



STATE TEACHERS
RETIREMENT SYSTEM
OF OHIO

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March 22, 2024

Ms. Bethany Rhodes, Director
Ohio Retirement Study Council
30 E. Broad St.
2nd Floor
Columbus, OH 43215

Dear Bethany:

Pursuant to Substitute Senate Bill 133 and as required by Section 3307.044 of the Ohio Revised Code, enclosed is a report of the actions of the Audit Committee of the State Teachers Retirement Board for calendar year 2023.

Please don't hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Lynn A. Hoover".

Lynn Hoover
Acting Executive Director

Enclosure

To: Ohio Retirement Study Council (ORSC)

Subject: STRS Ohio Audit Committee Reports – 2023 Activities

Date: March 22, 2024

As required by Section 3307.044 of the Ohio Revised Code, the following report outlines the activities of the STRS Ohio Audit Committee and the STRS Ohio Internal Audit Department for the year ending Dec. 31, 2023. This report outlines the following: audit reviews completed during 2023; STRS Ohio Audit Committee meetings and actions; and the 2024 Internal Audit Plan. STRS Ohio Board Members, are other relevant attendees are listed in the summarized activity reports below.

Audit Reviews Completed During 2023

The attached 2023 Internal Audit Summary lists the audits performed, the scope of each audit, the recommendations to management; management's response and expected implementation dates. The Internal Audit Summaries were provided to all STRS Ohio Board Members in March, August, and December of 2023.

STRS Ohio Audit Committee Meetings and Actions

The Audit Committee met on August 17, 2023, at 8:30 a.m. and was called to order by the committee chair, Carol Correthers. Committee members in attendance were Ms. Correthers, Brent Bishop, Alison Falls, Claudia Herrington and Elizabeth Jones. Also in attendance were board members, Rudy Fichtenbaum, Steve Foreman, Scott Hunt, Elizabeth Jones, Arthur Lard, Dale Price and Julie Sellers. Staff present included Bill Neville, Lynn Hoover, Kathy Boettcher, Jeff Lieser, Robert Vance, Philip Licata, Kimberly VanGundy, Bonnie Wild, Stacey Wideman and Wendie Ballard.

Robert Vance, chief audit executive, reviewed the Quarterly Internal Audit Summary, which included an update on the document layout, the audit tracking process, an update on the purpose and stage of specific active audits, an update on 2023 work plan progress, and an update on quality assessment review activities. Mr. Vance confirmed management's cooperation and compliance with Internal Audit and that there was no record of management accepting inappropriate levels of risk for the period under review.

Mr. Vance also provided an update on supplemental meetings planned with all members of the STRS Ohio board to satisfy the recommendations of the fiduciary auditors. Additionally, the Audit Committee was provided with an update on the collaborative plans with the ITS Department to complete dashboard tools that are designed to facilitate Internal Audit's administrative management and the governance activities of the committee.

Mr. Licata provided a recap of the active audits (Cloud Computing/Infrastructure and IT Security Access), closed IT audits (Firewall 2022, BYOD 2022, and the SWIFT Assessment), and related follow up, from the Internal Audit Summary. Additionally, a brief reference to the other audit related consultative activities performed throughout the year was provided.

Ms. Van Gundy provided an update on the closed Death Match Audit recommendations and confirmed management's cooperation. The scope and progress of the active audits (PBI, Commission Sharing Agreement and Trading, and the External Quality Assurance Review) were presented to the committee for discussion. Ms. Van Gundy also confirmed that the audit participants were well-qualified and performed their duties appropriately. No material weaknesses were noted.

Ms. Wild, a new member of the Internal Audit team, provided an update on the Service Retirement Benefits audit (draft report phase) and the Member Income Tax audit (testing phase).

Ms. Wild confirmed management's cooperation during both audits. An update will be given at the next Audit Committee meeting.

Mr. Vance then presented a summary of the proposed Internal Audit Charter for review and approval by the committee.

Ms. Correthers moved, seconded by Ms. Herrington, that the committee approve the Internal Audit Charter, as presented and discussed at the August 17, 2023 meeting.

Upon roll call the vote was as follows: Ms. Correthers, yes; Ms. Herrington, yes; Mr. Bishop, yes; Ms. Falls, yes; Ms. Jones.

Mr. Vance stated the next update will be presented to the committee at the December meeting. All internal audit activity for 2023 will be summarized, and the 2024 Internal Audit Plan will be presented at that time for approval. Mr. Vance reminded committee members that interaction was not limited to reports and committee meetings, and there are no time constraints for communications with the committee and audit staff.

Lynn Hoover, deputy executive director – Finance, introduced Jen Aras and Jonathan Schultz of Crowe LLP to present a summary of the audit plan for the fiscal 2023 financial statement audit. Crowe LLP as the independent public accounting firm, under the oversight of the Ohio Auditor of State, conducts the annual audit of STRS Ohio's financial statements. Crowe's audit of the system includes testing of investments, contributions and the pension liability and will issue an independent auditor report and required communications. The independent auditor report and required communications will be presented to the Audit Committee in December.

Ms. Hoover introduced Julia Reyes of ACA Group to present the results of the annual investment verification and performance examination of STRS Ohio for the fiscal year ended June 30, 2023. ACA Group is the third-party verification firm for STRS Ohio and performs rigorous testing and validates to third-party support, the STRS Ohio total fund performance calculation inputs, resulting return and reporting. Their independent tests also verifies that STRS Ohio has both complied and designed its policies and procedures to calculate and present performance in compliance with the Global Investment Performance Standards (GIPS®), which are globally recognized and considered industry best practice. ACA Group issued their verification and performance examination report, and the final report was provided to the board.

Bill Neville, executive director, provided background and findings from the fiduciary performance audit, completed in 2022 by Funston Advisory Services (FAS). An implementation roadmap was prepared to track progress on the recommendations from FAS. Mr. Neville provided an update on completed recommendations, including board approval of a statement of investment beliefs, board meeting video and archives, constituent and town hall style meetings, as well as additional staff resources. Ms. Falls requested a roadmap containing only the board decision items. Staff will continue to review and implement recommendations from the fiduciary audit. Regular updates on progress will be provided at future committee meetings.

A meeting of the Audit Committee was called to order by Mr. Price, committee chair, on December 14, 2023, at 8:30 a.m. Other committee members present were Ms. Falls and Ms. Jones. Other Board members present were Ms. Correthers and Dr. Fichtenbaum. Staff present included Mr. Worley, Ms.

Elliot, Ms. Hoover, Mr. Vance, Mr. Licata, Ms. VanGundy, Ms. Wideman, Ms. Wild and Ms. Ballard.

Mr. Vance, Chief Audit Executive, introduced the agenda. Teresa Snedigar, Quality Assessment Review Consultant, presented the outcome of her evaluation of the Internal Audit Department. She indicated the department earned the highest favorable rating. Mr. Vance presented the Internal Audit Summary for 2023 and provided audit status updates. Mr. Vance stated the summary contained no material findings and Internal Audit had full cooperation from management. Additionally, Mr. Vance reported that no inappropriate levels of residual risk were identified by the audit team before presenting statistics on the number of audit recommendations and their implementation status/timeframes. Most of the outstanding summary recommendations are scheduled to be implemented by management by the next audit committee meeting, August 2024. The results of the Board Expenses audit were detailed for the Board.

