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March 26, 2020

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 2019.

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

Sincerely,

A handwritten signature in black ink that reads "Michael J. Nehf". The signature is written in a cursive style.

Michael J. Nehf
Executive Director

Enclosure

To: Ohio Retirement Study Council (ORSC)

Subject: STRS Ohio Audit Committee Report — 2019

Date: March 26, 2020

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, 2019. This report outlines the following: audit reviews completed during 2019; STRS Ohio Audit Committee meetings and actions; special reviews completed during 2019; and the 2020 Internal Audit Plan. Audit Committee members during 2019 were Carol Correthers (Chair/Retired Member), David Gruber (Vice Chair/ Appointee), Jeffrey Rhodes (Active Member), Wade Steen (Appointee), Robert Stein (Retired Member), and Rita Walters (Retired Member/Non-Voting Observer).

Audit Reviews Completed During 2019

The attached 2019 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, June, August, and December of 2019.

STRS Ohio Audit Committee Meetings and Actions

A meeting of the Audit Committee was called to order by the committee chair, on Dec. 19, 2019, at 9:55 a.m. Committee members present were Ms. Correthers, Mr. Gruber, Mr. Rhodes and Mr. Steen. Board members Mr. McFee, Dr. Hunt, Mr. Lard and Ms. Walters were also in attendance. Mr. Stein joined the meeting in progress. Staff present included Mr. Nehf, Mr. Snyder, Ms. Hoover,

Mr. Tackett, Mr. Vance, Mr. Licata and Ms. Van Gundy.

Mr. Tackett began by introducing Ms. Van Gundy to the Audit Committee.

Mr. Tackett then reviewed the 2019 Internal Audit Summary. He stated the summary contained no material findings and Internal Audit had full cooperation from management. All recommendations will be implemented by management by June of 2020.

Mr. Licata then discussed the results of the IT Audits performed during 2019.

Mr. Tackett reviewed the Executive Summary of the 2020 Internal Audit Plan and the Risk Assessment Process that determines which audits to conduct.

Mr. Licata summarized the scope of the IT HIPAA audits that will be performed in 2020.

Ms. Correthers moved, seconded by Mr. Gruber 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 statute.

Upon roll call, the vote was as follows: Ms. Correthers, yes; Mr. Gruber, yes; Mr. Rhodes, yes; Mr. Steen, yes; Mr. Stein, yes. Motion carried.

CliftonLarsonAllen issued an unmodified opinion on the 2019 financial statements.

Public session resumed and the meeting was adjourned at 10:45 a.m.

A meeting of the Audit Committee was called to order by the committee chair on Aug. 15, 2019, at 8:30 a.m. Committee members present were Mr. Stein, Mr. Gruber, Dr. Hunt and Mr. McFee. Ms. Correthers, Mr. Price and Ms. Walters were also in attendance. Staff present included Mr. Nehf, Mr. Snyder, Ms. Hoover, Mr. Tackett, Mr. Vance and Mr. Licata.

Mr. Snyder introduced Kevin Rohrs of CliftonLarsonAllen to present a summary of their plan for the 2018-2019 financial statement audit and tentative schedule for issuing an audit report. Their overall risk assessment on this engagement is moderate and CliftonLarsonAllen has identified investments, contributions, benefit payments and actuarial assumptions as critical audit areas. The final audit report, will be presented to the Audit Committee in December.

Mr. Tackett informed the committee that there were no material findings from internal audits and that there was full cooperation from management. Management has accepted all internal audit recommendations and is in various stages of action-planning or implementation. Mr. Tackett informed the Audit Committee that his review of the FY2019 PBIs was complete and that he found the PBIs to be in compliance with the PBI Program Policy. Mr. Licata answered a question from Mr. Stein related to cyber security. The next update will be presented to the Audit Committee at the December meeting. All audit activity for 2019 will be summarized and the 2020 Internal Audit Plan will be presented at that time for approval.

The meeting was adjourned at 9:15 a.m.

Upon roll call the vote was as follows: Mr. Stein, yes; Mr. Price, yes; Mr. Gruber, yes; Dr. Hunt, yes; Mr. Lard, yes; Mr. McFee, yes; Mr. Rhodes, yes; Ms. Walters, yes; Ms. Correthers, yes. Motion carried.

