed delegation of responsibilities, focus on process and control, inclusion of investment beliefs, and specification of fund-level risk tolerance stand out as leading practice. Moreover, the SIP accomplishes this in a relatively compact 10 pages (not including appendices).

### 3.3. Consistency Between the SIP, Asset Allocation, Asset/Liability Study and Experience Study

#### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, the most recent asset-liability study (and multiple discussions regarding the asset-liability study now underway), the most recent five-year experience review, rebalancing reports from past three years, Board minutes from the past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, and the SERS actuary; and utilized the FAS investment policy and operations knowledgebase.

#### Expectations and Standard of Comparison

These overarching governance documents (the SIP and the asset allocation) should be informed by the relevant studies (asset/liability study and experience study). Decisions to deviate from the findings of the studies in creating the SIP and asset allocation should be noted and explained.

#### Findings and Conclusions

***C 3.3.1 The SIP, asset allocation, asset/liability study and experience study are reasonably consistent.***

The formal asset allocation is contained within the SIP, guaranteeing consistency between those policies. The most recent changes to the asset allocation were made in 2015, reflecting concerns that the 2013 asset allocation study overestimated the benefits of investments made in the multi-asset strategy (MAS). As a result, the target allocation for MAS was reduced from 15% to 10%; concurrently the target allocation for real assets was increased from 10 to 15%.

Consistent with prevailing practice, the asset allocation plan contains ranges around the target estimates. In addition, staff has recommended, and the Board has approved, phase-in plans when changes in asset allocation would result in imprudently rapid moves.

The actual asset allocation was within the ranges of the asset allocation policy for all the points in time examined.

The most recent five-year experience study, dated April, 2016, suggested reducing the assumed investment return to 7.5% from the 7.75% assumption. The Board made that change, and, as of the time of this report, SERS is in the midst of an asset/liability study which should result in a new asset allocation consistent with the new 7.5% assumed interest rate.

## 3.4 Rebalancing

### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, rebalancing reports from past three years, Board minutes from the past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, and the current and prior general investment consultants; and utilized the FAS investment policy and operations knowledgebase.

### Expectations and Standard of Comparison

We would expect a written rebalancing policy specifying the criteria for rebalancing and procedures to faithfully implement that rebalancing policy.

### Findings and Conclusions

***C 3.4.1 The actual process of rebalancing is risk-based, sophisticated, and consistent with the investment philosophy of the fund overall. It is at leading practice level. However, the written rebalancing procedure is at prevailing practice level, and could be improved by including more specifics of the process.***

Funds rebalance their investments when market movements, managerial hirings/firings, cash flows or other events move the actual allocation of the fund outside the policy range adopted in the asset allocation.

For many funds, rebalancing is a somewhat mechanistic procedure; they rebalance to the target allocation periodically, for instance quarterly or yearly. Other funds rebalance to target when the amount invested in an asset class (or other category of investment as defined in that particular fund's SIP) exceeds the upper or lower bound of the asset class range.

We note that, while rebalancing is typically thought of as a way to guarantee assets are bought low and sold high, a slightly more nuanced explanation is that rebalancing is a form of risk control, in that it reduces/increases risks associated with individual asset classes when the fund is over/under exposed to them.

SERS' rebalancing program is less mechanistic and more organic to the investment program, reflecting the risk budgeting approach to investing taken by the Board and investment staff. Risk reports are created monthly for public asset classes/strategies and quarterly for private asset classes/strategies (See section 3.13, below). Those reports are reviewed by the CIO and by the asset class groups separately and with risk management, and by the investment staff collectively in various periodic meetings. Those reports

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detail asset allocation, and also style (e.g. value vs. growth for public equity) and forecast active risk (SERS has adopted a total fund active risk limit of 3%). Should the risk reports reveal any deviation from target risk ranges (including the asset allocation ranges), the CIO orders trades to rebalance assets amongst the external asset managers, so as to bring the allocation back into tolerance.

The relevant investment policy (INV 1-001-003) is adequate, in that it defines why rebalancing is needed, and delegates responsibility to the staff, consistent with the overall investment delegation. But it is general and lacking in specificity. More detail, such as requiring the CIO to review the risk reports according to some minimal periodicity, would improve the written documentation.

### Recommendations for Improvement

***R 3.4.1 Investments should amend the existing rebalancing policy to include a more detailed description of the rebalancing process, consistent with current practice, and including the specific responsibilities of risk management, the CIO, and the investment staff.***

## 3.5 Documentation of Investment Decisions

### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, the most recent asset-liability study (and multiple discussions regarding the asset-liability study now underway), the most recent five-year experience review, rebalancing reports from past three years, Board minutes from the past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, SIC documentation, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, and the SERS actuary; and utilized the FAS investment policy and operations knowledgebase.

### Expectations and Standard of Comparison

All investment decisions should be documented to the extent necessary for an observer to understand what information and analyses the decision maker had at the time, and the rationale for the investment.

### Findings and Conclusions

#### ***C 3.5.1 Investment decisions are well-documented. The files are reflective of the processes and actions undertaken and the reasons for those actions is documented***

SERS has an extensive set of policies which require written documentation for virtually all final investment decisions.

Board-level decisions related to investments, such as the asset allocation and SIP, are documented through the minutes of the Board and the relevant reports upon which the Board relied in making those decisions. They are adequate and appropriate, and include both staff memoranda and reports, as well as reports from the independent investment consultant, whose primary purpose is to assist the Board in carrying out its fiduciary obligation.

Staff-level investment decisions are made pursuant to a clear procedure described in the Investment Committee policy. Two investment officers prepare a written investment thesis that is circulated to the strategy team for input. The sponsors lead due diligence efforts and prepare a written investment recommendation that is submitted to the Investment Committee. The investment recommendation includes an opinion letter from the Board's consultant, an investment checklist identifying necessary approvals and an operational due diligence report on alternative investments (if applicable). The Investment Committee reviews these materials, discusses them and approves by majority vote. The minutes of the Investment Committee meeting show that the Investment Committee thoughtfully and thoroughly considers investment decisions. From the transactions that FAS reviewed, almost all were

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approved unanimously, except for one. Investment transactions must be approved and a cover sheet must be physically signed by a sponsor, the CIO, the Enterprise Risk Manager, the legal department and the executive director. The process for obtaining investment approvals is reasonable, consistent with peer funds and appears to be an effective means of ensuring that investment transactions substantially comply with legal requirements and SERS policies and procedures.

A review of individual deal files found them to be substantially compliant with investment policies in all material respects. Please see section 4.5 for more information.

We note that the Investment Committee policy requires that the Enterprise Risk Management Officer review the transaction to affirm that it meets the requirements of the SIP and sign the signature cover page to affirm such review. Similarly, the CIO is required to sign the signature cover page on behalf of himself and the Investment Committee. It appears that the Investment Compliance Analyst and the Investments Assistant Director may sometimes fill these roles and sign the signature cover page. SERS may consider whether it wishes to create some flexibility in the Investment Committee policy to permit the Investment Compliance Analyst or Investments Assistant Director to also sign-off on investment transactions.

#### Recommendations for Improvement

***R 3.5.1 SERS may consider creating flexibility in the Investment Committee policy by permitting the Investment Compliance Analyst to sign the signature cover page in lieu of the Enterprise Risk Management Officer and the Investments Assistant Director in lieu of the CIO (provided the appropriate review and analysis has been done).***

## 3.6 SERS' Compliance with Documented Investment Policies and Procedures

### Review Activities

The FAS team reviewed SERS' investment policies and procedures, which include the Statement of Investment Policy, Investment Committee Policy, and Investment Compliance Policy. We also reviewed other policies, procedures and guidelines that address substantive issues or are specific to particular asset classes.

These include the Iran and Sudan Investment Policy, Private Equity Co-Investment Policy, Opportunistic Investment Policy, Derivatives Safe Harbor Policy, Investment Risk Management Policy, Cash Equivalents Portfolio Investment Guidelines, Leverage Policy and Derivatives Policy. We also interviewed key personnel who oversee investment compliance including the Enterprise Risk Management Officer, Investment Compliance Analyst, and Chief Legal Counsel, among others.

### Expectations and Standard of Comparison

As noted elsewhere, the SERS Board of Directors has delegated investment authority to the staff Investment Committee. Many other public pension plans have similarly delegated almost all investment authority to staff. For a public pension board of trustees to continue to provide effective oversight of its investment program under this type of delegated investment authority, it is important for public pension boards to have an effective investment compliance function which ensures investments remain within policy guidelines.

SERS' Statement of Investment Policy allocates responsibility for investment compliance to the Chief Investment Officer and the Investment Compliance Analyst. Investment compliance responsibilities are also outlined in the Investment Compliance Policy. The Investment Compliance Policy defines the responsibilities of the investment compliance team, which include ensuring that investment managers and vendors will comply with SERS' investment policies, monitoring investment compliance, and reporting compliance issues so that the instances of non-compliance may be addressed.

### Findings and Conclusions

#### ***C3.6.1 The Investment Compliance team is effectively incorporating SERS' policy requirements into investment contracts.***

The investment compliance team is comprised of the Enterprise Risk Management Officer and the Investment Compliance Analyst. The Enterprise Risk Management Officer has delegated investment compliance duties to the Investment Compliance Analyst, and it seems likely that the Investment Compliance Analyst will assume full responsibility for SERS' investment compliance function in the future. Investment compliance responsibilities are also shared with the legal department.

The Investment Compliance Analyst and legal department both review investment contracts to ensure they incorporate SERS' investment policies. The Statement of Investment Policy, Investment Compliance Policy, and the Iran/Sudan Investment Policy specifically impose certain obligations on investment managers. These obligations are reflected in the standard investment management agreement and side letter that SERS' legal counsel negotiates with its investment managers.

We note that section VI.D of the Statement of Investment Policy imposes specific obligations on investment managers, such as the investment managers' responsibility to notify SERS of any changes in ownership structure of the investment manager or its staffing or present in-depth reports to staff. SERS has incorporated these requirements into the template investment management agreement applicable to Global Equities and Fixed Income. It does not appear that these requirements have been incorporated into the template side letter that would be negotiated in connection with a private investment in a fund structure. However, the responsibilities identified in section VI.D seem more appropriate for public investment managers, and SERS might consider clarifying the Statement of Investment Policy to limit these requirements to the appropriate asset classes.

***C3.6.2 The Investment Compliance team is effectively monitoring investment manager compliance with investment policies.***

The investment compliance team is responsible for monitoring the investment managers' holdings and transactions for compliance with their contracts and Board-approved investment policies. SERS relies on investment manager self-reporting and compliance software to monitor compliance, which is consistent with other U.S. pension funds. SERS requires all investment managers to complete the Required Annual Disclosure form, which asks investment managers to self-report any non-compliance with their agreement with SERS.

In previous years, SERS has had some difficulty collecting the Required Annual Disclosure forms from investment managers in a timely manner. In the 2013 Fiduciary Audit Report, FAS suggested that SERS incorporate language in its transaction documents to allow SERS to withhold fees unless the Required Annual Disclosure form has been submitted.

This language has been incorporated into the template investment management agreement and side letter, and compliance has improved. We also note that SERS implemented another recommendation from the 2013 Fiduciary Audit Report and established a written record of verbal compliance representations for each fiscal year. Nearly all Required Annual Disclosure forms for the 2015-2016 fiscal year were received by the end of the fiscal year.

In addition to the Required Annual Disclosure forms, public market investment managers (i.e., those making investments in Global Equities and Fixed Income) are required to deliver monthly compliance letters to the Investment Compliance Analyst. Investment Managers disclose whether they have complied with the investment management agreement, investment guidelines, and the Ohio Revised Code over the previous month.

The investment compliance team also monitors compliance using Compliance Monitor software, which evaluates compliance on a manager-by-manager basis. The Investment Compliance Analyst currently develops the rules used by Compliance Monitor to assess compliance. The software rules are audited annually to ensure compliance. Compliance Monitor is generally working well, though it may need to be

updated in the future to address limitations regarding the types of transactions and the characteristics of certain securities.

The investment compliance team also monitors compliance with the Iran Sudan Investment Policy. SERS relies on a research provider (currently MSCI) to identify public companies with scrutinized active business operations in Iran/Sudan ("scrutinized companies"). The Investment Compliance department distributes the list of scrutinized companies to investment managers on a monthly basis, and the investment managers submit monthly transaction reports disclosing whether there were any transactions with the scrutinized companies.

The Investment Compliance Analyst reviews these reports and summarizes them on a monthly basis. Any instances of non-compliance are confirmed with the investment manager and escalated to the relevant investment officer. This process is reasonable, consistent with peers, and appears to be effectively detecting investment manager non-compliance with the Iran Sudan Investment Policy.

***C3.6.3 The Investment Compliance team is effectively reporting investment compliance issues.***

Compliance issues are effectively reported to the responsible parties. The Investment Compliance Analyst provides daily and monthly reports of non-compliance to staff. If there are compliance issues, then the Investment Compliance Analyst contacts the relevant investment manager to confirm the non-compliance and reports the non-compliance event to the appropriate investment officer and CIO, as needed.

Compliance issues are effectively communicated to the Board. The Board receives a monthly memorandum from the Investment Compliance Analyst describing violations of investment guidelines as well as issues self-reported by investment managers in their monthly compliance letters. The Investment Compliance Analyst also prepares an annual memorandum to the CIO and Executive Director summarizing the issues identified by SERS' investment managers in their Required Annual Disclosures. These disclosures are largely lawsuits and regulatory investigations, and Board review of this memorandum does not seem to be necessary at this time.

***C.3.6.4. The implementation of ESG integration into SERS' investment program could be improved.***

SERS has adopted two investment beliefs in the SIP which broadly relate to what has come to be called "ESG", or consideration of environmental, social and governance factors as risks and opportunities for the investment program. That is consistent with its peers. Environmental, social and governance risk factors have become mainstream investment considerations. For example, a recent CFA survey found that 73% of all financial analysts consider ESG factors when making investment decisions.

Specifically, the SIP includes two relevant statements of belief: a) "Good governance of markets and entities comprising the markets improves outcomes for investors. SERS Board and staff will exercise corporate ownership responsibly and with the best fiduciary interest of members and stakeholders," and; b) "SERS Board and staff must be attentive to important environmental, social and governance issues that affect markets and promote its interests in a responsible manner in the best fiduciary interest of members and stakeholders."

However, the implementation of ESG integration into SERS' investment program could be improved. SERS does have a robust proxy voting policy for public equity, which reflects the SIP's statements of belief and

participates in a number of institutional investor groups focused on ESG issues. But, unlike 60% of its peers, it has no written ESG investment policy. On a day-to-day basis, ESG integration in asset classes other than public equity is limited to asking the investment managers or general partners whether they have ESG policies. While that is an appropriate first step, it is only a first step.

The idea that ESG factors could be relevant to the other asset classes was regarded skeptically by several of the investment staff. Several investment staffers said ESG considerations were not applicable to their asset classes and at least one was openly dismissive stating “ESG is seen as conflicting with strong returns”. Confirming those statements, a number of external observers familiar with SERS said they did not think ESG was a SERS priority. That level of inactivity and passive renouncement to ESG issues does not align with the SIP.

Leading practice is to consider ESG issues across the asset classes and strategies in the investment portfolio. Some plans use materiality as a guideline, since different ESG issues will be material for different investments, while some take a more uniform policy approach, and still others consider the interaction between portfolio investments and environmental, finance and social “systems”.

### Recommendations for Improvement

SERS' processes for complying with investment policies and procedures are generally sound and effective. One recommendation for potential improvement is:

***R3.6.1 SERS may consider updating its template side letter to include the provisions of Section VI.D of the Statement of Investment Policy or revise the Statement of Investment Policy to clarify that such provisions apply only to certain asset classes.***

***R 3.6.2 SERS should broaden and deepen the implementation of its ESG program, consistent with the Investment Beliefs in the SIP.***

### 3.7 SERS' Board and Staff Policies and Processes for Periodic Review and Updating of Investment Policies, Guidelines and Procedures

#### Review Activities

The FAS team reviewed SERS' investment policies, procedures and guidelines to understand how often they were reviewed or amended. FAS also reviewed the Reference Manual for SERS Policies and Procedures which provides guidance on the organization of SERS' policies and procedures. The investment policies, procedures and guidelines reviewed include the Iran and Sudan Investment Policy, Private Equity Co-Investment Policy, Opportunistic Investment Policy, Derivatives Safe Harbor Policy, Cash Equivalents Portfolio Investment Guidelines, Leverage Policy, and Derivatives Policy. Note that the process for reviewing the Statement of Investment Policy is separately addressed in section 3.1.

#### Expectations and Standard of Comparison

The Board of Trustees is responsible for establishing investment policies for SERS' assets. The Chief Investment Officer is responsible for approving implementation guidelines for each asset class. The guidelines must be provided to the Board but are not required to be approved by the Board. This structure is consistent with other U.S. state pension funds we have reviewed.

#### Findings and Conclusions

##### ***C3.7.1 Investment policies are reviewed and updated frequently to ensure that Board and CIO decisions are incorporated into SERS' investment program.***

The Board reviews investment policies periodically, approximately every 2-4 years, which is consistent with peer funds. Certain policies, such as the Iran Sudan Investment Policy, have never been updated, but identify certain triggering events upon which they will be reviewed. Investment policies approved by the Board do not identify specific timeframes in which they must be reviewed or updated, but this does not appear to have caused any issues since the investment policies were, in fact, reviewed and updated regularly.

The CIO or Executive Director reviews investment guidelines periodically, approximately every 2-4 years. Investment guidelines approved by the CIO or Executive Director do not identify specific timeframes in which they must be reviewed or updated, but this does not appear to have caused any issues.

As noted above, SERS does not have a policy describing how often SERS will review and approve its policies. However, we understand that one is being developed and that the policy may draw from the Reference Manual for SERS Policies and Procedures. The Reference Manual includes as an appendix a schedule for reviewing investment policies (as well as all other policies) on an annual basis, during the month of January. In developing a policy for reviewing investment policies, SERS may wish to consider whether an annual review of all policies is practicable or whether the current system of updating policies

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every 2-4 years is more manageable. The frequency of review may also depend on the policy. SERS has indicated that the forthcoming policy will also identify those responsible for review, which is already provided in the Reference Manual.

### Recommendations for Improvement

One recommendation for potential improvement is:

***R3.7.1 Continue to develop a policy describing how often investment policies will be reviewed and updated and identifying responsible parties.***

## B. Investment Oversight and Review

### Scope of Review

*The contractor will perform an evaluation of the oversight and control of investments. The contractor will:*

- Evaluate the appropriateness of Board and staff controls, procedures, and capabilities to regularly review and monitor the performance of the investments and the practices of investment managers, as well as ensuring compliance with policies;*
- Evaluate SERS' process for measuring, evaluating, and controlling transaction costs, directed brokerage and commission recapture (if any), and compare the process to other funds as well as public or private third-party industry surveys.*
- Evaluate the process used to determine and measure investment performance, including how performance data is collected and verified and selection of appropriate benchmarks;*
- Evaluate the basis and methodology for the compensation of external investment managers and advisors and payments to others, if any;*
- Evaluate the written policies and procedures currently in place to monitor and guard against professional conflicts of interest; and*
- Analyze how investment managers are selected, including the transparency in the decision-making process, due diligence provisions, whether specific criteria and procedures govern the selection process, whether they are actually observed in the selection process, and whether there is adequate documentation of selection process.*

### Review Activities

For the investment oversight review, we utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- Investment compliance reports;
- Interviews with SERS' investment staff, investment accounting staff, financial staff who calculate investment manager fees, compliance officer, external managers, and the investment consultants;
- Trade execution analysis reports;
- Most recent CEM investment benchmarking report;
- Investment performance reports from the general consultant and custodial banks;
- SERS' staff investment reports to the Board;
- External manager fee calculations and reports;
- SERS' conflict of interest policies and procedures for external managers;
- External manager compliance reports;
- SERS' investment due diligence policies and procedures; and,

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- SERS' manager files (at least 10 investment managers from a variety of asset classes, focusing on the most recently hired and those with the largest allocations).

The FAS team relied upon existing investment performance reports, transaction execution analysis reports, and the CEM investment report to evaluate overall investment performance and level of manager and brokerage fees. We evaluated policies and processes for developing the manager pipeline, selection, due diligence and monitoring of external managers based upon interviews with internal SERS staff, investment consultants, and external managers and transaction file documentation.

Using the information described above, the FAS team:

1. Assessed SERS' controls, procedures and capabilities for investment oversight, performance monitoring, and manager compliance;
2. Assessed SERS' processes for monitoring and controlling transaction costs and compared to leading practices;
3. Assessed processes by which SERS selects performance benchmarks and monitors and measures performance;
4. Evaluated external manager compensation and payment processes and compared to peers;
5. Assessed external manager conflict of interest policies and compliance procedures and compared to leading practices; and,
6. Reviewed SERS' investment manager due diligence and selection policies, practices and documentation and compared to leading practices.

## 3.8 SERS' Processes for Monitoring and Controlling Transaction Costs

### Review Activities

The FAS team reviewed the Ohio statutes governing SERS' use of securities agents; SERS' processes for monitoring and controlling transaction costs based upon review of SERS trade execution analysis reports; interviews with SERS' investment staff and investment accounting staff; and the FAS public retirement benchmarking knowledgebase.

### Expectations and Standard of Comparison

Prevailing practice with respect to public asset brokerage includes a best execution policy which requires the pension fund and its managers to take all reasonable efforts to obtain the best possible result in trading securities on a consistent basis, taking into account both quantitative factors (e.g., price, commission, spread, implicit market impact, and size of the trade relative to volume) and qualitative factors (e.g., likelihood of execution within a desired time frame, market conditions, ability to act on a confidential basis, ability to handle large trades in securities having limited liquidity without undue market impact, creditworthiness, willingness to commit capital to a particular transaction, market knowledge, and back office infrastructure).

Prevailing practice is also to generally allow each investment manager to select their brokerage firms through which trading will be completed for the pension fund. Each investment manager is also responsible for conducting all appropriate due diligence on the brokerage firms it selects.

Many public funds also provide the option for their investment staff to retain the right to direct brokers and enter into brokerage commission recapture agreements. Directed commission brokers are selected by the investment staff, often with consultant assistance. Investment managers mutually agree to direct a percentage of their portfolio under management to the fund's directed commission brokers. The objective is to select a percentage amount that generates substantial commission savings, without hindering the investment manager's ability to execute investment strategies that meet the objectives set forth in the IMA. Many funds of the scale of SERS choose to not utilize directed brokerage based upon a cost/benefit analysis and the desire to allow investment managers to make their own selection and be responsible for their net returns.

Each investment manager is typically required to report on brokerage firms they are using and the terms of those relationships. The disclosure usually covers payment for order flow, soft dollars, covered expenses, and the nature of the broker selection process. The term "soft dollars" typically refers to the amount by which a commission exceeds the price of executing a transaction. In some cases, that amount is converted to credits and given to the investment manager by the executing broker for the manager to pay third parties for certain research, trading software and subscriptions. Soft dollar practices are regulated by the Securities and Exchange Commission. However, critics argue that soft dollar trades are less transparent and may result in more benefit to the manager than the client or more benefit to clients other than the one for whom the broker was making the trade. The use of soft dollars has been declining

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with public pension funds and is considered a lagging practice.

At a minimum, the investment staff reviews investment manager transactions and arrangements for compliance with the fund’s policies through a best execution analysis. The investment managers and custodian provide the information necessary to conduct this review.

Leading practice is for a public pension fund to periodically engage a trade analytics firm to independently monitor public equity transactions over a specified time period. Typically, the firm maintains a trading database with institutional averages for commissions, fees and market impact costs in most markets in which the public fund invests. Reports usually compare the trading costs of the fund’s public equities investment managers to those benchmarks. While the trading analytics firms also provide similar services for fixed income trades, this service is less often used and provides less benefit due to much lower fixed income trading costs.

The chart below indicates the use of an independent measuring service by one peer group of 15 public pension funds from a FAS benchmarking study conducted in 2012. The green shading indicates SERS’ responses.

*Table 3.1 Monitoring and Managing Transaction Costs*

In what ways do you monitor and manage transaction costs for public equities, fixed income, derivative contracts, foreign exchange and other?	Public Equities	Fixed Income	Derivative Contracts	Foreign Exchange	Other
An independent measuring service	13	3	1	4	
Self-reporting by external managers and/or internal investment staff	8	9	4	8	
We do not measure since we look at our returns on a net basis	2	4	5	4	
Other (please specify):					
Use exchange traded derivative transactions, but will soon use contracts.					
No derivative contracts.					
We try to measure all costs in the most accurate fashion.					

Source: 2012 NYS CRF Study

## Findings and Conclusions

### ***C3.8.1 The Ohio statute governing broker selection for SERS is typical and prevailing practice, with the exception of the goal to increase utilization of Ohio-qualified brokers, which is a lagging practice.***

The Ohio statute which governs public asset trading requires a written policy, annual review of performance, and a preference for Ohio-qualified brokers, as indicated below:

O.R.C. 3309.157 *Designation of Ohio-qualified agents - selection policy - utilization - annual report* states:

“(C) The school employees retirement board shall adopt and implement a written policy to establish criteria and procedures used to select agents to execute securities transactions on behalf of the retirement system. The policy shall address each of the following:

- (1) Commissions charged by the agent, both in the aggregate and on a per share basis;
- (2) The execution speed and trade settlement capabilities of the agent;
- (3) The responsiveness, reliability, and integrity of the agent;
- (4) The nature and value of research provided by the agent;
- (5) Any special capabilities of the agent.

(D)

- (1) The board shall, at least annually, establish a policy with the goal to increase utilization by the board of Ohio-qualified agents for the execution of domestic equity and fixed income trades on behalf of the retirement system, when an Ohio-qualified agent offers quality, services, and safety comparable to other agents otherwise available to the board and meets the criteria established under division (C) of this section.
- (2) The board shall review, at least annually, the performance of the agents that execute securities transactions on behalf of the board.
- (3) The board shall determine whether an agent is an Ohio-qualified agent, meets the criteria established by the board pursuant to division (C) of this section, and offers quality, services, and safety comparable to other agents otherwise available to the board. The board's determination shall be final.”

The statute is consistent with leading practice, with the exception of the preference for in-state brokers. While similar statutes favoring in-state providers may be found in other states, this is a lagging practice which imposes an administrative burden on SERS and does not appear to have much impact on broker selection. This type of special provision is also a lagging practice because it can help create an opportunity for fraud and pay-to-play if there is collusion between the investment staff and a favored in-state broker.

### ***C3.8.2 SERS broker selection policies and practices are prevailing practice.***

SERS' SIP states, with respect to broker selection:

“Brokers (or broker/dealers) who may provide execution of securities transactions for SERS will be evaluated on the basis of financial soundness, underwriting capabilities, research services, execution

costs, and any other capabilities necessary in the execution of such transactions. Investment Managers which use such brokers will use their good faith judgment to ensure that said brokers will perform in the best interest of the Total Fund.”

SERS’ investment managers select brokers to buy and sell securities on behalf of the Fund, which is common practice among pension funds. Board policy and investment manager agreements (IMA) require that managers use their judgment to ensure the brokers act in SERS’ best interests. As a standard IMA provision, SERS retains the right to direct broker commissions but it does not exercise that right in practice.

As indicated above, state statute directs that broker selection address commissions charged, execution capability, broker integrity, and value of research provided by the broker. These criteria are reflected in the IMAs.

***C3.8.3 SERS policies and practices comply with the statutory requirement to attempt to increase the use of Ohio-certified, women-owned, and minority-owned brokers.***

In addition to the statute which requires a goal to increase use of Ohio-certified brokers when such brokers offer services comparable to other brokers, SERS is also required by state law to give equal consideration to women-owned and minority-owned broker firms.

The SERS SIP states:

“It is a goal of the Board to increase its utilization of Ohio-qualified brokers for the execution of domestic equity and domestic fixed income trades when an Ohio-qualified broker offers quality, services, and safety comparable to other brokers available to the Board or its Investment Managers, and the use of such broker is consistent with the Board’s fiduciary duties.

SERS will give equal consideration to minority owned and controlled firms, and firms owned and controlled by women.”

SERS sends an annual letter to investment managers to introduce such firms, requesting that the managers give consideration to them if all other factors are equal. Staff indicates that the statutory provisions have not interfered with the Fund’s fiduciary obligation to seek best execution of trades.

***C3.8.4 SERS has discontinued its commission recapture program.***

SERS reviewed its use of directed brokerage with commission recapture in early 2014 and chose to discontinue the program. This is a prevailing practice among SERS’ peers.

***C3.8.5 SERS has clarified its soft dollar guidelines to help ensure investment managers understand and comply with SERS policies.***

SERS reviewed its policy and broker reporting for soft dollars in 2013 and added clarifying statements. The current soft dollar policy in the SIP states:

“SERS allows investment managers to enter into limited soft dollar trading arrangements as governed by the “safe harbor” provision of Section 28(e) of the Securities and Exchange Act of 1934, and guided by the CFA Institute Soft Dollar Standards. SERS does not support any new soft dollar arrangements outside of these noted provisions.”

SERS’ soft dollar brokers are subject to the same execution standard as other brokers. In mid-2014 when SERS reviewed its soft dollar program, it concluded that, “our managers’ soft dollar trading is limited in

scope, appears to be well within SEC requirements and still common practice in the industry, despite a continuing trend in the direction of fewer soft dollar trades. Currently, soft dollar trade commission's account for about 13% of total commissions in the SERS equity portfolio."

SERS chose to encourage investment managers to minimize soft dollar trading arrangements, but did not outright prohibit use of soft dollars, as it did not want to be in a position to have to terminate a well-performing manager simply based upon using soft dollar arrangements within acceptable policies.

***C3.8.6 SERS considered engaging a broker evaluation service in 2014 but chose to continue to self-monitor brokerage performance and costs.***

As mentioned earlier, Ohio statute requires that the Board review, at least annually, the performance of brokers that execute securities transactions on behalf of SERS. The SIP specifies that evaluations be based on financial soundness, underwriting capabilities, research services, execution costs, and any other capabilities necessary in trade execution.

The annual reviews the Board receives from staff for equities managers include brief comments about their trading effectiveness. The reviews for fixed income managers do not, because bond transactions do not involve payment of an explicit commission.

Both U.S. and non U.S. equities managers for active, separately managed accounts submit a quarterly trade report which is reviewed by the Senior Investment Officer. The report asks if the firm follows a best execution policy and asks for a list of brokers, trading costs, market impact, credit profile, foreign exchange transactions (for non-U.S.) and portfolio turnover rates. Utilizing the same trade report for U.S. and non-U.S. was a recent improvement to improve transparency of transaction costs with U.S. managers.