Mr. Licata, I.T. Audit Controls Manager, summarized the purpose and recommendations related to the IT Firewall, Bring Your Own Device and SWIFT – Customer Security Program performed in 2023. The purpose and scope of the active audits IT Security Access and several Consultative activities. Ms. VanGundy, Investment Audit Specialist, summarized the purpose and recommendations related to the Performance-Based Incentive (PBI) Review and Death Match audits performed in 2023. The purpose and scope of the active audits Trading and Broker/CSA/Research were presented. Ms. Wild, Internal Auditor, summarized the purpose and recommendations related to Service Retirement Benefits and Member Income Tax Withholding Audits performed in 2023. The purpose and scope of the active audits Member Withdrawals and Associate Travel were presented.

Mr. Vance then reviewed the Executive Summary of the 2024 Internal Audit Plan and the Risk Assessment Process that determines which audits to conduct. Mr. Licata provided a summary of the purpose of the SWIFT Customer Security Program (CSP) Self-Assessment, Business Continuity Plan Review and IT Change Control scheduled to be completed in 2024. Ms. VanGundy provided a summary of the purpose of the annual PBI review, Liquidity Reserves, Derivatives and Domestic Equities completed in 2024. Mr. Vance discussed the additional administrative areas of the plan that relate to Board/Audit Committee Support, Quality Assurance Reviews, and Fiduciary Audit Support, and Quality Assurance Improvement Program work. He then reviewed the process for requesting audits of areas not on the current-year plan and stated the board would be notified of significant areas of concern, outside of the quarterly or annual reporting cycle if such concerns were to arise.

Report from the Audit Committee Audit Committee Members: Dale Price (Chair) Claudia Herrington (Vice Chair) Alison Falls G. Brent Bishop Elizabeth Jones Carol Correthers – Non-voting observer December 14, 2023 Mr. Price moved, seconded by Ms. Falls to approve the 2024 Internal Audit Plan as presented on this date.

Upon roll call the vote was as follows: Mr. Price, yes; Ms. Falls, yes; Mr. Bishop, absent; Ms. Herrington, absent; Ms. Jones, yes. The motion carried.

Mr. Price moved, seconded by Ms. Falls, to enter executive session under authority of Division (G)(5) of Section 121.22 of the Ohio Revised Code for the purpose of discussing matters required to be kept confidential by federal law or state statutes.

Upon roll call the vote was as follows: Mr. Price, yes; Ms. Falls, yes; Mr. Bishop, absent; Ms. Herrington, absent; Ms. Jones, yes. The motion carried.

The meeting adjourned at 10:06 a.m.

Special Reviews/Projects

Internal Audit received no requests for supplemental reviews from the Audit Committee or management. See the 2023 Internal Audit Summary, "Other Audit Related Activity" section, for additional departmental activities.

2024 Internal Audit Plan

The 2024 Internal Audit Plan was approved by the STRS Ohio Board on December 14, 2023. A copy of the 2024 Internal Audit Plan is enclosed.

If you have any questions, or need additional information, please feel free to call me at 614-227-4046.

Respectfully submitted,

A handwritten signature in blue ink that reads "Robert L. Vance". The signature is written in a cursive style with a large initial "R" and a long, sweeping underline.

Robert L. Vance, MBA, MSA Chief Audit Executive



2023 Internal Audit Department Summary

Closed Audits: Previous Audit Recommendations Follow Up

Audit Area	Risk Rating	Scope	Recommendations	Management's Response	Implemented	Implementation or Target Implementation
Alternative Investments Opportunistic/Diversified	Low	Proper Documentation and Approval	Ensure that all phases of the vetting and fiduciary process are sufficiently documented	Agree	Yes	September 2020
		Policies and Procedures	Update policies and procedures to reflect structured file folders and centralized file storage locations to mitigate inconsistencies and continuity concerns	Agree	Yes	September 2020
		Due Diligence	Continue to enhance current fee monitoring process to include an independent calculation of carried interest and management fees on at least an annual basis	Agree	Yes*	January 2023
		Valuations & Fees				
		Compliance Monitoring of O.D. Funds				
Segregation of Duties						
Security/Access Controls				<i>*Comment: Recommendation satisfied by securing the services of an independent firm.</i>		
Investment Performance 2022 (PBI Review)	Low	Written Policies and Procedures Associate Eligibility Segregation of Duties External, Independent Services Independent Recalculations	Consider an independent, periodic review of the PBI Policy.	Agree	Yes	December 2023
Firewall	Low	Configuration	Update the documented policy for Network Firewalls and Secure Network Architecture to ensure staff are aware of requirements and restrictions related to firewall devices. Ensure protective measures and controls to manage firewall security and software compliance risks are in place.	Agree	Yes	May 2023*
		Operating System Logs				
		Physical Security	Review firewall rule sets on a defined periodic basis.	Agree	Yes	January 2023
		Logical Access				
		Change Control Process				
<i>*Comment: In progress (as part of the annual Information Security Handbook update).</i>						
Real Estate	Low	Proper Documentation and Approval	For indirect real estate investments, ensure the completeness of vetting and fiduciary oversight documentation and store with consistent file structures in centralized, accessible locations.	Agree	Yes	June 2022
		Written Policies and Procedures				
		Due Diligence	Enhance written procedures and include appropriate checklists for approval documents, acquisitions, monitoring, etc.	Agree	Yes	June 2022
		Property Management Company Audit Recommendations	Increase key-person risk coverage of indirect real estate investments to ensure continuity during periods of employee turnover.	Agree	No	January 2024*
		Segregation of Duties				
Compliance Monitoring						
Key Person Risk			<i>*Comment: *Extended from July 2023. Will be implemented after additional human resource commitment.</i>			
Securities Lending	Medium	Written Policies and Procedures	Staff should review the existing department specific securities lending procedures at least annually.	Agree	No	October 2024*
		Compliance	Annually review securities lending compliance checks to ensure thorough testing of new or updated policies and guidelines, as approved, and in their entirety.	Agree	No	March 2024**
		Collateral				
		Income and Expenses	Develop a documented approval process for the Approved Borrowers List similar to that of the Approved Issuers List.	Agree	Yes	November 2022
		Securities Lending Contract				
		Prior Recommendations				
		Financial Reporting	Increase interim compliance testing in key areas of the securities lending program to ensure the lending agent adheres to agreed-upon guidelines throughout each monthly reporting period.	Agree	No	October 2024**
		Segregation of Duties	Review BNY contracts to ensure all current negotiations are represented.	Agree	No	October 2024*
		Key Person Risk				
	Initiate documented cross-training and backup support for the Senior Officer, Investment Policies position to mitigate potential key-person risk.	Agree		No	December 2024**	
<i>*Comment: Extended from September 2023. Will be implemented after implementation of SimCorp Dimension software. **Pending review by recently hired Compliance Officer.</i>						