Special Reviews/Projects


See 2019 Internal Audit Summary: "Purchasing Practices-Roof Project"

2020 Internal Audit Plan

The 2020 Internal Audit Plan was approved by the STRS Ohio Board on December 19, 2019. A copy of the 2020 Internal Audit Plan is enclosed.

If you have any questions, or need further information, please feel free to call me at 614-227-2821.

Respectfully submitted,


David S. Tackett, CFA, CPA, CIA
Chief Audit Executive

2019 Internal Audit Summary

Closed Audits: Recommendations

Audit Area	Risk Rating	Scope	Recommendations	Management's Response	Implemented	Implementation or Target Implementation
Building Maintenance	Low	Preventative Maintenance	Establish formal, documented policies and procedures that govern departmental activities and responsibilities.	Agree	No	June 2020
		Associate Training				
		Quality Assurance	Perform regularly scheduled equipment inventory records reconciliations by associates who are independent of the receipt of/use of inventory	Agree	Yes	June 2019
I.T. Security: IT Vulnerability/ Patch Management and Response Review (Cyber Security)	Medium	Compliance with IT Incident Response Plans	On a periodic basis, schedule and perform tabletop exercises with STRS Ohio associates to test effectiveness of the Cyber Attack & Data Loss Incident Plan.	Agree	No	June 2020
		Performance of Routine Scanning and Proper Administration of Known Vulnerabilities	Create formal, fully-documented Vulnerability Management Procedures for publicly-facing and STRS Ohio-hosted web applications, including workstations and servers (to be included in future update of the Information Security Handbook).	Agree	No	March 2020
		Proper Management of Security Incidents	Develop a formally documented process for tracking the remediation of identified vulnerabilities.	Agree	No	June 2020
I.T. Security: Oracle Database	Medium	Access to Database Listener	I.T.S. should perform periodic reviews of privileges granted to the Public Role and revoke assignments where appropriate.	Agree	Yes	May 2019
		Default Accounts/Passwords	Configure password parameters/passwords to meet documented company and industry standards, and enforce a 180-day expiration.	Agree ¹	Yes	May 2019
		Host-Based Authentication Methods				
		Password Settings				
		Access to Public Role				
<i>Comments:</i> Agree ¹ - Database administrator profiles are scheduled for password changes every 180 days. Database administrator enhanced password complexity is now in effect. However, the process will be done through scheduling and not as an automated system change due to the possibility of an unacceptable level of risk associated with the potential failure of STaRS and other critical jobs/systems. Compensating controls noted and accepted by Internal Audit.						
Purchasing Practices: Roof Project	Low	Compliance - Approval Process: Hiring of Architect Hiring of Roof Contractors	The executive director and senior staff revisit the topic of competitive bidding to reach a consistent understanding of what changes are needed and to present policy changes to the STRS Ohio Board for approval.	Agree	Yes	April 2019
		Compliance - Competitive Bidding				
		Sufficiency of Policy				
<i>Comments:</i> This is an off-audit plan review performed at the request of the STRS Ohio Executive Director. "General Comments" Section of the report: General Comment #1 - Add a procedural step that requires that the executive director receive updates of unusual or significant expenditures authorized by an acting executive director. This change was also approved.						

Closed Audits: No Recommendations

Audit Area	Risk Rating	Scope	Management's Response
Benefits Processing: Recipient Benefits	Low	Annuity Certain Expiration Overpayments/Collections Disbursement Compliance-Death Benefit	N/A
Board Expenses	Low	Preapproval of Travel Accuracy of Reimbursement Compliance with Rules/Policies	N/A
Derivatives	Medium	Derivative Exposure Report Currency Forward Settlements Equity SWAP Settlements Counterparty Risk Equity SWAP Collateral Liquid Theme/Hedge Segregation of Duties	N/A
Financial Reporting	Low	Security/Segregation of Duties Journal Entries Disaster Recovery Protection Audit Trail Integrity	N/A

Fixed Assets	N/A	Tracking, Reporting, and Monitoring Depreciation Disposition	N/A
Fixed Income Investments	N/A	Compliance with Investment Policies Approved Brokers/Commissions Due Diligence Monitoring of External Managers Interest Income	N/A
Health Care	Low	Records Retention/Management- Member Application Issues Monitoring and Resolution Segregation of Duties Vendor Payments & Reconciliation	N/A
Investment Performance/PBI Review	Low	Associate Eligibility Compliance with PBI Policy	N/A
Proxy Voting	Low	Proxy Voting: Active Investments Compliance with Proxy Voting Policy	N/A