As mentioned above, most large pension funds use an independent measuring service to monitor transaction costs for public equities, including funds like SERS which rely predominantly on external management. SERS requests such independent evaluations if the manager has them, and they are provided by about half of the managers. SERS has used an independent measuring service in the past but was dissatisfied with the quality of the results and cost.

Like SERS, most surveyed funds rely on self-reporting by investment managers or their own staff to monitor fixed income transactions. SERS mainly judges fixed income trading capability via overall manager performance. Staff also discusses manager counterparty monitoring and electronic trading capability with managers.

## Recommendations for Improvement

***R3.8.1 The legislature should consider eliminating the required goal to increase utilization by SERS of Ohio-qualified agents to reduce administrative burden and ensure SERS is not unduly restricted in their options for trading.***

Although we observed no signs of any impropriety at SERS in this regard, a further reason for the legislature to consider eliminating this requirement is that it contributes to the potential for fraud and misdealing by creating preferences during the broker selection process.

## 3.9 Performance Benchmarks and Performance Monitoring

### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, the most recent asset-liability study (and multiple discussions regarding the asset-liability study now underway), Board minutes from the past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, SIC documentation, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, ten investment managers, two from each asset class, including the most recently hired (to understand the current processes) and those with the largest allocations (for risk management reasons), and the SERS actuary; and utilized the FAS investment policy and operations knowledgebase.

### Expectations and Standard of Comparison

We would expect SERS to have performance benchmarks appropriate to each asset class or strategy and for the total fund, and for staff to have performance benchmarks to help in monitoring each manager. We would also expect performance to be monitored regularly at the asset class, strategy and total fund level by both the Trustees and the staff, and for the staff to regularly monitor performance at the individual manager level as well.

### Findings and Conclusions

***C3.9.1 SERS' performance benchmarks and performance monitoring are similar to its peers and at a prevailing practice level. However, the current asset allocation provides an opportunity to rethink a few of the benchmarks so as to be more reflective of purpose or the specific investment universe.***

A brief discussion of the types of performance benchmarks and their purposes would be helpful to provide context for the discussion of SERS choices of benchmarks and performance monitoring.

In public asset classes, relative return benchmarks are typically market indices. SERS uses the Barclays' Capital US Aggregate Bond Index for global fixed income, or the Russell 3000 for public US equity. Benchmarks are sometimes combined to reflect different investment mandates. For example, SERS does this for global equities, which has a benchmark of 50% Russell 3000 and 50% MSCI ACWI (ex-US).

The benchmark may be fine-tuned to better reflect the manager's style, for example by choosing a small or large capitalization index, or by choosing a style index (i.e. value or growth) in US equities, or by choosing particular risk factors such as credit quality or duration in fixed income, or by defining geographies for international or global mandates.

Effectively, these relative return benchmarks seek to define the normal opportunity pool of securities from which a manager constructs its performance. Typically, that pool of securities is capitalization weighted, on the theory that capitalization-weighted benchmarks reflect the aggregate opinion of all investors. The goal of comparing a manager's performance to such a benchmark is to help understand how well that particular manager has exploited market opportunities over a particular time period. Such a benchmark effectively measures whether a manager has added or subtracted value as compared to a passive index alternative.

Benchmarking of private asset classes is notoriously problematic, though the state of the art has improved in recent years. SERS uses the NCREIF (National Council of Real Estate Investment Fiduciaries) Property Index (NPI) for Global Real Assets and the Burgiss All Private Equity for Global Private Equity. In both cases, SERS lags the index by a quarter of a year, to match its manager reporting cycle with the index, and both are recognized industry benchmarks. However, it is worth noting that they differ from public securities benchmarks in one material way. They reflect the performance of various managers or partnerships, not of the underlying securities. Effectively, they are peer groups which act as indices. It is also worth noting that the NPI is a real estate index, and that real assets includes some non-real estate assets and may include more non-real estate assets following the current asset allocation exercise. Finally, we note that the consultant report to the Board includes the term "custom benchmark" for global assets, although the NPI is not customized for SERS. The "custom benchmark" phrase is an unfortunate anachronism from a previous benchmark.

SERS uses the HFRI (Hedge Fund Research, Inc.) Fund of Funds Composite plus 100 basis points for the Multi-Asset Class (MAS) strategy. It is worth noting that staff informally has multiple benchmarks for the MAS strategy. As noted, the formal benchmark is the HFRI FOF +100 bps. But staff also expects MAS to meet or exceed a benchmark of 3-month Treasury Bills +450 basis points over time. It is common for investors to select a public security benchmark plus a hurdle rate for such strategies.

There are two reasons for this: First, the hurdle is designed to reflect performance associated with the risk exposures of such strategies over time. Second, often there is an aspirational aspect to such a benchmark. In effect, the argument is made that if the strategy can't outperform T-Bills +450 bps, then why have it? Moreover, as MAS is a strategy, not an asset class, such benchmarks are more guidance to investment staff as to the types of investment strategies in which to invest, and less about measuring short-term relative performance against an opportunity set.

Finally, SERS uses the total fund benchmark (the weighted average of all the asset class and strategy benchmarks) as the benchmark for opportunistic strategies. As with the MAS aspirational benchmark, the use of the total fund benchmark for the opportunistic strategy is more about guidance to the investment staff than about opportunities in the capital markets.

Effectively, SERS has decided that the alternate use of capital for an opportunistic investment is a pro-rata allocation across the other asset classes and strategies, so that composite benchmark should be the theoretical "hurdle rate" for making an opportunistic investment. This is consistent with the theoretical rationale for relative return benchmarks; it defines the opportunity set for the opportunistic investment strategy as all the other investments allowable in the total fund.

Obviously benchmarking is complicated, and what works for one asset class may not work for others. Therefore, leading practice is to use carefully selected benchmarks fit for specific purpose so as to allow

analysis from different perspectives: How did we do against market opportunities, against our objective, against peers?

As mentioned, above, SERS total fund performance is a mathematical roll-up of the asset class and strategy benchmarks, weighted by target allocation. All those individual benchmarks are relative return benchmarks (including the peer group ones for private asset classes). As a result, the total fund benchmark gives the Trustees and staff a good comparison to judge how the fund has done against the opportunities present in the markets.

However, there are disadvantages to using such relative return benchmarks. It is not helpful in understanding how the Fund is progressing towards its ultimate goal of funding pension liabilities. To understand why, assume that we are in a bear market, such as happened to equities in 2008, when the S&P 500 was down by 36.55%. To make the math easier, let us assume that 100% of the fund was in large capitalization stocks benchmarked to the S&P 500. If the Fund lost 25%, rather than 36.55%, the fund would have beat its benchmark by 11.3%. But the fund would have lost money, so, from an economic or liability perspective, it would have regressed. Looking at the opposite situation also illuminates the issue: If that 100% equity portfolio returned 20% in 2009, it would have underperformed the S&P 500 by some 5.94%. But there would be some 20% more to offset liabilities.

Relative return benchmarks are useful and appropriate for measuring managers and the total fund against their market opportunity set, but less useful for measuring how well a total fund performs over time in absolute terms.

For that reason, many pension funds choose to use an absolute return benchmark as well, such as the actuarial assumed interest rate, to measure total fund performance. Some investors take the practice a step further, and estimate the market value of their liabilities (which tend to move in inverse relationship to interest rates) against the market value of their assets. They then use the resulting ratio (often called a shortfall analysis) as part of their performance measurement program.

There are, of course, also disadvantages in using absolute benchmarks (or even shortfall analyses) for total fund performance analysis. It results in mismatches between the Fund's performance and that benchmark in short time periods, and even over a few years, as markets wax and wane. Nor does such a benchmark provide information about how the fund performed relative to market opportunities. This is why many funds use both relative return and absolute return benchmarks at the total fund level. SERS' SIP tacitly acknowledges this, stating that the fund seeks to achieve a "net of fees total return that equals or exceeds over the long term the Actuarial Assumed Rate". Adding that numerical Actuarial Assumed Rate (7.5% as of this report) to the SIP, would be an improvement, but FAS notes that it is already acknowledged de facto.

SERS is in the midst of an asset allocation study, which includes a review of the Fund's benchmarks.

SERS performance monitoring is at prevailing practice levels. Staff monitors managerial, asset class and strategy and total fund performance monthly, and it is reported to the Trustees. In addition, the general investment consultant provides quarterly performance reports to the Board.

Finally, numerous interviewees commented that SERS has become more "performance-oriented" over the past few years. The CIO has established a goal of adding value above the total fund benchmark on a rolling two-year basis. Operationally, this has resulted in increased focus on manager-by-manager

performance at SIC meetings and from the CIO and asset class/strategy investment officers. As a result, a number of managers, particularly in the MAS strategy, were terminated for performance reasons.

***R 3.9.1 As has been its policy in the past, SERS should use the opportunity of the asset liability study to review all benchmarks.***

- *Specifically, to the extent that the study results in more granular allocations (e.g. to emerging market debt or high yield debt, rather than “core plus” fixed income) SERS should adopt specific relative return benchmarks appropriate to those asset classes, rather than use composite benchmarks which add a hurdle rate to the broader asset class benchmark.*
- *SERS should review the existing, multiple benchmarks for the strategy allocations, explicitly differentiating between their function as hurdle rates to inform investment staff and as measures of market opportunities to allow the Board and senior investment staff to monitor performance.*
- *SERS should review the benchmark for real assets following the asset allocation, particularly if the Board determines to include more non-real estate assets in the allocation.*

### 3.10 External Manager Compensation and Payment Processes

#### Review Activities

The FAS team reviewed the SERS external manager compensation and payment practices based upon review of SERS policy and procedure documents; interviews with the SERS CFO, investment accounting staff, investment staff, and financial staff who calculate investment manager fees; and the FAS public retirement benchmarking knowledgebase.

#### Expectations and Standard of Comparison

Fees and payments due to an external investment manager are typically defined in an Investment Manager Agreement (IMA) signed by the manager and the pension fund. Investment managers agree to a payment schedule, often on a quarterly basis, in the IMA. Public market investment fund fee terms are usually a straightforward calculation of a percentage fee based upon assets under management at a point in time, although occasionally a manager will also receive an incentive fee based upon investment performance. Private market (e.g., private equity, hedge funds, real estate) investment fund fee arrangements are often more complex, usually with both a management fee and a performance fee. However, the basis of the private market calculations can be more variable (e.g., committed vs. invested capital) and there can be various offsets which reduce fees which are not visible to the pension fund.

Leading and prevailing practice for payment of investment manager fees is to ensure that the public pension fund has processes which independently calculate fees and validate manager invoices on a regular basis. When there are discrepancies, the manager is contacted and any differences are promptly resolved.

#### Findings and Conclusions

***C3.10.1 SERS has an effective process for ensuring payments to investment managers of public assets are appropriate.***

SERS has a formal process for reviewing payments to investment managers for public assets. A spreadsheet template is maintained by the master record keeper (MRK) which includes each external manager and their payment calculations. The SERS Investment Accounting Division (IAD) provides updates to the MRK when there are any changes (new manager, changes in terms, or terminations) and the MRK appropriately modifies the data in its template.

IAD receives invoices from the investment managers, typically quarterly. The invoiced amount is compared to the amount calculated by the MRK. If the two amounts are within a predefined tolerance, the invoice is accepted and approved. If the discrepancy is outside the tolerance, there is follow-up with the investment manager and the discrepancy is resolved.

The accepted invoices are forwarded from IAD to the SERS CFO or Assistant Director of Finance for approval, with an additional subsequent approval by the ED or Deputy ED. Payment instructions are then forwarded to the custodian for execution and IAD can monitor the payments through their access to the custodian and MRK systems.

***C3.10.2 SERS also has an effective process for ensuring payments to managers of private assets are appropriate.***

Private assets classes account for about 75% of total investment manager fees paid by SERS; this is typical for public pension funds with an asset allocation similar to SERS.

For Private Equity and Real Assets managers, on a quarterly basis, IAD staff calculates the management fee amounts due to the general partners (GPs) per the limited partner agreement (LPA). This calculation typically represents the maximum amount which the GP can invoice, as there are usually offsets which reduce the amount of cash fee reimbursement. SERS estimates that 60-70% of these managers report their fees annually and the rest quarterly.

For the Multi-Asset Strategy (MAS) managers, there is a similar process for where IAD staff calculate management and incentive fees on a monthly basis; approximately 30% of MAS managers report their fees monthly.

It should be noted that SERS commissioned an independent review of their payments to private equity managers in 2015. The review “found that all calculations tested were mathematically correct and prepared in accordance with the related Governing Documents.” There were, however, a number of recommendations which SERS is implementing to improve transparency of private equity management fees, including:

- SERS has had a representative on the Institutional Limited Partners Association (ILPA) committee that developed fee transparency guidelines, which were released in early 2016; the Fee Transparency Initiative aims to identify and promote an enhanced and uniform approach to fee disclosures.
- The confirmation process has been changed to request the gross management fee, net management fee, the amount of any fee offsets by category, incentive fees charged, calculation illustration and other expenses incurred or charged to the fund by category.
- SERS is obtaining historical management fee calculations that track fee offsets to ensure fee offsets are being treated consistently with the documents and to support an ability to recalculate before and after fee returns.
- IAD has enhanced the annual confirmation process to include further details of GP expenses charged by category and amount.

SERS is planning to use the new ILPA reporting requirements to enhanced private equity fee reporting and analysis.

## Recommendations for Improvement

***R3.10.1 SERS should continue to work with ILPA and SERS peers in support of the Transparency Initiative.***

### 3.11 External Manager Conflict of Interest Policies and Compliance Procedures.

#### Review Activities

The FAS team interviewed the Investment Compliance Analyst and reviewed the Statement of Investment Policy, template investment management agreements, the Required Annual Disclosure forms and audit reports to understand the policies and compliance procedures SERS has established to ensure that investment managers comply with their fiduciary duty of loyalty.

#### Expectations and Standard of Comparison

SERS' investment managers are fiduciaries pursuant to Ohio law, and they have a fiduciary duty of loyalty to SERS. In order to monitor investment managers, SERS requires investment managers to disclose conflicts of interest and reviews public filings to confirm. This practice is consistent with leading practices at peer pension funds.

#### Findings and Conclusions

***C3.11.1 SERS' process for identifying and addressing external manager conflicts of interest is consistent with peers and adequately addresses potential conflicts of interest.***

SERS' process for identifying managers' conflicts of interest is to require investment managers to affirm that they do not have a conflict of interest at the outset of the relationship and reaffirm this annually pursuant to the Required Annual Disclosure Form.

Any conflicts that arise during the course of the relationship should be disclosed to SERS in writing. SERS' template side letter requires investment managers to complete the Required Annual Disclosure Form upon execution of the side letter and again annually. These contract terms and the Required Annual Disclosure form appear to be effective at identifying conflicts.

The Required Annual Disclosure forms must be submitted annually. The Investment Compliance Analyst is responsible for ensuring that the Required Annual Disclosures are received. The Investment Compliance Analyst verifies that information received is consistent with data reported to the SEC or otherwise available to SERS. The Investment Compliance Analyst will escalate any significant findings.

Interviews with investment managers confirm that the requirements are communicated clearly and that SERS diligently follows-up on the Required Annual Disclosure forms.

The procedures developed by the Investment Compliance Department to identify investment manager conflicts of interest are adequate and consistent with peer funds.

## 3.12 Investment Manager Due Diligence, Selection, Monitoring and Controls

### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, SIC documentation, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, and 10 investment managers, two from each asset class, including the most recently hired (to understand the current processes) and those with the largest allocations (for risk management reasons); and utilized the FAS investment policy and operations knowledgebase.

### Expectations and Standard of Comparison

SERS uses a professional staff, general investment consultant and one specialty consultant (for hedge funds) for due diligence. SERS also uses a combination of public bidding (an RFP process) for public asset classes and negotiation for private asset classes. This is broadly in line with its peers.

In addition, SERS has an operational due diligence process with dedicated personnel (and uses the specialty consultant for hedge fund operational due diligence). It also makes use of its risk management capabilities to better understand portfolio fit (where data allows). SERS and the general consultant perform due diligence in parallel, not together, providing for a true independent opinion.

### Findings and Conclusions

***C 3.12.1 SERS' due diligence is robust and consistent across asset classes. SERS' investment officers are professional, know the managers as well or better than their peers, and focus on relevant issues and risks. The use of a separate operational due diligence team, the use of risk management to better understand the incremental effect of adding or subtracting a manager, and the parallel due diligence processes which allow the general consultant to provide independent opinions, are leading practices.***

Due diligence and selection of external investment managers is part science and part art. The science comes in analyzing the quantitative factors such as a manager's track record, risk exposures, disaggregated performance compared to market environment and marginal contribution to the existing SERS portfolio. All those quantitative measures are ex post.

The art comes in understanding what aspects of the manager's investment process were crucial in creating that performance, and then understanding whether anything has changed at the manager or in the markets which would materially change the investment process and/or the investment results in the future.

The place where the art and the science of due diligence merge is in the knowledge, diligence, and skills of the investment staff. SERS' investment staff is highly credentialed and more stable than many public pension funds. The external managers, consultants and others we interviewed were consistent in remarking that SERS' staff knows the investment program's managers at least as well as other, sophisticated public pension plans, and, in many cases, better than some of SERS' larger, better-known peers.

SERS typically begins its manager selection process by understanding the portfolio issue it is desiring to solve. This is a bit of a change from the previous SERS investment regime, where individual manager skill was valued as much as portfolio fit. Given the risk-budgeting philosophy of the fund, this seems appropriate.

Public security managers are typically hired by an RFP process, consistent with many of SERS' peers. In some cases, staff, after consultation with the general consultant, develops a list of potential bidders to whom to send the RFP.

Staff evaluates the proposals qualitatively and quantitatively. Qualitative factors include the investment process, the individuals, team history, and how those factors compare to managers already employed by SERS. Quantitative factors include performance analyses, correlation and risk analyses.

Staff then asks the consultant for its top picks. However, to enhance the independence of the consultant review, staff does not reveal its top picks to the consultant so as to not influence its decision. After a comparison of the lists and re-review, staff develops a short list of semi-finalists.

The semi-finalists are then subject to on-site due diligence. Operational due diligence for public security managers is performed by the asset class staff, while operational due diligence for private asset classes is performed by separate specialist staff. Additionally, the managers may make presentations to the investment staff, which includes all members of the SIC.

Final recommendations are then sent to the Staff Investment Committee. The consultant is also asked for a memorandum, which is leading practice. Though the consultant does not have to concur, no manager may be hired without both a staff recommendation and a consultant memorandum. A "back-up manager" is also selected, should an unforeseen problem (such as inability to reach a contract) develop with the selected manager.

The "back-up" authority was recently decreased from 18 months to six months, because the CIO believed that too much could change in 18 months to contract with a manager without re-diligencing the manager. While such a change decreases flexibility, it does reduce risk and increase precision.

Investments in private asset classes are made through limited partnerships. These are only available for a specific time period, so an RFP process is impractical. This makes knowledge of the marketplace (and of what fund openings are likely to be available) critical. Many funds use specialty consultants to develop a "pipeline" list and to perform pacing analyses. Indeed, these specialty consultants are the most expensive consultants used by SERS peers, averaging \$1.3 million a year amongst those peers which used such private equity consulting firms (7 of 15 surveyed).

However, SERS appears able to use its experienced investment officers, the annual planning process, and a network of other Ohio public pension funds, to adequately stay abreast of the market. Additionally, the

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private asset classes are relatively mature, so many of SERS new limited partnership investments are subscriptions to a new fund from an existing manager (often called “re-ups”). Despite being asked, no one at SERS or people external to the fund thought that SERS needed to hire specialty asset class consultants.

Staff performs in-depth due diligence, often traveling on-site. SERS looks at the strategy, the team, and the track record. They look at deals in previous funds or scheduled for the fund under consideration, understanding the general partner’s economics, checking references, etc.

In addition, general partners of private investments usually meet multiple times with both the asset class investment officer and with other members of the SIC, including the CIO. As with the public asset classes, the general consultant does its own independent due diligence and provides a memorandum to the SIC, which makes the final hiring decision.

General partners consistently ranked SERS’ investment officers and due diligence processes at or above peers. They particularly remarked on SERS’ ability to focus on the key drivers of risk and return. They did not note any gaps due to resource or other constraints.

## C. Investment and Fiduciary Risk

### Scope of Review

*The contractor will perform an evaluation of the awareness of risk and management of risk in investments. The contractor will:*

- *Evaluate the processes by which the Board is aware of the risks associated with the asset allocation they have adopted; and*
- *Examine investment risk factors. Attention should be on the types, levels, and appropriateness of risks in the investment portfolios and overall funds as well as any internal controls in place at SERS to ensure compliance with the adopted standards, policies and procedure for managing investment and fiduciary risk. This examination should include a comparison to best practices.*

### Review Activities

We utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- Risk reports and analyses provided to the SERS Board over the past three years;
- Investment compliance reports from the past three years;
- Interviews with the SERS Board, investment staff and investment consultants, including asset class consultants; and,
- FAS team member experience and the FAS investment operations knowledgebase.

We relied on interviews with Board members, investment consultants, and investment staff to assess the process through which investment risk has been discussed and evaluated when setting the asset allocation. We also utilized the investment risk reports and analyses prepared over the past three years and compared the SERS risk policies and procedures to leading practices. Using the information described above, the FAS team evaluated:

1. How the Board assesses risk during the asset allocation process; and,
2. How SERS identifies and controls investment and fiduciary risk and compared to leading practices

### 3.13 Investment Controls and Fiduciary Risk

#### Review Activities

The FAS team reviewed the SERS Statement of Investment Policy (SIP) and most recent revisions, the SERS annual investment reports for past three years, rebalancing reports from past three years, Board minutes from the past three years, Investment Reports to the Board, investment policy documents, investment files related to specific investments, internal audit review of the SIC, SIC documentation, and memoranda relating to implementation of the previous FAS fiduciary review; interviewed the SERS investment staff, the current and prior general investment consultants, the MAS specialty consultant, and ten investment managers, two from each asset class, including the most recently hired (to understand the current processes) and those with the largest allocations (for risk management reasons); and utilized the FAS investment policy and operations knowledgebase.

#### Expectations and Standards of Comparison

We would expect a fund of this size to have at least some quantitative tools and resources to perform risk analyses at the manager, asset class/strategy and total fund level. There should be some expertise on staff, risk analyses should be inputs into investment decisions, and the Board should receive appropriate risk analyses to assist it in its oversight function.

#### Findings and Conclusions

***C 3.13.1 SERS risk management efforts are at or above prevailing practice levels for its peer group, particularly given that its investments are made through external managers. SERS utilizes one dedicated investment analytical system and also uses a broader analytical system to complement those efforts. The risk reports are used by staff appropriately, and periodic risk reports are provided to the Board. The Board has modified the SIP to include an active risk target for the fund.***

SERS' investments are outsourced. Thus, investment risk management at SERS is fundamentally about risk monitoring, i.e., does the portfolio remain within the exposure limits approved by the Board? It is also about ensuring that their asset managers have robust risk management policies and processes in place.

That said, the investment philosophy framework of the investment staff is risk budgeting: deciding where to take active risk versus the benchmark; and, being aware of the risk factors at each manager and aggregating them to understand risk at an asset class and total fund level. Therefore, risk management plays an important role in the allocation decisions to managers and in rebalancing.

Risk reports are provided to each asset class/strategy group monthly for the public security asset classes/strategies and quarterly for the private asset classes/strategies. As one investment staffer noted, "Risk is just completely part of our conversations about performance".

Recent risk analyses have resulted in allocation changes which included an analysis of equity risk in the MAS managers and an analysis of the value/growth style factors resulted in a rebalancing between global equity managers.

Investment risk analyses have also become part of the due diligence process for hiring new public asset class managers, particularly when judging how an incremental allocation to a new manager would affect total fund risk. The head of risk management is a voting member of the Staff Investment Committee.

The Board receives regular risk reports that include a description of the risks related to each asset class/strategy and risk management activities. These include, for example, liquidity risk; credit risk; interest rate risk; yield curve risk; sector risk; currency risk; issuer risk; and, active risk with corresponding definitions.

Investment operations uses Barra software for risk assessments based on stochastic analysis. The Barra Risk Factor Analysis is a multi-factor model created by Barra Inc., which is used to quantitatively measure the overall risk associated with a security relative to the market. Barra Risk Factor Analysis incorporates over 40 metrics including: earnings growth, share turnover and senior debt rating. The model then measures risk factors associated with three main components: industry risk, risk from exposure to different investment themes and company-specific risk.

Investment risk management also continues to use customized Compass™ software.

As noted above and in Section 5.9 Holistic Risk Management, Investment Operations use the Barra quantitative tools to monitor risk, and risk management makes a report quarterly to the Board. This can be highly useful, and investment staff expressed admiration for the level of understanding of risk by the Board. Indeed, the Board amended the SIP to include an active risk target for the overall fund (a maximum of 3%).

The Board receives regular education about asset class risks from investment staff and its external consultant. Board members expressed that the education is relevant and valuable. It has devoted a material amount of time to understanding the risk in the asset allocation of the fund. On an ongoing basis, risk is reviewed quarterly at the Board and the discussion includes trends and performance/risk attribution. Risk has also been a topic at Board retreats.

SERS is in the midst of an asset liability study and the focus on understanding the implications of the asset allocation have been a constant. Capital market assumptions have been presented to the Board and the discussions about appropriate asset allocation have taken place over a multi-month period.

SERS is among the minority of peers which has a written, formal policy for periodically conducting asset allocation studies, which is leading practice.

Despite the level of sophistication shown by these activities, we caution that overconfidence in expected versus actual risk is a common behavior in this area, given the high degree of uncertainty associated with investments. The Board seems well equipped by the risk reports and time devoted to the risk discussions, but we would be remiss not to note that, as John Maynard Keynes once said “it is better to be roughly right than precisely wrong”.

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In terms of staffing, investment risk management is the one specialty area within the investment staff which does not have a back-up. At present, the de facto back up is the CIO; there is no one else within SERS who has the technical ability and time to back up risk management.

Recommendations for Improvement

***R3.13.1 SERS should provide for back up to the investment risk manager.***

## D. Custodian Policy

### Scope of Review

*The contractor will evaluate SERS' relationship with its custodial bank, including the custodial bank's breadth of services, technological planning and capability to address SERS' needs, the bank's structure and level of fees, cash management and analytical services, and the ability of SERS to have oversight over custodial functions. The contractor will also review the custody model used by the Ohio Treasurer of State as custodian of financial assets for SERS and evaluate the oversight provided as compared against other public systems and best practices.*

### Review Activities

We utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- The contract and service level agreement with SERS' custodial banks;
- Most recent custodial bank RFP;
- SERS' custody fee data for the past three years;
- Interviews with SERS staff, the current and former custodial bank staffs, and Treasurer of State staff; and,
- FAS project team experience and the FAS custody knowledgebase.

We identified the services provided by the custodial banks and compared them to services typically provided by custodial banks to peer funds. We compared the level of custody fees to those of peers based upon the FAS knowledgebase and the CEM investment benchmarking report. FAS has examined custody models used in other states and utilized the information to assess the model in use by SERS. Using the information described above, the FAS team evaluated the SERS relationship with its custodial bank and compared and evaluated:

1. The breadth and quality of services provided by the custodial banks to SERS with peer retirement systems; and,
2. The Ohio custody model and custodial bank oversight structure and compared to peer public retirement systems.

### 3.14 Breadth and Quality of Services Provided by the Custodial Banks to SERS

#### Review Activities

The FAS team reviewed the services received by its custodial banks and compared them with practices at peer state retirement systems in the U.S. We reviewed: the custody RFP and contracts; interviewed all SERS executives; Treasurer of State (TOS) staff who oversee the custody relationships; current and former custodial bank staff; and, utilized the FAS public retirement benchmarking knowledgebase to assess SERS' custodial bank services.

#### Expectations and Standard of Comparison

The primary role of a custodial bank is the safekeeping of assets. This is almost always a complex portfolio of public and private investments for major public pension funds. Compared to decades ago, custody has expanded from safekeeping of physical securities in a safe to include many services which are essential to the smooth and effective functioning of today's public funds.

When a major institutional investor selects a custodial bank, it is typically looking to take advantage of two key resources: the technology platform and support staff which facilitates their transactions and reporting; and, the bank's network of agent banks in international locations.

An effective custodian is at least as much a technology and data management facility as a lockbox. Leading custodial banks offer the services of a technology platform to their institutional investor clients which could not be replicated on a cost-effective basis by an individual fund.

In addition to holding assets in custody, providing asset pricing, monitoring and settlement transactions, posting income, and daily and monthly reporting, the custodian typically offers a number of other functions. These are available at the fund's discretion and include: fund accounting; portfolio analysis; compliance monitoring; derivative services; processing corporate actions; proxy voting; tax reclaim services; cash management; securities lending; and, foreign exchange.

Major institutional investors also rely on the global network (e.g., sub-custodian network, depositories) of their custodial bank, which has evolved over many years of servicing global clients, to allow them to invest in securities in international markets. A number of markets have complex local requirements which demand a local presence in order to participate in local investment opportunities.

It is leading practice to have a service level agreement (SLA) with the custodian. The SLA is a description of the operational, escalation and communication framework under which the fund, the custodian, and other service providers will operate. SLAs typically contain contact details, operational responsibilities, description of workflows, responsibilities, deliverables and timeline for delivery, and other key metrics. The primary objective of an SLA is to ensure that the custody and related processes are documented, achievable and will result in a satisfactory service being delivered.

Increasingly, public pension funds are changing the way that they approach contracting for securities lending and foreign exchange services. In the aftermath of the Great Recession, virtually all custodial banks experienced a significant drop in securities lending revenue. With a bundled services contracting approach, the custodial bank's share of securities lending revenue, typically 10-20% of gross lending revenues, was used to heavily subsidize the costs of providing other custody services, obscuring the true cost of those services.

Over the past few years, there has been a trend, which FAS considers leading practice, to contract separately for securities lending and foreign exchange services, even if the primary custody bank is ultimately selected to provide those services also.

## Findings and Conclusions

### ***C3.14.1 SERS transitioned to a new international sub-custodial bank earlier this year, a process which was completed relatively smoothly.***

A new procurement process was conducted earlier this year by the Treasurer of State (TOS) to select custodial banks for the five statewide public retirement systems.

For SERS, the incumbent domestic custodial bank re-bid and was awarded a new four-year contract for domestic custody. The domestic custodial bank records are considered the official book of record for depository reconciliation and legal title issues.

SERS also utilizes the services of a master record keeper (MRK) which maintains data for SERS accounting and performance reporting purposes. The MRK maintains records for all of SERS investments, including those private assets where title is not held by the custodial bank. This relationship also did not change as a result of the recent custodial bank procurement process.