Closed Audits: Recommendations

Audit Area	Risk Rating	Scope	Recommendations	Management's Response	Implemented	Implementation or Target Implementation
Board Expenses	Low	General Compliance with/Sufficiency of Policies/Procedures Pre-Approval of Travel & Follow-Up Segregation of Duties Key Person Risk Expenses: - Accuracy - Reasonableness - Prohibitions	Develop a fully trained backup for the Executive Coordinator position.	Agree	No	March 2024
B.Y.O.D. (Bring Your Own Device)/Mobile Device	Low	Compliance with Established Policies and Procedures Provisioning and De-Provisioning Processes B.Y.O.D./Mobile Devices Monitoring and Security	Centralize written policies, procedures, standards, and guidelines and review/update them periodically to reflect current practices.	Agree	Yes	June 2023
Death Match	Low	Policies and Procedures Death Monitoring Overpayments Collections Write-Offs	Ensure procedures are complete, annually reviewed and updated.	Agree	Yes	April 2023
			Consider a supplemental death match audit every three to five years in addition to current vendor reviews.	Agree	No	January 2025
			Consider adjusting POL (Proof of Life) letters with a beneficiary plan of payment less than Joint & Survivor Same.	Agree	Yes	April 2023
			Consider reducing manual processing aspects of the benefits claims process.	Agree	No	June 2024
Investment Performance (PBI Review)	Low	Written Policy and Procedures Associate Eligibility Segregation of Duties External, Independent Services Independent Recalculations	Following the PBI Policy update, HRS, Finance, Investments, Compliance, and Internal Audit update PBI processes to include desktop procedures and detailed calculations to maintain consistency, proper oversight, and continuity risk mitigation.	Agree	No	March 2024
			As priorities allow, where possible, further automate and streamline the PBI calculation process to eliminate manual calculations.	Agree	No	December 2025
Quality Assessment Review: Independent Verification	Low	Compliance with the Institute of Internal Auditor's International Professional Practices Framework (Standards).	Consider acknowledging adherence to Standards 1120 (Individual Objectivity) and 1130 (Impairment to Independence or Objectivity) with each assigned audit engagement.	Agree	No	January 2024
			Consider using the IIA Supplemental Guidance and focus on periodic monitoring (KPIs, Scorecard, etc.) to emphasize performance, quality, continuous improvement.	Agree	Yes	Ongoing
			Define and document the approach to the communication of the improvement program results on an annual basis.	Agree	Yes	Ongoing

Closed Audits: No Recommendations

Audit Area	Risk Rating	Scope	Management's Response
Member Income Taxes	Low	Withholding Change Reconciliations Tax Interface Reconciliations Segregation of Duties	N/A

Personal Investment Disclosure	Low	Sufficiency of Documentation/Policies Procedures Monitoring Participation Conflict Segregation of Duties Key Person Risk/Backup of Key Personnel Records Retention Audit	N/A
Service Retirement Benefits	Low	Sufficiency of Documentation/Procedures Due Diligence: Benefit Calculation Input Accuracy Segregation of Duties Key Person Risk	N/A
Survivor Benefits	Low	Policies and Procedures Due Diligence Segregation of Duties Key-Person Risk	N/A
SWIFT - Customer Security Program (CSP): Self Assessment	Low	Internet Access Restrictions Protection of Critical Systems Reduce Attack Surface and Vulnerabilities Physical Security Access Management Incident Response	N/A

Active Audits

Audit Area	Risk Rating	Scope	Target Completion
Accounts Payable	N/A	Appropriate Access Segregation of Duties Vendor Updates and Approvals Appropriate Review and Signoff Sufficient Documentation	January 2024
Associate Travel	N/A	Written Policies and Procedures Authorization to Travel Approval of Expenses General Compliance	December 2023
Broker/CSA/Research	N/A	Compliance with Policies and Procedures Segregation of Duties Compliance with Approved Brokers Compliance with SEC Section 28(e) Broker Utilization Fees Trade Accuracy Proper Allocation	January 2024

Cloud Computing/Infrastructure	N/A	<p>Incident Response, Notification and Remediation</p> <p>Data Security and Integrity</p> <p>Key Management</p> <p>Logging</p> <p>Identity and Access Management</p> <p>Business Continuity</p> <p>Operational Security</p> <p>Virtualization</p>	December 2023
Data Privacy	N/A	<p>Data Management and Collection</p> <p>Data Security</p> <p>Third-Party Compliance and Contractual Agreements</p> <p>Incident Management and Escalation</p>	February 2024
IT Security Access	N/A	<p>Password Settings</p> <p>User Access</p> <p>Physical Access</p> <p>Database and Privileged Access Limitations</p> <p>Active Directory Settings</p>	January 2024
Member Withdrawals	N/A	<p>Compliance with Ohio Revised Code/Policies and Procedures</p> <p>Refund Payments</p> <p>Non-Zero Accounts</p> <p>Segregation of Duties</p>	December 2023
Personal Investment Disclosures	N/A	<p>Compliance with Policies and Procedures</p> <p>Accuracy and Completeness</p> <p>Monitoring</p>	December 2023
Risk Management/Insurance	N/A	<p>Compliance with the STRS Ohio Insurance and Risk Management Manual</p> <p>Adequacy of Existing Insurance Policies</p> <p>Adequacy of Carrier Ratings</p> <p>Accuracy of Premium Payments</p> <p>Segregation of Duties</p>	December 2023
Trading	N/A	<p>Compliance with Policies and Procedures</p> <p>Segregation of Duties</p> <p>Approved Brokers</p> <p>Best Execution</p> <p>Trade Accuracy</p> <p>Proper Allocation</p>	January 2024

Rescheduled			
Audit Area	Risk Rating	Scope	Comment
External Management: Investments	N/A	Written Policies and Procedures Fee Process Verification	Internal Audit rescheduled this audit to account for the potential impact/changes that may occur to processes and procedures as a result of the hiring of a consultant firm that will provide services in this area.