Active Audits

Audit Area	Risk Rating	Scope	Target Completion
Alternative Investments Opportunistic/Diversified	N/A	Proper Documentation and Approval Due Diligence Valuations & Fees Monitoring of Opportunistic Diversified Funds Segregation of Duties Compliance with Policies and Procedures	February 2020
Contribution Reporting	N/A	Foundation Management Employee Contribution Management G/L Posting Segregation of Duties Annual Report Management	February 2020
Domestic Equities	N/A	Compliance with the Investment Objectives and Policy Reconciliation of External Manager Positions Monitoring of External Portfolio Managers External Management Fees Approved Brokers	December 2019
Purchase Service Credit by Payroll Deduction	N/A	Member Application Processing of Payroll Deduction Receipts Segregation of Duties Payroll Deduction Refunds	January 2020
Unused Sick & Vacation Leave	N/A	Compliance Accuracy of Payments Compliance with Rules/Policies	February 2020

Scheduled Audits

Audit Area	Risk Rating	Scope	Target Start Date
Educational Assistance Program	N/A	Educational Assistance Application Tuition Repayments Spending Limitations General Compliance	December 2019

Flexible Spending	N/A	Withholdings Disbursements	December 2019
Purchasing Practices	N/A	Compliance with General Policy Requirements Receipt of Goods and Services	December 2019

Rescheduled Audits

Audit Area	Scope	Explanation
Child Care Center	Compliance with State Licensing Requirements Compliance with State Inspections Enrollment Tuition Payments Review of Cost Neutrality Segregation of Duties	Additional off-audit plan work and personnel change resulted in audit reprioritization.
Defined Contribution	Processing of Retirement Plan Selection Forms NRS Contract Compliance Accuracy of Member Statements Segregation of Duties	Additional off-audit plan work and personnel change resulted in audit reprioritization.
Purchasing Service Credit	STARS Access Certifications and Cost Calculations Member Applications Posting of Purchased Service Credit Payments Compliance with Ohio Revised Code	Additional off-audit plan work and personnel change resulted in audit reprioritization.

Other Audit Related Activity

Area	Risk Rating	Subject/Project	Description
I.T.S.	N/A	STARS Upgrades/Maintenance	Consult with ITS and the user community on the security functionality and needs of the system.
Multi-departmental	N/A	DLP (Data Loss Prevention)	Participate on the DLP Committee to implement, monitor and evaluate the data loss prevention as it should function at STRS Ohio.
Multi-departmental	N/A	STRS Ohio Disaster Recovery	Participate in disaster recovery testing review. Strategize on business and human resource needs.

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

High: Requires Immediate attention and remediation.

Medium (Med.): Requires near-term attention.

Low: Improvements possible but does not require attention in immediate or near-term.

Composition of Current Audit Committee:

Carol Correthers, Chair/Active Member

David Gruber, Vice Chair/Appointee

Jeffrey Rhodes, Active Member

Wade Steen, Appointee

Robert Stein, Retired Member

Rita Walters, Retired Member/Non-Voting Observer



2020 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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2020 INTERNAL AUDIT SCHEDULE

Audit Area	Description of Audit Area	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
OEC Reporting	Compliance with Policies and Procedures												
Benefit Payment Process	Investment Operations Department Review and Verification												
	ITS Department Review and Verification												
	Finance Department Review and Verification												
	Segregation of Duties												
Contribution Reporting	Foundation Management												
	Employee Contribution Management												
	G/L Posting												
	Segregation of Duties												
	Annual Report Management												
Purchasing Service Credit	STaRS Access												
	Certifications and Cost Calculations												
	Member Applications												
	Posting of Purchased Service Credit Payments												
	Compliance with the Ohio Revised Code												
Child Care Center	Compliance with State Licensing Rules												
	Compliance with State Inspections												
	Enrollment												
	Tuition Payments												
	Review of Cost Neutrality												
	Segregation of Duties												
Defined Contribution Plan	Processing of Retirement Plan Selection Forms												
	NRS Contract Compliance												
	Accuracy of Member Statements												
	Segregation of Duties												
Associate Payroll	State and Federal Tax Regulations												
	Access to Payroll Database												
	Accuracy of Associates' Net Pay												
	Immigration Guidelines/Compliance												
Member Records Management	Contracting												
	Retention												
	Imaging-Quality Control												
	Off-Site Storage Facility Inspections												
	Disaster Recovery Coverage												
Annual Reporting	Compliance with Polices and Procedures												
International Investing	External Management Fees												
	Monitoring of External Managers												
	Foreign Tax Reclamations												
	Sub-Custodian Controls												