Because the selected domestic custodial bank does not have the capability to service international investments made by SERS, the procurement process separately sought a custodial bank, on a sub-custodian basis, with international capabilities to service those investment accounts which contain international investments. The recent bidding process resulted in a change in the international custodial bank for SERS, and a new four-year sub-custodian contract began in July. This relationship has now effectively transitioned from the former international sub-custodial bank to the new one.

The new international sub-custodial bank is also the same firm which provides the MRK services, which has helped facilitate a smooth transition.

### ***C3.14.2 SERS receives a more limited scope of services from its domestic custodial bank, but in combination with the MRK and international sub-custodian bank receives services comparable to most peer public funds.***

Aside from maintaining the book of record and basic trade settlement services, SERS receives a relatively limited set of additional services from its primary custodial bank as compared to other public pension funds, as shown by the two charts below (SERS responses are indicated by green shading).

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As shown, SERS receives both standing-instruction and directly-negotiated foreign exchange, class action claims processing and tax support from its custodian. Although there is not a clear pattern of what services each fund in this peer group receives from its custodian, the median was six, versus four for SERS, and the maximum was 11.

However, in SERS' case, a number of the other services are obtained through their master record keeper, through a separate team that is part of the same firm as their new international sub-custodial bank. For example, MRK services include:

- Portfolio performance reporting and analytics;
- Fund accounting;
- Fund exposure and structural analysis;
- Unaudited daily fund valuations; and,
- Corporate actions.

SERS utilizes the MRK compliance monitoring application/software to complete the review of adherence to the contractual guidelines, based upon MRK data.

*Table 3.2 Type of Custodial Services Used*

Which of the following services offered by your custodial institution do you use?	Number of Responses (N=15)
Portfolio performance reporting and analysis	12
Fund accounting	12
Standing instruction foreign exchange trades	10
Directly-negotiated foreign exchange trades	9
Compliance monitoring	9
Daily fund valuation	8
Class action claims processing	8
Derivatives services (trading, valuation, reporting)	7
Tax support	7
Fund exposure and structural analysis	5
Management fee calculations	3
Proxy voting	1
Asset servicing	1
Cash management	1
Transition management	1
Data management	1
Document safekeeping	1

Source: 2012 NYS CRF Study

Table 3.3: Number of Custodial Services Used

Number of custodial services used	Number of Responses (N=15)
Average	6.2
Median	6
SERS	4
Low	2
High	11

Source: 2012 NYS CRF Study

***C3.14.3 Although SERS operates with a complex structure of custody and recordkeeping service providers, the processes work effectively and relationships are collaborative.***

The typical public pension fund in the U.S. has one custodial bank providing comparable services to those which SERS receives from the TOS, SERS primary custodial bank, SERS international sub-custodian bank, and SERS master record keeper. Some funds utilize a separate administrator for private assets which are out-of-custody; the SERS MRK performs this service for SERS.

SERS, the three service provider teams, and TOS have developed detailed custody operating procedures which clearly define all processes which must be completed, who is responsible, what expected services levels are, and how exceptions should be handled. Although this creates a more complex set of processes than would be the case with a typical fund with a one-to-one relationship, all parties agree that it currently works well, and SERS is satisfied with its services and the quality.

***C3.14.4 SERS has a separate contract for a securities lending agent, and utilizes a service provider who is not its custodial bank, which is a leading practice.***

For at least 15 years, SERS has treated securities lending as a service to be obtained separately from its custody relationship. While this was atypical at the time, it has now become leading practice in the wake of the Great Recession and the need for improved transparency of custody and other service provider costs. SERS and the TOS consider securities lending to be an investment decision which is not under the purview of the TOS as custodian.

As shown below from a 2012 peer benchmarking study, most other funds rely on their custodian for securities lending, but the trend in the industry is to move away from this practice.

Table 3.4: Securities Lending Provider

Does your custodian also manage your securities lending program or do you contract with third parties for lending services?	Number of Responses (N=13)
Custodian	7
Other third party	3
No securities lending program	3

Source: 2013 SERS of Ohio Study

***C3.14.5 SERS receives effective information technology systems and support from its master record keeper; SERS does not directly use its custodial bank’s systems.***

SERS’ staff utilizes the MRK software platform in several key areas. The SERS Investment Accounting staff utilize the MRK system as the master records for investments, as well as the MRK’s risk and analytics system. SERS pulls holdings information from the MRK’s system and inputs it into SERS risk management system. Information is also uploaded from the MRK systems periodically to the SERS general ledger system.

The MRK provides trade-dated transaction information to SERS for purposes of daily portfolio valuations. The custodians provide settlement-date transaction information to the TOS to satisfy their requirements.

As shown in the chart below, SERS utilizes the MRK software (indicated here as custodial software), operated by SERS staff, to ensure investment compliance with policies and contracts. Most of the peers in this peer group have the custodian provide this service.

*Table 3.5: Ensuring Investment Compliance*

How do you ensure that your investments and managers are in compliance with policies and contracts?	Number of Responses (N=15)
Use custodial software operated by custodial staff with results reported to internal staff	8
Use custodial software operated by internal staff	4
Use internally-implemented software operated by internal staff	6
Other	1
Comments:	
Externally developed risk systems to assess any oversight, relationship, governance document, processes, risks and controls items.	
Manual contract review.	
SERS: Other - Internal audit conducts annual compliance audit; Investment Compliance maintain – Annual Disclosure process, Iran/Sudan monthly reporting requirements, public investment manager monthly compliance memos	

Source: 2012 NYS CRF Study

***C3.14.6 SERS has been paying 50% more for its custody and recordkeeping services than its peers, according to the most recent CEM Benchmarking analysis.***

According to the most recent CEM Benchmarking analysis using information from calendar year 2014, SERS’ custody costs have been more than 50 percent higher than their peer group median cost, placing SERS at the 75 percentile of custodial costs. The costs of the domestic custodian and the international

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sub-custodian are included in these costs as they represent the comparable services, but the MRK costs are excluded. From 2012-2014, the average annual custody cost for SERS was \$843,000, with the 2014 cost at \$799,000. CEM calculated SERS 2014 benchmark cost for custodial support at \$510,000, indicating that SERS paid \$289,000 more than its peer group median in CY2014. For CY2015 custody costs dropped to \$658,000.

It should be noted that the costs referenced above exclude the MRK costs, as mentioned. While the MRK performs some services which are beyond what may be typical for a custodial bank, a portion of their services, such as portfolio performance reporting and analytics, fund accounting, and corporate actions, are often performed by the custodial bank. In total, the MRK fees have been about \$1.4 million each of the past two fiscal years, significantly more than the custodial bank contracts. As a result, the comparable custodial bank fees for SERS are likely understated and are more than 50% higher than the peer group median.

We were told by SERS' Finance that the custodial bank costs with the new international sub-custodial bank are expected to be comparable to recent historical costs with the prior sub-custodial bank.

### Recommendations for Improvement

***R3.14.1 SERS should be allowed to contract directly with a single global custodial bank in order to receive comparable services at a significantly lower cost.***

### 3.15 The Ohio Custody Model and Custodial Bank Oversight Structure

#### Review Activities

The FAS team reviewed the current custody model of SERS under the Ohio code and compared it with practices at peer state retirement systems in the U.S. We interviewed SERS executives, TOS staff who oversee the custody relationships, and current and former custodial bank staff; and utilized the FAS public retirement benchmarking knowledgebase to assess SERS' custodial bank services.

#### Expectations and Standard of Comparison

Leading practice for an integrated public retirement system is for the Board of Trustees to approve the selection of the custodial bank and to oversee the ongoing relationship. Typically, the system staff, (upon approval by the Board) prepares an RFP, receives proposals, evaluates the bids, and makes a recommendation to the Board for approval. A senior member of the system staff who is independent of the investment office, typically the CFO, is responsible for leading the selection process and managing the day-to-day relationship with the custodial bank on an ongoing basis. This person ensures that a comprehensive service level agreement (SLA) is developed, performance is monitored, and that the custodial bank is meeting expected service levels.

The custodial bank is an integral part of the day-to-day operations of a public retirement system which manages a complex investment portfolio. There are several states where the retirement system Board of Trustees is not allowed to select their custodial bank and oversee the relationship, as this has been reserved by statute for the state treasurer. While this can operate effectively, it depends significantly upon the relationship between the retirement system and the state treasurer, and there have been instances where a poor relationship resulted in significant dysfunction.

Leading practice is for a public retirement system to have one custodial bank which provides master recordkeeping services, the primary custody technology platform, and access to a network of international agent banks. Although most systems also receive securities lending and foreign exchange services from their custodial bank, leading practice is to obtain these services under separate contracts and award the business to the provider with the best fit for the system's needs.

#### Findings and Conclusions

***C3.15.1 The Ohio statute which designates the Treasurer of State (TOS) as the SERS custodian of funds is unusual and, depending upon the relationship between the TOS and SERS, can result in a suboptimal choice of custodial bank and unnecessary costs, controls and delays due to added layers of oversight.***

O.R.C. Section 3309.12 states that "The treasurer of state shall be the custodian of the funds of the school employees retirement system, and all disbursements therefrom shall be paid by the treasurer of state

only upon instruments duly authorized by the school employees retirement board and bearing the signatures of the board.”

As a result of this statute, the contracting of custodial bank services is conducted on SERS’ behalf by the Treasurer of State (TOS), who also oversees the ongoing relationship between SERS and its custodial banks. The recently-completed custodial bank procurement process for SERS resulted in renewing the contract of the prime custodial bank for domestic investments and the selection of a new sub-custodial bank for international investments. The search was conducted by the TOS in a very collaborative and timely manner, and SERS was very satisfied with both the selection process and the outcome, although less so with the contracting process. However, this level of collaboration has not always been the case and SERS has in the past been forced to accept the results of a procurement process to which they had minimal input and were not pleased with the outcome or the services provided, including that of the most recent international sub-custodial bank.

In 2013, FAS conducted research on behalf of SERS on the custodial relationship with a peer group of 13 integrated state public pension funds (funds similar to SERS where the trustee board is responsible for both investments and pension administration), ranging in size from \$7 billion to \$14 billion of assets under management. In this study, 11 of the 13 funds contract directly with their custodian. The two funds which did not contract directly with their custodian were Ohio funds (SERS and Police & Fire).

In 2014, FAS conducted a benchmarking study with seven state investment boards (i.e., boards of trustees with authority for state retirement system investment funds but not administration of the pension system itself). Among the seven investment boards surveyed, the selection of the custodial bank was the responsibility of the investment board and its staff at all but one of them.

With one exception, the investment boards, even those where the treasurer is custodian of record, none allow for the state treasurer to select the custodial bank. The state treasurer is the custodian of record for the Illinois State Investment Board (ISBI), but the responsibility for selecting the custodial bank is given to the Board of Trustees by statute.

At the Washington State Investment Board (WSIB), the Treasurer signs the custodial bank contract; however, the WSIB staff prepares the RFP, conducts the selection process and manages the contract and relationship as these responsibilities are delegated. In the one state where the Treasurer selected the custodial bank, the relationship has been dysfunctional and contentious and resulted in multiple providers and higher overall custody costs.

At the two investment board funds where the Treasurer is the custodian of legal record (ISBI and WSIB), the Treasurer’s Office has nothing to do with the management of investment funds beyond the Treasurer being a member of the trustee board.

***C3.15.2 In theory, having the TOS manage the custodial bank procurement process for all five state-wide retirement systems could have the potential to save costs; however, in practice, at SERS this is not the case. We cannot speak to the costs of the other Ohio public pension systems.***

Based upon the experience of the FAS team, the main potential advantage of having the TOS conduct the procurement process on behalf of SERS and the four other statewide retirement systems is the potential for achieving fee savings based upon multiple systems selecting the same custodial bank. However, due

to different needs and preferences among the five systems, they have not all utilized the same custodial bank and are unlikely to do so. In fact, the current process may have unintended consequences, as in the most recent procurement, the incumbent SERS international sub-custodial bank did not submit a bid. We were told that the primary reason for not bidding was unrelated to SERS but rather to its relationship with one of the other five Ohio systems. In addition, the scope of services obtained by SERS is less than would typically be the case, which further reduces any potential fee pricing advantage.

When the state treasurer is the custodian of a retirement system, and does not delegate responsibility for selecting the custodial bank to the Board of Trustees, the result can be a suboptimal choice for the retirement system.

***C3.15.3 Although the TOS staff believe they provide an important layer of oversight between the custodial banks and SERS, it is not clear that the added oversight is either necessary or worth the added cost and complexity.***

The current TOS staff is to be commended for working collaboratively with SERS and being committed to making the current structure as efficient as possible. The account teams from the two custodial banks and the MRK all state that the processes work well, and that the added approvals required by TOS do not impose an undue burden. SERS believes that the current processes work smoothly and are pleased with the transition to the new international sub-custodian.

However, with the TOS acting as the custodian for SERS, there are duplicative and unnecessary controls and costs which, while manageable, add minimal value and complicate transactions and reporting processes and add unnecessary cost and complexity in terms of:

- TOS staff resources;
- Additional procedures for reporting; and,
- Added reconciliations.

The vast majority of U.S. state pension funds outside of Ohio operate effectively without a third party overseeing and managing the custodial bank relationship. With the custodial bank being so central to a fund's day-to-day operations, it is important to establish appropriate financial controls, but to minimize unnecessary complexity. In our view, TOS oversight adds unnecessary complexity.

***C3.15.4 The legal requirement for the custodial bank which limits the selection to those with a presence in Ohio causes added cost and complexity for SERS.***

The law in Ohio Revised Code *135.03 Institutions eligible as public depositories*, and its interpretation, severely restricts the selection of potential custodial banks which can serve SERS. While the statute states, "Any national bank, any bank doing business under authority granted by the superintendent of financial institutions, or any bank doing business under authority granted by the regulatory authority of another state of the United States, located in this state, is eligible to become a public depository, subject to sections 135.01 to 135.21 of the Revised Code." It is our understanding that the phrase "located in this state" has been interpreted in a way which eliminates all but one of the major global custodial banks. As a result, an additional sub-custodial bank has been selected to handle investment manager accounts with international holdings.

This legal requirement is highly unusual for U.S. state public pension funds. FAS is not aware of any other state which has an in-state custodial bank requirement. As a result, nearly all state funds utilize a single custodial bank for their global custody services. This results in more efficient processing and reporting, fewer reconciliation requirements, and lower costs.

While many states, including Ohio, have laws encouraging selection of in-state investment managers, there is typically a qualifier that the managers must offer competitive services to other managers being considered. Indeed, the Ohio statute encourages the selection “when an Ohio-qualified agent offers quality, services, and safety comparable to other agents otherwise available.” As all but one of the Ohio-based custodial banks do not offer international support, they do not offer comparable services to the many other global custodial banks available to serve SERS.

### Recommendations for Improvement

***R3.15.1 The SERS Board of Trustees should be given authority to select the SERS custodial bank. This could be accomplished in one of two ways:***

- a. The Treasurer of State could delegate authority to the SERS Board; or,***
- b. The legislature could consider authorizing the SERS Board of Trustees to select its custodial bank and oversee the relationship.***

The authorities assigned to the SERS Board of Trustees by the legislature overall are leading practice, with strong alignment of fiduciary responsibilities with authorities. However, the TOS as custodian of funds is an anachronism which is a lagging practice and should be addressed. As fiduciaries, the SERS Board of Trustees should be allowed to select the custodial bank and oversee the relationship.

***R3.15.2 The legislature should eliminate the requirement for the SERS custodial bank to have a presence in Ohio to allow for a single global custodial bank to serve SERS.***

This provision in the Ohio Revised Code limits SERS’ choice of custodial bank and imposes added cost and complexity on the system. There are at least three or four U.S.-based global custodial banks which SERS could consider employing as their single master custodian which are not considered acceptable by Ohio under the current statute. These are the custodial banks used by most other state pension funds in the U.S.

## 4. Legal Compliance

### Overview

SERS is subject to a number of legal and regulatory requirements based on its tax status as a qualified government plan under Section 401(a) of the Internal Revenue Code ("Code"). SERS has established the appropriate policies, procedures and practices to ensure that it remains in substantial compliance with relevant federal tax laws by participating in the Internal Revenue Service ("IRS") determination letter process and relying on the advice of outside counsel and the Assistant General Counsel who has developed expertise in federal tax issues.

SERS is also subject to state specific requirements, including Ohio's ethics laws, which impose requirements on SERS trustees, employees, and external managers. FAS has reviewed SERS' policies, procedures and practices for ensuring that SERS' trustees and employees receive sufficient training on their ethics requirements and determined that although SERS' policies and procedures are consistent with peers, SERS may improve compliance by tracking ethics training. Finally, FAS identified applicable laws and policies that apply to SERS' investment transactions and found that SERS' investment transactions were substantially compliant in all material respects.

### Scope of Review

*The contractor will evaluate the adequacy of SERS' legal compliance with applicable state and federal law and regulations. The evaluation will include an analysis of:*

- *Legal compliance and adherence to IRS regulations;*
- *Adequacy of internal and external counsel;*
- *Adequacy of ethics training, disclosure, and monitoring of compliance; and*
- *Board and staff compliance with legal requirements.*

### Review Activities

We utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- SERS' IRS filings over the past three years;
- Most recent IRS Determination Letter;
- Investment compliance checklists;
- SERS' transaction files (ten investment managers across the asset classes, focusing on the most recently hired and those with the largest allocations);
- List with description of external legal services obtained over the past three years;
- Ethics training materials used by SERS;
- SERS' compliance reports for Board members and staff;

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- Interviews with SERS' legal, compliance and investment staffs; and,
- SERS' project team experience and the FAS knowledgebase.

The FAS team utilized interviews with internal counsel and the investment staff and peer information on level of legal staffing and external fees. We assessed the adequacy of legal services over the past three years. Using the information described above, the FAS team:

1. Reviewed communications with the IRS to identify potential compliance deficiencies;
2. Reviewed the process by which SERS monitors compliance with IRS requirements and responds to compliance issues;
3. Assessed legal services in comparison to peers over the past three years;
4. Reviewed the ethics training and compliance programs, as well as compliance reporting processes, and compared them to leading practices; and,
5. Reviewed transaction compliance checklists for each asset class and reviewed a sample of transactions for compliance with guidelines and legal requirements

## 4.1 Communications with the IRS

### Review Activities

FAS interviewed SERS' General Counsel to understand the legal department's policies and practices with respect to communicating with IRS. FAS reviewed SERS' past communications with the IRS, which is conducted through outside legal counsel. SERS' communications to the IRS consist of determination letter requests and determination letters confirming that SERS meets the requirements of a qualified plan under Section 401(a) of the Code. SERS has also participated in the IRS's Voluntary Correction Program.

### Expectations and Standard of Comparison

Public pension plans like SERS are considered governmental plans under Section 414(d) of the Code and receive favorable tax treatment as a qualified employee retirement plans under Section 401(a) of the Code. Other laws may confer tax exemption, such as IRC section 501(a) or implied statutory immunity. The IRS has established a process for governmental plans to request that the IRS review their plan document (*i.e.*, applicable statutes) to ensure it meets the applicable tax qualification requirements. Although making the request to the IRS for a determination letter is not mandatory from a compliance perspective, it is established practice among public pension funds. Public pension plans that receive a favorable determination letter minimize the risk that the IRS will disqualify the plan on audit because the plan document does not satisfy the applicable tax-qualification requirements and plans can use IRS correction programs to correct plan errors. We note that the IRS is likely to eliminate the determination letter process, except in certain limited circumstances.

Public pension plans like SERS may also have tax reporting obligations with respect to any entities wholly-owned by the pension plan, but we understand that SERS does not own any such entities.

### Findings and Conclusions

#### ***C4.1.1 SERS' communications with the IRS regarding SERS' qualification as a governmental plan qualified under 401(a) appear to be reasonable and consistent with leading practices.***

SERS received a favorable determination letter on December 13, 2012, confirming that SERS is an employee retirement plan qualified under section 401(a) of the IRC. SERS submitted a request for another determination letter on January 29, 2016. The request appears to have been submitted in order to elect Cycle E as its second remedial amendment cycle in order to extend the expiration date on the prior determination letter, which is consistent with leading practice. The IRS has not responded to the request, but the request will protect the plan and allow it to come into compliance if needed. SERS' correspondence with the IRS regarding its status as a qualified plan is reasonable and consistent with leading practices.

## 4.2 SERS' Monitoring of Compliance with IRS Requirements

### Review Activities

FAS interviewed SERS' General Counsel to understand the legal department's policies and practices for monitoring changes in tax law. FAS also reviewed the websites of outside counsel retained by SERS to advise FAS on federal tax compliance. FAS reviewed the Federal Tax Compliance policy and required minimum distribution procedure. FAS also reviewed SERS' communications to the IRS, which include determination letters confirming that SERS is a qualified employee retirement plan and other communications describing SERS' participation in the Voluntary Correction Program.

### Expectations and Standard of Comparison

Employee retirement plans qualified under section 401(a) of the Code must satisfy the Code's requirements both in form and operations. Employee retirement plans may request determination letters from the IRS to confirm that the form of the plan satisfies the Code's requirements for qualified plans. SERS has taken advantage of this opportunity, as described in Section 4.1. In addition to the form of the plan, the operation of the plan must also satisfy the Code's requirements. State pension funds like SERS often rely on outside legal counsel to advise on changes to federal tax law, which is consistent with SERS' policies and practices.

### Findings and Conclusions

#### ***C4.2.1 SERS' policies, procedures and practices for monitoring compliance with IRS requirements are reasonable and consistent with peer practices.***

As described above, SERS relies on the favorable determination letter process to confirm that the form of the plan complies with the Code's requirements applicable to qualified plans. SERS relies on outside counsel to advise on changes to federal tax law. SERS has appointed the Associate General Counsel to implement the federal tax compliance recommendations of outside counsel to ensure that the operation of the plan is consistent with the Code's requirements. SERS has also adopted a Federal Tax Compliance policy, which demonstrates a commitment to compliance with SERS' obligations as an employee retirement plan qualified under section 401(a). The Federal Tax Compliance Policy provides a detailed procedure to ensure that SERS complies with the required minimum distribution (RMD) requirements of Section 401(a)(9) of the Code, which was an operational compliance issue identified in 2009, when the policy was adopted. Although other isolated operational compliance issues have occurred in the past, SERS took measures to minimize the impact of such issues pursuant to the Voluntary Correction Program and has adopted appropriate measures to minimize compliance issues.

## 4.3 Use of Legal Services

### Review Activities

FAS interviewed SERS' General Counsel and the Assistant Attorney General appointed to serve SERS from the Attorney General's Office. FAS reviewed the Memorandum of Understanding between SERS and the Ohio Attorney General, websites of outside counsel, and biographies of SERS' internal counsel. FAS also reviewed various investment policies, reports, documents and procedures that reflect counsel participation (e.g., the Investment Committee Policy, sample investment contracts).

### Expectations and Standard of Comparison

SERS' legal team includes four lawyers, who address different legal needs including investments, benefits, disabilities, tax, health care, and information technology contracts (among others). SERS also works with private law firms and an Assistant Attorney General pursuant to SERS' relationship with the Ohio Attorney General's Office.

By statute, the Attorney General is counsel to the five Ohio retirement systems, including SERS. One Assistant Attorney General is appointed to work for SERS part-time, pursuant to a Memorandum of Understanding between SERS and the Attorney General's Office. The Assistant Attorney General advises the Board directly on fiduciary issues and responds to ad hoc requests from the General Counsel.

SERS hires outside law firms to address specialized legal needs, such as private equity or real estate deals, immigration issues, tax compliance, and employment law matters. The Attorney General's Office maintains a list of qualified law firms from which SERS may select and has authority to approve or deny outside counsel. This practice is not uncommon. Three of the seven investment boards in the FAS Benchmarking Report must also have outside counsel contracts approved by the Attorney General. The Attorney General may oversee significant legal services provided by outside counsel (e.g., reviewing pleadings in litigation).

SERS negotiates legal fees with the assistance of the Attorney General's office. SERS recently moved from fixed fee billing to hourly rate billing for certain transaction document reviews. SERS has been able to negotiate competitive billing rates and monitors legal fees closely. According to the most recent CEM report, SERS legal costs were well below those of peers.

## Findings and Conclusions

### ***C4.3.1 SERS' legal function is staffed appropriately, outside counsel is qualified, and legal fees appear to be reasonable in comparison to peers.***

SERS has competent and adequate in-house legal counsel. However, the Attorney General's Office is available to SERS, and SERS uses that resource to full advantage.

SERS also uses outside legal counsel appropriately. We found that the law firms used by SERS were experienced and qualified firms that are also used by peers for similar engagements. Although the Attorney General's Office controls the use of law firms and approves contracts with law firms, SERS has sufficient flexibility to hire qualified counsel, and the Attorney General's oversight does not appear to be causing problems.

Related legal fees appear to be reasonable, and in some instances, quite favorable compared to peers.

## 4.4 Ethics Training and Compliance Programs and Compliance Reporting Processes

### Review Activities

FAS reviewed Ohio law to understand the applicable ethics training obligations for the Board and staff. FAS also reviewed the various ethics-related policies and procedures that SERS has developed, including the Ethics Policy, Additional Standards of Professional and Ethical Conduct for Employees Policy, and the Continuing Education Policy. FAS reviewed other ethics monitoring documents such as checklists identifying ethics requirements for new trustees and employees. FAS also interviewed Board members, the Investment Compliance Analyst, Internal Auditor and legal counsel to understand how ethics training requirements are satisfied.

### Expectations and Standard of Comparison

Section 171.50 of the Ohio Revised Code requires the Ohio retirement systems to jointly develop a retirement board orientation program for new trustees and a continuing education program for trustees that have served more than a year. The orientation program and the continuing education program must both incorporate ethics considerations. New trustees must complete the training within 90 days of their election or appointment. Trustees that are not newly elected or appointed must participate in at least two continuing education sessions per year.

Section 3309.042 of the Ohio Revised Code separately requires SERS to periodically provide ethics training to Board members and employees regarding the requirements of Chapter 102 (Ethics), Section 2921.42 (Unlawful Interest in Public Contracts) and 2921.43 (Soliciting or Accepting Improper Compensation) of the Ohio Revised Code.

### Findings and Conclusions

#### ***C4.4.1 SERS provides sufficient opportunities to Board members and employees so that they may meet their ethics training requirements.***

SERS provides ample opportunities for Board members and staff to satisfy their ethics training obligations imposed under Ohio law. Staff provides educational opportunities to the Board at its annual retreat, biennial joint trustee training and new trustee training. New trustees receive at least eight hours of orientation training. Staff tracks each Board member's orientation training. Current board members participate in at least two education training sessions every year. Every two years, staff participates in ethics training led by SERS legal team. SERS tracks all education sessions and reports such information to the Board.

Ethics training appears to be grouped with other types of board member education. The Continuing Education Policy says that education sessions may focus on "topics of common interest [which] may

include ethics, governance processes and procedures, actuarial soundness, fiduciary basics, and investments." However, the Continuing Education Policy does not indicate that such ethics training is mandatory or identify the other educational topics that must be incorporated into Board members' training by statute (e.g., retirement system benefits). SERS may consider updating the Continuing Education Policy to identify the educational topics that are required by statute and desired by the Board (if any).

The Continuing Education Policy appears to apply to both trustees and staff but does not identify any continuing education requirements for staff. SERS has typically provided regular ethics training for staff and tracks attendance, so this is not a practical compliance concern. However, SERS may improve the Continuing Education Policy by describing how SERS implements the ethics training requirements of Section 3309.042 of the Ohio Revised Code, which apply to both Board members and staff.

In the 2013 Final Report, FAS suggested that the SERS Board develop a self-assessment process and move to a structured and directed continuing education program which identifies the needs of the Board in total and for each individual member and considers the results of the self-assessment process. The Board declined to proceed with the self-assessment process, and the Continuing Education Policy was not updated. We note that FAS has again proposed Board self-assessment, and SERS may likewise reconsider updating the Continuing Education Policy to incorporate the results of the self-assessment as well as the proposed changes described in this section.

***C4.4.2 SERS has a robust investment ethics compliance reporting system that appears to be operating satisfactorily.***

SERS' investment staff members file several conflict of interest and ethics compliance certifications annually. This includes annual and event-related certifications required by SERS, the Ethics Commission and relevant professional organizations. This process and the filings are reviewed annually by SERS' Internal Auditor, with results reported to the Audit Committee, Executive Director and CIO. External investment service providers also file Required Annual Disclosure forms with SERS reporting on conflicts of interest and compliance with contractual ethics and other requirements. These disclosure forms are reviewed by the Investment Compliance Analyst and audited annually by Internal Audit. Our review of the compliance process found it to be operating effectively and did not identify any material issues.

## Recommendations for Improvement

The policies and procedures adopted by the Board to monitor compliance with ethics training requirements are generally sound but could be improved. Recommendations for potential improvement are:

***R4.4.1 SERS may consider updating the Continuing Education Policy to identify the educational topics that are required by statute, including ethics, and desired by the Board (if any).***

***R4.4.2 SERS may wish to supplement the Continuing Education Policy to identify how SERS will implement ethics training requirements of Section 3309.042 of the Ohio Revised Code, in respect to which apply to staff.***

## 4.5 Transaction Compliance with Guidelines and Legal Requirements

### Review Activities

The FAS team reviewed a representative sample of 10 transactions from different asset classes. We conducted a compliance review of those transactions pursuant to the following process:

- We were provided with the transaction files for each of the 10 transactions;
- We reviewed the relevant laws, policies, legal checklists and procedures applicable to investment transactions. In addition to Ohio law, we reviewed SERS' investment policies and procedures describing the process for hiring investment managers and making investments, which include the Statement of Investment Policy, Investment Committee Policy, and Investment Compliance Policy. We also reviewed other policies, procedures and guidelines that address substantive legal issues or are specific to particular asset classes. These include the Iran and Sudan Investment Policy, Private Equity Co-Investment Policy, Opportunistic Investment Policy, Derivatives Safe Harbor Policy, Investment Risk Management Policy, Cash Equivalents Portfolio Investment Guidelines, Leverage Policy and Derivatives Policy;
- We developed a checklist that identified both SERS procedural requirements and substantive terms;
- We then reviewed the transaction file and completed the checklist for each transaction to identify which requirements or terms had been met and which requirements terms (if any) had been omitted.
- Finally, we summarized the results in Appendix E – Summary of Transaction Reviews.

### Expectations and Standard of Comparison:

As noted elsewhere, the SERS Board of Directors has delegated investment authority to the staff Investment Committee. Many other public pension plans have similarly delegated almost all investment authority to staff. In order for a public pension board of trustees to continue to provide effective oversight of its investment program under this type of delegated investment authority, it is important for public pension boards to have a clear process for approving investments to ensure that they remain within policy guidelines.