Quality Review Activities			
Area/Standard	Description	Summary	
IPPF Standard 1000 - Purpose, Authority and Responsibility	Internal Audit Charter Update	<p>International Professional Practices Framework (IPPF, or "Standards") requires a periodic review of the IA Charter. Internal Audit (IA) reviewed the current charter to reconcile to mandatory requirements of the updated Standards. The purpose, authority and responsibility were formally defined, consistent with the Definition of Internal Auditing, Code of Ethics, and the Standards.</p> <p>The updated IA Charter was presented by the Audit Committee Chair before being presented to the Audit Committee for consideration in May, 2023.</p> <p>In August, 2023, the Audit Committee approved the updated charter.</p>	
IPPF Standard 1010 - Recognizing Mandatory Guidance in the IA Charter	Internal Audit Charter Update	<p>The updated charter contains IPPF's language related to areas where compliance with guidance is mandatory.</p> <p>This item was completed upon approval of the updated charter.</p>	
IPPF Standard 1300- Quality Assurance and Improvement Program (QAIP) IPPF Standard 1310 - Requirements of the Quality Assurance Program	QAIP	<p>Applicable Standards were reviewed for comparison to IA operations. Areas where process improvement opportunities were identified resulted in the activities that populate this section (Quality Review Activities) of the summary and will be presented to keep the Audit Committee informed of relevant issues and progress. The QAIP will remain a permanent part of the Internal Audit Plans going forward.</p> <p>The completion of the internal assessment and action plan will be presented to the Audit Committee/Board during the year. The "Self-Assessment" includes an informational update (see the next section below).</p> <p>The internal QAIP work is in progress. Reporting mechanisms are being developed to provide dashboard style information for audit information stakeholders.</p>	
IPPF Standard 1311 - Internal Assessments	QAIP	<p>Standards require periodic reviews be performed through self-assessment and ongoing monitoring. Self-assessment and ongoing monitoring will become yearly IA administrative activities that are reported to the Audit Committee/Board.</p> <p>Completed: Will be added to the "Calendar of Significant Event" that will be available to the Audit Committee/Board.</p>	
IPPF Standard 1312 - External Assessments	QAR	<p>Standards require the external assessment take place every five years (also referenced in Standard 2070). The IA procedures update will include a "deliverables" discussion with the Audit Committee so that items of significance, and their time of delivery/performance, are documented and scheduled. This action will also aid new Audit Committee members as they seek to understand their roles and responsibilities.</p> <p>The independent, external quality assessment process began August 2023. Per Standard 1312, the qualified assessor possesses/has demonstrated competence in two areas: the professional practice of internal auditing and the external assessment process.</p> <p>This item was completed in November, 2023. The assessor will provide the results at the annual Audit Committee meeting.</p>	
IPPF Standard 2040 - Policies and Procedures	Procedures Update	<p>Standards require the Chief Audit Executive to establish policies and procedures to guide the internal audit activity.</p> <p>Conversion to paperless audits improved efficiency and has resulted in reviews and elimination of some procedural steps. This process is ongoing as IA discusses future changes and the potential impact of audit management software tools. Multiple factors (including QAR/QAIP outcomes) impact which parts of the procedures manual that can be updated and the timing of the updates. As of August 2023, the Internal Audit Manual is in the process of being reviewed and updated to reflect current practices.</p> <p>The main procedures manual has been updated to meet the requirements of the Standards. Additional updates will be ongoing as process improvements continue.</p>	
IPPF Standard 2050 - Coordination and Reliance	Collaboration/Information Sharing	<p>Standards require the CAE coordinate/share information and activities with other internal and external providers of assurance and consulting services which minimizes duplicative efforts. This process is ongoing and will involve documenting participants in the assurance framework.</p>	
IPPF Standard 2060 Reporting to Senior Management and the Board	Reporting Conformance	<p>Standards require the reporting of conformance with mandatory guidance in key materials provided to the Audit Committee. As the IA progresses through QAIP/QAR activities, conformance statements will be appropriately integrated.</p> <p>Work continues on the IA SharePoint site: A section has been created for Audit Committee/Board access to dashboard data that can be accessed at will. Relevant performance/scheduling information will be summarized. A template should be available for demonstration on or before March 1, 2024.</p>	
IPPF Standard 2100 - Nature of Work	Contribution to Governance	<p>Standards require the use of a systematic, disciplined approach to evaluate and contribute to the improvement of the organization's governance, risk-management, and control processes. IA currently engages the senior management team to discuss and consider key elements of enterprise risk management, external audits, and consultant advisories when documenting potential risks and risk mitigation strategies for audit planning purposes. As departmental procedures are updated, this step will be memorialized.</p> <p>December 2023: The ITS Dept. is helping to evaluate efficient tools designed to aid in data collection that would likely serve as a basis for supporting multiple IA projects.</p>	

Activity	Standard	GC = Generally Conforms PC = Partially Conforms DNC = Does Not Conform
Internal Audit Self-Assessment		
	<i>Standard 1000: Purpose, Authority, and Responsibility Internal Audit Charter elements</i>	GC
	<i>Standard 1010: Recognizing Mandatory Guidance Internal Audit Charter elements</i>	GC
	<i>Standard 1100: Independence and Objectivity</i>	GC
	<i>Standard 1110: Organizational Independence Functional Board reporting</i>	GC
	<i>Standard 1111: Direct Interaction with the Board</i>	GC
	<i>Standard 1112: Chief Audit Executive Roles Beyond Internal Auditing</i>	GC
	<i>Standard 1120: Individual Objectivity</i>	GC
	<i>Standard 1130: Impairment to Independence or Objectivity</i>	GC
	<i>Standard 1200: Proficiency and Due Professional Care (engagement performance)</i>	GC

	Standard 1210: Proficiency (auditor knowledge/skills)	GC
	Standard 1220: Due Professional Care (reasonably prudent application/competence)	GC
	Standard 1230: Continuing Professional Development	GC
	Standard 1300: Maintain a Quality Assurance and Improvement Program	PC
	Standard 1310: Requirements of the Quality Assurance and Improvement Program	PC
	Standard 1311: Internal Assessments	GC
	Standard 1312: External Assessments	PC
	Standard 1320: Reporting on the Quality Assurance and Improvement Program	PC
	Standard 1321: Use of "Conforms with the Internal Standards for the Professional Practice of Internal Auditing" - Internal Audit Governance	GC
	Standard 1322: Disclosure of Nonconformance	GC
	Standard 2000: Managing the Internal Audit Activity	GC
	Standard 2010: Planning (Preparation of risk-based plan)	GC
	Standard 2020: Communication and Approval (activity/plans/significant changes)	GC
	Standard 2030: Resource Management (appropriateness/sufficiency)	GC
	Standard 2040: Policies and Procedures	GC
	Standard 2050: Coordination and Reliance	GC
	Standard 2060: Reporting to Senior Management and the Board	PC
	Standard 2100: Nature of Work	GC
	Standard 2110: Governance	GC
	Standard 2120: Risk Management	GC
	Standard 2130: Control	GC
	Standard 2200: Engagement Planning	GC
	Standard 2201: Planning Consideration	GC
	Standard 2210: Engagement Objectives	GC
	Standard 2220: Engagement Scope	PC
	Standard 2230: Engagement Resource Allocation	GC
	Standard 2240: Engagement Work Program	GC
	Standard 2300: Performing the Engagement	GC
	Standard 2310: Identifying Information	GC
	Standard 2320: Analysis and Evaluation	GC
	Standard 2330: Documenting Information	GC
	Standard 2340: Engagement Supervision	GC
	Standard 2400: Communicating Results	GC
	Standard 2410: Criteria for Communicating	GC
	Standard 2420: Quality of Communications	GC
	Standard 2421: Errors and Omissions	GC
	Standard 2430: Use of "Conducted in Conformance with the International Standards for the Professional Practice of Internal Auditing"	GC
	Standard 2431: Engagement Disclosure of Nonconformance	GC
	Standard 2440: Disseminating Results	GC
	Standard 2450: Overall Opinions	GC
	Standard 2500: Monitoring Progress	GC
	Standard 2600: Communicating the Acceptance of Risks	GC
Activity	Standard	GC = Generally Conforms PC = Partially Conforms DNC = Does Not Conform
External Assessor's Final Results		
	Standard 1000: Purpose, Authority, and Responsibility Internal Audit Charter elements	GC
	Standard 1010: Recognizing Mandatory Guidance Internal Audit Charter elements	GC
	Standard 1100: Independence and Objectivity	GC
	Standard 1110: Organizational Independence Functional Board reporting	GC
	Standard 1111: Direct Interaction with the Board	GC
	Standard 1112: Chief Audit Executive Roles Beyond Internal Auditing	GC
	Standard 1120: Individual Objectivity	GC
	Standard 1130: Impairment to Independence or Objectivity	GC
	Standard 1200: Proficiency and Due Professional Care (engagement performance)	GC
	Standard 1210: Proficiency (auditor knowledge/skills)	GC
	Standard 1220: Due Professional Care (reasonably prudent application/competence)	GC
	Standard 1230: Continuing Professional Development	GC
	Standard 1300: Maintain a Quality Assurance and Improvement Program	GC
	Standard 1310: Requirements of the Quality Assurance and Improvement Program	GC
	Standard 1311: Internal Assessments	GC
	Standard 1312: External Assessments	GC
	Standard 1320: Reporting on the Quality Assurance and Improvement Program	GC
	Standard 1321: Use of "Conforms with the Internal Standards for the Professional Practice of Internal Auditing" - Internal Audit Governance	GC
	Standard 1322: Disclosure of Nonconformance	GC
	Standard 2000: Managing the Internal Audit Activity	GC
	Standard 2010: Planning (Preparation of risk-based plan)	GC
	Standard 2020: Communication and Approval (activity/plans/significant changes)	GC
	Standard 2030: Resource Management (appropriateness/sufficiency)	GC
	Standard 2040: Policies and Procedures	GC
	Standard 2050: Coordination and Reliance	GC
	Standard 2060: Reporting to Senior Management and the Board	GC
	Standard 2100: Nature of Work	GC
	Standard 2110: Governance	GC