2020 INTERNAL AUDIT SCHEDULE

Audit Area	Description of Audit Area	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
I.T. Security: HIPPA (Part 1)	Risk Management						■						
	Governance						■						
	Encryption						■						
I.T. Security: HIPPA (Part 2)	Access Management							■					
	Authentication							■					
Investment Performance (PBI Review)	Associate Eligibility									■			
	Compliance with PBI Policy									■			
STRS Ohio Self-Funded Associate Health Insurance	Administrative Services Fees									■			
	Review of Key Goals and Objectives									■			
	Accuracy of Payroll Withholdings									■			
	Accuracy of Financial Reporting									■			
	Monitoring of Health Insurance Costs									■			
	Miscellaneous Income									■			
	Segregation of Duties									■			
Real Estate	Compliance with Policies and Procedures									■			
	Due Diligence									■			
	Valuation									■			
	Property Management Fees									■			
	Property-Level Expenses									■			
	External Compliance Reviews									■			
	Site Inspections									■			
	Tenant Surveys									■			
Board Expenses	Preapproval of Travel												■
	Accuracy of Reimbursement												■
	Compliance with Rules/Policies												■
Liquidity Reserves	Compliance												■
	Income												■
	Purchases/Sales												■

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 Payroll	2	2	2	2	2	2	12
Associate Travel Expenses	2	1	1	1	1	2	8
Attendance Reporting	4	2	2	2	2	2	14
Benefit Payment Process	3	4	3	3	3	3	19
Board Expenses	1	1	1	1	1	1	6
Building Maintenance	3	2	3	2	2	2	14
Business Continuity Plan	3	3	3	3	4	3	19
Child Care Center	2	2	2	2	2	1	11
Educational Assistance Program	2	2	2	2	2	2	12
Fixed Assets — Computer Equip.	3	4	2	3	3	4	19
Flexible Spending Plans	2	2	2	2	3	2	13
Insurance/Risk Management	2	2	1	1	2	2	10
OEC Reporting	1	2	1	2	2	1	9
Other Staff Expenses	2	2	1	1	1	1	8
Personal Investment Disclosure	1	1	3	3	5	3	16
Postage	2	2	2	1	2	3	12
Purchasing Practices	3	2	3	2	2	3	15
STRS Ohio Self Insurance Plan	3	2	3	2	3	3	16
Unused Sick and Vacation Leave	2	1	2	2	2	1	10

* See Page 3 for description of 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
Annual Reporting	2	3	2	2	2	2	13
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
Member Income Taxes	1	1	2	2	4	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	3	2	2	3	3	15

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INFORMATION TECHNOLOGY SERVICES							
AIX/ Windows Security	5	3	5	1	5	5	24
Compliance: B.Y.O.D.	5	3	5	1	5	5	24
Database Security	3	3	3	1	4	5	19
I.T. Operations	3	3	3	1	3	3	16
I.T. Security: Change Control	3	3	3	3	3	3	18
I.T. Security: Logical/Physical Access	3	3	3	1	5	5	20
I.T. Security: HIPAA	5	3	5	1	5	5	24
I.T. Security: PeopleSoft Security	3	3	3	3	5	5	22
I.T. Security: Cyber Vulnerabilities	4	4	5	1	5	5	24

* See Page 3 for description of risk factors.