SERS has adopted the following procedures for approving investments, which is consistent with other U.S. state pension funds:

- Identification of two "sponsors" who are licensed investment officers responsible for leading due diligence efforts and preparing and presenting reports.

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- Investment Thesis - The sponsors will prepare a written investment thesis describing the opportunity which is circulated for comments.
- Investment Recommendation - The sponsors will incorporate comments into the investment recommendation that is delivered to the Investment Committee. The sponsors are required to include the following attachments:
  - The Board consultant's recommendation;
  - Investment checklist identifying required compliance procedures; and
  - The operational due diligence report (for certain asset classes)
- Investment Committee approval
- Signature Cover Page - One sponsor, the CIO, the Enterprise Risk Management Officer, an attorney, and the Executive Director must all sign the cover page confirming the investment.

FAS also reviewed the transaction files to review compliance with the following legal requirements and policies, though many of these legal requirements and policies were not applicable to all investments reviewed:

- Fully executed documents in transaction file;
- Conflicts of Interest language;
- Required Annual Disclosure Form;
- Monthly compliance letters;
- Iran and Sudan Transaction Report
- Notice of significant strategic, organizational or staffing changes;
- Quarterly reporting;
- Performance reporting consistent with the CFA Institute's performance standards;
- No contingent compensation arrangement.

A table which summarizes the results of our review for each covered transaction is attached to this report as Appendix E – Summary of Transaction Reviews.

#### Findings and Conclusions:

***C4.5.1 The reviewed investment transactions were approved and closed in accordance with the applicable SERS investment policies and procedures in all material respects.***

Based on the above review process, all investment transactions appear to have been approved and closed in accordance with applicable SERS' policies and legal requirements in all material respects.

***C4.5.2 The reviewed investment contracts substantially incorporate SERS' policies and procedures applicable to investment managers.***

SERS' legal staff and the Investment Compliance Department are involved in negotiating and reviewing investment contracts to ensure that they are aligned with SERS' policies and procedures. While SERS' standard forms of investment manager agreements and side letters incorporate SERS' policies, the final form of the agreement is subject to negotiation and terms may vary. Depending on the size of SERS' investment and the relative bargaining leverage of each party, the provisions of a final contract may vary

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from SERS' standard form. In reviewing the 10 transaction files, we found that the negotiated investment contracts incorporated substantially all of SERS relevant investment policies and generally contained key terms consistent with similar agreements negotiated by peers.

## 5. Risk Management and Controls

### Overview

SERS' financial control structure is appropriate. The essential components of SERS' financial control structure are consistent with peer pension and benefit systems. Based on the results of the past four years of external audits, no significant or material internal control weaknesses have been identified by either internal or external audit relating to the adequacy of financial controls.

SERS' financial statement and reporting processes and procedures fulfill the agency's duty to be publicly accountable and enables users to: assess that accountability; assist users in evaluating the operating results; and, in assessing the level of services that can be provided by SERS and its ability to meet its obligations as they become due.

Purchasing policies and procedures are improving. SERS is progressing on the recommendations in the 2015 Internal Audit report. SERS' purchasing policy and procedures are consistent with prevailing practices. SERS does not have a purchasing and contract management system to facilitate further enhancements to purchasing processes. SERS relies on ad hoc feedback from staff regarding the performance of vendors.

SERS' accounting processes conform to the Governmental Accounting Standards Board (GASB) compliance principles of regularity; consistency; sincerity; permanence of methods; non-compensation; prudence; continuity; periodicity; and, full disclosure/materiality.

Internal Audit has significantly improved over the past 18 months. SERS has adopted the leading practice of requiring Internal Audit to act in accordance with the Institute of Internal Auditors' (IIA) International Professional Practices Framework (IPPF). SERS has a control environment that enables the Internal Audit Department to be ethical, independent and objective. The Board has hired a competent CAO. The new CAO has implemented a risk-based approach to planning. Tools used by the CAO appear to be appropriate although we have some concerns about the risk assessment methodology (discussed later under 5.8 Holistic Risk Management). The CAO and Board have established a quality and continuous improvement program.

The selection of SERS' external financial audit firm included representation from SERS on the selection committee. The External financial auditors have been engaged to perform financial audits only.

SERS has developed adequate policies and procedures for the retention, destruction, and governance of records; however, requesting records and security should be cross-referenced with other policies. SERS is currently looking for a replacement for ImageNow's Retention Policy Manager because it does not retain the custody and authorization trail after destruction of the record. SERS educates and raises awareness with staff about record-keeping through the record-keeping administration and record agent relationship. SERS management can articulate tasks being performed for records management; however, an overall records management strategy has not been documented or formally agreed upon by executive management.

There currently is no common or holistic approach to risk management throughout SERS. The risk assessment framework used by Internal Audit is consistent with prevailing practice. The framework used by ERM has elements of both prevailing and leading practice. The model used by Investments is consistent with prevailing practice.

We have concerns with the prevailing practice and the use of qualitative estimates of likelihood by both ERM and IA. Use of subjective assessments of likelihood may result in the systematic under-estimation of residual risk by discounting risks seen as unlikely.

There may be some confusion in executive management about responsibilities for assurance (operating management) and independent reassurance (Internal Audit and ERM). Specific individual responsibilities for risk ownership and accountability have not been clearly assigned. The results of the ERM risk assessment are presented by the Enterprise Risk Management Officer. This may diminish the sense of ownership and accountability by operating management.

## Scope of Work

*The contractor will evaluate the risk review and control procedures of SERS. The contractor will also evaluate the SERS management process by analyzing, as appropriate, the essential components of its internal control structure. These components include segregation of duties, availability of information, timeliness, accessibility, and accuracy of information, policy manuals, supervision and review, audits, and training and planning. A review of this task area should also encompass an assessment of whether the pension fund utilizes a holistic view of risk management.*

*The evaluation will include an analysis of:*

- *The adequacy of financial controls and integrity of financial statements. This should include an analysis of the purchasing policy and adherence to that policy;*
- *The adequacy of the current accounting process;*
- *The appropriateness and utility of regular reports provided to the Board and management, and how that reporting compares to industry standards and best practices;*
- *Sufficiency of internal and external audit procedures;*
- *Adequacy of record-keeping system; and*
- *Holistic view of risk management.*

## Sources of Information

We utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- SERS' risk policies and procedures;
- SERS' purchasing policy and procedures;
- Description of accounting processes;
- External audit reports for prior three years, including any management letters;

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- Operational risk reports;
- Internal audit charter, manual, plans and reports;
- Record-keeping policies, procedures and systems;
- Interviews with SERS' Executive Director, Deputy Executive Director, Enterprise Risk Management Officer, Chief Audit Officer, Chief Financial Officer and staff, and the external auditor; and,
- FAS project team experience and the FAS risk and reporting knowledgebase.

This evaluation does not replace an external audit of financial statements or the formal external quality review of Internal Audit.

### Organization of this Section

Using this information, we have organized our findings, conclusions and recommendations concerning Risk Management and Controls into the following eight areas:

- 5.1 Financial Control Structure;
- 5.2 Financial Statements and Reporting;
- 5.3 Purchasing Policies and Procedures;
- 5.4 Accounting Processes;
- 5.5 Internal Audit;
- 5.6 External Auditor;
- 5.7 Record-Keeping; and,
- 5.8 Holistic Risk Management

## 5.1 Financial Control Structure

### Scope of Review

*Assess the adequacy of financial controls including segregation of duties, supervision and review, and audits.*

### Review Activities

The FAS team conducted interviews with the Chief Financial Officer, Assistant Director of Finance, Controller, Investment Accounting Senior Manager and the external financial auditors. In addition, we reviewed various reports prepared by SERS' external auditing firm covering the annual examination report, as well as their annual report on the "Auditor's Communication with Those Charged with Governance (AU-C 260)." These activities do not replace a formal external financial audit performed in conformance with the American Institute of Certified Public Accountants (AICPA) or the U.S. Government Accountability Office's (GAO) Government Auditing Standards.

### Expectations and Standards of Comparison

The AICPA has established practices and guidance around the financial control structure and underlying processes. Effective internal controls reduce the risk of asset loss, and help ensure that SERS' information is complete and accurate, financial statements are reliable, and its operations are conducted in accordance with the provisions of applicable laws and regulations. An effective system of internal control helps to protect the organization in two ways:

- By minimizing opportunities for unintentional errors or intentional fraud that may harm the organization. Preventive controls, which are designed to discourage errors or fraud, help accomplish this objective.
- By discovering small errors before they become big problems. Detective controls are designed to identify an error or fraud after it has occurred.

Internal control is a process — effected by management and other personnel, and overseen by those charged with governance. Internal control is designed to provide reasonable assurance regarding the achievement of objectives in the reliability of financial reporting. The organization's policies, procedures, organizational design and physical security all are part of the internal control process. The following are some general characteristics of satisfactory internal control over financial reporting:

- Policies and procedures provide for appropriate segregation of duties to reduce the likelihood that deliberate fraud can occur.
- Personnel are qualified to perform their assigned responsibilities.
- Sound practices are followed by personnel in performing their duties and functions.
- A system that ensures proper authorization and recording procedures for financial transactions.

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The Committee of Sponsoring Organizations of the Treadway Commission’s (COSO) Internal Control — Integrated Framework (*Framework*) provides detailed information about internal controls. The COSO *Framework* has been recognized by external auditors, internal auditors, executives, board members, regulators, standard setters and professional organizations as an appropriate and comprehensive framework for internal control. The *Framework* has three categories of objectives: reporting, operations and compliance.

The role of the external financial auditor is to communicate to the Board and others in the organization whether there are certain deficiencies or weaknesses in internal controls over the plan’s financial reporting. All plan auditors are required to follow Generally Accepted Auditing Standards (GAAS) as well as the GAO’s Governmental Auditing Standards, which requires that “significant deficiencies” and “material weaknesses” (as defined) identified during the annual independent audit be communicated to the Audit Committee and management in writing.

These communications must be made every year in which the significant deficiency or material weakness exists, even if it has already been communicated to the organization in the past. These must include an explanation of the potential effects of the significant deficiencies and material weaknesses identified. Such communications will improve awareness of the importance of internal control over financial reporting, and to help assess the costs and benefits of implementing adequate controls, weigh the risks of each significant deficiency or material weakness, and determine if and how to address them.

In this respect, the role of the Board is to oversee the effectiveness of the system of internal control including “tone at the top”. We found during the course our procedures and interviews, that there is a strong sense of tone at the top. Senior management and staff clearly stated and discussed their commitment to doing the “right thing” for their members, employers and the organization. The Board relies on management to implement control processes and provide reasonable (but not absolute) assurances that the processes are functioning as intended. Items that ought to be of concern to the Board should follow an escalation process.

Management’s responsibility is to provide reasonable assurances to the Board that they have established control processes and procedures. Control activities include identifying and assessing risk, implementing controls to mitigate risks, and communicating activity to internal stakeholders and if necessary the Board.

Leading practice is to have executives and management certify their assurances to the Board and implement monitoring activities under the oversight of executive management. Such monitoring includes, for example, enterprise risk management and compliance activities. The leaders of these activities typically report to the executive director. ERM is discussed under 1.8 Holistic Risk Management.

The role of the Internal Auditor (and others independent of operating management) is to provide independent reassurance about the reliability of management’s assertions about governance, risk management and controls. The scope of Internal Audit work is determined through risk-based planning, resource allocation based upon coverage by external auditors or other independent parties engaged by the Board or the state auditor’s office and direction of the Board through the audit committee. Leading practice is for Internal Audit to liaise with external auditors and focus primarily on strategic, operational and compliance objectives.

## Findings and Conclusions

Overall, SERS' financial control structure segregation of duties, supervision and review and audits, appear appropriate and consistent with other systems. SERS' financial control structure and organization includes a Chief Financial Officer (CFO) who reports to the Deputy Executive Director (Deputy ED) of SERS and business units.

The Finance organization consists of functions commonly found in other pension systems including: Employer Services and Outreach, Investment Accounting, Budget and Business Analyses, Tax, Purchasing, General Accounting and Accounts Payable. The business units each have a financial liaison who ensure the adequacy of the information being sent to Finance for management and financial reports. Monthly, the Finance staff review financial information with department liaisons and leaders.

RSM US, LLP (formerly McGladrey LLP, and SERS' auditors for the past four years) have not identified any significant or material errors. However, some internal control improvements over information technology internal controls were identified. Management has since remediated the deficiencies noted.

The Chief Audit Officer liaises with the external audit and provides the Audit Committee updates regarding process of the external audit and status of observations by the external auditors.

***C.5.1.1 The essential components of SERS' financial control structure are consistent with peer pension and benefit systems.***

There are no rules or national standards for how financial control structures need to be organized. However, SERS' structure for its Finance Group appears consistent with peers. Reporting responsibilities have the appropriate segregation of duties, while also providing for the appropriate level of governance by management, through SERS' internal reporting and review processes. This includes a review of financial information by business unit leaders.

***C.5.1.2 Based on the results of the past four years of external audits, no significant or material internal control weaknesses have been identified by either internal or external audit relating to the adequacy of financial controls.***

RSM has been engaged only to perform audits of SERS' financial statements, related disclosures and the underlying internal controls as part of the Comprehensive Annual Financial Report, required by all governmental institutions.

## 5.2 Financial Statements and Reporting

### Scope of Review

*Assess the integrity of financial statements and reporting including the appropriateness and utility of regular reports provided to the Board and management, and how that reporting compares to industry standards and leading practices. Essential components of financial reporting include integrity, accountability, consistency through policy and procedures, and timeliness.*

### Review Activities

The FAS team compared SERS' policies and procedures with leading practices at peer state retirement systems in the U.S. and guidance promulgated by American Institute of Certified Public Accountants (AICPA) and the Government Accounting Standards Board (GASB). We conducted interviews with the Chief Financial Officer, Assistant Director of Finance, Controller, Investment Accounting Senior Manager and the external financial auditors.

In addition, we reviewed the Comprehensive Annual Financial Report (CAFR) for the past two years as well as supporting accounting and financial reporting policies and procedures. Furthermore, we reviewed various reports prepared by SERS' external auditing firm covering the annual examination report, as well as their annual report on the "Auditor's Communication with Those Charged with Governance (AU-C 260)." These activities do not replace a formal external financial audit performed in conformance with the American Institute of Certified Public Accountants or the GAO's Government Auditing Standards.

### Expectations and Standards of Comparison

SERS' financial reporting process is governed by standards set forth by the AICPA as well as the GASB. Furthermore, an independent public accounting firm performs an annual audit of SERS' financial statements as well as reviews its annual public disclosures contained within the CAFR. Ultimately, financial reporting should possess these basic characteristics: understandability, reliability, relevance, timeliness, consistency and comparability.

More specifically, GASB's Concepts Statement No. 1 provides a summary of key objectives for financial reporting in governmental agencies such as SERS:

- Financial reporting should assist in fulfilling government's duty to be publicly accountable and should enable users to assess that accountability by:
  - Providing information to determine whether current-year revenues were sufficient to pay for current-year services.
  - Demonstrating whether resources were obtained and used in accordance with the entity's legally adopted budget, and demonstrating compliance with other financial-related legal or contractual requirements.

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- Providing information to assist users in assessing the service efforts, costs and accomplishments of the governmental entity.
- Financial reporting should assist users in evaluating the operating results of the governmental entity for the year by:
  - Providing information about sources and uses of financial resources.
  - Providing information about how it financed its activities and met its cash requirements.
  - Providing information necessary to determine whether its financial position improved or deteriorated as a result of the year's operations.
- Financial reporting should assist users in assessing the level of services that can be provided by the governmental entity and its ability to meet its obligations as they become due by:
  - Providing information about its financial position and condition.
  - Providing information about its physical and other nonfinancial resources having useful lives that extend beyond the current year, including information that can be used to assess the service potential of those resources.
  - Disclosing legal or contractual restrictions on resources and the risk of potential loss of resources.

## Findings and Conclusions

SERS' Finance department is primarily responsible for the preparation of all financial and budgeting reports to senior leadership as well as the Board. Their focus over the past year has been on the implementation of the new SMART system as well as updating desktop procedures and integrating the Purchasing Department into the group.

Overall, SERS' financial reporting appears reasonable and appropriate. Furthermore, the accounting and finance groups have been seen within the organization (as well as by their external financial auditors) to be meeting the current demands of the organization and in compliance with regulatory and financial reporting standards. However, we did identify several opportunities for improvement which are described in R.5.2.1 through R.5.2.5.

***C.5.2.1 SERS' financial reporting processes and procedures fulfill the agency's duty to be publicly accountable and enables users to assess that accountability.***

SERS has demonstrated their obligation and commitment for preparing and reporting on their financial condition through the following actions:

- Financial statements and reports are provided to senior leadership and the Board monthly;
- The SERS Comprehensive Annual Financial Report is issued within 6 months of their June 30, fiscal year end;
- SERS' financial statements are audited on an annual basis by an independent auditing firm. The external auditor's reports have not identified any material or internal control issues that would affect the integrity of the financial report;
- The external auditors also issue an annual report on "The Auditor's Communication with Those Charged with Governance." This report contains a Summary of Significant Accounting Estimates

and the basis for their conclusion on the reasonableness of the estimates. Their conclusions noted that SERS' methodologies and estimates were reasonable and appropriate;

- SERS' Executive Director and Chief Financial Officer sign a Management Representation Letter as part of the issuance of the annually audited financial statements. The Management Representation letter confirms that all the information contained within the financial statements is true and accurate. In addition, it also confirms that all relevant disclosures over business practices, compliance with laws and regulations have been made.

***C.5.2.2 SERS' financial reporting processes and procedures are sufficient to assist users in evaluating the operating results.***

SERS' Finance department has been focused on implementing new internal controls as well as governance processes over its budgeting, financial reporting and procurement activities. These activities include:

- A monthly report to senior leadership which contains a section on management discussion and analysis of issues and opportunities that have been identified as well as an analysis of net positions by fund. Although monthly reports are issued, they are distributed approximately two months after the month-end. This delay is primarily due to a number of manual processes and procedure which are currently being addressed in SMART and the intended upgrade of Great Plains in fiscal year 2018.
- Developing updated desk procedures and standards. These desk procedures help to ensure that staff are following detailed procedures that assist in maintaining compliance with SERS policies and reducing errors. Although these have been updated, further work will be needed to ensure that they are updated to reflect process changes when the new SMART system goes live.
- Moving the Purchasing department from Administrative Services to Finance has helped to ensure more oversight of the procurement process as well as developing more formalized purchasing policies and procedures. Several internal control improvement opportunities were identified by Internal Audit and are currently being addressed by management.
- A quarterly budget analysis process is in place to identify and evaluate variances and provide reports to senior leadership as well as the Board. The current process is based on spreadsheets and templates that must be manually updated and distributed to each business unit. SERS is in the initial stage of considering more automated tools to improve timeliness of report distribution as well as reducing errors attributable to manual processing activities.

***C.5.2.3 SERS' financial reporting processes and procedures are sufficient to assist users in assessing the level of services that can be provided by SERS and its ability to meet its obligations as they become due.***

SERS issues their Comprehensive Annual Financial Report which covers an Introduction, consisting of an overview of SERS and the services it provides as well as how it is organized; a Financial section, which contains a management discussion and analysis as well as the external auditors' opinion and financial statements; and an Investment section, which provides both summarized as well as detailed analyses of fund performance. Finally, the report contains detailed appendices which cover actuarial and statistical supporting materials for users' benefit.

To ensure completeness and accuracy of the CAFR report, SERS has established comprehensive processes and procedures. These processes include:

- Obtaining fund balance and activity information from Mellon Bank and updating SERS' Great Plains general ledger system for further analysis and reporting.
- Coordinating SERS' report process with the State's Office of Budget and Management.
- An audit of the financial statements and a review of the CAFR report for general consistency is performed by the external audit firm.

## Recommendations for Improvement

SERS' financial reporting processes and practices are generally sound, effective and demonstrate a focus on compliance with regulatory and financial reporting practices. Recommendations for improvement are:

***R.5.2.1 SERS should consider implementing a management sub-certification process to ensure the integrity of financial reporting by increasing manager accountability for accuracy and compliance with financial reporting standards.***

Currently, the Executive Director along with the Chief Financial Officer sign the annual Management Representation Letter required as part of the issuance of the audited financial statements. A common assumption is that the CFO and Executive Director are the sole owners of financial statement risk. Leading practice is to include more managers below the levels of the ED and CFO to ensure more accountability and completeness in performing accounting and related disclosure requirements.

One approach would be to include sub-certifications by the Chief Audit Officer, General Counsel and relevant business unit leaders. The business unit leaders are responsible for ensuring that accurate financial information goes into the financial systems. The Finance department relies on these managers for the integrity of the data.

***R.5.2.2 Management should continue to document desk procedures to ensure consistency in the execution of transactions, reporting and performance of duties.***

The steps taken by the Finance department to document desk procedures should continue. In addition, with the roll out of SMART later in 2017, these procedures should be updated to conform to new processes and activities, not only in Finance but across the organization. The benefits of up-to-date desk procedures include not only the ability to decrease the time it takes to educate and train new employees, but also in cross-training existing staff. Another benefit is that it encourages consistency in how procedures are carried out and should also improve the accuracy of data and transaction processing.

***R.5.2.3 Management should improve the timeliness of internal financial and budget reporting.***

SERS' internal financial reporting to senior management occurs approximately two months after the financial close for the month. Hence, information and issue resolution becomes more challenging and remediation efforts may be delayed. It is our understanding that the process is heavily reliant on spreadsheets and manual downloads of information from the general ledger.

***R.5.2.4 Management should automate tools to help improve the budgeting process.***

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SERS' budgeting process is based primarily on the use of spreadsheets and templates. It is heavily reliant on manual data gathering and input. This approach leads to errors and inefficient use of time in tracking down and correcting mistakes. Utilizing dedicated budgeting software could significantly reduce the data gathering and correction of errors and provide more time for thoughtful analyses and greater reporting capabilities.

## 5.3 Purchasing Policies and Procedures

### Scope of Review

*Evaluate purchasing policies, practices and compliance with policies.*

### Review Activities

The FAS team compared SERS' policies, procedures and compliance with prevailing and leading practices of state retirement systems in the U.S. Specifically, we reviewed the purchasing policy and the related Internal Audit report dated October 2015. This review focused on major purchases for operations of SERS and excluded investment purchases. The FAS team interviewed the Executive Director, Deputy Executive Director, CFO, Assistance Director of Finance, and Director of Administrative Services.

### Expectations and Standards of Comparison

SERS is exempt from following the State of Ohio Procurement practices; therefore, leading and prevailing practices among state retirement systems were used as the basis for this review. Leading practices for purchasing activities include:

- Purchasing policies, standards and monitoring provide strategic guidance and education to the departments regarding alignment of purchases with needs of the department and organization.
- A Purchasing function works with each department to anticipate their needs and ensure:
  - Major purchases are included in the budget approved by the Board; and
  - Proactive consideration is given to expiring contracts.
- Purchasing policies and procedures are designed to accommodate different types of goods and services with different characteristics, e.g.:
  - Complex, high-risk IT multi-year services contracts.
  - Commodity items such as office supplies.
- Policies include contract management and records retention for purchasing related activities.
- Compliance with the policies and procedures is monitored.
- The general counsel collaborates to ensure consistent contracts.
- Vendor performance is monitored and compared to the contract terms.
- Approval authorities are clearly defined by department and management level to facilitate efficient procurements with appropriate levels of control.
- A procurement and contract management information system facilitates purchasing processes with capabilities such as:
  - Central repository for all contracts which is easily searchable;
  - Workflow functions support development of new contracts and allow electronic approvals according to delegated authorities;
  - Automated support for development of Requests for Proposal (RFPs);

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- Standard contracting terms and conditions checklists are provided for each type of procurement in a central repository; and,
- Contract expiration dates are automatically monitored and contract owners are notified appropriately in advance.
- Purchasing activities are reported separately from accounts payable to ensure appropriate segregation of duties.

## Findings and Conclusions

In February 2016, the responsibility for purchasing moved from Administrative Services department to Finance. Moving purchasing to Finance was predicated on the need to improve internal controls as well as to improve oversight of the procurement process. Purchasing policies and procedures were updated in September 2016 to reflect the change in responsibility and address recommendations from an October 2015 Internal Audit.

SERS has been making progress in implementing Internal Audit recommendations and is beginning to contemplate the strategic direction of purchasing. Purchasing focuses primarily on day to day purchasing and coordinating RFPs and contracting for other departments such as health care program and Information Technology.

***C.5.3.1 SERS is progressing on the recommendations for purchasing contained in the 2015 Internal Audit report.***

Moving the Purchasing department from Administrative Services to Finance has helped to ensure more oversight of the procurement process as well as developing more formalized purchasing policies and procedures. Several internal control improvement opportunities were identified by Internal Audit and are currently being addressed by management.

***C.5.3.2 SERS' purchasing policy and procedures are consistent with prevailing practices.***

Purchasing policies and procedures are designed to provide SERS with a single purchasing policy and process with centralized monitoring of completeness and compliance throughout the contracting process. Each department is expected to designate an authorized employee to execute the purchasing process on behalf of the department. Purchasing policies and procedures include guidance for board approval, responsibilities, processes for different types of goods, vendor selection, contracting, purchasing authority, conflict of interest, confidentiality and records management.

The Purchasing Coordinator, working with Legal, facilitates the purchasing process from RFP to retention of the contract. This process helps ensure that staff follow the purchasing policy and procedures. In addition, purchasing responsibilities are separate from accounts payable.

***C5.3.3 SERS does not have a purchasing and contract management system to facilitate further enhancements to purchasing processes.***

Leading practices for purchasing include a centralized system for managing purchasing workflow, contract approval and monitoring contract renewals. Much of SERS' contracts are renewals. The purchasing team is working with each department to collect contract information, developing a contract checklist and

working with IT to develop automated workflow for contract approvals. The team plans to leverage features of Great Plains and SMART; however, major system upgrades or new systems will not take place until after the implementation of SMART.

A goal of the purchasing team is to activate some of the features in Great Plains related to purchasing. This upgrade is expected to happen in FY2018. In addition, purchasing is using SharePoint to hold documents during the flow of purchasing activities.

***C5.3.4 SERS relies on ad hoc feedback from staff regarding the performance of vendors.***

Leading practice is to proactively monitor the performance of vendors in relations to the contract. The monitoring of vendor performance can lead to effective negotiation, mitigation of risks such as member satisfaction and data security. These programs take time to implement.

## Recommendations for Improvement

***R.5.3.1 The Finance team should continue to implement tools to enable efficient and effective centralization of contract monitoring, allowing leadership to be more strategic in working with third party vendors and service providers.***

Centralized capabilities to track and monitor contract quality and expiration could range from manually intensive processes to highly automated workflows with notices of expiration. The more automated the process, the more effectively and efficiently, SERS will be able to ensure the following:

- Purchases are processed in accordance with SERS purchasing policy and purchasing process;
- Proactive and effective anticipation of expiring contracts; and
- Payments are authorized.

***R.5.3.2 The Purchasing team should ensure that the document retention needs for purchasing activities and contracts are considered in SERS' records retention strategy.***

The Purchasing team is designing processes for retaining documents. These business needs should be included in the SERS' enterprise records management project. The purchasing team most likely can leverage the tools implemented by legal and the enterprise. For more information on records management, see 5.7 SERS Record-keeping system.

***R.5.3.3 Once centralized processes are effectively working, the Purchasing team should work more strategically within SERS.***

Leading practice is for a centralized purchasing leader to provide strategic procurement support to executive and department leaders. This process could involve analyzing purchasing workflow and creating opportunities to provide strategic value through the following:

- Assisting departments in understanding their purchasing needs and linkage to SERS' strategic plan;
- Proactively analyzing contract activities to anticipate contract renewals to minimize unnecessary cost increases; and,
- Evaluating the performance of vendors based upon risk-profile or impact on member experience.

## 5.4 Accounting Processes

### Scope of Review

*Assess the adequacy of the current accounting processes including the evaluation of SERS' management process by analyzing, as appropriate, the essential components of its internal control structure.*

### Review Activities

The FAS team compared SERS' policies and procedures with leading practices at peer state retirement systems in the U.S. and guidance promulgated by American Institute of Certified Public Accountants (AICPA) and the Government Accounting Standards Board (GASB). We conducted interviews with the Chief Financial Officer, Assistant Director of Finance, Controller, Investment Accounting Senior Manager and the external financial auditors.

In addition, we reviewed various reports prepared by SERS' external auditing firm covering the annual examination report, as well as their annual report on the "Auditor's Communication with Those Charged with Governance (AU-C 260)." These activities do not replace a formal external financial audit performed in conformance with the American Institute of Certified Public Accountants or the GAO's Government Auditing Standards.

### Expectations and Standards of Comparison

SERS' financial reporting process is governed by standards set forth by the AICPA as well as the GASB. Furthermore, an independent public accounting firm performs an annual audit of SERS' financial statements. Financial accounting information must be assembled and reported objectively. For this reason, financial accounting relies on certain accounting best practices and standards called "Generally Accepted Accounting Principles" (GAAP).

GAAP compliance principles include:

- **Principle of Regularity:** Regularity is defined as conformity to enforced rules and laws.
- **Principle of Consistency:** The consistency principle requires accountants to apply the same methods and procedures from period to period.
- **Principle of Sincerity:** The accounting unit should reflect in good faith the reality of the company's financial status.
- **Principle of The Permanence of Methods:** This accounting principle aims to provide coherence and allow comparison of the financial information published by the company.
- **Principle of Non-Compensation:** One should show the full details of the financial accounting information and not seek to compensate a debt with an asset, a revenue with an expense, etc.
- **Principle of Prudence:** This accounting principle aims to show the reality "as is" -- one should not try to make things look prettier than they are. Typically, revenue should be recorded only when it is certain and a provision should be entered for an expense which is probable.

- **Principle of Continuity:** When stating financial information, one should assume that the business will not be interrupted. This accounting principle mitigates the principle of prudence -- assets do not have to be accounted at their disposable value, but it is accepted that they are at their historical value.
- **Principle of Periodicity:** Each financial accounting entry should be allocated to a given period, and split accordingly if it covers several periods. If a client pre-pays a subscription (or lease, etc.), the given revenue should be split to the entire timespan and not counted for entirely on the date of the transaction.
- **Principle of Full Disclosure/Materiality:** All financial accounting information and values pertaining to the financial position of a business must be disclosed in the records.

