January 5, 2023

Ms. Bethany Rhodes
Executive Director
Ohio Retirement Study Council
30 East Broad Street, 2nd Floor
Columbus, OH 43215

Dear Director Rhodes:

Pursuant to R.C. 145.095, please find enclosed the 2022 Annual Audit Committee
Report of the OPERS Retirement Board. This report was reviewed with the
OPERS Audit Committee during its meeting on November 15, 2022 and approved
by the OPERS Retirement Board on November 15, 2022. The report documents
the activities of the OPERS Internal Audit Department for 2022 including:

- Closed Audits with Recommendations
- Closed Audits with No Recommendations
- Active Audits
- Other Audit Related Activity

Also, the OPERS Audit Committee held three (3) meetings during 2022. Following
is a summary of the meetings and actions taken:

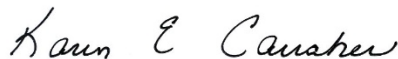| Meeting Date	Meeting Summary & Action Taken
February 16, 2022	• Staff from Plante Moran, OPERS' external auditor, discussed the audit plan for the 2021 financial statement audit.
May 18, 2022	• Action: The Audit Committee reviewed, discussed, and approved the 2022 Six Month Internal Audit Plan (July-December). • An executive summary of internal audit initiatives and activities occurring since November 2021 along with the status of outstanding audit recommendations was presented. • Staff from Plante Moran, OPERS' external auditor, discussed the results of the 2021 financial statement audit. • Staff from OPERS presented highlights from the Annual Financial Report for 2021.

Meeting Date	Meeting Summary & Action Taken
November 15, 2022	• Action: The Audit Committee reviewed and approved the 2022 Annual Audit Committee Report to be provided to the ORSC. An executive summary of internal audit initiatives and activities occurring since May 2022 along with the status of outstanding audit recommendations was presented. • Action: The Audit Committee reviewed, discussed, and approved the 2023 Six Month Internal Audit Plan (January-June). • Staff from Plante Moran, OPERS' external auditor, discussed the audit plan for the 2022 financial statement audit.

Please let us know if you need additional information.

Sincerely,

_____
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Ohio Public Employees Retirement System
2022 Annual Audit Committee Report

Closed Audits: Recommendations

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
IT Change Management (January 2022) – outsourced to a third-party firm	1. High 2. High	Assess the design and effectiveness of key controls within the change management process to manage the enhancements, updates, incremental fixes, and patches to production systems.	1. OPERS should evaluate and encrypt all confidential data stored in database tables following industry standard algorithms. Database encryption should be centrally managed by IT and reviewed annually by Information Security. 2. OPERS should continue with the plan to communicate the results of the secure application code assessment reports performed during the system development lifecycle with the Information Security department. OPERS should verify all corrective actions are implemented and risk exceptions are approved before completion of testing and deployment to production.	1. Management agreed and implemented. 2. Management agreed and will implement.	1. Yes 2. No	1. Completed 2. December 2022

[1] Risk Rating Levels:

    High: Requires immediate attention and remediation.
    Moderate (Mod.): Requires near-term attention.
    Low: Improvements possible but does not require attention in immediate or near-term.

"In process" status is an audit recommendation that has been implemented by management but is pending validation from Internal Audit.

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
	3. Mod.		3. OPERS should either incorporate an approval process for high-risk tickets during the weekly Change Community Meeting or institute a weekly CAB meeting that is comprised of the requestor of the change, IT Directors, and (as appliable) departmental leaders / executives impacted by the change requested.	3. Management agreed and implemented.	3. Yes	3. Completed
	4. Low		4. OPERS should consider restricting senior developers access to UAT environments to prevent the risk of unauthorized, unintentional modification, or malicious activity occurring.	4. Management accepts the risk associated with this recommendation with existing mitigations.	4. No	4. N/A
	5. Low		5. OPERS should consider a review of change management policies and procedures to address the lack of requirements or missing documentation as stated within the condition by leveraging industry standard guidelines.	5. Management agreed and implemented.	5. Yes	5. Completed
	6. Low		6. OPERS should consider the enhancement of manual and/or the implementation of automated controls. As a result of the implementation of manual or automated, policy requirements and documented procedures should be reviewed and updated accordingly.	6. Management agreed and will implement.	6. No	6. June 2023

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
	7. Low		7. OPERS should continue the project plan to enhance the change management workflow to include a root cause analysis.	7. Management agreed and will implement.	7. No	7. June 2023
	8. Low		8. OPERS should continue the project plan to re-evaluate the questions asked within Risk Assessment process.	8. Management agreed and implemented.	8. Yes	8. Completed
		Comments: None				
Imaging Audit (January 2022)	1. Mod.	Assess the design and effectiveness of key controls associated with the records and imaging process within the Office Services department.	1. Verifying workflow was difficult because there wasn't enough detail in the Audit Trail Report to directly confirm the workflow initiated and/or initiated appropriately based on documents that were imaged. Additionally, there are no notifications or alerts when a workflow doesn't kick-off.	1. Management agreed and implemented.	1. Yes	1. Completed
	2. Low		2. Office Services should review and document the process between the batch prepper and the batch reviewer to consider segregation of duties.	2. Management agreed and implemented.	2. Yes	2. Completed
	3. Low		3. Office Services should ensure sign-off on the monthly deletion report to provide evidence of review and appropriate segregation of duties.	3. Management agreed and implemented.	3. Yes	3. Completed
	4. Low		4. Internal Audit recommends Office Services formally document the collection of policies and procedures related to the imaging	4. Management agreed and implemented.	4. Yes	4. Completed