ASSIGNMENT OF RISK RATING

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INVESTMENTS							
Alternative Investments	3	3	2	2	4	4	18
Derivatives	3	4	2	3	4	3	19
Domestic Equities	3	4	2	2	4	5	20
Fixed Income	2	4	2	3	3	5	19
International Investing	5	5	2	1	4	4	21
Investment Performance (PBI Review)	2	2	2	2	2	2	12
Liquidity Reserves	1	2	1	1	2	3	10
Proxy Voting	2	1	1	1	2	2	9
Real Estate	3	4	3	3	3	3	19
Securities Lending	2	3	2	2	4	4	17

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
MEMBER BENEFITS							
Annual Statements	2	2	2	2	2	2	12
Benefit Services	3	3	2	2	2	2	14
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 Data Management	3	4	4	2	2	2	17
Member Records Management	2	2	2	2	2	2	12
Member Services Center	2	2	2	1	2	2	11
Purchasing Service Credit	2	3	2	2	2	2	13
Reemployed Retirees	2	3	2	2	2	2	13
Service Retirement Benefits	2	3	2	3	3	3	16
Survivor Benefits	3	2	2	3	2	3	15

* See Page 3 for description of risk factors.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
ADMINISTRATION							
Associate Payroll	18	16	14	12	10	8	78
Associate Travel Expenses	18	8	7	6	5	8	52
Attendance Reporting	36	16	14	12	10	8	96
Benefit Payment Process	27	32	21	18	15	12	125
Board Expenses	9	8	7	6	5	4	39
Building Maintenance	27	16	21	12	10	8	94
Business Continuity Plan	27	24	21	18	20	12	122
Child Care Center	18	16	14	12	10	4	74
Educational Assistance Program	18	16	14	12	10	8	78
Fixed Assets — Computer Equip.	27	32	14	18	15	16	122
Flexible Spending Plans	18	16	14	12	15	8	83
Insurance/Risk Management	18	16	7	6	10	8	65
OEC Reporting	9	16	7	12	10	4	58
Other Staff Expenses	18	16	7	6	5	4	56
Personal Investment Disclosure	9	8	21	18	25	12	93
Postage	18	16	14	6	10	12	76
Purchasing Practices	27	16	21	12	10	12	98
STRS Ohio Self Insurance Plan	27	16	21	12	15	12	103
Unused Sick and Vacation Leave	18	8	14	12	10	4	66

* See Page 4 for description of risk factors.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
FINANCE							
Accounts Payable	18	8	14	6	10	8	64
Annual Reporting	18	24	14	12	10	8	86
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
Member Income Taxes	9	8	14	12	20	20	83
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	24	14	12	15	12	95

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INFORMATION TECHNOLOGY SERVICES							
AIX/ Windows Security	45	24	35	6	25	20	155
Compliance: B.Y.O.D.	45	24	35	6	25	20	155
Database Security	27	24	21	6	20	20	118
I.T. Operations	27	24	21	6	15	12	105
I.T. Security: Change Control	27	24	21	18	15	12	117
I.T. Security: Logical/Physical Access	27	24	21	6	25	20	123
I.T. Security: HIPAA	45	24	35	6	25	20	155
I.T. Security: PeopleSoft Security	27	24	21	18	25	20	135
I.T. Security: Cyber Vulnerabilities	36	32	35	6	25	20	154

* See Page 4 for description of risk factors.

RISK FACTORS WEIGHTED

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
INVESTMENTS							
Alternative Investments	27	24	14	12	20	16	113
Derivatives	27	32	14	18	20	12	123
Domestic Equities	27	32	14	12	20	20	125
Fixed Income	18	32	14	18	15	20	117
International Investing	45	40	14	6	20	16	141
Investment Performance (PBI Review)	18	16	14	12	10	8	78
Liquidity Reserves	9	16	7	6	10	12	60
Proxy Voting	18	8	7	6	10	8	57
Real Estate	27	32	21	18	15	12	125
Securities Lending	18	24	14	12	20	16	104

Audit Area	Risk Factors*						Total
	A	B	C	D	E	F	
MEMBER BENEFITS							
Annual Statements	18	16	14	12	10	8	78
Benefit Services	27	24	14	12	10	8	95
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 Data Management	27	32	28	12	10	8	117
Member Records Management	18	16	14	12	10	8	78
Member Services Center	18	16	14	6	10	8	72
Purchasing Service Credit	18	24	14	12	10	8	86
Reemployed Retirees	18	24	14	12	10	8	86
Service Retirement Benefits	18	24	14	18	15	12	101
Survivor Benefits	27	16	14	18	10	12	97

* See Page 4 for description of risk factors.

