

December 2024

ASSURANCE

Audit, Compliance & Ethics Committee Meeting



**Teacher Retirement System of
Texas**
1000 Red River Street
Austin, Texas
78701-2698

**TEACHER RETIREMENT SYSTEM OF TEXAS
BOARD OF TRUSTEES
AND
AUDIT, COMPLIANCE AND ETHICS COMMITTEE**

(Ms. Allred, Chairman; Mr. Ball, Ms. Sissney, Mr. Williams, and Mr. Walls, Committee Members)

*All or part of the December 5, 2024, meeting of the TRS Audit, Compliance and Ethics Committee and Board of Trustees may be held by telephone or video conference call as authorized under Sections 551.130 and 551.127 of the Texas Government Code. The Board intends to have a quorum and the presiding officer physically present at the following location, which will be open to the public during the open portions of the meeting: **1000 Red River, Austin, Texas 78701 in the TRS East Building, 5th Floor, Boardroom.***

The open portions of the December 5, 2024, meeting are being broadcast over the Internet. Access to the Internet broadcast and agenda materials of the meeting is provided at www.trs.texas.gov. A recording of the meeting will be available at www.trs.texas.gov.

AGENDA

December 5, 2024 – 2:00 pm

TRS East Building, 5th Floor, Boardroom

1. Call roll of Committee members.
2. Approve minutes of September 2024 Audit, Compliance and Ethics Committee meeting
– Ms. Brittney Allred, Chair
3. Receive report of the financial audit of TRS Annual Comprehensive Financial Report (ACFR) for fiscal year ended August 31, 2024 – Robert Pagenkopf and Michael Clayton.
4. Receive Crowe LLP's report of the financial audit of TRS Investment Company (TRICOT) for fiscal year ended August 31, 2024 – Kevin W. Smith and Michelle Buss, Crowe LLP.
5. Receive TRS Legal and Compliance reports including those related to ethics and fraud, conflicts of interest, investment policies, and enterprise risk – Heather Traeger, Chris Bowlin MaryEllen O'Neill and Michelle Pagán.
6. Receive Internal Audit reports:
 - A. Review of Emerging Manager Program – Syed Israr and Kirk Sims;
 - B. Review of Internal Audit Quality Assurance Improvement Program (QAIP) Self-Assessment – Amanda Jenami and Kathey Mitchell.
 - C. Internal Audit Annual Report for Fiscal Year 2024 – Julie Toler.
 - D. Status of prior audit and consulting recommendations – Jonathan O'Reilly.

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Audit, Compliance and Ethics Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because the full Audit, Compliance and Ethics Committee constitutes a quorum of the Board, the meeting of the Committee is also being posted as a meeting of the Board out of an abundance of caution.

7. Discuss or consider Internal Audit and TRS Compliance administrative reports and matters related to governance, risk management, internal control, compliance violations, fraud, regulatory reviews or investigations, fraud risk areas, audits for the annual internal audit plan, or auditors' ability to perform duties – Brittney Allred, Amanda Jenami and Heather Traeger

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Audit, Compliance and Ethics Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because the full Audit, Compliance and Ethics Committee constitutes a quorum of the Board, the meeting of the Committee is also being posted as a meeting of the Board out of an abundance of caution.

Minutes of the Audit, Compliance and Ethics Committee
September 20, 2024

The Audit, Compliance and Ethics Committee of the Board of Trustees of the Teacher Retirement System of Texas met on September 20, 2024, in the boardroom located on the Fifth Floor in the East Building of TRS' offices located at 1000 Red River Street, Austin, Texas, 78701.