## Findings and Conclusions

SERS' Finance department is primarily responsible for the preparation of all financial accounting and budgeting reports to senior leadership as well as the Board. Their focus over the past year has been on the implementation of the new SMART system as well as updating desktop procedures and integrating the Purchasing Department into the group.

The Accounting function has also been focused on implementing new travel expense policies and procedures. They have recently developed the "Accounts Payable – Travel Handbook," which outlines how travel credit cards should be authorized and used by staff members. It was noted during our discussions with various levels of management that the travel expense reimbursement process could be made more efficient and less cumbersome by the staff when they are traveling on business. In addition, the Accounting function is also responsible for providing data and other information to third-party actuarial firms as well managing SERS' fixed asset inventory and the budget process.

SERS currently uses several systems for supporting its accounting processes:

- Great Plains for its general ledger and fixed assets systems;
- Mekorma Check Writing for disbursements to members as well as staff for claims and expense reimbursements; and,
- ImageNow is used to process accounts payable and manage the approval process workflow.

Overall, financial reporting performed by SERS is adequate. In addition, the accounting and finance groups have been seen within the organization (as well as by their external financial auditors) to be meeting the current demands of the organization and in compliance with regulatory and financial reporting standards.

### ***C.5.4.1 SERS' Accounting processes conform to the principles of regularity.***

SERS has demonstrated their obligation and commitment for accounting for transactions based on current regulatory guidance and requirements through the following actions:

- During fiscal year 2016, SERS implemented GASB 67 and 68. The objective of GASB 67 is to improve financial reporting by state and local governmental pension plans. This Statement results from a comprehensive review of the effectiveness of existing standards of accounting and financial reporting for pensions to provide decision-useful information, supporting assessments of accountability and inter-period equity, and creating additional transparency.

This Statement replaces the requirements of Statements No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and No. 50, Pension Disclosures, as they relate to pension plans that are administered through trusts or equivalent arrangements (hereafter jointly referred to as trusts) that meet certain criteria. The requirements of Statements 25 and 50 remain applicable to pension plans that are not administered through trusts covered by the scope of this Statement and to defined contribution plans that provide postemployment benefits other than pensions.

Statement No. 68, Accounting and Financial Reporting for Pensions, establishes accounting and financial reporting requirements related to pensions for governments whose employees are provided with pensions through pension plans that are covered by the scope of this Statement, as well as for non-employer governments that have a legal obligation to contribute to those plans.

Statement 67 and Statement 68 establish a definition of a pension plan that reflects the primary activities associated with the pension arrangement—determining pensions, accumulating and managing assets dedicated for pensions, and paying benefits to plan members as they come due.

- SERS' financial statements are audited on an annual basis by an independent auditing firm. The external auditor's reports have not identified any material or internal control issues that would affect the integrity of their accounting processes or financial report.
- The external auditors also issue an annual report on "The Auditor's Communication with Those Charged with Governance." This report contains a Summary of Significant Accounting Estimates and the basis for their conclusion on the reasonableness of the estimates. Their conclusions noted that SERS' methodologies and estimates were reasonable and appropriate.
- SERS' Executive Director and Chief Financial Officer sign a Management Representation Letter as part of the issuance of the annually audited financial statements. The Management Representation letter confirms that all the information contained within the financial statements is true and accurate. In addition, it also confirms that all relevant disclosures over business practices, compliance with laws and regulations have been made.

#### ***C.5.4.2 SERS' Accounting processes conform to the principle of consistency.***

As noted above, SERS implemented two new financial accounting and reporting requirements during the 2016 fiscal year. Although this resulted in additional disclosures, it did not represent a change in the principle of consistency from an accounting perspective. In addition, to ensure that SERS' accounting and financial reporting processes are consistently applied, they have continued to improve on their documentation of policies and procedures:

- Developing updated desk procedures and standards. These desk procedures help to ensure that staff is following detailed procedures that assist in maintaining compliance with SERS policies and reducing errors. Although these have been updated, further work will be needed to complete the process as well as ensure that they are updated to reflect process changes when the new SMART system goes live.

- SERS' accounting processes and procedures rely heavily on the use of manually updated spreadsheets. Although the desk procedures outline quality review checks that should take place, there are few automated procedures in place to reduce the possibility of human error.

***C.5.4.3 SERS' Accounting processes conform to the principle of sincerity.***

SERS has established a number of internal review processes as well as utilized an independent financial auditing firm to conduct an annual audit of its financial reports and disclosures (as part of its issuance of the CAFR). These processes include:

- SERS' Investment Accounting reviews daily cash reconciliations that are produced by the master record keeper. Domestic holding reconciliations are reviewed on a weekly basis and global holding reconciliations are reviewed monthly.
- The Investment Accounting group also performs monthly risk analytics to identify any unusual trends or transactions.
- SERS prepares monthly financial reports to senior leadership consisting of a management discussion and analysis of business, regulatory, accounting or other related financial changes. It also includes net positions by fund as well as related analyses. Although these reports are prepared monthly, there is typically a two-month delay in issuance, due to delays in manual processes and departmental analyses.
- Quarterly operations reports are issued to both senior leadership as well as the Board.
- Quarterly budgets analyses are prepared and reviewed with the Executive and Department Directors.
- On an annual basis, SERS' external financial auditors perform an audit of the financial statements and associated disclosures. As part of their procedures, they assess the internal accounting processes, systems and internal controls. If any significant or material issues are identified, they are discussed with management. During our discussions with both management as well as the external auditors, no significant or material issues were identified in any recent audits.

***C.5.4.4 SERS' Accounting processes conform to the principle of permanence of methods.***

SERS has developed comprehensive accounting policies and procedures, which are updated at least on an annual basis and more frequently, as regulatory or process changes takes place. Through our reading of the accounting policy/procedure manuals, as well as our discussions with management, and the external auditors, we did not identify any concerns in their accounting methodologies.

***C.5.4.5 SERS' Accounting processes conform to the principle of non-compensation.***

As described in section C.5.4.3, SERS' Accounting processes conform to the principle of sincerity. SERS utilizes multiple levels of internal accounting analyses and checkpoints for senior leadership to note any unusual trends or variances that might be caused by netting transaction activity. Furthermore, the annual financial audit process includes examining detailed transactions and balance detail which would identify significant or material irregularities or errors. FAS's review of internal analyses, discussions with management, staff and the external auditors did not note any instance of issues of this nature.

***C.5.4.6 SERS' Accounting processes conform to the principle of prudence.***

SERS has established multiple levels of review of accounting, financial analyses and vetting of transactions across the organization to identify and resolve potential issues from occurring:

- SERS' Investment Accounting Senior Manager attends weekly investment staff meetings to gain an understanding of existing and pending transactions.
- The Investment Accounting Senior Manager also attends monthly investment committee meetings and interacts with the Chief Investment Officer (CIO) on an as-needed basis.
- The Executive Director attends all investment committee meetings and a report is provided to the Executive Director, Assistant Director, CIO and Chief Financial Officer.
- The Investment Accounting Senior Manager also meets with the Investment Compliance Analyst on a monthly basis to discuss any potential issues or concerns.
- Performance reporting is prepared for both senior leadership as well as the Board.

***C.5.4.7 SERS' Accounting processes conform to the principle of continuity.***

SERS has established procedures for accounting for assets in accordance with GAAP requirements. In addition, the annual audit conducted by the independent external auditors involves conducting procedures to confirm the existence and cost basis of their investments and other material assets SERS holds. No issues or concerns were noted as part of our discussions with senior/mid-level management or the external audit firm.

We also noted that through our conversations with both SERS' accounting and finance groups (as well as the external audit firm) that there are frequent discussions of pending accounting guidance and requirements.

***C.5.4.8 SERS' Accounting processes conform to the principle of periodicity.***

As noted in several other sections, SERS relies on multiple levels of reviews to identify accounting and financial transactions which may have a material impact on the organization. These reviews not only help to ensure that the transactions are properly approved, but that they are recorded in the proper accounting period and under the correct accounting methodology. As also noted, the independent financial auditing firm also examines significant and material transactions for the appropriate accounting treatment and confirms the existence of assets and liabilities.

***C.5.4.9 SERS' Accounting processes conform to the principle of full disclosure/materiality.***

SERS issues their Comprehensive Annual Financial Report (CAFR). The CAFR includes: An Introduction, consisting of an overview of SERS and the services it provides as well as how it is organized; a Financial section, which contains a management discussion and analysis as well as the external auditors' opinion and financial statements; and an Investment section, which provides both summarized as well as detailed analyses of fund performance. Finally, the report contains detailed appendices which cover actuarial and statistical supporting materials for the users' benefit.

To ensure completeness and accuracy of the CAFR report, SERS has established comprehensive processes and procedures. These processes include:

- Obtaining fund balance and activity information from Mellon Bank and updating SERS' Great Plains general ledger system for further analysis and reporting;

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- SERS coordinates its report process with the State’s Office of Budget and Management; and,
- Once the report is finalized by SERS, their external audit firm performs an audit of the financial statements and reviews the CAFR report in general for consistency and compliance with disclosure requirements.

### Recommendations for Improvement

SERS’ accounting and reporting processes and practices are generally sound, effective and demonstrate a focus on compliance with regulatory and financial reporting practices. Recommendations for potential improvement are:

***R.5.4.1 SERS should strive to issue their monthly and quarterly financial statements more timely.***

Currently, there is approximately a two-month delay in issuing internal financial statements. One reason noted is the high degree of manual processing and analyses.

***R.5.4.2 SERS should consider developing an upgrade plan to the most recent version of their accounting software applications.***

We understand that SERS is currently holding off upgrading its accounting applications until the SMART system goes live. Although SERS intends to move forward with its planned upgrade to the latest version of Great Plains general ledger, SERS should start planning for the software upgrade to help identify potential compliance gaps, priorities and timelines for their eventual implementation schedule for fiscal year 2018.

***R.5.4.3 SERS should continue to refine its travel expense reimbursement process along with implementing a system to ensure consistent approval procedures, timely recording and reimbursement of business related expenditures.***

The current process for SERS’ managers and staff for obtaining approval for travel related business activities as well as receiving reimbursement for business expenses is not timely and is resource consuming:

- Timely reimbursement and recording is dependent upon the manual timely and accurate submission of the reimbursement request.
- The ImageNow system used by Finance to manage cash disbursements and accounts payable workflow is not optimized for travel approval or expense reimbursement requests. Typically, dedicated travel expense systems are used for this purpose.

SERS plans on continuing its implementation of more consistent travel expense approval and record keeping workflows and tools will help to enable the process to be more efficient and easier to manage.

## 5.5 Internal Audit

### Scope of Review

*Assess SERS' Internal Audit capabilities and procedures including charter, audit management, planning, performance of audits, issue tracking and continuous improvement.*

### Review Activities

The FAS team compared SERS' policies and procedures with leading practices at peer state retirement systems in the U.S. and guidance promulgated by The Institute of Internal Auditors, Inc. (IIA). We reviewed the Internal Audit charter, risk assessment approach for prioritizing Internal Audit activities, communications to the board, Internal Audit manual, Internal Audit reports and resources. These activities do not replace a formal external quality review performed in conformance with the IIA's *International Standards for the Professional Practice of Internal Auditing (Standards)*.

### Expectations and Standards of Comparison

Internal Audit is one of several sources available to the Board for independent reassurance regarding the reliability of operating management's assurances. IA also consults with operating managers to improve controls. Guidance and certifications for Internal Audit are promulgated by the IIA and the U.S. Government Accountability Office (GAO). The IIA's *International Standards for the Professional Practice of Internal Auditing (Standards)* focus is on Internal Audit management and performance of Internal Audit activities. The GAO's Government Auditing Standards (GAGAS) focus on the delivery of performance audits, attestation engagements and financial audits. Typically, State Audit Offices are directed to comply with GAGAS.

A leading practice for quasi-government and non-government entities is to conform with the IIA's *Standards* unless otherwise directed by legislation. SERS has demonstrated a leading practice by adopting the IIA's International Professional Practices Framework (IPPF) a conceptual framework for performing Internal Audit. The IPPF includes the mission and definition of Internal Audit, code of ethics, core principles, *Standards* and recommended guidance for performing Internal Audit.

The purpose of Internal Audit is best captured in the IPPF's mission of Internal Audit, definition of Internal Audit and core principles for the professional practice of Internal Auditing.

*Mission of Internal Audit - To enhance and protect organizational value by providing risk-based and objective assurance, advice, and insight.*

*Definition of Internal Audit - Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It 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.*

Core Principles for the Professional Practice of Internal Auditing

- *Demonstrates integrity.*
- *Demonstrates competence and due professional care.*
- *Is objective and free from undue influence (independent).*
- *Aligns with the strategies, objectives, and risks of the organization.*
- *Is appropriately positioned and adequately resourced.*
- *Demonstrates quality and continuous improvement.*
- *Communicates effectively.*
- *Provides risk-based assurance.*
- *Is insightful, proactive, and future-focused.*
- *Promotes organizational improvement.*

For a public pension board of trustees to obtain effective independent reassurance from Internal Audit, leading practice is for Internal Audit to implement a program that includes:

- Governance practices approved by the board;
- An environment that is ethical, independent and objective;
- Risk-based approaches;
- Competent people;
- Adequate tools; and,
- Quality and continuous improvement.

## Findings and Conclusions

In the last three years, SERS has made significant enhancements to the Internal Audit Department following the replacement of the Chief Audit Officer (CAO) in March 2015. The CAO has reconstructed the foundation of Internal Audit to align with the *Standards* and address the concerns of the 2012 quality review. In addition, the CAO has been educating the board and management about the purpose and benefits of Internal Audit.

In June 2016, the Audit Committee approved a revised Internal Audit Charter stating the requirements for professionalism, purpose, authority, independence, objectivity, responsibility and reporting for the Internal Audit Department. In addition, the Internal Audit Department reports directly to the Board Audit Committee with an administrative reporting line to the Executive Director.

**C.5.5.1**     *SERS has adopted the leading practice of requiring Internal Audit to act accordance with the IIA's IPPF.*

The IIA is an international professional organization for Internal Audit professionals. The IIA provides Internal Auditors with standards, guidance, research, certification, education and advocacy. The adoption of the IIA IPPF is a leading practice among boards and Internal Audit professionals.

SERS has demonstrated leading practice by including in the Internal Audit process the following:

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- Internal Audit Charter: Audit Committee approved the Internal Audit charter containing the IIA IPPF as the requirement for professionalism and due care in performing Internal Audit activities. The charter also includes mission/vision and definition of Internal Audit consistent with the IIA's 2015 update of the IPPF.
- Strategic plan: This is recommended practice of the IIA; however, very few Internal Audit departments have this in place. SERS' Internal Audit Strategic Plan is well structured and contains a three-year strategy including a capability matrix with goals and action items.
- Risk-based Internal Audit plan: The SERS internal audit plan considers the strategies of SERS and risks related to SERS strategic, financial, operational, compliance and IT objectives. The plan clearly articulates the level of risk being addressed and nature of work such as audit, consulting and compliance.

In addition, the intent of the Core Principles (recently included in the IPPF) is demonstrated in the Internal Audit manual and the quality of relationships between the CAO, the Board and management. Internal Audit processes align with strategies, objectives and the risks of the organization; the CAO reports to an appropriate position in the organization (Board functionally and administratively to ED), the CAO has access to contractors as needed, and Internal Audit planning is risk-based. Through interviews, we learned that the CAO is well respected, demonstrates integrity, competence, due professional care, objectivity and freedom from undue influence, and promotes organizational improvement.

SERS' Board and leadership appreciate the level of communication because the information is insightful, proactive and future-focused. The CAO demonstrates a commitment to quality and continuous improvement through completing an internal assessment in December 2016 and scheduling an external quality assessment review for fall of 2017. A leading practice is to have an independent qualified person perform an independent periodic assessment. Given the limited independent qualified resources within SERS, the internal assessment was performed by a peer, Interim Internal Audit Director for Ohio Public Employees Retirement System. SERS received the rating of generally conforms with IIA *Standards*, the highest opinion available within the IIA guidelines.

***C.5.5.2 SERS has a control environment that enables the Internal Audit Department to be ethical, independent and objective.***

In conformance with the *Standards* and as a leading practice, the CAO reports directly to the Board Audit Committee with an administrative reporting line to the Executive Director. The CAO meets with the Board Audit Committee quarterly and the Chair is available to the CAO between meetings.

In addition, the CAO has quickly established respectful relationships with the Board and management that sometimes take years to achieve. Management had asked the CAO to perform an audit of the Purchasing function that led to its being moved to the Finance group. Management has also asked the CAO to consult on the SMART implementation. The FAS team saw no evidence that the CAO has been pressured to not pursue audits or inappropriately change the content of a report.

***C.5.5.3 The CAO has implemented a risk-based approach to planning.***

Auditing every process and control every year within a system is neither practical nor cost effective. A risk-based Internal Audit plan enables Internal Audit to focus on the areas most critical to the success of the

system. Consistent with the *Standards*, the CAO has designed a risk-based approach to prioritize Internal Audit activities.

The Internal Audit risk framework has been clearly defined and communicated to the Board and management. The framework considers the strategies of SERS and risks related to SERS' strategic, financial, operational, compliance and IT objectives. The plan clearly articulates the level of risk being addressed and nature of work such as audit, consulting and compliance. The risk factors include considerations for fraud, changes, complexity (processes and systems) and materiality. The procedures for performing the Internal Audit risk assessment are documented in the Internal Audit manual. See further comments about the risk assessment approach in 5.8 Holistic Risk Management.

While the CAO has been reconstructing the foundation of Internal Audit, SERS has also been developing an Enterprise Risk Management (ERM) program. While the Internal Audit and ERM risk assessments need to remain independent, this should not preclude the CAO and ERM Officer from coordinating and harmonizing their approach to reduce intrusiveness and disruptiveness to operations. See further comments about the risk assessment approach in 5.8 Holistic Risk Management.

***C.5.5.4 The Board has hired a competent CAO.***

The CAO is the sole member of the Internal Audit Department. This is common among funds this size that do not make direct investments and when employers are audited by the State Auditor. Consistent with leading practice, the CAO identifies resource needs driven by a risk-based audit plan and independent assurances provided by third parties such as external audit and security testing. If SERS changes its operational model or the Board changes its level of reassurance expectations, the CAO may wish to re-evaluate the reliance on third-party assurance providers.

The current CAO has over 20 years of experience and is an active member of The Institute of Internal Auditors (IIA), including participation in various IIA national committees that provide networking and education opportunities. The benefit of this experience is demonstrated by the CAO's rapid acceptance and quality of relationships within SERS, leveraging of information from the IIA and peers, and quality of the documentation and reporting of Internal Audit activities. The Board and management are highly complementary of the CAO. The practices and documentation in Internal Audit are leading practice when compared to other pension funds and corporations.

***C.5.5.5 Tools used by the CAO appear to be appropriate.***

Tools available for Internal Audit management range from basic use of Microsoft products and shared drives to elaborate tools that are integrated with governance, risk and compliance tools. Internal audit must select the best tools for its unique situation. At present, the SERS CAO primarily relies on basic Microsoft products such as Word, Excel, PowerPoint, and digital folders.

As the capabilities of Internal Audit evolve, as a leading practice the CAO should consider expanding the use of tools to include data driven risk analysis to supplement risk assessment activities; automated workflow for risk assessment, documentation, reporting and issue tracking.

***C.5.5.6 The CAO and Board have established a quality and continuous improvement program.***

The *Standards* require Internal Audit departments to have an internal quality and improvement program with periodic external audit assessments. Leading practice for small Internal Audit departments, without the resources for daily supervision and quality control processes, is to rely on stakeholder feedback, self-assessment compared to the *Standards* and periodic independent external reviews. The Board and CAO have implemented the following leading practices to ensure that Internal Audit continues to be effective and continuously improves:

- The CAO has a standard process for obtaining stakeholder feedback and reports the results to the Board;
- The CAO has performed a self-assessment using a tool provided by the IIA. The exceptions had quality explanations and noted compensating activities to address the gaps. This report was shared with the Audit Committee; and,
- In accordance with the *Standards*, an external quality review must be conducted every five years. SERS had an external quality review in 2012 and another is planned for 2017.

### Recommendations for Improvement

SERS Internal Audit practices are generally sound, effective and demonstrate leading practices. Recommendations for potential improvement are:

***R.5.5.1 The Board should continue to periodically assess the relationships between Internal Audit, the Board and management.***

Quality and collaborative relationships between the Internal Audit department, the Board and management are important. The Board should periodically review that the relationships remain independent and objective. This periodic review is typically achieved through quality and continuous improvement programs including internal and external assessments.

***R.5.5.2 The CAO and ERM officer should harmonize risk assessment approaches using the measures of inherent and residual risk.***

See also Section 5.8 ERM and a holistic approach to risk. The use of impact and likelihood is consistent with prevailing practice in both IA and ERM. However, probabilistic assessments are unreliable and expose the organization to high impact but low probability risks. Several Noble prize winners have argued that humans are incapable of reliable subjective assessments of probability due to bias. We suggest instead the use of inherent risk (minus the effectiveness of controls) = residual risk. Inherent risk and residual risk both have elements of impact and velocity. Inherent risk = How bad can it get and how fast can it get that bad? Residual risk = how fast can we detect it and correct it? High residual risks can then be allocated scarce resources for further mitigation based on assumptions about their probability.

This recognizes that some high residual risks may not be prioritized for resources (again probability is unreliable but there has to be some basis for resource allocation). However, the acceptance of residual risk is explicit rather than implicit. An important role of IA and ERM to play is to provide independent reassurance that the controls for high inherent risks are actually effective and that the controls can be counted on. For more on ERM see Section 5.8.

## 5.6 External Auditor

### Scope of Review

*Assess the sufficiency of SERS' selection of its external auditing firm as well as the working relationship between the external auditors and SERS' management team.*

### Review Activities

The FAS team conducted interviews with the Chief Financial Officer, Assistant Director of Finance, Controller, Investment Accounting Senior Manager and the external financial auditors. In addition, we reviewed various reports prepared by SERS' external auditing firm covering the annual examination report, as well as their annual report on the "Auditor's Communication with Those Charged with Governance (AU-C 260)." These activities do not replace a formal external financial audit performed in conformance with the American Institute of Certified Public Accountants or the GAO's Government Auditing Standards.

### Expectations and Standards of Comparison

The United States Government's Department of Labor developed guidance on selecting external auditing firms for the purposes of auditing employee benefits. In addition, the American Institute of Certified Public Accountants ("AICPA") has established the Employee Benefit Plan Audit Quality Center, a firm-based voluntary membership center for firms that audit employee benefit plans to help ensure quality audits and provide resources to its members.

Based on these sources, guidance focuses on these selection criteria:

- The personnel size and reputation of the firm in the industry;
- The firm's clientele;
- The firm's proven and demonstrated experience in examining the financial statements of a state or local governmental benefits agency; and,
- The firm's audit methodology, audit approach and use of information technology tools.

### Findings and Conclusions

The process for selecting SERS' external financial auditors is conducted by the Auditor of the State of Ohio. There was involvement by SERS in the selection process as SERS' leadership participated in interviews and provided feedback to the State Auditor. SERS' leadership feels that the State Auditor listened to their feedback and the process is working well.

RSM's primary interaction with the Board is regarding the audit plan and the results of the audit. RSM typically meets with the Board in July together with the Chair of the Audit Committee to discuss the audit plan and the results of the audit. The Chair of the Audit Committee appears to have been very proactive in asking questions about the results of RSM's audit and internal controls.

Over the past four years, there have not been any significant or material errors identified as part of the audit; however, some internal control improvements over information technology internal controls were identified. Management has since remediated the deficiencies noted.

***C.5.6.1 The selection of SERS' external financial audit firm included representation from SERS on the selection committee.***

There was involvement by SERS in the State Auditor's selection process. SERS' leadership participated in interviews and provided feedback to the State Auditor. SERS' leadership feels that the State Auditor listened to their feedback and the process is working well.

***C.5.6.2 SERS External financial auditors have been engaged to perform financial audits only.***

RSM has been engaged only to perform audits of SERS' financial statements and related disclosures as part of the Comprehensive Annual Financial Report, required by all governmental institutions. No consulting-related services have been requested or provided either before or after RSM became SERS' auditors.

## Recommendations for Improvement

Recommendations for the selection of the external audit firm and other process improvement include:

***R.5.6.1 SERS should continue to provide their external auditors with updates on significant system implementations which may impact their audit timing and approach.***

As part of a significant or material change in business and accounting systems used by an organization, changes in the internal control environment are often affected. As processes become more automated, more reliance is placed on system controls, rather than manual report reviews and reconciliations. Continuing to keep the external auditors informed about the progress of these changes and implementations, will provide both parties better insights into how these changes may impact the accounting and financial statement preparation process. Also, the external financial auditors will be in a better position to identify potential timing or audit procedure challenges or delays. These delays may impact the final issuance of the management's reports or increase the costs associated with the audit.

***R.5.6.2 SERS should consider updating its Audit Committee Charter to include their role in appointing the external financial auditing firm.***

SERS' CFO performs a liaison role in which the system is permitted to review a copy and submit feedback on the Request for Proposal and subsequent proposals from the accounting firms who submit them. SERS should have the opportunity to take a more active role in evaluating the external auditing firms being proposed to perform their annual financial audit. However, this may involve legislative changes to existing state laws.

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The Institute of Internal Auditors (“IIA”) has established leading practices for Audit Committees pertaining to the selection of the organization’s external auditing firm. The IIA has stated that the Audit Committee should be empowered to appoint, compensate, and oversee the work of any registered public accounting firm employed by the organization.

## 5.7 Record-Keeping

### Scope of Review

*Examine the adequacy of the record keeping system for SERS' operational activities. Record-keeping for investments transactions is addressed in Section 3.15.*

### Review Activities

The FAS team reviewed the project charter, project scope of work, policies and procedures, and compared this information to leading practices and regulations. Interviews were conducted with the Director of Administrative Services, Executive Director, Deputy Director, Information Security and Privacy Officer, and Assistant Director of Information Technology and the topic was included in interviews of department leaders.

### Expectations and Standards of Comparison

SERS is exempt from following the State of Ohio Records Management practices; therefore, leading and prevailing practices among state retirement systems were used as the basis for this review. Prevailing practices for records management activities include:

- ISO 27001 is an Information Security Management Systems standard that incorporates several management, physical and technical controls. The standard provides guidelines and principles to enhance security and protection in the Records Management Lifecycle
- AICPA discusses the importance of designing security and privacy into an organization's records management program and how security and privacy are accomplished using Generally Accepted Privacy Principles (GAPP)
- DoD 5015.2 (Department of Defense) standard provides implementation and procedural guidance on the management of records and record-keeping systems. DoD 5015.2 is the de facto standard for Records Management tools

The purpose of an effective enterprise-wide record-keeping program is to promote efficient administration, compliance, management and retention of the records. The characteristics of an effective record-keeping system include:

- A strategic plan with scope, objectives and applicable regulatory obligations;
- A governance model;
- An enterprise-wide taxonomy and inventory including the following:
  - Definition of a record;
  - Classifications for records; and,
  - Retention schedule based upon record classification and format (paper and digital);
- A disciplined approach to the management of the retirement system's records to include:
  - Policies and procedures to comply with all legal and regulatory requirements and the retention of multiple copies and formats;

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- Guidance for destroying and transferring records;
- Guidance to secure records per applicable regulations;
- Procedures to retrieve information;
- Training and awareness to educate staff on the enforcement of the record-keeping policies;
- Ensures that the records are protected in accordance with the enterprise data and information security program, including SERS records retained at vendor sites;
- Ensuring that technology is available to read the offsite storage media until the retention period is over;
- Establishing a compliance monitoring framework and baseline metrics; and
- Having a plan for continuous program improvement.

## Findings and Conclusions

The record-keeping activities reside in the Administrative Services department. The department includes a record-keeping supervisor. His area of specialty is the design and implementation of effective record-keeping programs.

Current initiatives for record-keeping include:

- Each department inventorying records indicating electronic, SharePoint, file cabinets and electronic locations;
- Each document will be classified; and,
- Identifying software tools that will facilitate the workflow for retention and destruction of records in FY2018.

SERS appears to be making progress toward enhancing the record-keeping processes and has budgeted for and plans to implement a new tool by end of FY2018.

***C.5.7.1 SERS has developed adequate policies and procedures for the retention, destruction, and governance of records; however, records and security should be cross-referenced in the records management policy.***

The Record Management policy and procedures were reviewed and approved in July 2016. The procedures describe responsibilities, definition and classification of records and procedures for retaining and destroying records, including legal holds. The procedures do not address information requests or security of records.

The records management team does not respond to requests unless the request has gone through the proper process within Legal. The request for information is facilitated by Legal who has policy and procedures. If the Administrative Services team receives a request for information, it is forwarded to Legal for processing.

Responsibility and accountability for security does not appear to be clear. The expectations between Administrative Services and the Information Security Office is not clearly articulated and agreed upon.

***C.5.7.2 SERS is currently looking for a document retention and destruction tool that retains the custody and authorization trail after destruction of the record.***

SERS attempted to use the ImageNow Retention Policy Manager for retention and destruction of records. This module enables automated workflow and audit trails of custody and legal holds. At the expiration of a record, the record owner is notified to authorize destruction of the record. Legal holds stay in effect until an authorized individual releases the legal hold.

Executive leadership has determined that the ImageNow Retention Policy Manager does not meet the needs of SERS. The primary shortcoming with ImageNow is that once a record is destroyed, the trail of custody and authorizations to destroy also disappear.

The most critical documents are member retiree records that are required to be retained for life. All member case files are currently on microfilm or ImageNow. To convert documents on microfilm to an image tool would not be cost beneficial.

Within SERS, a common tool (Microsoft SharePoint) is used for collaboration. At this time, SharePoint does not have a records retention module and is not well-known for maintaining change controls (logging of changed or deleted information) or protection from unintentional destruction of data. In addition, some departments rely heavily on Microsoft Access™, another tool that does not have a retention module.

The Administrative Services team described the process for exchanging ideas and communicating records management updates with departments and executive management; however, the example shared with FAS was dated July 2014. To ensure that these meetings are effective, a clear agenda should be set with documentation for the results of the discussion. These meetings could also be used as a venue for validating user needs.

***C.5.7.3 SERS educates and raises awareness with staff about record-keeping through the record-keeping administration and record agent relationship.***

The record-keeping supervisor meets as needed with each department to understand record-keeping needs, discuss the identification and classification of records, understand the current location of various documents and identify areas for improvement.

In addition, the record-keeping supervisor should be facilitating quarterly group meetings with the Executive Director, Internal Audit, Legal and the records agent to discuss progress and department needs. These activities are the primary forum for educating staff, identifying opportunities for improvement and raising awareness to the executive level regarding record-keeping.