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
			process as one documented manual with a table of contents for easy reference.			
		Comments: None				
Cash Reconciliation Audit (February 2022)	1. Low	Assess the design and effectiveness of key controls related to cash reconciliations.	1. The Finance team should update the monthly bank reconciliation SOP to document the process for researching, investigating, and opening Helpdesk tickets for unidentified differences.	1. Management agreed and implemented.	1. Yes	1. Completed
		Comments: None				
Cash Room Audit (March 2022)	1. Mod.	Assess the design and effectiveness of key controls related to cash management.	1. Office Services should ensure that appropriate segregation of duties exists between the role of prepping cash receipts and the role of posting cash receipts within the system. While no instances of misappropriation or fraud were noted from our testing, proper segregation of duties mitigates the risk of loss, errors, and fraud.	1. Management agreed and implemented.	1. In process	1. March 2022
	2. Low		2. Office Services should update their procedures related to the Cash Room processing to include all the processes involving cash receipts and provide detailed information on the process to assist in the execution of tasks.	2. Management agreed and implemented.	2. Yes	2. Completed
	3. Low		3. Office Services should document the process for cash receipts held for next day	3. Management agreed and implemented.	3. Yes	3. Completed

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
			processing. Cash receipts held for next day processing should be adequately secured overnight as well as documented and confirmed the following day to ensure all cash receipts are accurately accounted for.			
	4. Low		4. Office Services should obtain a list of return reasons from the bank and add these to the cash system.	4. Management agreed and implemented.	4. Yes	4. Completed
		Comments: None				
Internally Managed Derivatives Audit (April 2022) – co-sourced w third-party firm Internally Managed Derivatives Audit (April 2022) – co-sourced w third-party firm	1. Mod. 2. Mod. 3. Mod. 4. Low	Assess the design and effectiveness of key controls associated with the use of derivative instruments	1. Establish controls to validate OTC swaps are entered timely and accurately into appropriate systems with special consideration given to unique arrangements such as short-tenor swaps. 2. Enhancements should be made regarding the review of FX spot transactions, including the 5-day window to trade and settle. 3. Enhancements should be made to procedures performed by Investment Compliance to ensure completeness and accuracy of certain derivative compliance tests. 4. OPERS should review counterparty confirmations to understand any additional language included and risk imposed as a result. The confirmation review process should be further documented to include	1. Management agreed and implemented. 2. Management agreed and will implement. 3. Management agreed and implemented. 4. Management agreed and will implement.	1. Yes 2. No 3. Yes 4. No	1. Completed 2. December 2022 3. Completed 4. June 2023

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
			any additional procedures that might be considered necessary to mitigate legal or business risk.			
	5. Low		5. Perform a review of current reconciliation processes and enhance procedures to have a more complete understanding that OPERS aligns with clearing brokers/custodians/record keeper/Bloomberg and/or other systems timely and accurately.	5. Management agreed and will implement.	5. No	5. December 2022
	6. Low		6. Maintain historical calculations related to collateral calculations and work with Portfolio Managers to establish a threshold for investigating differences.	6. Management agreed and will implement.	6. No	6. June 2022
	7. Low		7. Update written procedures to validate they include and align with current processes.	7. Management agreed and will implement.	7. No	7. December 2022
	8. Low		8. If admin access cannot be appropriately restricted in Bloomberg, a control should be implemented to review the Bloomberg activity for the individuals with administrative access to ensure activity is in alignment with their job responsibilities and expectations.	8. Management agreed and will implement.	8. No	8. June 2022
		Comments: None				

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
2021 Incentive Comp Calculation Audit (May 2022)	1. Low	Verify the accuracy of the 2021 Incentive Compensation payments.	1. Internal Audit recommends that the calculation mechanics and impact of changes to the Annual Incentive Compensation calculation during the year be included as part of the change forms discussed by the Incentive Compensation Committee (ICC). This will allow for those on the ICC to review the calculation mechanics and discuss any additional considerations or updates prior to execution of the end of year calculation.	1. Management agreed and will implement.	1. No	1. December 2022
		Comments: None				
Member Directed RMA Vendor Audit (June 2022)	1. Low	Assess the effectiveness of the vendor associated with the Member Directed Retiree Medical Accounts (RMA).	1. Enhancements should be made to the process of updating addresses with the vendor to ensure ongoing accuracy.	1. Management agreed and implemented.	1. Yes	1. Completed
		Comments: None				
Proxy Voting Audit (August 2022)	1. Mod.	Assess the design and effectiveness of controls associated with the Corporate Governance department's proxy voting process.	1. Corporate Governance should add details/comments to the reconciliations that describe the reasons for the variances, including evidence to confirm the correct shares were voted and the variances were accurately researched and resolved.	1. Management agreed and implemented.	1. In process	1. Completed