Committee Members Present:

Ms. Brittny Allred, Chair
Mr. Michael Ball
Ms. Nanette Sissney
Mr. Robert H. Walls, Jr.
Mr. Elvis Williams

Other TRS Board Members Present:

Mr. David Corpus
Mr. John Elliott
Mr. James D. Nance
Mr. John R. Rutherford

Others who participated:

Brian Guthrie, TRS	Michael Clayton, State Auditor's Office
Caasi Lamb, TRS	Fabiienne Robin, State Auditor's Office
Jase Auby, TRS	Robert Pagenkopf, State Auditor's Office
Heather Traeger, TRS	Michelle Buss, Crowe LLP
Amanda Jenami, TRS	Koonal Bose, Accenture
Chris Cutler, TRS	
Chris Bowlin, TRS	
Elena Barreiro, TRS	
Michael Schaff, TRS	
Katie Linczer, TRS	
Jonathan O'Reilly, TRS	
Nathan Ward, TRS	
Mark Telschow, TRS	
Cui Rye, TRS	
Kristi Vorce, TRS	
Kristi Glasgall, TRS	
Brian Browder, TRS	
Katherine Farrell, TRS	
Suzanne Dugan, Cohen Milstein	

Audit, Compliance and Ethics Committee Chair, Ms. Allred, called the meeting to order at 8:01 a.m.

1. Call roll of Committee members.

Ms. Farrell called the roll. A quorum was present.

2. Approve minutes of July 2024 Audit, Compliance and Ethics Committee meeting – Committee Chair Ms. Brittney Allred.

On a motion by Mr. Elliott, seconded by Mr. Williams, the proposed minutes for the July 2024 Audit, Compliance and Ethics Committee meeting were approved as presented.

3. Receive State Auditor’s Office (SAO) presentations – Michael Clayton and Fabienne Robin:

- A. **Results of the Audit of TRS’ Fiscal Year 2023 Pension Liability**
- B. **Other Post Employment Benefits (OPEB) Liability Schedules**

Mr. Michael Clayton explained that these schedules are important to school districts in determining their share of Pension and OPEB liabilities for inclusion in their financial statements. He said the Governmental Accounting Standards Board (GASB) requires each employer to record their portion of that liability in their financial statements.

Ms. Fabienne Robin said they issued four reports in relation to these audits in early June. The four reports issued were: the opinion on the pension liability schedules, the opinion on the OPEB liability schedules, the report on controls and compliance and other matters, and the Legislative Audit Committee report. She said the opinions were unmodified opinions on the schedule for fiscal year 2023. The pension and OPEB schedules were materially correct and were presented in accordance with generally accepted accounting principles. She said the report on internal controls did not identify any material weakness or significant deficiencies in the controls, meaning that all major internal controls tested were operating effectively. She stated the Legislative Audit Committee report was issued per the standard process.

4. Receive SAO’s presentation on the planned financial audit of TRS’ Annual Comprehensive Financial Report (ACFR) for Fiscal Year 2024 – Michael Clayton and Robert Pagenkopf.

Mr. Robert Pagenkopf reviewed the purpose and scope of the audit of TRS’ Annual Comprehensive Financial Report for fiscal year 2024. He concluded by reviewing the proposed timelines. He said the report will be issued around November 20th.

5. Receive Crowe LLP’s presentation on the planned financial audit of TRS Investment company (TRICOT) – Kevin Smith and Michelle Buss, Crowe LLP.

Ms. Michelle Buss provided the audit plan for the TRICOT audit. She reviewed the team working on the audit, discussed the audit plan and timeline. She noted that Crowe planned to provide the final report at the December board meeting.

6. Receive an overview of TRS Compliance and reports including those related to ethics, fraud, conflicts of interest and investment policies – Heather Traeger, Chris Bowlin, Elena Barreiro, and Michael Schaff.

Mr. Chris Bowlin reported the quarterly testing focused on whether or not the IMD provided an investment integrity questionnaire (IIQ) for each of the new investments, whether or not they performed the hedge fund test for all relevant new investments; and whether or not all investments were within the policy limits. He said in addition to these IPS checks, they also performed quarterly checks on the restricted securities list as well as the securities lending monitoring. He said for this quarter there were no material findings and that there were no unreported IPS violations.