The quarterly meeting recap shared with FAS was dated July 2014. We have not been presented with documentation that supports the quarterly meetings are taking place and action items are being actively resolved.

***C.5.7.4 SERS management can articulate tasks being performed for records management; however, an overall records management strategy has not been documented or formally agreed upon by executive management.***

A project statement of work was approved in 2013 describing the tasks that will be performed regarding records management activities. The statement of work (SOW) did not state how the activities related to the strategy and mission of SERS. In addition, the SOW did not have specific timelines or milestones for achieving the work.

During interviews, Administrative Services and executive management could articulate the tactics being performed by Administrative Services such as working with departments to inventory and classify records. However, SERS does not appear to have a documented long-term strategy or a project plan for the current activities of Administrative Services.

## Recommendations for Improvement

***R.5.7.1 SERS should continue to pursue identifying and implementing a record retention tool that retains the custody trail after destruction and update the needs of departments for document management and retention.***

A leading practice is to use a proactive strategic approach to identifying the legal needs of the departments includes listing and documenting of items through both formal and informal means. The needs of users may evolve over time especially in a two-year span or with the implementation of new technology such as SMART.

***R.5.7.2 For records management, the role of security of records should be clearly articulated and agreed upon between Information Security, Administrative Services and Record Agents within the departments.***

If roles and responsibilities are not clearly articulated and agreed upon, inaccurate assumptions may be made about the security of records and action is omitted. Records management and security should be driven by a data classification scheme. The classification, in turn defines the retention and security requirements. This applies independent of technology but, technology may be used for workflow of retention through destruction.

Members trust SERS to protect their information. A breach of this trust could cause reputational damage.

***R.5.7.3 SERS should develop a long-term strategy for records management including linkage to the mission of SERS and capabilities plan.***

Leading practice for retirement systems is to have a management-approved strategic plan for records. The strategic plan could include a maturity model. The maturity model would provide insight to management of ranges of services that could be created in records management. Management would then determine a point on the maturity model that is a goal. Then management could use this goal to determine the capabilities needed to reach the goal on a timeline. This information could be used as input for the enterprise strategy and budgeting.

Explicitly articulating and approving a strategy increases the likelihood that records management will be successful in achieving goals in a timely manner.

## 5.8 Holistic View of Risk Management

### Scope of Review

*Assess whether the pension fund has a holistic view of risk management.*

### Review Activities

We conducted interviews with the ERM Officer, the CAO, the former Executive Director and the Interim Executive Director as well as all members of the Board. We reviewed and compared the risk assessment approach used by Internal Audit, ERM and Investment Management. The review, findings, conclusions and recommendations related to Internal Audit and Investment Risk have been described in section 5.6 and 3.C respectively.

### Expectations and Standards of Comparison

Risk is pervasive and intrinsic to every business. Certain risks are unique to public pension systems such as opposition to defined benefit plans, variability in appointments to the board and illiquidity to pay benefits. Others are common to institutional investors such as failure to meet the expected rate of return at a point in time, market risk, succession planning, and information security.

In an organization such as SERS, we would expect to find a variety of approaches to the definition, identification, assessment, management and reporting of risks. A holistic approach to harmonization and coordination of risk efforts is a leading practice and, frankly, most organizations have struggled with this.

Trustees and executives need to be risk intelligent. They need timely information and useful insights to understand the various types of risk and how much the organization is exposed. With these insights, trustees can determine how much of what types of risk they are willing to accept and allocate resources to priorities for mitigation. Good risk management and good risk intelligence is inseparable from good governance.

There are variety of different frameworks available. The two principal frameworks are the Committee of Sponsoring Organizations of the Treadway Commission (COSO ERM)<sup>3</sup>, and the International Standards Organization (ISO 31000).<sup>4</sup>

COSO is in the process of updating its ERM framework. This update is intended to:

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<sup>3</sup> [http://www.coso.org/documents/coso\\_erm\\_executivesummary.pdf](http://www.coso.org/documents/coso_erm_executivesummary.pdf)

<sup>4</sup> <http://www.iso.org/iso/home/standards/iso31000.htm>

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- Provide greater insight into the role of enterprise risk management when setting and executing strategy.
- Enhance alignment between performance and enterprise risk management.
- Accommodate expectations for governance and oversight.
- Recognize the globalization of markets and operations and the need to apply a common, albeit tailored, approach across geographies.
- Present new ways to view risk to setting and achieving objectives in the context of greater business complexity.
- Expand reporting to address expectations for greater stakeholder transparency.
- Accommodate evolving technologies and the growth of data analytics in supporting decision-making.

Many of these improvements are applicable to public pension systems. Some of these improvements reflect recommendations we have made to the IIA and COSO for the past decade such as the inclusion of velocity as a risk factor and a more consistent use of inherent and residual risk that doesn't include likelihood. Nonetheless, the current and proposed ERM frameworks still reflect the conventional wisdom of risk management derived largely from an insurer's perspective of the world.

In our experience with both multi-national corporations as well as the public sector, there are number of factors that adversely influence the practical utility of ERM and impede its implementation. These include a tendency to systematically under-estimate inherent risk by using qualitative assessments of likelihood, a failure to factor in velocity (speed of onset and speed of response); the treatment of risks as individual events rather than as scenarios and interactions of a number of risks; a tendency to focus only on the highest risks; and, an implementation process that often takes too long to demonstrate its value and thus fails to gain or sustain support from operating management and the board.

### Problems with Probability / Likelihood

For insurers, the key dimensions of risk are its impact and its probability. The use of probability or likelihood is appropriate for certain insurable risks but not most of the risks relevant to a public pension system.

“The use of impact and likelihood to assess risk is consistent with prevailing practice in both Internal Audit and ERM.<sup>5</sup> However, probabilistic assessments are unreliable and expose the organization to high impact but low probability risks. Just because you think the risk is unlikely (if it is relevant to your business) you should still be prepared. History is littered with the casualties of those who thought disaster couldn't befall them because of its low probability.<sup>6</sup> The use of probabilities is appropriate when you are dealing with a large body of data and there is an established cause-effect relationship.

Unfortunately, risks which haven't yet occurred, don't occur very often or for which cause-effect relationships are unknown, are unsuitable for probabilistic analysis. According to global reinsurer

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<sup>5</sup> ISO/IEC 73, IIA Standards Glossary Definition, COSO ERM

<sup>6</sup> Taleb, Nassim. “The Black Swan: The Impact of the Highly Improbable. Random House. 2010.

Swiss Re: “predictions about the likelihood of multi-causal losses actually depend on either sound understanding of cause-and-effect relationships or on a detailed loss-history, and the risks of the future have neither of the two.”<sup>7</sup> Insurance companies use probabilities to determine the premium they will charge based on their extensive databases of causes and loss effects.

Another Noble prize winner, Daniel Kahneman<sup>8</sup>, presents a convincing case that humans are incapable of reliable subjective assessments of probability due to bias. What are the alternatives to conventional risk assessments? The following pages describe a more intelligent way to assess risks.”<sup>9</sup>

### The Case for Inherent and Residual Risk

Our principal concern is that the use of subjective, qualitative assessments of likelihood systematically under-estimate residual risk. Unexpected events happen all the time, in sports, socially, economically, and politically. Public pensions are not exempt. We recommend instead the explicit use of inherent risk and residual risk. Likelihood has a role to play but only in estimating priorities among equivalent residual risks.

COSO ERM defines inherent risk as the exposure before mitigation or controls. Residual risk is defined as the exposure remaining after mitigation. Thus, the simple formula shown below:

$$\text{Inherent Risk} - \text{Mitigation} = \text{Residual Risk}$$

Both types of risk have elements of mass and velocity and thus momentum. Likelihood does not play a role until it comes to prioritization of resources and then it should be a conscious decision to accept or defer action on certain risks.

Probabilities in the form of standard deviations are widely used in investments (both public and private). The quantitative use of probabilities can also instill an unjustified sense of confidence in investors. Speaking of investment risk, Noble Prize winner Eugene Fama stated:

“If the population of price changes is strictly normal, on the average for any stock ... an observation more than five standard deviations from the mean should be observed about once every 7,000 years. In fact, such observations seem to occur about once every three to four years.”<sup>10</sup>

This is what happened to Myron Scholes and Robert Merton (also Nobel Prize winners) while they were directors at the hedge-fund Long-Term Capital Management (LTCM). After four years of high performance, LCTM went bankrupt in 1998 because of the unexpected Asian and Russian financial crises.

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<sup>7</sup> Porro, Bruno and Schaad, Werner, “The Risk Landscape of the Future,” Swiss Re, 2004.

<sup>8</sup> [Daniel Kahneman](#), “Thinking, Fast and Slow”, Farrar, Straus and Giroux, 2013

<sup>9</sup> Funston Advisory Services, “One of A Kind! A Handbook for Public Pension Trustees”. Ch. 16. Risk Intelligent Assessment. To be published in 2017.

<sup>10</sup> Fama, Eugene The Behavior of Stock Market Prices, 1965 *The Journal of Business* Vol. 38, No. 1 (Jan., 1965), pp. 34-105. [The University of Chicago Press](#)

As John Maynard Keynes once said, “It is better to be roughly right than precisely wrong.” The most important part of an ERM program is the dialogue it creates between the board and executives. It is much less about crafting perfect policy than it is about getting the right focus on exposures and clarifying risk management accountabilities.

## Findings and Conclusions

### Background

The CAO joined SERS in March 2015 (see 5.6 for further detail). The ERM Officer started with SERS in compliance in 2008, reporting to the CFO, and later became a direct report to the ED as Investment Compliance and Governance Officer. In February 2015, she took on the ERM role, retained Compliance responsibilities and assumed responsibility for Information Security. In addition to the ERM officer, the team consists of a Compliance Analyst, an Information Security and Privacy Officer, and Information Security Analyst. The Enterprise Risk Management Officer reports directly to the Executive Director (ED).

“The ERM program is still in its early stages, with a focus on identifying and prioritizing risks. SERS initiated this program in order to provide a proactive and comprehensive program for organization-wide risk identification and management. The goal of the program is to create an environment at SERS that ensures that risk management is an integral part of decision making and strategic planning. While this program will help us to identify and manage risk across the organization, it will not eliminate all of the risks that are identified. However, we can ensure that risks are identified, analyzed, and managed within risk tolerances that are acceptable to the organization and to the Board.”<sup>11</sup>

The role of ERM is to facilitate and enable a holistic view of risk. Managing risk is the job of operating management. The ERM Officer has made several presentations to the Board. These presentations articulated the ERM goals, phases of implementation, definition of risk, types of risk, risk assessment criteria and a risk register with risk owners and linkages to SERS strategy.

The risk register includes a range of risks from investments, IT, health care, information security, administrative, human resources to member services. Risk owners have been identified at a high level. This is in the process of being updated.

The risk assessment criteria for ERM include likelihood, impact, velocity and preparedness. IA uses impact and likelihood. Investments uses BARRA for risk based on stochastic analysis. The Barra Risk Factor Analysis is a multi-factor model created by Barra Inc., which is used to quantitatively measure the overall risk associated with a security relative to the market. Barra Risk Factor Analysis incorporates over 40 data metrics including: earnings growth, share turnover and senior debt rating. The model then measures risk factors associated with three main components: industry risk, risk from exposure to different investment themes and company-specific risk.

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<sup>11</sup> Enterprise Risk Management Update Memo to the Retirement Board from Julie Deisler, June 3, 2016

***C5.8.1 There currently is no common or holistic approach to risk management throughout SERS.***

Internal Audit, ERM and Investment Operations all use different criteria to identify, assess, manage and report risk. ERM is in the process of trying to develop a common approach but it is not unusual to take years to develop a common understanding. A common understanding is important to common agreement on the nature of the exposures. For example, what is a risk? How big is the exposure? Who is responsible for managing it?

There are two basic implementation options available: 1) change attitudes and hope for a behavioral change; 2) change behavior and hope for an attitude change. We recommend the latter because operating management is already responsible for managing risks. They must do so every day.

Risk management should be an integral part of everything they do, day in and day out. The Board is already responsible for the overall effectiveness of risk management and for approving the nature and level of risk that is acceptable. They are also responsible to oversee that unacceptable exposures are mitigated.

Investment Operations already includes risk as part of its standing reports to the Board as does Internal Audit. It is entirely reasonable to expect that other operating managers also report directly on those risks to the Board.

There is a tendency when deploying ERM to focus more on process than on risk intelligent performance. Success requires an emphasis on both but priority should be given to risk management performance and insightful dialogue about risk and reward among the senior executive and the Board.

***C5.8.2 The risk assessment framework used by Internal Audit is consistent with prevailing practice. The framework used by ERM has elements of both prevailing and leading practice. The model used by Investments is consistent with prevailing practice.***

There are systemic problems with prevailing practice (see the discussion above).

***C5.8.3 The use of qualitative estimates of likelihood by both ERM and IA may result in the systematic under-estimation of residual risk by discounting risks seen as unlikely.***

See earlier discussion of the problems with subjective assessment of probability and the use of inherent and residual risk instead.

***C.5.8.4 There may be some confusion about responsibilities for assurance and reassurance.***

To fulfill their responsibilities, trustees need to be intelligent about risks and they need reasonable (but not absolute) assurances from executives that the system is properly managed and risk exposures are acceptable. The board also requires reassurance from parties independent of management (such as Internal Audit and ERM) that management's assurances can be relied upon.

Independent reassurance means that the person responsible for managing the risk and providing assurances cannot also be responsible for an independent assessment of the reliability of those assurances. The division of these responsibilities may not be clear. ERM should not be a source of primary assurance to the Board. This is the responsibility of operating management. By operating management, we mean all managers from the Executive Director to all subordinate managers and supervisors who are responsible for managing risk such as Investment, Member Services, IT, HR, Legal, Finance and

Administration. Operating management is responsible for developing and delivering capable processes, people and systems to fulfill the organization’s mandate.

This includes responsibility for the effectiveness and efficiency of the operation and continuous improvement. It also includes responsibility for the identification of relevant risks, their assessment and mitigation.

Operating management is also responsible for providing reasonable, but not absolute, assurances to the Board that their respective processes are under control and in compliance with policies, procedures and performance limits and expectations. If not, then they should describe the actions they are taking to mitigate exposures and additional resources that may be required.

Conversely, non-operating management is anyone who is independent of management and not responsible for day to day operations and related risk management. This includes functions such as Internal Audit, ERM and Compliance. These functions are responsible for providing independent reassurance to the Board regarding the reliability of operating management’s assurances but not to manage risks themselves.

This definition is distinct from organizational responses to risk and control such as segregation of duties and from line management versus support service management.

IA and ERM are already collaborating and should continue to work toward a common framework for risk assessment and reporting. This will help to reduce confusion and clearly differentiate responsibilities for assurance and independent reassurance between operating management and the reassurance roles of IA and ERM.

***C.5.8.5 Specific individual responsibilities for risk ownership and accountability have not been clearly assigned.***

The CAO conducts an independent risk assessment for purposes of planning Internal Audits. The Chief Investment Officer is responsible for investment risk. Each asset class has identified its risks and its approach to risk management. Risk ownership has been assigned departmentally but specific individual executive responsibility has not been assigned. There also appears to be a lack of agreement at the executive level on the definitions and assessments of non-investment risks and a lack of buy-in to a more holistic risk assessment and risk management process.

Establishing the specific risk owner for each identified risk is a critical early step in the successful deployment of an ERM process. By quickly establishing a single point of accountability for the reliability of assurances about the effectiveness of risk mitigation, the stage is set for ERM to provide support and assistance to risk owners in developing a common understanding with each other and the board.

This way, the ERM process is much better positioned to assist and support executives, rather than being perceived as an added burden to their already heavy workloads or a takeover of their risk management responsibilities. The goal is to make the approach to risk management common across the system where it makes sense and not just for its own sake.

***C.5.8.6 The results of the ERM risk assessment are presented by the ERM Officer. This may diminish the sense of ownership and accountability by operating management.***

The responsibility for risk management and risk reporting should clearly rest with operating management, who in turn should deploy risk-intelligent management throughout the organization. While ERM can support operating management, it is operating management who must clearly own the risks and report on them. ERM directors may fall into the trap of presenting the risk report or dashboard and thus shift accountability for ERM away from operating management to the ERM program. This can be a fatal mistake as it undermines the primary accountability of operating management.

Operating management must retain clear accountability and responsibility for risk assessments and risk management. The ERM program can facilitate the process but the results must be owned by operating management. Otherwise, operating managers may sit on the sidelines and take shots at the ERM program.

### Recommendations for Improvement

- R.5.8.1 A common or holistic approach to risk management should be required throughout SERS.***
- R.5.8.2 IA and ERM should continue to work together to harmonize their risk assessment approaches to promote consistency and a common language of risk and risk assessment.***
- R.5.8.3 Internal Audit and ERM should evaluate the utility of using subjective assessments of likelihood as a measure of inherent risk. They should instead consider likelihood as a subjective metric for allocating resources to equivalent high residual risks.***
- R.5.8.4 Primary responsibilities for assurance and independent reassurance should be clarified between operating management and IA and ERM.***
- R.5.8.5 Each risk owner should be responsible for providing reasonable assurances to the executive and the Board that risks for which they have responsibility have been identified, robustly assessed and are being managed within the exposures limits established by the Board. If such limits do not currently exist, they should propose them.***
- R.5.8.6 Each risk owner should represent / certify their risk assessments to the Board.***
- R.5.8.7 Internal audit should continue to focus its auditing efforts on those risks which have high inherent impact and low residual risk to provide independent reassurance that the controls the organization is counting on to be effective can be relied upon. IA's consulting activities should focus on ways to reduce high residual exposures.***
- R.5.8.8 Specific individual responsibilities for risk ownership and accountability should be clearly assigned by the Executive Director.***
- R.5.8.9 Operating management's performance appraisals should include the quality of risk assessment, risk management and reporting.***
- R.5.8.10 The results of the ERM risk assessment should be presented to the Board by operating management using an agreed upon format.***

## 6. IT Operations

### Overview

Activities related to the SMART program are dominating everyone's agenda. Although SERS does not employ a single comprehensive standard for the governance of IT and IT Security, governance is substantially achieved through annual strategic planning, risk assessments, budget management and periodic update reporting. IT Security reports to the ERM Officer.

The periodic reporting regime appears to be robust. The pace of reporting is appropriate. Governance activities provide adequate insight and transparency for the IT and IT Security departments' respective stakeholders.

Ohio SERS supports multiple infrastructure platforms across its computing environment. IT assets are managed internally. IT personnel are cross-trained to support SERS' portfolio of technologies and as a means for helping employees expand their skillsets. Budget constraints may affect adequate training and manpower.

As noted above, IT project and portfolio management is currently sharply focused on the SMART implementation. The project organization and use of third parties to oversee risk management is leading practice.

Management has identified several conditions related to the SMART implementation that should be addressed before go-live. Among these are security weaknesses noted by third-party firms and slow system responses identified by users during user acceptance testing. The Program leadership has a well-defined process to triage and risk assess issues for appropriate response.

The Payment Card Industry Data Security Standard (PCI DSS) for security seems appropriate. Third-party contractors are engaged as external experts in, for example, vulnerability and IT security. Management has well documented plans outlining cyber-risks and planned responses. SERS also uses third parties effectively to monitor, evaluate and assess its IT security and SMART implementation. This is leading practice.

Approximately 6 weeks after the SMART software goes live, FAS will perform a limited post-implementation review.

### Scope of Review

*The contractor will evaluate the control, accuracy, and integrity of the SERS information technology system. This should include a review of SERS data integrity; security and confidentiality of its records system; evaluate the overall risk level for SERS IT operations. The evaluation will include an analysis of:*

- The quality of processes and controls for the organization and management of IT operations and governance; IT project and portfolio management; data management; application development and maintenance; local area network infrastructure; security; business continuity plan and disaster recovery; and*

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- *Areas of high risk and SERS' mitigating controls for those defined high-risk areas. The analysis will compare the SERS' control structure with IT industry best practices.*

### Sources of Information

For the IT Operations and IT Security review, we utilized the following sources of information to complete our assessment and comparison to leading, prevailing and lagging practices:

- SERS' IT governance processes;
- SERS' IT strategy and delivery framework;
- SERS' IT, data and business continuity policies and procedures;
- SERS' IT planning documents (strategic, operational, network, data security, etc.);
- SERS' applications systems portfolio and application map;
- SERS' technology platforms and service catalog;
- Description of SERS program management functions;
- SERS' IT risk assessment;
- Documentation for SERS' IT projects, including the new enterprise web application currently being implemented (SMART);
- SERS' disaster recovery and business continuity plans;
- IT and security incident and outage reports;
- Interviews with the Chief Technology Officer and staff, the Executive Director, Deputy Executive Director, Director of Member Services, the SMART Project Manager, and the SMART software developer;
- FAS project team experience and the FAS IT knowledgebase; and,
- The COBIT 5 framework. This defines a set of generic processes for the management of IT, with each process defined together with process inputs and outputs, key process-activities, process objectives, performance measures and an elementary maturity model. COBIT 5 also provides a set of recommended best practices for governance and control process of information systems and technology with the essence of aligning IT with business. Each section below includes an overview of the respective guidance used in analyzing management's practice.

### Review Activities

The FAS team:

1. Assessed SERS' overall IT governance structure, policies, procedures and control structure;
2. Assessed the organizational structure of SERS' IT to support the ongoing performance of the fund operations;
3. Reviewed the SERS technology infrastructure and applications portfolio along with the service catalog;
4. Evaluated SERS' systems and data infrastructure;
5. Assessed SERS' project management policies, procedures and capabilities;

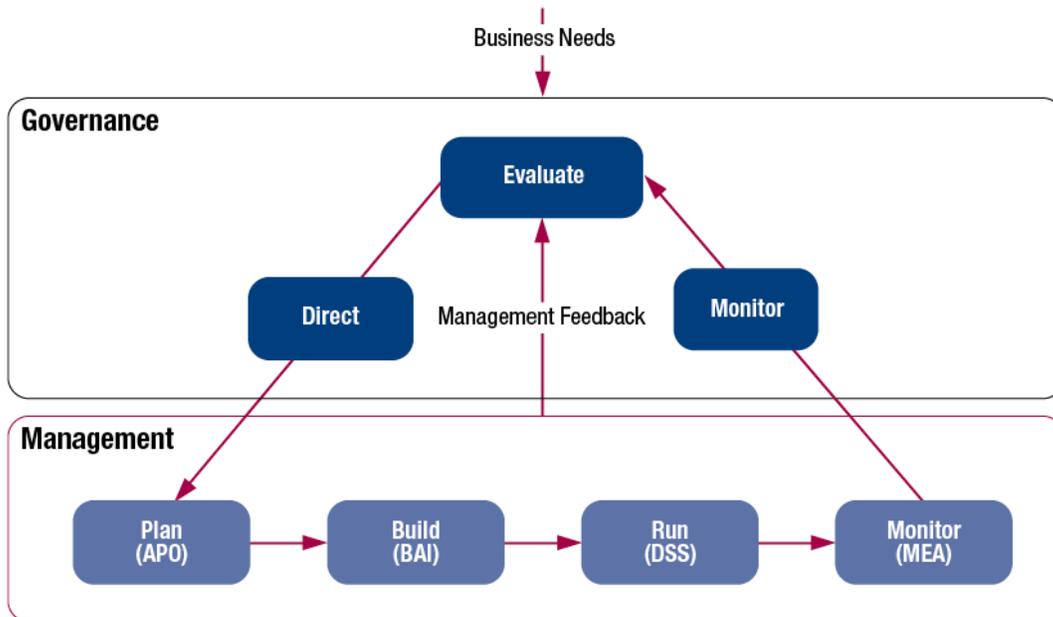
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6. Reviewed major IT projects underway, including the status and related risks;
7. Evaluated SERS' data integrity, confidentiality and security policies and practices and compared to industry leading practices;
8. Reviewed the cyber security capabilities of SERS' operations and systems, including the technology environment delivering applications and data;
9. Reviewed the SERS disaster recovery and continuity planning policies, plan and practices and compared to leading practices;
10. Reviewed SERS' incident reporting system; and,
11. Assessed risks associated with SERS' IT operations.

### Organization of this Section

There are many models for IT and IT Security service delivery and management that could be used as an evaluation framework in this assessment. We have selected the Information Security And Control Association's (ISACA's) Control Objectives for Information and Related Technologies version 5 (COBIT 5) as a single standard reference point for evaluating the IT and IT Security functions at SERS. In addition to being a single comprehensive source of integrated sub-processes, (not just controls) version 5 was developed with the view that technology is ubiquitous – often indistinguishable from the business processes it enables. SERS' current move to the SMART platform implementation is an example of highly integrated technology.

COBIT 5 is comprised of five high-level processes that comprise the IT universe, including IT Security, as pictured: (Governance and Enterprise Data Management (EDM) are considered collectively as one process.)



COBIT 5: Enabling Processes, © 2012 ISACA. All rights reserved. Used with permission.

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COBIT 5 is not a prescriptive model.<sup>12</sup> It is intended to be adapted to an organization’s circumstance and management’s best judgment. Accordingly, we have not made this a rigorous point-by-point review of SERS IT and IT Security against the COBIT 5 framework because:

1. This model was not adopted by SERS, there would be natural gaps compared to the full, formal COBIT 5 model; and,
2. The predominance of the SMART program substantially overshadows most areas in terms of risk to the enterprise and the IT scope of this review. System implementation is a subcategory under the Build process and our findings related to the SMART program have been included there.

In this context and using the COBIT 5 framework, we have organized our findings, conclusions and recommendations concerning IT operations and IT Security services under the 12 Review Activities, above. The scope areas are grouped to follow their respective appearance in ISACA’s COBIT 5 – Enabling Processes guide – as follows:

	<i>Title</i>	<i>Scope (RFP)</i>	<i>Steps (Proposal)</i>	<i>Section (COBIT)</i>
6.1	<i>Organization and Governance</i>	<i>Organization and Governance</i>	<i>Assess governance, policies and procedures (1,2)</i>	<i>Evaluate, Direct and Monitor</i>
6.2	<i>Infrastructure and Services</i>		<i>Review Infrastructure, Applications and Service Catalog (3,4)</i>	<i>Align, Plan and Organize</i>
6.3	<i>Project and Portfolio Management</i>	<i>Project and Portfolio Management</i>	<i>Assess project management and major projects (5,6)</i>	<i>Build, Acquire and Implement</i>
6.4	<i>IT Operations and Security</i>	<i>Security (confidentiality, integrity, accuracy) and Controls</i>	<i>Review CIA policies and security capabilities (7,8)</i>	<i>Deliver, Service and Support</i>
6.4		<i>Contingency and Continuity planning</i>	<i>Review DRP and BCP (9)</i>	
6.4		<i>Incident management</i>	<i>Review incident reporting system (10)</i>	
6.5	<i>Monitor, Evaluate and Assess</i>			<i>Monitor, Evaluate and Assess</i>
6.6	<i>Risk and Control Assessment</i>	<i>IT Operations Risk and Controls</i>	<i>IT Operation Risk (11) and Impact analysis (12)</i>	<i>Report (our opinion, not a COBIT area)</i>

<sup>12</sup>COBIT 5 covers IT processes substantially similar to ITIL but has the advantage of tying IT activities to business processes and the enterprise value chain. ITIL, formally an acronym for Information Technology Infrastructure Library, is a set of practices for IT service management (ITSM) that focuses on aligning IT services with the needs of business.

## 6.1 IT Organization and Governance

### Expectations and Standard of Comparison

The primary objectives of IT governance in COBIT 5 are:

- Achieve alignment of IT and business strategy;
- Ensure commitment of executive management to IT decisions;
- Provide transparency of IT costs, benefits and risk; and
- Deliver IT services in line with business requirements.

COBIT 5 recommends addressing these objectives with manageable component sub-processes under the heading of Evaluate, Direct and Monitor (EDM). The five sub-processes under the EDM heading are:

- Ensure Governance Framework Setting and Maintenance;
- Ensure Benefits Delivery;
- Ensure Risk Optimization;
- Ensure Stakeholder Transparency; and
- Manage the IT Management Framework.

Planning and executing these sub-processes thoroughly and explicitly is a leading practice for enterprises with a need to deliver on expectations for a broad audience of stakeholders who are influential and geographically dispersed. We would expect an organization of the size and complexity of SERS to tailor this model significantly. For example, the selection and monitoring of the framework need not be extensive. IT management might simply select COBIT (or the Information Technology Infrastructure Library (ITIL), etc.) and perform periodic assessments to evaluate continuing effectiveness of the model and management's use of the model.

Similarly, SERS management routinely evaluates its significant decisions and reports on its activities to stakeholders. While the nature and extent of these analyses and reports may not represent full implementation of a standard, they certainly could represent an adapted implementation of a framework.

### Findings and Conclusions

***C6.1.1 SERS does not employ a single comprehensive standard for the governance of IT and IT Security. Governance is substantially achieved through annual strategic planning, risk assessments, budget management and periodic update reporting.***

***C6.1.2 The periodic reporting regime appears to be robust (including budget compared to actual reporting). The pace of reporting seems appropriate. Governance activities provide adequate insight and transparency for the IT and IT Security departments' respective stakeholders.***

***C6.1.3 IT Security is managed within the ERM function and separate from IT. The organization's leaders operate in concert and report to the Executive Director with periodic reports to the Board of Trustees.***

SERS uses various elements from different frameworks rather than a single, comprehensive framework for modeling its processes. In our document review, we found strategy documents linking business priorities, risk management plans and status reports for several different sub-processes. In addition to the risk registers used to monitor key risks and management's responses, we reviewed periodic reports monitoring help-desk performance, system uptime, programming activities and security results. The use of such tools, including budget management, indicate that IT management is reaching out to its stakeholder community with information necessary to support good governance.

What is less clear, (from simply reviewing documents) is the degree to which stakeholder representatives (executives, board) are actively engaged with the respective leaders of the IT and IT Security functions on routine matters. The demands of the SMART project clearly drive the focus and activities in the IT department currently and the business owners appear to be well-engaged with project governance. It is important for business leaders to remain engaged with IT governance beyond the life of the implementation.

Similarly, the IT Security function is working to protect systems and data in a way that its leadership believes is responsive to the organization's needs. As a standard, the organization is using a variety of models including NIST, CIS and PCI-DSS for various purposes. Each standard is useful in its own way, however, a full spectrum risk and control model might better inform business stakeholders as IT decision makers. Further, the potential shortcomings of using multiple models for IT governance may not be appreciated by stakeholder representatives. Potential gaps might include the need for PHI (personal health information) to be protected or the security needs to maintain system availability.