	<i>Standard 2120: Risk Management</i>	<i>GC</i>
	<i>Standard 2130: Control</i>	<i>GC</i>
	<i>Standard 2200: Engagement Planning</i>	<i>GC</i>
	<i>Standard 2201: Planning Consideration</i>	<i>GC</i>
	<i>Standard 2210: Engagement Objectives</i>	<i>GC</i>
	<i>Standard 2220: Engagement Scope</i>	<i>GC</i>
	<i>Standard 2230: Engagement Resource Allocation</i>	<i>GC</i>
	<i>Standard 2240: Engagement Work Program</i>	<i>GC</i>
	<i>Standard 2300: Performing the Engagement</i>	<i>GC</i>
	<i>Standard 2310: Identifying Information</i>	<i>GC</i>
	<i>Standard 2320: Analysis and Evaluation</i>	<i>GC</i>
	<i>Standard 2330: Documenting Information</i>	<i>GC</i>
	<i>Standard 2340: Engagement Supervision</i>	<i>GC</i>
	<i>Standard 2400: Communicating Results</i>	<i>GC</i>
	<i>Standard 2410: Criteria for Communicating</i>	<i>GC</i>
	<i>Standard 2420: Quality of Communications</i>	<i>GC</i>
	<i>Standard 2421: Errors and Omissions</i>	<i>GC</i>
	<i>Standard 2430: Use of "Conducted in Conformance with the International Standards for the Professional Practicing of Internal Auditing"</i>	<i>GC</i>
	<i>Standard 2431: Engagement Disclosure of Nonconformance</i>	<i>GC</i>
	<i>Standard 2440: Disseminating Results</i>	<i>GC</i>
	<i>Standard 2450: Overall Opinions</i>	<i>GC</i>
	<i>Standard 2500: Monitoring Progress</i>	<i>GC</i>
	<i>Standard 2600: Communicating the Acceptance of Risks</i>	<i>GC</i>
Note: Additional compliance activities will rotate onto the Internal Audit Summary as new projects are initiated and removed when closed. The Audit Committee/Board will be informed of closed items and the details of completion will be documented.		

Other Audit Related Activity

Area	Risk Rating	Subject/Project	Description
Multi-departmental	N/A	SimCorp Dimension (Maximis system replacement)	Consult during the various phases of technical and business process implementation.
Multi-departmental	N/A	STRS Ohio Disaster Recovery	Participate in disaster recovery testing review. Strategize on business and human resource needs.
Multi-departmental	N/A	Organizational Risk Assessment	Participate in multi-departmental risk identification/mitigation efforts.

Risk Rating Level: (Refers to rating assigned to findings/recommendations)

High: Requires immediate attention and remediation.

Medium: Requires near-term attention.

Low: Improvements are possible but do not require immediate or near-term attention.

Composition of Current Audit Committee:

Dale Price, Active Member/Chair

Claudia Herrington, Appointee/Vice Chair

Alison Falls, Appointee

Elizabeth Jones, Retired Member

Brent Bishop, Appointee

Carol Correthers, Active Member/Non-Voting Observer



2024 Internal Audit Plan

INTERNAL AUDIT DEPARTMENT

Mission Statement

To work in partnership with associates to conduct value-added independent appraisals of policies and procedures to contribute to the continuous improvement of STRS Ohio.

Vision Statement

To be recognized as an innovative department that, through independent appraisals and partnered solutions, strives for quality enhancements and the elimination of non-value-added processes.

To create an environment that encourages teamwork, innovation, open communication, empowerment and personal and professional growth.

Guiding Principles

To achieve our mission and vision, we will:

- Prepare a comprehensive, practical, planned program of audit coverage consistent with STRS Ohio's mission, vision and guiding principles.
- Perform audits in compliance with the International Standards for the Professional Practice of Internal Auditing.
- Verify the adequacy and effectiveness of STRS Ohio's systems of administrative, operating and financial controls.
- Understand the associates' business from their perspective.
- Produce objective, clear, concise, constructive and timely reports.
- Maintain contemporary professional proficiency through continuing education and training.
- Seek to continuously improve our team, tools and processes.
- Develop professional expertise for potential career opportunities within STRS Ohio.

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2024 INTERNAL AUDIT SCHEDULE

Audit Area	Description of Audit Area	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Quality Assurance and Improvement Program: I/A	Ongoing Administrative Performance Reviews Audit Committee/Board: KPI/Dashboard Development External Quality Assessment Review Response												
Board/Audit Committee Support	Reviews Performed to the Request of the Board/ Audit Committee												
Internal Audit Recommendation Follow-Up	Document and Report on Recommendation Compliance												
Fiduciary Audit Support/Response	Recommendation Consultation Implementation Tracking & Reporting												
Board Reporting Verification (Funston Recommendation)	Key Board Reporting Independent Verification												
HRS: Associate Separations	Sufficiency of Documented Policies and Procedures Termination of Physical Access Termination of Systems Access Property Collection General Compliance Interview Process Key-Person Risk												
Health Care	Sufficiency of Documented Policies and Procedures Segregation of Duties Issues Monitoring and Resolution Vendor Management Enrollment and Eligibility Management STaRS Information Integrity Compliance with Laws/Regulations Auditing/Analyst Support Key-Person Risk												
I.T. Security: Change Control	Authorization Testing Approvals Monitoring Segregation of Duties												
Liquidity Reserves	Sufficiency of Documented Policies and Procedures Approved Issuers Approved Guidelines Independent Reviews Key-Person Risk Income Management Board Reporting Business Continuity												
Business Continuity Plan	Sufficiency of Documented Policies and Procedures Compliance with Policies and Procedures Plan Monitoring and Testing Plan Change Documentation and Approval Process Key-Person Risk												

2024 INTERNAL AUDIT SCHEDULE

Audit Area	Description of Audit Area	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Legal: Records Management	Sufficiency of Written Policies and Procedures							■					
	Administrative Due Diligence							■					
	Organizational Compliance							■					
	Key-Person Risk							■					
SWIFT – Customer Security Program (CSP)	Internet Access Restrictions								■	■			
	Protection of Critical Systems								■	■			
	Reduce Attack Surface and Vulnerabilities								■	■			
	Physical Security								■	■			
	Access Management								■	■			
	Incident Response								■	■			
Disability Benefits	Sufficiency of Written Policies and Procedures								■	■			
	Key-Person Risk								■	■			
	Re-Examination Schedules								■	■			
	Statement of Employment/Earnings								■	■			
	Terminated Benefits — Proper Notification								■	■			
	Benefits Calculations								■	■			
	Medical Invoice Payments								■	■			
Investment Performance/PBI Review	Sufficiency of Written Policies and Procedures									■	■		
	Key-Person Risk									■	■		
	Associate Eligibility									■	■		
	Compliance with PBI Policy									■	■		
	Segregation of Duties									■	■		
	External, Independent Services									■	■		
Derivatives	Independent Recalculations									■	■		
	Sufficiency of Written Policies and Procedures										■	■	
	Key-Person Risk										■	■	
	Derivative Exposure Report										■	■	
	Currency Forward Settlements										■	■	
	Equity Swap Settlements										■	■	
Board Expenses	Segregation of Duties										■	■	
	Sufficiency of Policies/Procedures											■	■
	Compliance with Policies/Procedures											■	■
	Preapproval of Travel & Follow-up											■	■
	Segregation of Duties											■	■
	Key-Person Risk											■	■
Domestic Equities	Expense Processing											■	■
	Travel Limitations											■	■
	Reconciliation of External Manager Positions											■	■
	Accuracy of Board Reporting											■	■
	Sufficiency of Written Policies and Procedures											■	■
	Key-Person Risk											■	■
	Monitoring of External Manager Performance											■	■