Ms. Heather Traeger reported on three 541(e)s conflicts reports relating to employees who have either a spouse or themselves with a relationship potentially tied to a TRS vendor. She reported three items came through the hotline. She said each were investigated in turn and appropriate action was taken where warranted.

Ms. Traeger was then joined by Compliance staff members, Elena Barreiro, and Michael Schaff, who provided an overview of the Ethics function, including policy, procedures, processes, and trainings.

7. Receive an overview of the new IIA Global Internal Audit Standards – Katie Linczer.

Ms. Linczer reported Texas Internal Auditing Act requires TRS to maintain an Internal Audit department that conforms with the Institute of Internal Auditors' Internal Professional Practices Framework, the red book, and the United States Government Accountability Office Government Auditing Standards, the yellow book. She said the IIA published changes to the red book in January 2024 and requires Internal Audit functions to implement them no later than January 9, 2025. She reported that, with the support from the Board and senior management, TRS Internal Audit is already following leading practices in line with the updated standards so the impact of implementation should be minimal. She reviewed the Domain III, Governing the Internal Audit Function.

8. Consider recommending to the Board of Trustees adoption of the following – Amanda Jenami:
A. Proposed revisions to the Audit Charter;

Ms. Jenami reviewed the proposed revisions to the Audit Charter. She noted an important addition to the Charter i.e., the Chief Audit Executive will develop and implement a strategy for the internal audit function and review the internal audit strategy with the Board and senior management periodically.

On a motion by Ms. Sissney, seconded by Mr. Walls, the committee unanimously voted to recommend to the Board of Trustees adoption of the proposed revisions to the charter, as presented by staff.

B. Internal Audit's Strategic Plan and Proposed Performance Objectives for Fiscal Year 2025;

Ms. Jenami reported the new requirement of the red book is to have a strategic plan. She noted Internal Audit already had a strategic plan. She said there is a proposed change to the vision to

now read: “to serve as a trusted advisor and essential strategic partner, enhancing the efficiency and effectiveness of TRS operations.” Ms. Jenami provided further review of the strategic plan.

Ms. Jenami reviewed how the proposed performance objectives are also required by the standards. She said the KPIs are good but proposed to increase some of the performance targets. She reviewed the goals and KPIs that saw an increase in the targets.

On a motion by Mr. Williams, seconded by Mr. Walls the committee unanimously voted to recommend to the Board of Trustees the Internal Audit strategic plan and proposed performance objectives for fiscal year 2025, as presented by staff.

C. Proposed Audit Plan for Fiscal Year 2025.

Ms. Jenami provided an overview of the Audit Plan developed using a risk-based approach. She reviewed the audits or projects planned for fiscal year 2025, such as the annual cyber control audit and a safety and physical security audit at Alpha.

On a motion by Mr. Williams, seconded by Mr. Walls the committee unanimously voted to recommend to the Board of Trustees the adoption of the audit plan for FY 2025, as presented by staff.

9. Receive an update on Internal Audit’s Data Analytics Program – Jonathan O’Reilly.

Mr. Jonathan O’Reilly delivered an update on Internal Audit’s data analytics program. He provided a highlight of the projects from the year. The first he covered was the Insulin Cost Sharing Audit that resulted in 1,200 members being issued refund checks totaling \$283,000. He reported this project’s success is its repeatability and how the algorithm is now run on a quarterly basis. Another project he reviewed was the dental/vision independent testing. He said they tested enrollment simulating different scenarios. He concluded by reviewing the projects performed for pension benefits.