It is unusual, but not unheard of, for the IT Security function to be managed outside of the IT department. The benefits of this arrangement include objective and capable security experts applying their expertise without the burden of delivering IT services and the conflict arising from reporting to the CTO. However, the risk of managing IT security independent of the IT organization includes potentially redundant staffing or over-investment in internal security expertise and the effort required to coordinate across two departments instead of working under one executive.

### Recommendations for Improvement

***R6.1.1 Management should identify a comprehensive IT process model and associated maturity model for managing the development and growth of the IT function.***

***R6.1.2 Management should identify appropriate and specific executives and a committee of the board to sponsor the IT function through routine reporting and oversight processes. In addition, IT executives should be accountable for specific activities, risks and outcomes.***

## 6.2 IT Infrastructure and Services

### Expectations and Standard of Comparison

The term “technology infrastructure” includes the hardware, operating systems and databases required to support and deliver applications, i.e., the tools users apply to support and execute business processes. The service catalog refers to the portfolio of activities the IT department may undertake to provide value to the organization. In COBIT 5, the selection of individual technologies and practices is included under Align, Plan and Organize (APO) which includes 13 distinct activities. APO activities seek to translate governance decisions into actionable and manageable processes. The primary objectives of the APO process are to:

- Align IT and business strategy
- Ensure realization of benefits from IT-enabled investments and services
- Ensure delivery of IT services in line with business requirements
- Provide competent and motivated IT personnel
- Provide knowledge, expertise and initiatives to support business innovation

APO activities are generally evident in significant decisions like product selections or hiring and training decisions and these should be based on the direction provided by the governance model and activities. However, it is not uncommon to see short-term business needs driving application choices within some limits dictated by infrastructure capabilities.

Over the long-term, however, infrastructure choices provide significant leverage and, with a cohesive strategy, could be used to lower cost and drive more effective application choices. Leading practice is to develop an infrastructure roadmap responsive to SERS’ organizational strategy and constrain application choices to those supported by the planned infrastructure.

In its strategic planning document, SERS has indicated the importance of streamlining the evolution of its computing environment, but the details are vague and are not anchored in business imperatives.

### Findings and Conclusions

**C6.2.1** *SERS supports multiple infrastructure platforms across its computing environment. In some cases, management has elected to retain unsupported technology because it was easier and less risky than updating its applications and data. Some of these are scheduled to be retired subject to the SMART rollout.*

**C6.2.2** *Management has consistently elected to manage IT assets internally rather than outsourcing. Examples include its disaster recovery capabilities, the computing environment and most recently, the SMART application. These will be hosted and managed by SERS personnel with vendor support.*

***C6.2.3 IT personnel are cross-trained to support SERS' portfolio of complex and ever expanding technologies and as a means for helping employees expand their skillsets. However, management is challenged to maintain manpower due to budget constraints.***

While we did observe evidence of an operating governance function including budgeting and planning, the IT department at SERS is built to be more reactive than proactive. While IT certainly provides insight and guidance to the business delivery of services appears to be more tactical than strategic. Effective organizations leverage IT as a strategic partner. While there are benefits to using of multiple network platforms, they can also evidence that choices are being made without reference to a central plan. Similarly, while cross-training personnel is important and valuable for developing human resources, recent technological advances have made possible the use of external people, processes, and technology with superior capabilities as compared to the capabilities resident within any single organization.

In making these choices (to retain IT processes and capabilities in-house) management has demonstrated diligence in assessing the cost and benefit of its choices. We raise this observation due to the departure from current industry trends.

Management also notes compensation constraints as a hurdle to recruiting and retaining talent in the open market place and as a driver for its need to re-train or cross-train existing staff. Management may need to retain contractors or firms to provide services inevitably using the same talent at market rates – with contractor firm markup on top.

Recommendations for Improvement

- R6.2.1 Management should consider developing an infrastructure roadmap defining its “future state” computing environment based on vendor roadmaps and current and projected computing and management needs of the organization. This exercise should be initiated shortly after the SMART system go-live event.***
- R6.2.2 Management should consider using a third-party backup and recovery service and re-deploying the assets invested in disaster recovery.***
- R6.2.3 Management should consider developing high-level principles to direct strategy and planning. (For example, buy vs. build, outsource vs. hire, or hire vs. train) Such principles could also support decisions to support changes to the current staffing model or to make exceptions to compensation rules to acquire and retain talent.***

## 6.3 IT Project and Portfolio Management

### Expectations and Standard of Comparison

Project and Portfolio Management is the most significant of the 10 sub-processes included under COBIT 5's Build, Acquire and Implement (BAI) process. The primary objectives of the BAI section include:

- Align IT and business strategy;
- Ensure realization of benefits from IT-enabled investments and services;
- Ensure delivery of IT services in line with business requirements;
- Manage IT-related business risk;
- Ensure adequate use of technology;
- Provide IT agility;
- Ensure optimization of IT assets, resources and capabilities;
- Enable and support of business process; and,
- Delivery of program benefits on time, on budget and meeting requirements and quality standards.

Tailoring of the BAI processes relative to the SMART implementation means increasing the rigor with which the standards are applied. Due to the pervasive risk the SMART program presents to the enterprise, the deployment of BAI sub-processes at this point in time have a disproportionate impact on IT and IT Security department risk. So long as these processes are well controlled and services effectively and efficiently delivered, IT and IT Security will have substantially delivered on the objectives most important to SERS.

### Findings and Conclusions

***C6.3.1 The SMART program is an enterprise-wide program that relies substantially on IT for implementation process controls.***

***C6.3.2 The project organization and use of third parties to oversee risk management is leading practice.***

***C6.3.3 In evaluating the SMART implementation, management has identified several conditions that should be addressed. Among these are security weaknesses noted by third-party firms and system latency (i.e., slowness to respond) identified by users during user acceptance testing.***

The SMART program implementation overshadows all other IT activities. The chief sponsor/stakeholder in the SMART program is, appropriately, the Executive Director. Given the changes currently underway, the Member Services Department is also contributing significant leadership. The project's organization is a leading practice that contributes to stakeholder acceptance and appropriate oversight of IT in its deployment of resources.

In addition to using the software vendor's professional program management team – they are experienced in implementing the software and the associated processes that make up the full program –

SERS has retained a third-party to oversee the program's risk management activities. These are both leading practices that minimize the common risks of implementations exceeding their original budget and timeline while not delivering intended functionality.

While this implementation has exceeded timeline estimates, the presence of a third-party Project Management Office (PMO) oversight expert ensures the delays were justified by evolving circumstances and conditions not anticipated in the original plans.

While the dollars involved with the program pale in comparison with fund's assets under management, the dollars are significant relative to the annual operating costs of the fund. Further, all users – including members – will be impacted by the implementation. The exposure of SERS' management to its most important stakeholders – its members - presents a critical opportunity for this program to demonstrate value.

In response to this opportunity, management has adopted a leading practice for project risk management. SERS is employing a third party to manage PMO/Implementation risk. This is intended to ensure value is delivered by addressing program risk. Key risks addressed by PMO risk management activities are:

- User acceptance;
- Data conversion; and,
- Implementation cost and benefits delivery.

User acceptance depends on organizational trust in the vendor to deliver a business solution that works as promised. Critical elements supporting that trust include system performance, communications and training.

Data conversion is one of the riskiest elements in an implementation of this magnitude. The data supporting this system are vast and must be converted to a new format completely and accurately as they are significantly member-related and represent members' retirement savings. Engaging end-users in acceptance testing of the conversion results is important.

Implementation cost and benefits seem obvious, but there is often a focus on the technical aspects of an implementation to judge whether it has been successful or not. The time and the dollars invested in any system implementation are significant. To be successful, the system must deliver its promised benefits.

All of the risks detailed above are included within the scope of risk-management activities being executed by the PMO oversight office managed by LRWL Inc.

## Recommendations for Improvement

- R6.3.1 Management should continue monitoring and testing the system implementation for performance, data integrity and user acceptance to identify and manage risks that threaten a successful launch.***

## 6.4 IT Operations and Security

### Expectations and Standard of Comparison

There are five sub-processes in the COBIT 5 Deliver, Service and Support section:

- Manage Service Requests and Incidents
- Manage Problems
- Manage Continuity
- Manage Security Services
- Manage Business Process Controls

The primary objectives addressed by these sub-processes include:

- Manage IT-related business risk
- Deliver IT services to meet business requirements
- Optimize IT assets, resources and capabilities
- Maintain availability of reliable and useful information for decision making

The DSS sub-processes are perhaps the most tangible of all IT processes as they provide for continuity and availability of services and represent the locus of interaction with the user community. In addition, when these processes fail, the results are felt by all users and can be catastrophic. Leading practices include operating a help desk, monitoring network activity, employing third-party assessments and planning and practicing backup and recovery of systems.

### Findings and Conclusions

***C6.4.1 Confidentiality, Integrity and Availability objectives drive IT security choices. In selecting PCI DSS as the standard for security, management has appropriately focused on these elements.***

***C6.4.2 Third-party contractors are engaged as external experts in, for example, vulnerability and IT security.***

***C6.4.3 Management has well documented plans outlining cyber-risks and planned responses (Risk Register). However, the Risk Register appears to be a static report rather than a dynamic process.***

Consistent with the tangibility of the DSS sub-processes, questions posed to us by SERS were dominated by concern in this area. From our observations, management shares this concern and has ingrained governing and planning activities in well-established operating activities.

It appears that management is focused on operations, perhaps more than any other set of sub-processes. Evidence of governance and planning activities even leaned toward reports produced in the process of operating and securing the IT environment. For example, evidence of security controls was provided in the form of third party security review. Similarly, evidence of the approach to the development process

was provided to us in the form of an operational report addressing the balancing of resources and priorities.

IT security is management's response to threats to SERS' information confidentiality, integrity and availability. SERS has appropriate policies articulating the need/level of protection required for each of these threats. There are also periodic third party reviews of SERS' security. In addition, management produces and reviews periodic monitoring reports to ensure IT services are meeting stakeholder needs.

For example, there is a weekly monitoring report that supports a weekly meeting. The project meeting and report formats are patterned after operating reports that reflect system uptime, security status or maintenance routines and results.

Another key element in management's delivery of IT service with consistency and reliability is its backup and recovery routine and disaster recovery plan. These processes, notably, are managed internally. Due to technology advances that have significantly lowered costs and increased speed and storage capacity, it has become rare to see so much of these activities managed internally. Ohio SERS also owns its own disaster recovery hot site that is furnished with equipment retired from service.

However, in addition to lowering cost, the use of third parties to backup, recover and store systems can be done with increased skill and efficiency. In addition to these operating/delivery processes, nearly all IT services can be provided by external parties including network hosting, application management and operations and business processes.

All of SERS' risk management activities are anchored in a Risk Register. Developed by management to communicate its understanding of the computing environment, the Risk Register documents and assesses risks as the baseline to its risk management approach. The Risk Register feeds into the IT and IT Security strategy documents and to the respective departmental budgets and plans.

#### Recommendations for Improvement

- R6.4.1**     *Management should continually evaluate its sourcing strategy for all IT services to ensure risk and resource usage are optimized.*
  
- R6.4.2**     *The activities involved in producing and reviewing the risk register should be folded into a formal IT risk assessment; preferably as part of an overall enterprise risk assessment process. Risk Assessment is a key element in internal control and management should consider developing a continual risk assessment process.*

## 6.5 Monitor, Evaluate and Assess

### Expectations and Standard of Comparison

There are three sub-processes in the COBIT 5 Monitor, Evaluate and Assess (MEA):

- MEA – Performance and Conformance
- MEA – System of Internal Control
- MEA – Compliance with External Requirements

The primary objectives addressed by these sub-processes include:

- Manage IT-related business risk
- Manage IT-related compliance
- Deliver IT services in-line with business requirements
- Manage IT compliance with internal policies

MEA sub-processes include those reviews and assessments generally executed by third parties, including internal audit. Routine reporting of ongoing activities is also a monitoring process. As a standalone concept, the critical management characteristic to understand is the degree to which management engages feedback and embraces the processes providing that feedback. Of course, it is also valuable to observe that management deliberately addresses the needs of performance management, internal control and compliance.

### Findings and Conclusions

Elsewhere in this report, we have pointed out the value contributed to SERS via third-party assessments of IT Security and the important role third party oversight has had on the SMART program. In addition, the internal reporting of ongoing internal activities represents monitoring and evaluation of performance, conformance and effective operation of internal controls. Together with the cooperation we received in performing this work, it is safe to say management embraces the culture of third party review – the essence of monitoring, evaluation and assessment.

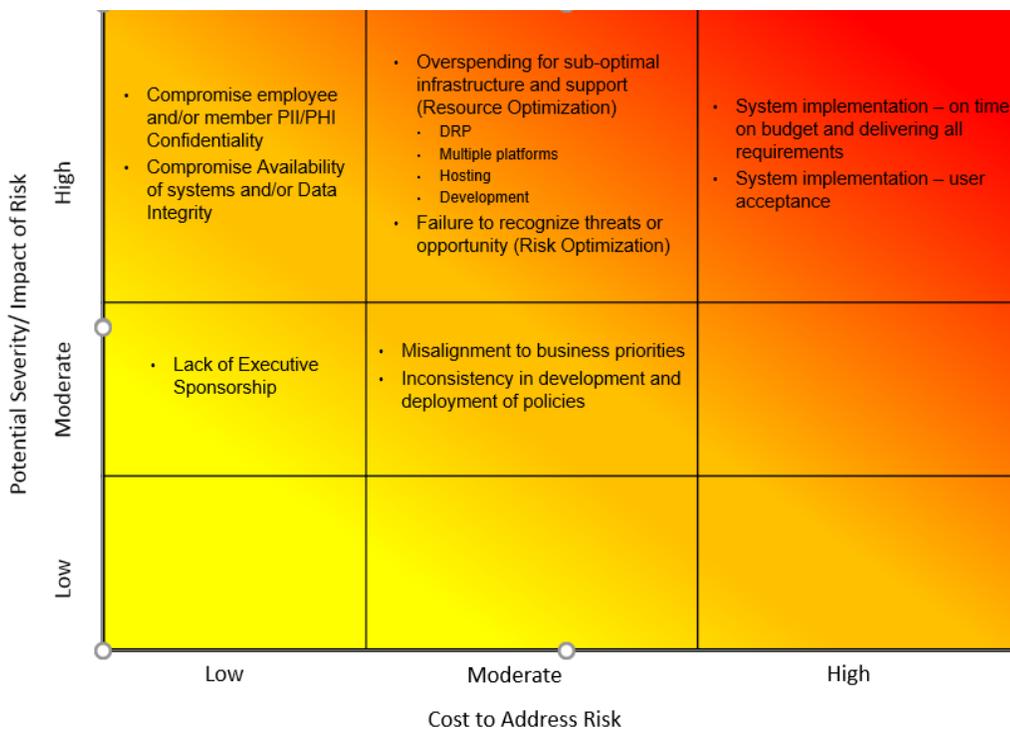
The significant improvement opportunity for SERS under the MEA process is to adopt a comprehensive IT process model. Also mentioned elsewhere, (R6.1.1) adopting this recommendation would enable management to incorporate benchmarks in the MEA processes and to improve the overall delivery of IT and IT Security services. Evaluation against a comprehensive standard would also ensure that all of the necessary services required by the business are in the scope of IT and IT Security managements' plans.

Because the recommendations relevant to the MEA sub-processes have been highlighted under other sections, we have not repeated them here.

## 6.6 IT Risk and Controls Report

As noted under our procedures performed, this section does not detail specific procedures relative to management’s processes but rather seeks to summarize and highlight our understanding of SERS’ IT risk and our opinion as to how management is dealing with that risk. Accordingly, we have no “Performance Expectations” in this section and the entire section is comprised of our findings and recommendations.

Each of our observations and recommendations in sections 6.1-6.5 above is important because they evolve from a set of common risks. Here we have organized those common risks, as tailored to the business of SERS, in a Heat map intended to highlight the nature of the inherent risk<sup>13</sup> along with a high-level assessment of how costly or complex an appropriate response might be.



The following table expands on the inherent risks noted above by describing the general approach SERS has taken in response to each risk along with considerations (or recommendations) for improving the risk management approach. In general, lowering risk indicates an increased up-front cost. Interestingly, given the strong approach management has taken to managing system implementation risk, the alternative noted involves lowering the up-front cost for PMO management and oversight and increasing the risk that management is willing to accept in terms of program failure.

<sup>13</sup> Inherent risk is that which exists prior to any attempts by the organization to manage or mitigate that risk.

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<i>Risk</i>	<i>Current Approach</i>	<i>Alternate Approach</i>
<i>Compromise of employee and/or member PHI/PII Confidentiality</i>	<i>Management has implemented IT security intended to address the requirements of PCI/DSS. This includes security standards for configuration, implementation and periodic review.</i>	<i>Additional third party reviews should address how well the PCI/DSS standard is being met; whether the privacy requirements of health care or financial compliance regulations are being met; or whether another standard might be a better fit for this business.</i>
<i>Compromise of System Availability and/or Data Integrity</i>	<i>Management has implemented IT security intended to address the requirements of PCI/DSS. This includes security standards for configuration, implementation and periodic review.</i>	<i>In addition to third party security reviews as detailed above, management can increase its understanding of risk (the need for security) through a Business Impact Assessment intended to estimate the potential harm of system downtime or corruption of data.</i>
<i>Lack of Executive Sponsorship</i>	<i>IT management maintains dialogue with executive management and the Board of Trustees around a strategic plan and budget, a periodically updated risk register, and operational reporting.</i>	<i>IT management can increase the engagement of enterprise leaders through select and formal operation of governance committees with specific performance objectives and KPI tying back to the enterprise's strategic plans.</i>
<i>Lack of Risk or Resource Optimization</i>	<i>Strategy and significant tactical decisions are supported by formal analysis.</i>	<i>A more disciplined decision making framework incorporating opportunity cost and tied to a long-term technology roadmap and an all-encompassing framework (like ITIL) would improve management's ability to consistently optimize risk and resource deployment.</i>
<i>Misalignment to business priorities</i>	<i>IT management maintains dialogue with executive management and the Board of Trustees around a strategic plan and budget, a periodically updated risk</i>	<i>IT management can improve alignment of IT activities to business priorities through select and formal operation of governance committees with specific performance objectives and KPI</i>

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<i>Risk</i>	<i>Current Approach</i>	<i>Alternate Approach</i>
	<i>register, and operational reporting.</i>	<i>tying back to the enterprise’s strategic plans.</i>
<i>Inconsistency in development and deployment of policies</i>	<i>Management maintains a full set of IT policies.</i>	<i>A comprehensive model for operating and controlling an IT function would enhance the consistency with which policies are developed and deployed.</i>
<i>System implementation – over time, over budget, failed in deliverables</i>	<i>Management has retained a third party PMO oversight professional to monitor program objectives, progress against those objectives and assist in analyzing departures.</i>	<i>This is a leading practice. The alternative would be to eliminate the PMO oversight for current cost savings. The cost savings would be accompanied by increases of all three system implementation risks.</i>
<i>System implementation – lack of user acceptance</i>	<i>Included in third party PMO oversight are the activities of communication and education – the primary vehicles by which user acceptance is managed.</i>	<i>This is a leading practice. The alternative would be to communicate and train users ad hoc which would save on the up front expense in exchange for increased likelihood that users do not use the system or do not use the system properly.</i>

Recommendations for Improvement

- R6.6.1** *SERS should conduct additional third-party reviews to address how well the PCI/DSS standard is being met; whether applicable privacy requirements of health care and/or financial compliance regulations are being met; and, whether another standard might be a better fit for this business.*
- R6.6.2** *SERS should commission a Business Impact Assessment intended to estimate the potential impact system downtime or data corruption could have on supported business processes.*
- R6.6.3** *SERS should establish a formal IT governance committee to develop specific performance objectives and KPI tying back to the enterprise’s strategic plans.*

**R6.6.4** *SERS should adopt a disciplined decision-making framework incorporating opportunity costs and tied to a long-term technology roadmap and an all-encompassing framework (like ITIL or COBIT 5) to improve management’s ability to consistently optimize risk and resource deployment.*

## 6.7 Planned Post-Implementation Review

Approximately 6 weeks after the SMART software goes live, FAS will perform a limited post-implementation review. We plan to review the project issues log and open change requests to determine whether the project has substantially met its objectives and initial implementation is ready to be wound down. Together with management, we will inspect application documentation to determine whether this resource is adequate to support management's effort to manage the software going forward. We will review help desk tickets for the first 45 days to understand the nature and direction of users' problems.

In addition, we will perform a high-level audit readiness assessment. This is important because at the end of 2017 the financial auditor's IT specialist will request evidence supporting management's testing and acceptance of the system. Unlike routine control activities, system implementation controls are very holistic. "Being there" for weekly meetings, reviewing test results and talking with project managers is often adequate to minimize the risk. SERS' management appears to be very much on top of project risks.

## Implementation Considerations

The FAS team has reviewed all the recommendations contained in this report and assessed the relative importance, implementation degree of difficulty, implementation resources required, whether or not Board of Trustees support is required, and whether enabling legislation is required.

For relative importance, each recommendation is categorized as one of three categories:

1. Critical: Top priority recommendation which should be addressed immediately;
2. Important: High priority recommendation which should be addressed as soon as resource availability allows; or,
3. Leading Practice: Priority recommendation which would help SERS achieve leading practice.

For implementation degree of difficulty, each recommendation is categorized as:

1. Difficult: Will require significant management attention and focus and potentially an extended implementation period;
2. Medium: Will require management attention and focus but not likely to have major barriers to overcome; or,
3. Easy: With clear management direction, staff should be able to complete implementation without difficulty.

For implementation resources required, the categories used for the assessment are:

1. High: Could potentially require significant budget and/or staff time to complete;
2. Medium: Will require some budget or staff time, but is not a significant project; or,
3. Low: Should not require significant budget or staff time.

The final two categories assessed were the potential need for the Board of Trustees to be involved and support a recommendation and whether or not the legislature would need to approve changes to statute.

These implementation assessments are contained in the table on the following pages.

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
<b>1. Board Governance and Administration</b>						
1.1. SERS' Overall Governance Structure, Board Composition, and Lines of Reporting						
R1.1.1	The SERS Board should meet annually with the general investment consultant to discuss past performance and expectations for the upcoming year to ensure that the Board is receiving the independent reassurance it desires.	Important	Medium	Low	Yes	Maybe
1.2. Policies and Role of the Board vis-à-vis SERS Staff, Advisors, and External Managers						
R1.2.1	The Chief Investment Officer and investment staff should consider whether there are additional investment consultant resources that could be accessed and used in strategy development and oversight.	Leading Practice	Easy	Low	No	No
1.3. Board Oversight and Monitoring Activities, including Succession Planning for Key Positions						
R1.3.1	After the process for replacing the Executive Director is completed, the Board should evaluate how well the direct report succession policy worked in practice and make any needed modifications.	Leading Practice	Easy	Low	Yes	No
1.4. Board and Staff Processes for Compliance with Applicable Laws, Administrative Rules and Policies						
	No recommendations					
1.5. Conflict of Interest Policies and Procedures						
R1.5.1	The Board may wish to amend the Ethics Policy to describe how Board members may report conflicts of interest or ethics violations and/or reference the whistleblower policy (i.e., the Reporting of Suspected Misconduct Policy).	Important	Easy	Low	Yes	No

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R1.5.2	The Board should consider adopting a policy or procedure to have the General Counsel review Board members' Financial Disclosure Statements to address potential conflicts of interests at the Board level.	Important	Easy	Low	Yes	No
1.6.	SERS Board authorities and performance and areas where the Board is unduly limited					
R1.6.1	If the SERS Board is not given authority to select its custodial bank and oversee the custodial relationship, SERS should request that the Treasurer of State comply with ethics and compliance assurance standards similar to those required for other providers of fiduciary services.	Critical	Difficult	Medium	Yes	Maybe
1.7.	SERS' Budgeting and Monitoring Processes					
R1.7.1	SERS should consider implementing a budgeting module which integrates with the existing accounting general ledger system to improve timeliness of reporting and reduce manual effort.	Important	Medium	Medium	Yes	No
R1.7.2	SERS' Finance should ensure that the current travel administration policies for use of SERS credit cards is known throughout the organization to encourage broader implementation.	Leading Practice	Easy	Low	No	No
R1.7.3	SERS should consider alternative approaches for travel expense administration, including potentially acquiring a travel administration application or utilizing the services of a third-party travel administrator.	Leading Practice	Medium	Medium	No	No
1.8.	SERS' Administrative Costs					
R1.8.1	Once implementation of the SMART system is completed and operating smoothly, SERS should undertake a review of each pension administration process to optimize staffing and, as appropriate, redeploy staff to other areas.	Critical	Difficult	Medium	Yes	No

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R1.8.2	SERS should consider an office occupancy review and determine if its current office space could be utilized more effectively and downsized to allow for more space to be leased to outside parties	Leading Practice	Medium	Medium	No	No
1.9.	SERS' Board Continuing Education Program and Ongoing Costs					
R1.9.1	SERS should continue to participate in joint training programs with the other Ohio public pension funds and explore addition of new topics or segments that are of mutual interest.	Important	Easy	Medium	Yes	No
R1.9.2.	SERS should consider including additional topics in the internal Trustee training program, such as financial acuity, emerging trends, strategy, board leadership and public/stakeholder relations.	Leading Practice	Easy	Medium	Yes	No
R1.9.3.	SERS could also consider additional ways to improve effectiveness of Trustee training, such as:					
	<ul style="list-style-type: none"> <li>Initiating a Trustee mentoring program to pair an experienced Trustee with each new Board member;</li> </ul>	Important	Medium	Medium	Yes	No
	<ul style="list-style-type: none"> <li>Ensuring that orientation is offered prior to a new Trustee attending the first meeting</li> </ul>	Important	Medium	Medium	Yes	No
	<ul style="list-style-type: none"> <li>Including an opportunity during orientation to be introduced to each senior staff member and have a chance to become familiar with their area;</li> </ul>	Important	Medium	Medium	Yes	No
	<ul style="list-style-type: none"> <li>Establishing a more disciplined schedule for Board meeting refreshers on key practical topics such as fiduciary duty, ethics code provisions, funding and high level actuarial principles, Board policy provisions, and fundamental investment, employee benefits and risk management oversight responsibilities;</li> </ul>	Important	Medium	Medium	Yes	No
	<ul style="list-style-type: none"> <li>Encourage Trustees to attend quality third-party training opportunities to create a more rounded educational program.</li> </ul>	Important	Medium	Medium	Yes	No

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R1.9.4.	The Board should consider modifications to SERS’ training protocol to link it with Board and Committee self-assessment results to address areas where collective Board member skill development is needed or would be useful.	Leading Practice	Medium	Low	Yes	No
1.10.	SERS’ Stakeholder Communications and Plans					
R1.10.1	SERS could consider modifying its communications policy to specify a procedure for designation of a Board spokesperson in case the need for one were to arise, address limits on personal use of social media for SERS communications and reference any fiduciary limits on expenditure of plan funds for communications on unrelated matters.	Important	Easy	Low	Yes	No
R1.10.2	Consideration could be given to whether SERS should prioritize efforts to encourage participant personal savings for retirement through the deferred compensation program or other vehicles.	Important	Medium	Medium	Yes	No
1.11.	Board Self-Assessment					
R1.11.1	The Board should consider whether it is feasible to adopt a meaningful self-assessment process within the public records and meetings law provisions in Ohio. If so, the process could be evolutionary.	Leading Practice	Difficult	Medium	Yes	Maybe
R1.11.2	The Board should work with its Chief Counsel to identify how public records and public meetings access requirements relate to self-assessment results and determine whether there is an appropriate process that would facilitate an honest and useful process by assuring the confidentiality of sensitive information.	Leading Practice	Easy	Medium	Yes	Maybe
R1.11.3	The Board may wish to collaborate with other Ohio public pension funds if it believes that pursuit of legislation to provide the same level of self-assessment confidentiality as is enjoyed by peer investment fiduciaries in other states is needed.	Leading Practice	Difficult	High	Yes	Yes

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
<b>2. Organizational Structure and Staffing</b>						
2.1. Organization Structure, Staffing and Capabilities of SERS						
R2.1.1	SERS should consider having its Chief Financial Officer report directly to the Executive Director rather than through the Deputy Executive Director to ensure greater independence for financial reporting.	Leading Practice	Easy	Low	No	No
2.2. Human Resources Policies and Practices						
R2.2.1	After it has successfully implemented its new, leading-practice succession and replacement planning processes, SERS should develop a formal policy which recognizes these practices as official SERS policy to ensure continuity.	Leading Practice	Easy	Low	No	No
2.3. Staff Qualifications, Hiring and Evaluation Processes						
R2.3.1	SERS should consider how to more effectively utilize its website, in addition to its use of social media and other digital channels, to further support its recruiting efforts.	Leading Practice	Medium	Medium	No	No
2.4. SERS' Compensation Policies and Structure						
	No recommendations					
2.5. SERS' Processes for Monitoring, Measuring and Improving Member Satisfaction						
R2.5.1	After the SMART system implementation is complete, SERS should review its monitoring and reporting of member services metrics and significantly increase its level of performance tracking.	Leading Practice	Medium	Medium	No	No
2.6. SERS' Staff Training, Continuing Education Policies and Program						

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R2.6.1	SERS should develop and approve an employee training and continuing education policy which incorporates the de facto policies and practices already in place and specifies minimum acceptable levels of training annually.	Leading Practice	Easy	Low	No	No
<b>3. Investment Policy and Oversight</b>						
3.1. Statement of Investment Policy (SIP) Development and Updating						
R 3.1.1.	While the investment staff has input into the annual updating of the SIP, SERS should better formalize that input. One way would be for the updating to be an agenda item at a Staff Investment Committee (SIC) meeting scheduled adequately in advance of the submission of the updated SIP to the Board.	Leading Practice	Easy	Low	No	No
3.2. Content and Quality of the SIP						
	No recommendations					
3.3. Consistency Between the SIP, Asset Allocation Asset/Liability Study and Experience Study						
	No recommendations					
3.4. Rebalancing						
R 3.4.1	Investments should amend the existing rebalancing policy to include a more detailed description of the rebalancing process, consistent with current practice, and including the specific responsibilities of risk management, the Chief Investment Officer, and the investment staff.	Leading Practice	Easy	Low	No	No
3.5. Documentation of Investment Decisions						

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R 3.5.1	SERS may consider creating flexibility in the Investment Committee policy by permitting the Investment Compliance Analyst to sign the signature cover page in lieu of the Enterprise Risk Management Officer and the Investments Assistant Director in lieu of the CIO (provided the appropriate review and analysis has been done).	Important	Easy	Low	No	No
3.6. SERS Compliance with Documented Investment Policies and Procedures						
R 3.6.1	SERS may consider updating its template side letter to include the provisions of Section VI.D of the Statement of Investment Policy or revise the Statement of Investment Policy to clarify that such provisions apply only to certain asset classes.	Important	Easy	Low	No	No
R 3.6.2	SERS should broaden and deepen the implementation of its ESG program, consistent with the Investment Beliefs in the SIP.	Important	Medium	Medium	No	No
3.7. SERS Board and Staff Policies and Processes for Periodic Review and Updating of Investment Policies, Guidelines and Procedures						
R3.7.1	Continue to develop a policy describing how often investment policies will be reviewed and updated and identifying responsible parties.	Leading Practice	Easy	Low	Yes	No
3.8. SERS' Processes for Monitoring and Controlling Transaction Costs						
R3.8.1	The legislature should consider eliminating the required goal to increase utilization by SERS of Ohio-qualified agents to reduce administrative burden and ensure SERS is not unduly restricted in their options for trading.	Leading Practice	Medium	Low	No	Yes
3.9. Performance Benchmarks and Performance Monitoring						
R 3.9.1	As has been its policy in the past, SERS should use the opportunity of the asset liability study to review all benchmarks.					