RISK FACTORS

RISK FACTOR	RISK FACTOR DESCRIPTION	WEIGHTING
A	Adequacy and Effectiveness of the System of Internal Controls	9
B	Major Changes in Technology, Operations, the Organization or the Economy	8
C	Dates and Results of Previous Audits	7
D	Recent or Relevant Changes in Key Personnel	6
E	Complexity or Volatility of Activities	5
F	Asset Size or Transaction Volume	4

RISK ASSESSMENT SCALE

The risk assessment scale is a 9-point system with graduations of risk as follows:

RISK FACTOR DESCRIPTION	SCORE
Extremely Risky	9
Very Risky	7
Risky	5*
Slightly Risky	3
Not Risky	1

* If no previous audit was performed, the auditable area was assessed a 5 — Risky.

ASSIGNMENT OF RISK RATING

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
ADMINISTRATION							
Associate Travel Expenses	2	1	1	1	1	2	8
Attendance Reporting	4	2	2	2	2	2	14
Benefit Payment Process	2	2	1	2	3	3	13
Board Expenses	1	1	1	2	1	1	7
Fixed Assets – Computer Equipment	3	4	2	3	3	4	19
Flexible Spending Plans	2	2	2	2	3	2	13
HRS: Associate Payroll	2	2	2	3	2	2	13
HRS: Educational Assistance Program	2	2	2	2	2	2	12
HRS: Exit Interview Management	1	1	5	1	1	1	10
Insurance/Risk Management	2	2	1	1	2	2	10
Legal: Contract Management	3	2	3	2	4	5	19
Legal: OEC Reporting	1	2	1	2	2	1	9
Legal: Records Management	2	2	4	1	2	3	14
Other Staff Expenses	2	1	1	1	1	1	7
Personal Investment Disclosure	1	1	3	3	5	3	16
Purchasing Practices	3	2	3	2	2	3	15
STRS Ohio Self Insurance Plan	3	2	3	2	3	3	16
Third-Party Relationships: Administration	3	3	5	3	3	4	21
Unused Sick and Vacation Leave	2	1	2	2	2	1	10

* See Page 3 for risk factors.

ASSIGNMENT OF RISK RATING

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
FINANCE							
Accounts Payable	2	1	2	1	2	2	10
Administrative Services: Postage	2	2	2	1	2	3	12
Administrative Services: Security & Safety	3	2	5	1	1	1	13
Annual Reporting	2	3	2	2	2	2	13
Building Services: Maintenance	3	2	3	2	2	2	14
Contribution Reporting	1	3	1	1	3	5	14
Financial Reporting (STRS Ohio)	2	2	2	2	3	4	15
Fixed Assets	3	2	3	3	2	2	15
Investment Accounting	3	5	5	1	5	5	24
Member Income Taxes	1	1	2	3	3	5	15
Member Withdrawals	2	1	2	2	2	2	11
Petty Cash/Café Operations	2	2	2	3	1	1	11
Purchasing Service Credit by Payroll Deduction	2	2	2	2	2	3	13
Tax Management	3	5	5	1	3	4	21
Third-Party Relationships: Finance	3	3	5	4	3	4	22

* See Page 3 for risk factors.

ASSIGNMENT OF RISK RATING

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INFORMATION TECHNOLOGY SERVICES							
Active Directory/Azure	5	3	5	1	3	3	20
Business Continuity Plan	3	3	3	3	5	3	20
Cloud Computing/Infrastructure	5	5	5	3	5	3	26
Compliance: B.Y.O.D.	4	3	4	1	4	3	19
Data Analytics	5	3	5	1	5	3	22
Data Loss Prevention (DLP)	3	3	3	1	3	3	16
Data Management	5	3	5	1	3	3	20
Data Privacy	5	3	5	1	2	3	19
Data Warehouse	5	3	5	1	5	3	22
Database Security	3	3	3	1	4	3	17
Email Security	3	3	3	3	5	3	20
External Partners/Assessments	3	3	3	1	4	5	19
Firewall Security	5	3	3	1	5	3	20
I.T. Cloud/CASB	3	3	3	1	3	3	16
I.T. Operations	3	3	3	1	3	3	16
I.T. Security: Change Control	4	3	3	3	3	3	19
I.T. Security: Cyber Vulnerabilities	4	4	5	1	5	3	22
I.T. Security: Logical/Physical Access	3	3	3	1	5	3	18
I.T. Security: MRI	3	3	3	1	3	3	16
I.T. Security: SimCorp Dimension	5	5	5	5	5	5	30
I.T. Security: Workday	3	3	3	3	4	3	19
I.T. Vendor Contract Management	3	3	3	1	5	3	18
Incident Response Plan	5	3	5	1	2	3	19
Intrusion Protection System (IPS)	5	3	5	1	5	3	22
Manage Requests	3	3	3	1	3	3	16
Network Security	5	5	5	3	5	3	26
Project Management (ITS Projects)	4	3	3	3	3	3	19
Social Engineering	5	3	3	1	5	3	20
SWIFT — Customer Security Program (CSP)	5	5	5	5	5	5	30
Web Security	3	3	3	1	5	3	18
Wireless Security	4	3	3	3	3	3	19

* See Page 3 for risk factors.

ASSIGNMENT OF RISK RATING

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INVESTMENTS							
Alternative Investments	3	3	2	4	5	4	21
Brokers/CSA/Research	4	3	5	2	3	4	21
Compliance	4	5	5	1	4	4	23
Consultants	5	3	5	1	4	3	21
Custodians/Record Keepers	5	5	5	1	4	3	23
Derivatives	4	4	3	2	5	3	21
Domestic Equities	2	3	3	3	2	4	17
External Management	5	3	5	3	3	3	22
Fixed Income	1	3	1	1	3	4	13
International Investing	3	3	2	3	3	4	18
Investment Performance (PBI Review)	2	2	2	3	3	2	14
Liquidity Reserves	2	2	1	3	2	3	13
Investments Operations	5	5	5	5	3	4	27
Proxy Voting	2	2	1	3	2	3	13
Real Estate	3	3	3	3	3	3	18
Securities Lending	2	3	2	3	3	4	17
Trading	5	3	5	1	3	4	21

* See Page 3 for risk factors.