10. Receive Internal Audit reports.

A. Review of Risk Parity Portfolio Operations – Nathan Ward and Mark Telschow.

Mr. Nathan Ward noted the risk parity portfolio makes up approximately 7 percent of the Trust, two-thirds managed internally, and one-third managed through external managers. He reported this was a very positive audit for the team. He provided general observations that the small detail-oriented team of three had a strong grasp of strategy implementation, a strong ability to build models that are automated and have strong programming skills as well. He said the three recommendations are to only enhance the solid controls already in place. For liquidity monitoring and model change management, he recommended that the team further enhance the model documentation and alignment of the monitoring controls in place. And the third recommendation is for IMD as a whole to develop centralized model governance practices.

Mr. Mark Telschow, providing the management response, agreed with the recommendations and will complete work on the liquidity item by December 31, 2024, and the model governance item by March 31, 2025.

B. Review of Contract Oversight (IMD) – Amanda Jenami, Cui Rye, and Kristi Vorce.

Ms. Jenami provided an overview as to what is contract management. She said the scope of the audit were activities that happened between November 2023 through June 2024. She said for the goods and services contracts, IMD has a total of 154 contracts with a total of \$55 million annual expenditures. She reported the process in place is exemplary, it requires and ensures that contract management is effective, efficient, and compliant with all requirements. Ms. Rye reviewed processes and the positive audit results. She noted that 15 percent of the contracts tested did not have a risk assessment, and 46 percent of the risk assessments were not completed within the team-specified time frame of 10 business days following contract execution. She reported the recommendation was for management to evaluate the target timeline to ensure it is achievable.

Ms. Kristi Vorce provided management's response agreeing with Audit's recommendation to evaluate the target timeline for completing contract risk assessments. She reported that the team had extended to the timeline to 15 business days back in August and that they have met or exceeded that deadline on all contracts executed since.

C. Update on Prior Audit Recommendations – Jonathan O'Reilly.

Mr. O'Reilly reviewed the dashboard of prior audit recommendations noting the key changes were management implementing recommendations and Internal Audit's validation as in sync with management's implementation pace.

Ms. Allred announced, without objection, that the committee would take agenda item 11 next.

11. Discuss or consider Internal Audit and TRS Compliance administrative reports and matters related to governance, risk management, internal control, compliance violations, fraud, regulatory reviews or investigations, fraud risk areas, audits for the annual internal audit plan, or auditors' ability to perform duties – Robert H. Walls, Jr., Amanda Jenami and Heather Traeger

Ms. Jenami reported on Internal Audit's Fiscal Year 2024 key performance measures. She noted that Internal Audit met or exceeded all the annual performance targets for the year.

Ms. Allred announced, without objection that the committee would take up agenda items 10 D and 10 E.

**10D. Review of Cyber Controls – Chris Cutler, Kristi Glasgall; Koonal Bose, Accenture
10E. Review of Cybersecurity Response Program – Brian Browder and Kristi Glasgall.**

At 9:49 a.m., Ms. Allred announced the committee would go into executive session under the following Agenda Item and sections of the Government Code: Item 10(D) under Section 551.076,

551.089 and 551.071 to discuss the review of cyber controls, and to consult with legal counsel as needed; Item 10(E), under Section 551.076, 551.089 and 551.071 to discuss the review of the Cybersecurity Response Program and to consult with legal counsel as needed.

At 10:00 a.m., Ms. Allred reconvened the committee in open meeting.

There being no more business before the Audit, Compliance and Ethics Committee, the committee adjourned at 10:00 a.m.

APPROVED BY THE AUDIT, COMPLIANCE AND ETHICS COMMITTEE OF THE BOARD
OF TRUSTEES OF THE TEACHER RETIREMENT SYSTEM OF TEXAS ON THE ____
DAY OF DECEMBER 2024.