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	<ul style="list-style-type: none"> <li>Specifically, to the extent that the study results in more granular allocations (e.g. to emerging market debt or high yield debt, rather than “core plus” fixed income) SERS should adopt specific relative return benchmarks appropriate to those asset classes, rather than use composite benchmarks which add a hurdle rate to the broader asset class benchmark.</li> </ul>	Critical	Easy	Low	Yes	No
	<ul style="list-style-type: none"> <li>SERS should review the existing, multiple benchmarks for the strategy allocations, explicitly differentiating between their function as hurdle rates to inform investment staff and as measures of market opportunities to allow the Board and senior investment staff to monitor performance.</li> </ul>	Important	Easy	Low	Yes	No
	<ul style="list-style-type: none"> <li>SERS should review the benchmark for real assets following the asset allocation, particularly if the Board determines to include more non-real estate assets in the allocation.</li> </ul>	Important	Easy	Low	Yes	No
3.10. External Manager Compensation and Payment Processes						
R3.10.1	SERS should continue to work with ILPA and SERS’ peers in support of the Transparency Initiative.	Leading Practice	Medium	Medium	No	No
3.11. External Manager Conflict of Interest Policies and Compliance Procedures						
	No recommendations					
3.12. Investment Manager Due Diligence, Selection, Monitoring and Controls						
	No recommendations					
3.13. Investment Controls and Fiduciary Risk						
R3.13.1	SERS should provide for back up to the investment risk manager.	Important	Medium	Medium	Yes	No
3.14. Breadth and Quality of Services Provided by the Custodial Banks to SERS						

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R3.14.1	SERS should be allowed to contract directly with a single global custodial bank in order to receive comparable services at a significantly lower cost.	Important	Difficult	High	Yes	Yes
3.15. The Ohio Custody Model and Custodial Bank Oversight Structure						
R3.15.1	The SERS Board of Trustees should be given authority to select the SERS custodial bank. This could be accomplished in one of two ways:	Important	Difficult	High	Yes	Yes
	a. The Treasurer of State could delegate authority to the SERS Board; or,					
	b. The legislature could consider authorizing the SERS Board of Trustees to select its custodial bank and oversee the relationship.					
R3.15.2	The legislature should eliminate the requirement for the SERS custodial bank to have a presence in Ohio to allow for a single global custodial bank to serve SERS.	Critical	Difficult	High	Yes	Yes
<b>4. Legal Compliance</b>						
4.1. Communications with the IRS						
	No recommendations					
4.2. SERS' Monitoring of Compliance with IRS Requirements						
	No recommendations					
4.3. Use of Legal Services						
	No recommendations					
4.4. Ethics Training and Compliance Programs and Compliance Reporting Processes						
R4.4.1	SERS may consider updating the Continuing Education Policy to identify the educational topics that are required by statute, including ethics, and desired by the Board (if any).	Important	Easy	Low	Yes	No

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R4.4.2	SERS may wish to supplement the Continuing Education Policy to identify how SERS will implement ethics training requirements of Section 3309.042 of the Ohio Revised Code, in respect to which apply to staff.	Important	Easy	Low	No	No
4.5. Transaction Compliance and Legal Requirements						
	No recommendations					
<b>5. Risk Management and Controls</b>						
5.1. Financial Control Structure						
	No recommendations					
5.2. Financial Statements and Reporting						
R.5.2.1	SERS should consider implementing a management sub-certification process to ensure the integrity of financial reporting by increasing manager accountability for accuracy and compliance with financial reporting standards.	Leading Practice	Medium	Low	No	No
R.5.2.2	Management should continue to document desk procedures to ensure consistency in the execution of transactions, reporting and performance of duties.	Important	Medium	Low	No	No
R.5.2.3	Management should improve the timeliness of internal financial and budget reporting.	Important	Medium	Medium	No	No
R.5.2.4	Management should automate tools to help improve the budgeting process.	Important	Medium	Medium	No	No
5.3. Purchasing Policies and Procedures						
R.5.3.1	The Finance team should continue to implement tools to enable efficient and effective centralization of contract monitoring allowing leadership to be more strategic in working with third party vendors and service providers.	Important	Medium	Medium	No	No

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R.5.3.2	The Purchasing team should ensure that the document retention needs for purchasing activities and contracts are considered in SERS' records retention strategy.	Critical	Medium	Medium	No	No
R.5.3.3	Once centralized processes are effectively working; the Purchasing team should work more strategically within SERS.	Leading	Medium	Low	No	No
5.4. Accounting Processes						
R.5.4.1	SERS should strive to issue monthly and quarterly financial statements more timely.	Important	Medium	Medium	No	No
R.5.4.2	SERS should continue with upgrade plan to the most recent version of its accounting software applications in FY2018.	Important	Medium	Medium	No	No
R.5.4.3	SERS should continue to refine its travel expense reimbursement process along with implementing a system to ensure consistent approval procedures, timely recording and reimbursement of business related expenditures.	Important	Medium	Medium	No	No
5.5. Internal Audit						
R.5.5.1	The Board should continue to periodically assess the relationships between Internal Audit, the Board and management.	Important	Easy	Low	Yes	No
R.5.5.2	The Chief Audit Officer (CAO) and Enterprise Risk Management (ERM) officer should harmonize risk assessment approaches using the measures of inherent and residual risk.	Leading	Medium	Low	Yes	No
5.6. External Auditor						
R.5.6.1	SERS should continue to provide external auditors with updates on significant system implementations which may impact audit timing and approach.	Important	Medium	Low	No	No
R.5.6.2	SERS should consider updating its Audit Committee Charter to include their role in appointing the external financial auditing firm.	Important	Easy	Low	Yes	No
5.7. Record Keeping						

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R.5.7.1	SERS should continue to pursue identifying and implementing a record retention tool that retains the custody trail after destruction and update the needs of departments for document management and retention.	Critical	Difficult	Med/High	Maybe?	No
R.5.7.2.	For records management, the role of security of records should be clearly articulated and agreed upon between Information Security, Administrative Services and Record Agents within the departments.	Critical	Medium	Medium	No	No
R.5.7.3.	SERS should develop a long-term strategy for records management including linkage to the mission of SERS and capabilities plan.	Leading	Medium	Low	Yes	No
5.8. Holistic Risk Management						
R.5.8.1	A common or holistic approach to risk management should be required throughout SERS.	Critical	Medium	Low	Yes	No
R.5.8.2	Internal Audit (IA) and Enterprise Risk Management (ERM) should continue to work together to harmonize their risk assessment approaches to promote consistency and a common language of risk and risk assessment.	Leading	Medium	Low	Yes	No
R.5.8.3	Internal Audit and Enterprise Risk Management should evaluate the utility of using subjective assessments of likelihood as a measure of inherent risk. They should instead consider likelihood as a subjective metric for allocating resources to equivalent high residual risks.	Leading	Medium	Low	Yes	No
R.5.8.4	Primary responsibilities for assurance and independent reassurance should be clarified between operating management and Internal Audit and Enterprise Risk Management.	Important	Medium	Low	Yes	No

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R.5.8.5	Each risk owner should be responsible for providing reasonable assurances to the Executive Director and the Board that risks for which they have responsibility have been identified, robustly assessed and are being managed within the exposures limits established by the Board. If such limits do not currently exist, they should propose them.	Critical	Medium	Low	Yes	No
R.5.8.6	Each risk owner should represent / certify their risk assessments to the Board.	Important	Easy	Low	Yes	No
R.5.8.7	Internal audit should continue to focus its auditing efforts on those risks which have high inherent impact and low residual risk to provide independent reassurance that the controls the organization is counting on to be effective can be relied upon. IA's consulting activities should focus on ways to reduce high residual exposures.	Leading	Medium	Low	Yes	No
R.5.8.8	Specific individual responsibilities for risk ownership and accountability should be clearly assigned by the Executive Director.	Critical	Medium	Low	Yes	No
R.5.8.9	Operating management's performance appraisals should include the quality of risk assessment, risk management and reporting.	Critical	Medium	Low	Yes	No
R.5.8.10	The results of the Enterprise Risk Management risk assessment should be presented to the Board by operating management using an agreed-upon format.	Important	Medium	Low	Yes	No
<b>6. IT Operations</b>						
6.1. IT Organization and Governance						
R6.1.1	Management should identify a comprehensive IT process model and associated maturity model for managing the development and growth of the IT function.	Important	Medium	Medium	No	No

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R6.1.2	Management should identify appropriate and specific executives and a committee of the board to sponsor the IT function through routine reporting and oversight processes. In addition, IT executives should be accountable for specific activities, risks and outcomes.	Critical	Difficult	Medium	Yes	No
6.2. IT Infrastructure and Services						
R6.2.1	Management should consider developing an infrastructure roadmap defining its “future state” computing environment based on vendor roadmaps and current and projected computing and management needs of the organization. This exercise should be initiated shortly after the SMART system go-live event.	Leading Practice	Difficult	Medium	No	No
R6.2.2	Management should consider using a third-party backup and recovery service and re-deploying the assets invested in disaster recovery.	Leading Practice	Medium	Medium	No	No
R6.2.3	Management should consider developing high-level principles to direct strategy and planning. (For example, buy vs. build, outsource vs. hire, or hire vs. train.) Such principles could also support decisions to support changes to the current staffing model or to make exceptions to compensation rules to acquire and retain talent.	Leading Practice	Difficult	Medium	Yes	No
6.3. IT Project and Portfolio Management						
R6.3.1	Management should continue monitoring and testing the system implementation for performance, data integrity and user acceptance to identify and manage risks that threaten a successful launch.	Critical	Easy	Low	No	No
6.4. IT Operations and Security						
R6.4.1	Management should continually evaluate its sourcing strategy for all IT services to ensure risk and resource usage are optimized.	Important	Difficult	Low	Yes	No

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Recommendation		Critical vs Important vs Leading Practice	Difficult vs Medium vs Easy to Accomplish	Resources Required: Low / Medium / High	Board Support Needed	Enabling Legislation Needed
R6.4.2	The activities involved in producing and reviewing the risk register should be folded into a formal IT risk assessment; preferably as part of an overall enterprise risk assessment process. Risk Assessment is a key element in internal control and management should consider developing a continual risk assessment process.	Leading Practice	Medium	Medium	Yes	No
6.5. Monitor, Evaluate and Assess						
	No recommendations					
6.6. IT Risk and Controls Report						
R6.6.1	SERS should conduct additional third-party reviews to address how well the Payment Card Industry Data Security Standard (PCI/DSS) standard is being met; whether applicable privacy requirements of health care and/or financial compliance regulations are being met; and, whether another standard might be a better fit for this business.	Important	Medium	Medium	No	No
R6.6.2	SERS should commission a Business Impact Assessment intended to estimate the potential impact system downtime or data corruption could have on supported business processes.	Important	Medium	Medium	No	No
R6.6.3	SERS should establish a formal IT governance committee to develop specific performance objectives and Key Performance Indicators tying back to the enterprise’s strategic plans.	Important	Medium	Low	Yes	No
R6.6.4	SERS should adopt a disciplined decision-making framework incorporating opportunity costs and tied to a long-term technology roadmap and an all-encompassing framework (like ITIL or COBIT 5) to improve management’s ability to consistently optimize risk and resource deployment.	Leading Practice	Difficult	Low	Yes	No

## Appendices

### A Scope of Review

#### A. BOARD GOVERNANCE AND ADMINISTRATION

*The contractor will perform a review of the governance structure of SERS in terms of the make-up of its Board and level of monitoring and oversight provided in its policies, procedures, and practices. The contractor shall evaluate the adequacy of the policies concerning delineation of roles and responsibilities of the Board, staff, investment managers, and others with administrative or oversight responsibilities.*

*Specifically, this will include an analysis of:*

- *Board trustee education, training, and their associated costs;*
- *Whether SERS sufficiently delineates, communicates, and documents the lines of reporting and responsibility over staff responsibilities in general and in the investment program specifically and whether the role of the Board and staff are clearly defined for both;*
- *The statutes and administrative rules under which SERS operates to determine if the Board and staff comply with applicable statutes and rules as well as whether the statutes and administrative rules are sufficient to allow the Board and staff to meet their responsibilities;*
- *Comparison of the governance provisions and practices to industry standards and best practices in comparable systems.*
- *SERS' budget process and its adherence to Board approved budget;*
- *Written policies and procedures currently in place to monitor and guard against professional conflicts of interest;*
- *Succession planning for key positions;*
- *Administrative costs, including determining their appropriateness compared to comparable public systems; and*
- *Communication policies and procedures of SERS between the Board, its members, and its retirees.*

#### B. ORGANIZATIONAL STRUCTURE AND STAFFING

*The contractor will perform a review of the overall organizational structure of SERS and its capacity and effectiveness in implementing the policy and assignments delineated by the SERS Board and management. Specifically, this will include an analysis of:*

- *Staffing size, hiring procedures, staff qualifications, roles, compensation, performance evaluation*

*requirements, and an analysis of these factors compared to other similar size public pensions;*

- *Adequacy of process to evaluate and improve customer/member satisfaction;*
- *Whether compensation levels are sufficient to facilitate SERS' ability to attract and retain qualified pension fund professionals; and*
- *Monitoring and maintaining staff qualifications and continuing education requirements.*

### **C. INVESTMENT POLICY AND OVERSIGHT**

*a. Investment policy. The contractor will perform an evaluation of the Board investment policy and procedure. The contractor will:*

- *Review the process by which the investment policy is adopted and compare that process to best practices;*
- *Review the investment policy statement and compare it to industry best practices;*
- *Determine whether SERS' investment policy includes all critical elements, acknowledging an understanding of SERS' financial and actuarial characteristics, and in accordance with established investment and funding goals, and risk tolerances;*
- *Evaluate whether the asset allocation is tied to the investment policy statement;*
- *Evaluate whether SERS' investment policy is compatible with the most recent asset/liability study and five-year experience review;*
- *Evaluate the adequacy of the mechanisms and decision-making processes utilized for setting, periodically reviewing, and rebalancing the asset allocation;*
- *Evaluate whether SERS' policy specifies to what extent the basis for particular investment decisions should be articulated in writing by the Board or SERS staff;*
- *The extent to which SERS observes its formal written investment policies and procedures, and identify what, if any, practical problems have resulted either on a systematic or isolated (but significant) basis; and*
- *How often and by what process the Board or staff reviews SERS' written policies, guidelines, and procedures.*

*b. Investment oversight and review. The contractor will perform an evaluation of the oversight and control of investments. The contractor will:*

- *Evaluate the appropriateness of Board and staff controls, procedures, and capabilities to regularly review and monitor the performance of the investments and the practices of investment managers, as well as ensuring compliance with policies;*
- *Evaluate SERS' process for measuring, evaluating, and controlling transaction costs, directed brokerage and commission recapture (if any), and compare the process to other funds as well as*

*public or private third party industry surveys.*

- *Evaluate the process used to determine and measure investment performance, including how performance data is collected and verified and selection of appropriate benchmarks;*
- *Evaluate the basis and methodology for the compensation of external investment managers and advisors and payments to others, if any;*
- *Evaluate the written policies and procedures currently in place to monitor and guard against professional conflicts of interest; and*
- *Analyze how investment managers are selected, including the transparency in the decision-making process, due diligence provisions, whether specific criteria and procedures govern the selection process, whether they are actually observed in the selection process, and whether there is adequate documentation of selection process.*

*c. Investment and fiduciary risk. The contractor will perform an evaluation of the awareness of risk and management of risk in investments. The contractor will:*

- *Evaluate the processes by which the Board is aware of the risks associated with the asset allocation they have adopted; and*
- *Examine investment risk factors. Attention should be on the types, levels, and appropriateness of risks in the investment portfolios and overall funds as well as any internal controls in place at SERS to ensure compliance with the adopted standards, policies and procedure for managing investment and fiduciary risk. This examination should include a comparison to best practices.*

*d. Custodian policy. The contractor will evaluate SERS' relationship with its custodial bank, including the custodial bank's breadth of services, technological planning and capability to address SERS' needs, the bank's structure and level of fees, cash management and analytical services, and the ability of SERS to have oversight over custodial functions. The contractor will also review the custody model used by the Ohio Treasurer of State as custodian of financial assets for SERS and evaluate the oversight provided as compared against other public systems and best practices.*

#### **D. LEGAL COMPLIANCE**

*The contractor will evaluate the adequacy of SERS' legal compliance with applicable state and federal law and regulations. The evaluation will include an analysis of:*

- *Legal compliance and adherence to IRS regulations;*
- *Adequacy of internal and external counsel;*
- *Adequacy of ethics training, disclosure, and monitoring of compliance; and*
- *Board and staff compliance with legal requirements.*

#### **E. RISK MANAGEMENT AND CONTROLS**

*The contractor will evaluate the risk review and control procedures of SERS. The contractor will also evaluate the SERS management process by analyzing, as appropriate, the essential components of its internal control structure. These components include segregation of duties, availability of information, timeliness, accessibility, and accuracy of information, policy manuals, supervision and review, audits, and training and planning. A review of this task area should also encompass an assessment of whether the pension fund utilizes a holistic view of risk management.*

*The evaluation will include an analysis of:*

- *The adequacy of financial controls and integrity of financial statements. This should include an analysis of the purchasing policy and adherence to that policy;*
- *The adequacy of the current accounting process;*
- *The appropriateness and utility of regular reports provided to the Board and management, and how that reporting compares to industry standards and best practices;*
- *Sufficiency of internal and external audit procedures; and*
- *Adequacy of record-keeping system.*

#### **F. IT OPERATIONS**

*Evaluate the control, accuracy, and integrity of the SERS information technology system. This should include a review of SERS' data integrity; security and confidentiality of its records system; contingency and continuity planning; and incident management system. Evaluate the overall risk level for SERS' IT operations. The analysis will include an analysis of:*

- *The quality of processes and controls for the organization and management of IT operations and governance; IT project and portfolio management; data management; application development and maintenance; local area network infrastructure; security; business continuity plan and disaster recovery; and*
- *Areas of high risk and SERS' mitigating controls for those defined high-risk areas. The analysis will compare the SERS' control structure with IT industry best practices.*

## B FAS Benchmarking Studies

The seven benchmarking studies referenced are as follows:

### **1. Public Pension Fund Governance Benchmarking Survey and Leading Practices, 2011**

The benchmarking study was very useful in helping the CalPERS Board understand governance leading practices and to move forward to implement substantive changes. Sixteen major pension funds in the U.S., Netherlands, South Africa and the U.K participated. Referenced as 2011 CalPERS Study.

### **2. Public Fund Investment Management Governance Survey, 2012**

This study was completed at the request of the Office of the Oregon State Treasurer (OST). It included a review of fund governance with seven peer funds utilizing a detailed analysis of 66 authorities under 9 broad “Powers Reserved” categories. The “treasurer model” and “investment board model” governance structures were compared and contrasted. Referenced as 2012 Oregon Study.

### **3. Public Pension Fund Fiduciary and Governance Leading Practices Survey, 2012**

Completed at the request of the New York State Comptroller’s Office, this study evaluated and identified leading and prevailing practices in eleven different areas. The study included 15 public pensions funds with AUM of \$50 billion or greater. The results were also used to highlight differences found among sole fiduciary, investment board, and integrated board governance models. Referenced as 2012 NYS CRF Study.

### **4. Public Pension Fund Governance Leading Practices Survey, 2013**

At the request of the School Employees Retirement System of Ohio, FAS conducted a targeted benchmarking process covering five topical areas with 12 peer public pension funds with AUM ranging from \$7 billion to \$14 billion. Referenced as 2013 Ohio SERS Study

### **5. Public Pension Investment Board Benchmarking Survey, 2014**

As part of our fiduciary performance review of the South Carolina Retirement System Investment Commission, FAS conducted a benchmarking survey of a peer group of seven U.S. state public pension investment boards with AUM of \$10 billion or greater. Topics included various board policies and practices, decision-making processes, the custodian relationship, and personnel and sourcing strategies. Referenced as 2014 SC RSIC Study.

### **6. Retirement Administration Agency Peer Benchmarking Results, 2014**

As part of our fiduciary performance review of the South Carolina Public Employee Benefit Authority (PEBA), FAS conducted a benchmarking survey of public retirement systems which administer retirement benefits and are separate from the agencies which manage fund investments. Among the seven agencies which participated, five also oversee defined contribution plans, five administer health insurance, and three oversee other insurance programs. Topics benchmarked included board policies and practices, legal authorities, organization structure, and risk management. Referenced as 2014 SC PEBA Study.

### **7. Public Pension Fund Investment Governance Survey, 2016**

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As part of our assignment assisting the Board of Investments of the Los Angeles County Employee Retirement Association (LACERA), FAS conducted a benchmarking survey of investment governance policies and practices at eleven public retirement systems ranging in AUM from \$25 to \$70 billion which do not manage any non-cash retirement investments internally. Topics focused primarily on delegations to staff. Referenced as 2016 LACERA Study.

## C 2013 FAS Fiduciary Audit of SERS Investment Operations

Funston Advisory Services was engaged by SERS of Ohio to perform a fiduciary audit of its investment operations. Project work was initiated in January 2013 and was completed in May 2013. The scope of our engagement included:

- Alignment of fiduciary duties and responsibilities with authorities
- Investment policy framework and policy implementation
- Investment operations compliance, performance, and controls
- Identify relevant leading practices and improvement opportunities

We accomplished the fiduciary audit through the following work streams:

1. Review the process through which the asset/liability study and discount rate were developed
2. Review the legal and regulatory framework which governs SERS
3. Review the Statement of Investment Policy (SIP) and related investment policies
4. Review compliance with investment-related laws and policies and identify any potential gaps
5. Review practices and performance of investment operations
6. Review and assess the control environment and internal controls for key processes

This review included a targeted benchmarking process with twelve other state public pension funds with AUM ranging from \$7 billion to \$15 billion. Topics addressed included staffing profile, internal asset management, asset/liability study policies and responsibilities, Board Audit Committee profile, internal auditor reporting relationship, board education plans and venues, internal investment committee profile, and custodial relationship profile.

The final report was presented to the SERS Board of Trustees during their May 2013 meeting and was well received. SERS established a regular monitoring and reporting program which reported progress to the Board. All the improvement recommendations which could be addressed by the SERS staff have been completed.

Throughout this report, the FAS team references changes implemented over the past three years by SERS. Many of these improvements were initiated in response to recommendations from the 2013 fiduciary audit. SERS' leadership is to be commended for its focus on continuous improvement and receptiveness to implement leading practice policies and practices.

## D Human Resource Policies

- Recruiting and hiring
  - HR5-005 Employee and Contractor Onboarding
  - HR6-006 SERS Recruitment and Selection
  - HR6-007 Background Investigations
  - HR6-009 Employment Verification
- Training, development and succession planning:
  - HR2-001 Tuition Assistance
  - HR2-002 Certification and Professional Designation Program
  - HR2-003 Leadership Development
- Compensation:
  - HR4-001 Employee Recognition
  - HR4-007 Compensation for Unused Leave Time
  - HR4-016 Employee Compensation
  - HR4-017 Assignment of a New Job to a Salary Grade
  - HR4-018 Determining Pay for Job Changes
  - HR4-019 Establishing Pay for New Hires
  - HR4-020 Market-based Pay Adjustments
  - HR4-021 Pay Above Grade Maximum
  - HR4-022 Purpose of Compensation System
  - HR4-023 Request Review of a Salary Grade
  - HR4-024 Salary Structure Adjustments
  - HR6-013 SERS Employee Payroll
- Performance management
  - HR5-002 Performance Management
  - HR5-006 Merit Increases
  - HR6-010 Corrective Action
  - HR6-015 Telephone Call Recording and Monitoring
- Ethics, equal opportunity and employee behavior
  - HR3-001 Substance Abuse
  - HR3-002 Anti-Harassment
  - HR3-003 Dress Code
  - HR3-004 Workplace Violence
  - HR3-005 Tobacco Use Policy
  - HR3-006 Social Media and Networking
  - HR6-002 Employment of Relatives
  - HR6-003 Secondary Employment
  - HR6-008 Equal Employment Opportunity
  - HR6-014 Wireless Devices and Services Policy & Procedure (in draft)
  - HR6-016 Attendance and Punctuality
  - HR6-017 ADA-ADAAA Compliance

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- HR7-002 Employee Personnel Information
- LL2-001 Additional Standards of Professional and Ethical Conduct for Employees Policy
- Employee classifications and benefits
  - HR4-004 Granting Previous Service and Sick Leave Hours
  - HR4-008 Sick Leave Donation Program
  - HR4-013 Employee Fund
  - HR4-015 Employee Health Care Claim Review Process
  - HR5-007 Change in Employee Status
  - HR6-001 Employee Overtime
  - HR6-010 Employee Classifications
  - HR8-003 Employee Wellness Program
- Work and holiday schedule
  - HR4-009 Flexible Scheduling
  - HR6-004 Telecommuting
- Personal leave policies
  - HR4-026 Family Medical Leave
  - HR4-027 Employee Leave Time
  - HR4-028 Leave of Absences
- Termination
  - HR5-001 Employee Separations
- Employee safety and emergency procedures
  - HR8-001 Safe and Healthy Workplace
  - HR8-002 Domestic Violence
  - HR8-004 Pandemic Event
  - HR8-005 Emergency Event

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## E Summary of Transaction Reviews

Transaction Name	Babson Capital Global Special Situations Credit Fund II	Coho Partners	Green Equity Investors VII	GSA QMS Fund Limited	Harvest MLP Alpha Strategy	Lubert-Adler Real Estate VII	Mason Wells Buyout Fund IV, LP	Neumeier Poma	Rockspring TransEuropean Property VI	Scopia PX International Limited
Asset Class	Opportunistic	US Equities	Private Equity	Multi-Asset Strategies	Opportunistic	Real Assets	Private Equity	US Equities	Real Assets	Multi-Asset Strategies
Investment Recommendation by 2 Sponsors	✓ <sup>14</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓
Opinion Letter by Consultant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Investment Checklist	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Operational Due Diligence Report Memorandum	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Staff Investment Committee Approval	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Signature Page of Required Approvals		✓	✓		✓	✓	✓	✓	✓	✓
Signed Documents (LPA, Sub Docs, Side letter)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Required Annual Disclosure	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monthly Compliance Letter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

<sup>14</sup> ✓ indicates that the legal or policy requirement (1) has been substantially satisfied in all material respects or (2) does not apply.

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Asset Class	Opportunistic	US Equities	Private Equity	Multi-Asset Strategies	Opportunistic	Real Assets	Private Equity	US Equities	Real Assets	Multi-Asset Strategies
Iran/Sudan Transaction Reporting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reporting at least quarterly	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Notice of Organizational Changes or Staffing (or other agreement to comply with SIP)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
No Contingency Payments/Placement Agent Fees	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## F Glossary of Acronyms and Defined Terms

2013 Review – The Funston Advisory Services  
Fiduciary Audit of the Investment Operations of  
the School Employees Retirement System  
(SERS) of Ohio

ACWI – All Country World Index

AICPA – American Institute of Certified Public  
Accountants

APO – Align, Plan and Organize

ARS – Absolute Return Strategies

AUM – Assets Under Management

Basket Clause – Investments that do not qualify  
or are otherwise not permitted under prevailing  
statute

CAFR – Comprehensive Annual Financial Report

CAO – Chief Audit Officer

CEM – CEM Benchmarking Inc.

CEO – Chief Executive Officer

CFO – Chief Financial Officer

CIO – Chief Investment Officer

COBIT – Control Objectives for Information and  
Related Technologies

COO – Chief Operating Officer

COSO – Committee of Sponsoring Organizations  
of the Treadway Commission

ED – Executive Director

EDM – Enterprise Data Management

ERM– Enterprise Risk Management

DMS – Document Management System

ERISA – Employee Retirement Income Security  
Act of 1974

ESG – Environmental, Social and Governance

FAS – Funston Advisory Services LLC

FAS Team – Public pension experts who  
conducted the 2013 Review

FTE – Full-Time Equivalent

FX – Foreign Exchange

GAAP – Generally Accepted Accounting  
Principles

GAAS – Generally Accepted Accounting  
Standards

GAO – Government Accountability Office

GASB – Governmental Accounting Standards  
Board

GP – General Partner

HFRI – Hedge Fund Research, Inc.

HR – Human Resources

IA – Internal Audit

IAD – Investment Accounting Division

IIA – Institute of Internal Auditors

ILPA – Institutional Limited Partners Association

IMA – Investment Manager Agreement

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IPPF – International Professional Practices Framework	SEC – Securities and Exchange Commission
IRS – Internal revenue Service	SIC – Staff Investment Committee
ISACA – Information Systems Audit and Control Association	SIP – Statement of Investment Policy
ISO – International Standards Organization	SLA – Service Level Agreement
IT – Information Technology	SMART – SERS Member and Retiree Tracking
ITIL – Information Technology Infrastructure Library	SERS – School Employees Retirement System
LCTM – Long-Term Capital Management	SOW – Statement of Work
LLC – Limited Liability Company	System – The School Employees Retirement System of Ohio
LP – Limited Partner	TOS – Treasurer of State
LPA – Limited Partner Agreement	U.S.C.A. – United States Code Annotated
MARS – Member and Retiree System	
MAS – Multi-Asset Strategy	
MEA – Monitor, Evaluate and Assess	
MRK – Master Record Keeper	
MWBE – Minority and Women-Owned Business Enterprise	
NCREIF – National Council of Real Estate Investment Fiduciaries	
O.R.C. – Ohio Revised Code	
ORSC – Ohio Retirement Study Council	
PCI DSS – Payment Card Industry Data Security Standard	
PMO – Project Management Office	
RFP – Request for Proposals	
RMD – Required Minimum Distribution	