2020 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
I.T. Security: Cyber Vulnerabilities	HIGH	ITS	154	2019		F, I, C, O, PS
International Investing	HIGH	I	141	2016	2020	F, I, C, O
I.T. Security: PeopleSoft Security	HIGH	ITS	135	2017		F, I, C, O, PS
Domestic Equities	HIGH	I	125	2019		F, I, C, O
Real Estate	HIGH	I	125	2017	2020	F, I, C, O
Derivatives	HIGH	I	123	2018		F, I, C, O
Fixed Income	HIGH	I	117	2018		F, I, C, O
Alternative Investments	HIGH	I	113	2019		F, I, C, O
Liquidity Reserves	HIGH	I	60	2017	2020	F, I, C, O
Board Expenses	HIGH	A	39	2019	2020	I, C, O, PS
AIX/ Windows Security	MED.	ITS	155	2017		F, I, C, O, PS
Compliance: B.Y.O.D.	MED.	ITS	155	2017		F, I, C, O, PS
I.T. Security: HIPAA	MED.	ITS	155	2015	2020	F, I, C, O, PS
I.T. Security: Logical/ Physical Access	MED.	ITS	123	2016		F, I, C, O, PS
Business Continuity Plan	MED.	A	122	2018		F, I, C, O
Database Security	MED.	ITS	118	2019		F, I, C, O, PS
I.T. Security: Change Control	MED.	ITS	117	2016		F, I, C, O, PS
Member Data Management	MED.	MB	117	2017		C, PS
I.T. Operations	MED.	ITS	105	2017		F, I, C, O, PS
Service Retirement Benefits	MED.	MB	101	2017		I, C, O
Health Care	MED.	MB	100	2018		I, C, O
Financial Reporting (STRS Ohio)	MED.	F	91	2018		I, C, O
Annual Reporting	MED.	F	86	2015	2020	I, C, O
Defined Contribution Plan	MED.	MB	82	2016	2020	I, C, O

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2020 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
Contribution Reporting	MED.	F	81	2019		I, C, O
Annual Statements	MED.	MB	78	2017		I, C, O
Risk Management/ Insurance	MED.	A	65	2017		F,I, C, O
Accounts Payable	MED.	F	64	2018		I, C, O
Benefit Payment Process	LOW	A	125	2015	2020	I, C, O
Fixed Assets — Computer Equip.	LOW	A	122	2018		I, C, O
Securities Lending	LOW	I	104	2017		I, C, O
Disability Benefits	LOW	MB	103	2018		I, C, O
STRS Ohio Self Insurance Plan	LOW	A	103	2016	2020	I, C, O
Fixed Assets	LOW	F	100	2018		I, C, O
Purchasing Practices	LOW	A	98	2019		I, C, O, PS
Survivor Benefits	LOW	MB	97	2017		I, C, O
Attendance Reporting	LOW	A	96	2018		I, C, O
Member Services Center	LOW	MB	95	2017		C, O
Purchasing Service Credit by Payroll Deduction	LOW	F	95	2019		I, C, O
Building Maintenance	LOW	A	94	2018		I, C, O
Personal Investment Disclosure	LOW	A	93	2017		I, C
Member Records Management	LOW	MB	86	2016	2020	C, O
Reemployed Retirees	LOW	MB	86	2016		I, C, O
Flexible Spending Programs	LOW	A	83	2019		I, C, O
Member Income Taxes	LOW	F	83	2017		I, C, O
Associate Payroll	LOW	A	78	2016	2020	I, C, O

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2020 INTERNAL AUDIT WORK PLAN

Audit Area	Priority	Dept.	Risk Score	Last Audit	Estimated Audit Date	Risk Codes
Benefits Processing	LOW	MB	78	2018		I, C, O
Educational Assistance Program	LOW	A	78	2019		I, C, O
Investment Performance (PBI Review)	LOW	I	78	2019	2020	I, C, O
Postage	LOW	A	76	2018		I, C, O
Petty Cash/Café Operations	LOW	F	75	2017		I, C, O, PS
Child Care Center	LOW	A	74	2015	2020	I, C, O
Purchasing Service Credit	LOW	MB	72	2016	2020	I, C, O
Member Withdrawals	LOW	F	70	2017		I, C, O
Unused Sick and Vacation Leave	LOW	A	66	2019		I, C, O
OEC Reporting	LOW	A	58	2015	2020	I, C, O, PS
Proxy Voting	LOW	I	57	2019		I, C, PS
Other Staff Expenses	LOW	A	56	2017		I, C, O, PS
Associate Travel Expenses	LOW	A	52	2017		I, C, O, PS

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