Brittny Allred
Chair, Audit Compliance and Ethics Committee
Board of Trustees
Teacher Retirement Systems of Texas

Date



Internal Audit

**Audit, Compliance & Ethics
Committee Meeting
Dec. 5, 2024**





Audit of the Fiscal Year 2024 Financial Statements of the Teacher Retirement System of Texas

Robert Pagenkopf, Managing Senior Auditor
Michael Clayton, Audit Manager



Presentation to the TRS Board of Trustees

December 5, 2024

Objectives and Scope

Basic Financial Statements

(System ACFR)

Report on Internal Controls

- To obtain reasonable assurance about whether the basic financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

- To report on any significant deficiencies and material weaknesses in internal control over financial reporting and compliance with laws, regulations, and provisions of contracts or grant agreements based on an audit of financial statements performed in accordance with the standards applicable to financial audits contained in *Government Auditing Standards*.



Presentation to the TRS Board of Trustees

December 5, 2024

Audit Results - Deliverables

We issued the following deliverables related to this audit:

- We issued an **Unmodified Opinion**, dated November 20, 2024.
- We also issued a Report on Internal Control dated November 20, 2024.
- Report to the Legislative Audit Committee. This report was posted to the State Auditor's Office website.

- In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the major enterprise fund and the aggregate remaining funds information, consisting of the fiduciary funds of the System, as of August 31, 2024, and the respective changes in financial position, and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.
- No material weaknesses or significant deficiencies were noted in the Report on Internal Control or communicated to System management.



Presentation to the TRS Board of Trustees

December 5, 2024

Audit Results - Emphasis of Matters

Our opinion included two emphasis of matters paragraphs.

Our opinion was not modified with respect to these matters.

- As discussed in Note 1, the financial statements present only the System and do not purport to, and do not, present fairly the financial position of the State of Texas as of August 31, 2024, the changes in its financial position, or, where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.
- As discussed in Note 3, the financial statements include investments valued at approximately \$110.7 billion as of August 31, 2024, whose fair values have been estimated by management in the absence of readily determinable fair values.



Presentation to the TRS Board of Trustees

December 5, 2024

Required Communications

Item:	Comment:
Significant Risks	<ul style="list-style-type: none">Management overrides of controlExistence and valuation of alternative investmentsValuation of health care claims payable
Changes in Significant Accounting Practices	None noted.
Significant Unusual Transactions	None noted.
Significant Difficulties Encountered During the Audit	None noted.
Disagreements with Management	None noted.
Corrected and Uncorrected Misstatements	None identified.
Fraud or Noncompliance with Laws and Regulations, Contracts or Grant Agreements	None identified.
Communication of Deficiencies in Internal Control	No reportable deficiencies identified.



Presentation to the TRS Board of Trustees

December 5, 2024

Thank You

**We want to thank the various
System Divisions for their
cooperation, assistance, and
patience throughout the audit.**

- Executive Division
- Investment Management
- Financial
- Benefit Services
- Health
- Legal and Compliance
- Information Technology



Smart decisions. Lasting value.TM

TRS Investment Company (TRICOT)

Fiscal Year Ended August 31, 2024

Audit Committee Presentation

Kevin W. Smith, Partner

December 5, 2024



Results of Services

Unmodified (“Clean”) Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Teacher Retirement Investment Company of Texas, Ltd., as of August 31, 2024, and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Results of Services

Emphasis of Matter

As discussed in Note 1, the financial statements present only TRICOT and do not purport to, and do not, present fairly the financial position of Teacher Retirement System of Texas or the State of Texas as of August 31, 2024, the changes in its financial position, or, where applicable, its cash flows for the year then ended, in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Results of Services

Internal Control - No material weaknesses or significant deficiencies in internal control reported or communicated to management.

Audit Differences – none.