ASSIGNMENT OF RISK RATING

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
MEMBER BENEFITS							
Annual Statements	2	3	2	2	2	2	13
Death Match	3	3	3	1	5	5	20
Defined Contribution Plan	2	2	2	2	2	3	13
Disability Benefits	3	2	2	4	2	3	16
Health Care	3	2	2	2	3	4	16
Member Benefits Processing	3	3	2	2	2	2	14
Member Data Management	3	3	3	1	3	3	16
Member Records Management	2	3	2	2	2	2	13
Member Services Center	2	2	2	1	2	2	11
Purchasing Service Credit	2	3	2	2	2	2	13
Recipient Benefit Processing	2	2	3	2	3	3	15
Reemployed Retirees	2	3	2	2	2	2	13
Service Retirement Benefits	2	3	2	4	2	3	16
Survivor Benefits	1	3	1	1	3	4	13
Third-Party Relationships: Member Benefits	3	3	5	4	3	4	22

* See Page 3 for risk factors.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
ADMINISTRATION							
Associate Travel Expenses	18	8	7	6	5	8	52
Attendance Reporting	36	16	14	12	10	8	96
Benefit Payment Process	18	16	7	12	15	12	80
Board Expenses	9	8	7	12	5	4	45
Fixed Assets – Computer Equipment	27	32	14	18	15	16	122
Flexible Spending Plans	18	16	14	12	15	8	83
HRS: Associate Payroll	18	16	14	18	10	8	84
HRS: Educational Assistance Program	18	16	14	12	10	8	78
HRS: Exit Interview Management	9	8	35	6	5	4	67
Insurance/Risk Management	18	16	7	6	10	8	65
Legal: Contract Management	27	16	21	12	20	20	116
Legal: OEC Reporting	9	16	7	12	10	4	58
Legal: Records Management	18	16	28	6	10	12	90
Other Staff Expenses	18	8	7	6	5	4	48
Personal Investment Disclosure	9	8	21	18	25	12	93
Purchasing Practices	27	16	21	12	10	12	98
STRS Ohio Self Insurance Plan	27	16	21	12	15	12	103
Third-Party Relationships: Administration	27	24	35	18	15	16	135
Unused Sick and Vacation Leave	18	8	14	12	10	4	66

* See Page 4 for the Risk Assessment Scale.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
FINANCE							
Accounts Payable	18	8	14	6	10	8	64
Administrative Services: Postage	18	16	14	6	10	12	76
Administrative Services: Security & Safety	27	16	35	6	5	4	93
Annual Reporting	18	24	14	12	10	8	86
Building Services: Maintenance	27	16	21	12	10	8	94
Contribution Reporting	9	24	7	6	15	20	81
Financial Reporting (STRS Ohio)	18	16	14	12	15	16	91
Fixed Assets	27	16	21	18	10	8	100
Investment Accounting	27	40	35	6	25	20	153
Member Income Taxes	9	8	14	18	15	20	84
Member Withdrawals	18	8	14	12	10	8	70
Petty Cash/Café Operations	18	16	14	18	5	4	75
Purchasing Service Credit by Payroll Deduction	18	16	14	12	10	12	82
Tax Management	27	40	35	6	15	16	139
Third-Party Relationships: Finance	27	24	35	24	15	16	141

* See Page 4 for the Risk Assessment Scale.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INFORMATION TECHNOLOGY SERVICES							
Active Directory/Azure	45	24	35	6	15	12	137
Business Continuity Plan	27	24	21	18	25	12	127
Cloud Computing/Infrastructure	45	40	35	18	25	12	175
Compliance: B.Y.O.D.	36	24	28	6	20	12	126
Data Analytics	45	24	35	6	25	12	147
Data Loss Prevention (DLP)	27	24	21	6	15	12	105
Data Management	45	24	35	6	15	12	137
Data Privacy	45	24	35	6	10	12	132
Data Warehouse	45	24	35	6	25	12	147
Database Security	27	24	21	6	20	12	110
Email Security	27	24	21	18	25	12	127
External Partners/Assessments	27	24	21	6	20	20	118
Firewall Security	45	24	21	6	25	12	133
I.T. Cloud/CASB	27	24	21	6	15	12	105
I.T. Operations	27	24	21	6	15	12	105
I.T. Security: Change Control	36	24	21	18	15	12	126
I.T. Security: Cyber Vulnerabilities	36	32	35	6	25	12	146
I.T. Security: Logical/Physical Access	27	24	21	6	25	12	115
I.T. Security: MRI	27	24	21	6	15	12	105
I.T. Security: SimCorp Dimension	45	40	35	30	25	20	195
I.T. Security: Workday	27	24	21	18	20	12	122
I.T. Vendor Contract Management	27	24	21	6	25	12	115
Incident Response Plan	45	24	35	6	10	12	132
Intrusion Protection System (IPS)	45	24	35	6	25	12	147
Manage Requests	27	24	21	6	15	12	105
Network Security	45	40	35	18	25	12	175
Project Management (ITS Projects)	36	24	21	18	15	12	126
Social Engineering	45	24	21	6	25	12	133
SWIFT – Customer Security Program (CSP)	45	40	35	30	25	20	195
Web Security	27	24	21	6	25	12	115
Wireless Security	36	24	21	18	15	12	126

* See Page 4 for the Risk Assessment Scale.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INVESTMENTS							
Alternative Investments	27	24	14	24	25	16	130
Brokers/CSA/Research	36	24	35	12	15	16	138
Compliance	36	40	35	6	20	16	153
Consultants	45	24	35	6	20	12	142
Custodians/Record Keepers	45	40	35	6	20	12	158
Derivatives	36	32	21	12	25	12	138
Domestic Equities	18	24	21	18	10	16	107
External Management	45	24	35	18	15	12	149
Fixed Income	9	24	7	6	15	16	77
International Investing	27	24	14	18	15	16	114
Investment Performance (PBI Review)	18	16	14	18	15	8	89
Liquidity Reserves	18	16	7	18	10	12	81
Investments Operations	45	40	35	30	15	16	181
Proxy Voting	18	16	7	18	10	12	81
Real Estate	27	24	21	18	15	12	117
Securities Lending	18	24	14	18	15	16	105
Trading	45	24	35	6	15	16	141

* See Page 4 for the Risk Assessment Scale.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
MEMBER BENEFITS							
Annual Statements	18	24	14	12	10	8	86
Death Match	27	24	21	6	25	20	123
Defined Contribution Plan	18	16	14	12	10	12	82
Disability Benefits	27	16	14	24	10	12	103
Health Care	27	16	14	12	15	16	100
Member Benefits Processing	27	24	14	12	10	8	95
Member Data Management	27	24	21	6	15	12	105
Member Records Management	18	24	14	12	10	8	86
Member Services Center	18	16	14	6	10	8	72
Purchasing Service Credit	18	24	14	12	10	8	86
Recipient Benefit Processing	18	16	21	12	15	12	94
Reemployed Retirees	18	24	14	12	10	8	86
Service Retirement Benefits	18	24	14	24	10	12	102
Survivor Benefits	9	24	7	6	15	16	77
Third-Party Relationships: Member Benefits	27	24	35	24	15	16	141

* See Page 4 for the Risk Assessment Scale.