Audit Area	Risk Rating[1]	Scope	Summarized Audit Recommendations	Management's Response	Implemented	Implementation or Target Implementation
	2. Mod. 3. Low		2. Corporate Governance should update their Business Continuity Plan to accurately reflect the primary role and backup role for proxy voting. Critical personnel or backups should consider performing Corporate Governance functions to ensure business stability in the event a backup is needed. 3. Corporate Governance should consider reviewing their procedures for proxy voting activities to ensure they are thoroughly documented and address all controls for mitigating risks.	2. Management agreed and implemented. 3. Management agreed and implemented.	2. In process 3. In process	2. Completed 3. Completed
		Comments: None				
IT Mainframe Review – Comparison of Data Tables (September 2022)	1. High	Review the data table comparison process associated with the IT Mainframe retirement project.	1. Enhancements to documentation and the process can be made to improve upon the completeness of data comparisons associated with the conversion.	1. Management agreed and implemented.	1. Yes	1. Completed
		Comments: None				

Closed Audits: No Recommendations

Audit Area	Risk Rating	Scope	Management's Response
Service Retirement – Required Minimum Distribution (RMD) (January 2022)	Low	Assess the design and effectiveness of key controls related to the RMD process post migration to the Compass environment.	Not applicable.
		Comments: Testing performed concluded that controls operating effectively.	
Service Retirement – Division of Property Order Process (DPO) (January 2022)	Low	Assess the design and effectiveness of key controls related to the DPO process post migration to the Compass environment.	Not applicable.
		Comments: Testing performed concluded that controls operating effectively.	
Annual Ethics Policy Procedures (2021) (October 2022)	Low	Verify the organization's compliance with OPERS' Ethics Policy (2021).	Not applicable.
		Comments: Testing performed based on agreed upon procedures with management.	
Personal Trading Policy (October 2022)	Mod.	Assess the organization's compliance with the Personal Trading Policy.	Not applicable.
		Comments: Testing performed concluded that controls associated with the Personal Trading Policy are operating effectively.	

Active Audits

Audit Area	Risk Rating	Scope	Target Completion
Investment Performance	High	Assess the design and effectiveness of key controls related to the calculation and monitoring of investment performance. (Subject Matter Expert (SME) involvement)	December 2022
Investment Benchmarks	High	Assess the design and effectiveness of key controls related to establishment and review of investment benchmarks. (SME involvement)	December 2022
Ransomware Response Audit	High	Evaluate the adequacy of implementation of OPERS Ransomware Response.	December 2022
Health Care Service Provider Audit (outsourced to third-party firm)	Mod.	Health Care specific audit to be conducted over claims incurred from the period of January 1, 2018 through December 31, 2019 for the Rx administrator.	December 2022
Survivor Benefits Processing	Mod.	Assess the design and effectiveness of key controls associated with processing Survivor Benefits.	December 2022
Board Election Audit	Low	Assess the design and effectiveness of key controls related to the board election process specifically related to member address files and procedures performed by the vendor.	December 2022
OPERS Employer Audit	Low	Assess compliance with accounting and reporting requirements as an OPERS' employer.	December 2022

Other Audit Related Activity

Subject/Project	Risk Rating	Area	Description
Continuous Auditing (On-going)	Low	Finance/Benefits/ Fraud	Monthly review of various processes/indicators to identify exceptions and trends that may prompt a more detailed review.
IT Security Penetration Testing (outsourced to a third-party firm)	High	Information Technology	Conduct testing on externally and internally accessible systems from the perspective of an outside threat to assess the effectiveness of security controls.
Private Alternatives Distribution Methodology Change	Mod.	Investments	Review support and analysis associated with PE/RE distribution methodology change.
IT Security Access	Mod.	Information Technology	Review processes and controls associated with sensitive access maintained by IT Security department.
Business Continuity Assessment	High	Executive/Other	Evaluate updates made to the organization's business continuity efforts and work directly with the business to identify possible gaps/opportunities for improvement.
Enterprise Risk Management	Low	Enterprise Risk Management	Review and provide feedback related to the organization's ERM process.
Audit Software	N/A	Internal Audit	Implementation of audit software to assist in the execution and documentation of audits.
Risk Assessment/ Audit Plan	N/A	Internal Audit	Preparation of the 2023 audit plan.
Audit Recommendation Follow-up	N/A	Internal Audit	Follow-up and report on the status pf outstanding audit recommendations.
Audit Committee Meetings/ Preparation	N/A	Internal Audit	Prepare communications and attend Audit Committee and Board Meetings.

Composition of Audit Committee at end of reporting year (R.C. 145.095)

Ken Thomas (Chair) - Representative for Municipal Employees

Chris Mabe - Representative for State Employees

Kathleen Madden - Director, Department of Administrative Services

Jim Tilling - General Assembly Appointed Investment Expert

Tim Steitz - Representative for Retirees