Required Communications

Topic	Comments
Changes in accounting principles	None noted
Other information included in annual reports	None noted
Circumstances that affect the form and content of audit report	None noted
Disagreements with management on financial accounting and reporting	None noted
Corrected or uncorrected misstatements	Corrected misstatements – None identified Uncorrected misstatements – None identified.
Major issues discussed with management prior to engagement	None noted
Consultations with other accountants	None noted
Difficulties in performing the audit	None noted
Material errors, irregularities or illegal acts	None identified
Material weaknesses in internal control	None identified
Representation letter	Provided to Crowe prior to release of AFS
Independence communications	No impairments identified
Significant Estimates	Allocation of expenses

Independence Communications

- We wish to report that we are not aware of any relationship between Crowe LLP and TRICOT that, in our professional judgment, may reasonably be thought to impair our independence.
- Accordingly, and relating to our examination of the financial statements of TRICOT as of August 31, 2024, and for the year then ended, we are independent certified public accountants with respect to TRICOT within the meaning of the applicable pronouncements of the American Institute of Certified Public Accountants' Code of Professional Conduct, its interpretations and rulings.

Questions?



Thank You

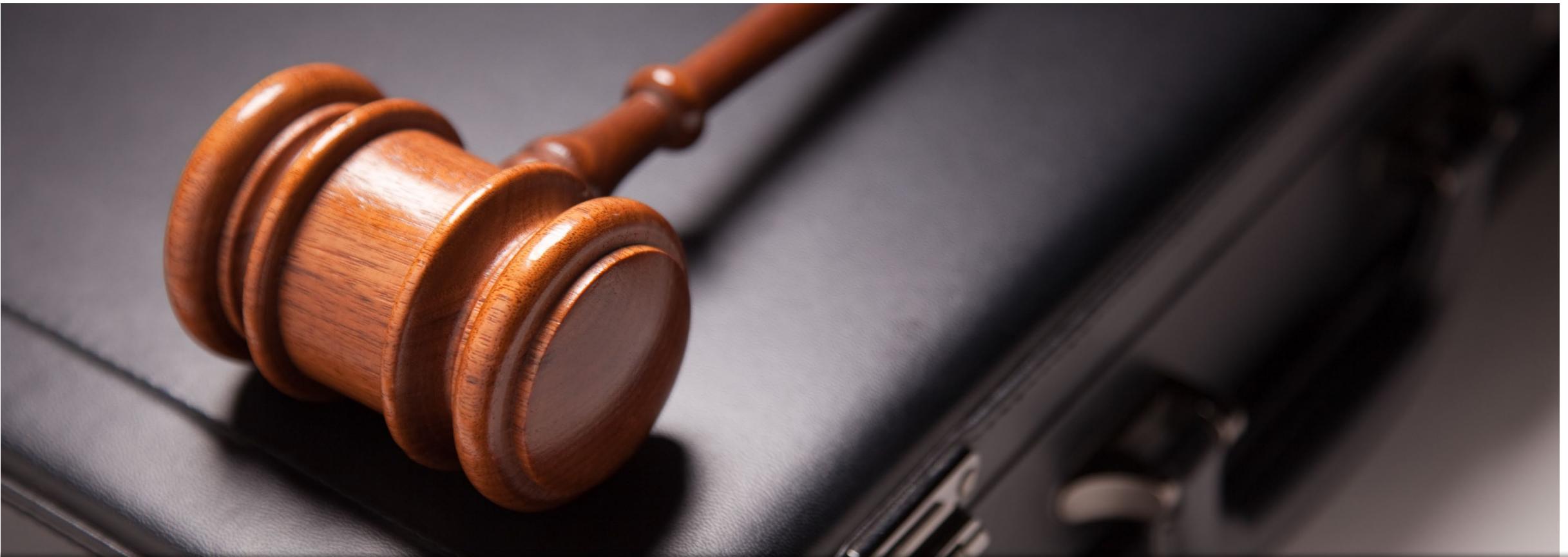
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TRS Compliance: Ethics Overview

December 2024

Heather Traeger and Chris Bowlin

Quarterly Investment Compliance Testing
Investment Policy Statement (IPS), Securities Lending Policy (SLP), and Proxy Voting Policy
Quarter ending September 30, 2024