2024 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
I.T. Cloud/CASB	HIGH	ITS	105	2021		F, I, C, O, PS
I.T. Security: Cyber Vulnerabilities	HIGH	ITS	146	2019		F, I, C, O, PS
International Investing	HIGH	I	114	2020		F, I, C, O
Domestic Equities	HIGH	I	107	2019	2024	F, I, C, O
Real Estate	HIGH	I	117	2020		F, I, C, O
Derivatives	HIGH	I	138	2019	2024	F, I, C, O
Alternative Investments	HIGH	I	130	2021		F, I, C, O
Fixed Income	HIGH	I	77	2021		F, I, C, O
Liquidity Reserves	HIGH	I	81	2020	2024	F, I, C, O
Board Expenses	HIGH	A	45	2023	2024	I, C, O, PS
I.T. Security: SimCorp Dimension	HIGH	ITS	195	N/A		F, I, C, O, PS
Network Security	HIGH	ITS	175	N/A		F, I, C, O, PS
Cloud Computing/ Infrastructure	HIGH	ITS	175	2022		F, I, C, O, PS
SWIFT – Customer Security Program (CSP)	HIGH	ITS	195	2023	2024	F, I, C, O, PS
Legal: Contract Management	HIGH	A	116	N/A		F, I, C, O, PS
Investment Accounting	HIGH	F	153	N/A		F, I, C, O, PS
Investment Operations	HIGH	I	181	N/A		F, I, C, O
Compliance	HIGH	I	153	N/A		F, I, C, O
Compliance: B.Y.O.D.	MED.	ITS	126	2022		F, I, C, O, PS
Database Security	MED.	ITS	110	2020		F, I, C, O, PS
I.T. Vendor Contract Management	MED.	ITS	115	2020		F, I, C, O, PS
I.T. Operations	MED.	ITS	105	2021		F, I, C, O, PS
I.T. Security: Change Control	MED.	ITS	126	2020	2024	F, I, C, O, PS

Risk Codes:

- F:** Financial = Risk related to financial impact
- I:** Integrity = Risk related to accuracy of data or asset managed/presented
- C:** Compliance = Risk related to non-compliance with laws/regulations/internal policies
- O:** Operational = Risk related to operational efficiencies/inefficiencies
- PS:** Public Sensitivity = No material financial impact but high public sensitivity

2024 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
I.T. Security: Logical/ Physical Access	MED.	ITS	126	2020	2024	F, I, C, O, PS
I.T. Security: Workday	HIGH	ITS	122	N/A		F, I, C, O, PS
Business Continuity Plan	MED.	A	127	2021	2024	F, I, C, O
Member Data Management	MED.	MB	105	2017		C, PS
Financial Reporting (STRS Ohio)	MED.	F	91	2018		I, C, O
Service Retirement Benefits	MED.	MB	102	2023		I, C, O
Annual Statements	MED.	MB	86	2021		I, C, O
Health Care	MED.	MB	100	2018		I, C, O
Contribution Reporting	MED.	F	81	2020		I, C, O
Annual Reporting	MED.	F	86	2020		I, C, O
Defined Contribution Plan	MED.	MB	82	2020		I, C, O
Risk Management/Insurance	MED.	A	65	2022		F, I, C, O
Accounts Payable	MED.	F	64	2023		I, C, O
Data Analytics	MED.	ITS	147	N/A		F, I, C, O, PS
Data Management	MED.	ITS	137	N/A		F, I, C, O, PS
Data Privacy	MED.	ITS	132	N/A		F, I, C, O, PS
Data Warehouse	MED.	ITS	147	N/A		F, I, C, O, PS
Data Loss Prevention (DLP)	MED.	ITS	105	N/A		F, I, C, O, PS
Email Security	MED.	ITS	127	N/A		F, I, C, O, PS
External Partners/ Assessments	MED.	ITS	118	N/A		F, I, C, O, PS
Firewall Security	MED.	ITS	133	2022		F, I, C, O, PS
Incident Response Plan	MED.	ITS	132	N/A		F, I, C, O, PS
Intrusion Protection System (IPS)	MED.	ITS	147	N/A		F, I, C, O, PS

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2024 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
Manage Requests	MED.	ITS	105	N/A		F, I, C, O, PS
Project Management (IT Project)	MED.	ITS	126	N/A		F, I, C, O, PS
Social Engineering	MED.	ITS	133	N/A		F, I, C, O, PS
Web Security	MED.	ITS	115	N/A		F, I, C, O, PS
Wireless Security	MED.	ITS	126	N/A		F, I, C, O, PS
Third Party Relationships: Member Benefits	MED.	MB	141	N/A		F, I, C, O, PS
Third Party Relationships: Finance	MED.	F	141	N/A		F, I, C, O, PS
Third Party Relationships: Administration	MED.	A	135	N/A		F, I, C, O, PS
Active Directory/Azure	MED.	ITS	137	N/A		F, I, C, O, PS
Legal: Records Management	MED.	A	90	N/A	2024	F, I, C, O, PS
Tax Management	MED.	F	139	N/A		F, I, C, O, PS
Trading	MED.	I	141	2022		F, I, C, O
External Management	MED.	I	149	N/A		F, I, C, O
Custodians/Record Keepers	MED.	I	158	N/A		F, I, C, O
Consultants	MED.	I	142	N/A		F, I, C, O
Brokers/CSA/Research	MED.	I	138	2022		F, I, C, O
I.T. Security: MRI	LOW	ITS	105	2020		F, I, C, O, PS
Benefit Payment Process	LOW	A	80	2021		I, C, O
Member Income Taxes	LOW	F	84	2022		I, C, O
Fixed Assets – Computer Equipment	LOW	A	122	2018		I, C, O
Reemployed Retirees	LOW	MB	86	2021		I, C, O
STRS Ohio Self Insurance Plan	LOW	A	103	2020		I, C, O

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Securities Lending	LOW	I	105	2021		I, C, O
Fixed Assets	LOW	F	100	2018		I, C, O
Personal Investment Disclosure	LOW	A	93	2022		I, C
Disability Benefits	LOW	MB	103	2018	2024	I, C, O
Member Services Center	LOW	MB	72	2021		C, O
Purchasing Service Credit by Payroll Deduction	LOW	F	82	2019		I, C, O
Purchasing Practices	LOW	A	98	2019		I, C, O, PS
Survivor Benefits	LOW	MB	77	2022		I, C, O
Member Records Management	LOW	MB	86	2020		C, O
Building Services: Maintenance	LOW	A	94	2018		I, C, O
Administrative Services: Postage	LOW	A	76	2018		I, C, O
Flexible Spending Programs	LOW	A	83	2019		I, C, O
Attendance Reporting	LOW	A	96	2018		I, C, O
HRS: Associate Payroll	LOW	A	84	2020		I, C, O
Member Benefits Processing	LOW	MB	95	2018		I, C, O
Investment Performance (PBI Review)	LOW	I	89	2023	2024	I, C, O
Member Withdrawals	LOW	F	70	2022		I, C, O
HRS: Educational Assistance	LOW	A	78	2019		I, C, O
Petty Cash/Café Operations	LOW	F	75	2017		I, C, O, PS
Purchasing Service Credit	LOW	MB	86	2020		I, C, O

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2024 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
Unused Sick and Vacation Leave	LOW	A	66	2019		I, C, O
Associate Travel Expenses	LOW	A	52	2023		I, C, O, PS
Other Staff Expenses	LOW	A	48	2021		I, C, O, PS
Legal: OEC Reporting	LOW	A	58	2020		I, C, O, PS
Proxy Voting	LOW	I	81	2019		I, C, PS
HRS: Exit Interview Management	LOW	A	67	N/A	2024	F, I, C, O, PS
Administrative Services: Security & Safety	LOW	F	93	N/A		C, O, PS
Recipient Benefits Processing	LOW	MB	94	N/A		F, I, C, O, PS
Death Match	LOW	MB	123	2022		F, I, C, O, PS

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