Procedures Performed	Test Results
<p><u>Business Objective 1: Board Reports</u></p> <p>All required information is reported to the TRS Board of Trustees</p> <ul style="list-style-type: none"> • Obtain evidence that all requirements reported to Board of Trustees • Trace sample information included in Board reports to supporting documentation 	<ul style="list-style-type: none"> • All reporting requirements were met • Documentation provided supported information tested
<p><u>Business Objective 2: Investment Selection and Approval</u></p> <p>Investments made are within delegated limits and established selection criteria</p> <ul style="list-style-type: none"> • Obtain evidence that Investment Integrity Questionnaires (IICs) were received prior to investment authorization and deal closing • Obtain evidence from the investment teams that the CIO conditional approval was addressed after the IIC • Obtain evidence of prudence or recommendation letters where required • Obtain evidence that all counterparty requirements were met • Obtain evidence that new investments in emerging managers met requirements • Obtain evidence that approved investments were within policy limits 	<ul style="list-style-type: none"> • Each investment tested had a completed questionnaire prior to IIC date • CIO conditional approvals during this period were documented in the IIC minutes and the required actions were completed after the IIC • No prudence letters were required for this period • All counterparty tests met policy requirements for the tested period • All investments met policy requirements for the tested period • All investments made during the quarter were tested and found to be in compliance with approval limits
<p><u>Business Objective 3: Other (IPS, SLP, other reporting)</u></p> <p>Risk limits are followed for other investment and proxy voting policies and procedures were followed</p> <ul style="list-style-type: none"> • Obtain senior management disclosure about known compliance violations • Obtain evidence that TRS sec. lending program complied with policy guidelines • Obtain evidence that the proxy voting committee complied with the proxy voting policy, including maintaining a voting record, documenting exceptions and reviewing TRS' service provider guidance. 	<ul style="list-style-type: none"> • Obtained quarterly compliance certification from IMD IIC and Legal • No security lending violations were identified • All proxy voting policy requirements were met, and documentation provided supported the policies tested

Legend:



Significant to TRS



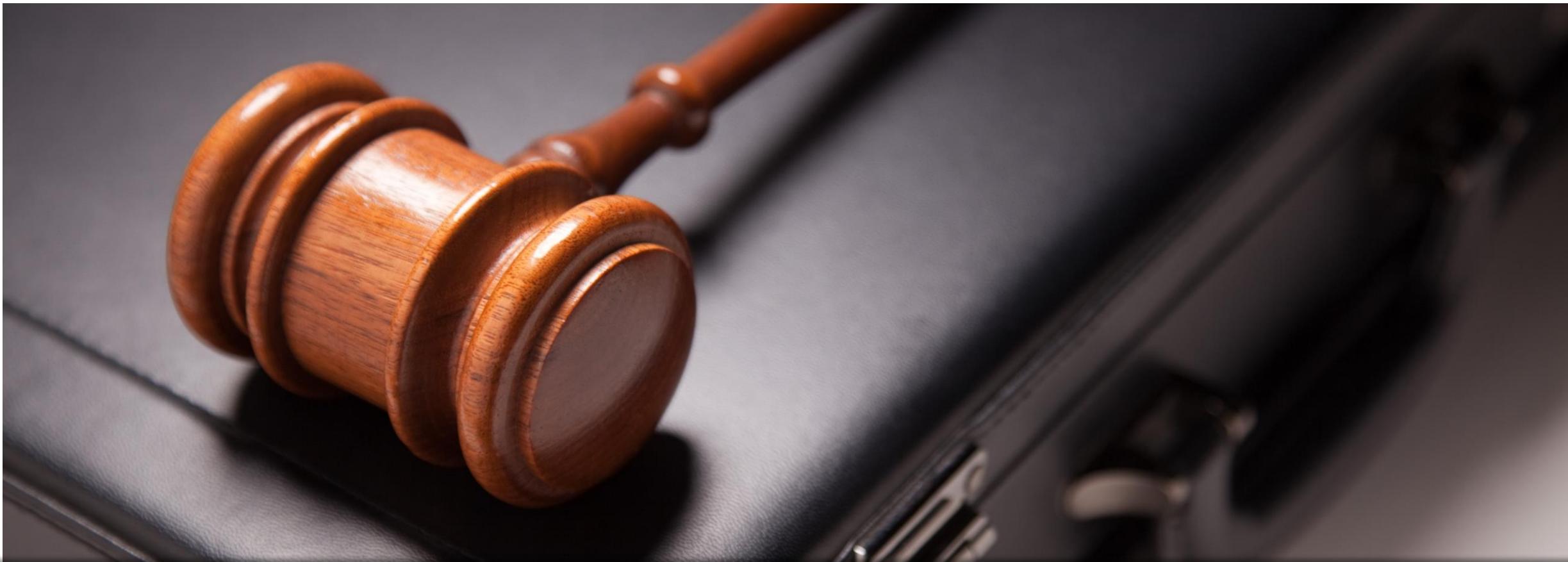
Significant to Business Objectives



Other Reportable Exception



Positive Test Result/ No Exception



TRS Ethics & Compliance Overview: Data, Risk & Other Compliance Functions

Dec. 5, 2024

Data, Compliance & Risk, MaryEllen O'Neill



Agenda



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Data, Risk & Other Compliance Functions

- Data Governance
- Fraud Risk Management
- Policy Management
- Other



Risk Management - Data Governance

Key Points of SB 475 (incorporated into 2054.137):

- Establish a data governance program to identify and exercise authority and management over data assets.
- Ensure records management programs applies to all data storage media.
- Improve control and security of information for managing and securing data in accordance with state privacy laws and data privacy classifications.
- Improve information management to increase information security, uncover fraud and waste, and verify compliance with applicable laws.
- Ensure contracts with a vendor authorized to access, transmit, use, or store data meet the security controls proportionate with the agency's risk based on the sensitivity of the agency's data.



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Risk Management - Data Governance



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- In addition to the Texas requirements on the previous slide, there are federal and contractual requirements for data governance and privacy TRS must adhere to.
- TRS has a DMO team - EDGC- to assure compliance.
- To Date, as shared:
 - Developed Data Maps, Data Domains, Business Glossary, and Member Data Request Procedures.
 - Reviewed, supported, and continue to oversee M365 governance.
 - Simplified TRS' Data Classification.
 - Helped develop TRS' new project governance process.
- In Progress:
 - Implementing Data Inventory tool.
 - Data Maturity Assessment.



Risk Management - ERM



Enterprise Risk Management (ERM) function is part of Legal and Compliance

- Risk Oversight Committee
- Fraud Risk
 - Regulatory, Compliance & Litigation
 - Ethics & Fraud Prevention
- Hosted 13th Annual Public Pension Fund ERM Peer Group Forum.



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Risk Management - Fraud Risk Management



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- Fraud Risk Management - Solutioning
 - Safety Tool: Limited Purpose-MyTRS
 - Enterprise-Wide Solutioning
 - Identified risks across the enterprise, especially shared risks
 - Identified controls in place and their impact on identified risks
 - Evaluated the identified risks
 - Normalizing risk rating
 - Identify and implement solution(s)
- Fraud Risk Management - Member Communication
 - Quarterly: Fraud prevention communication in member newsletter.





Risk Management - Policy Management

Transitioned to Ethics & Compliance September 2023 with the following goals:

- Provide a consistent and timely process for policy creation, review, communication, training, and retirement.
- Ensure timely notification of policy changes to employees.
- Ensure employees receive appropriate training in coordination with Organizational Excellence and Communications.
 - Master Policy Administration Schedule
 - Master Training Administration Schedule



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Compliance from the Organizational Perspective – Other Compliance Functions

- Other Agencywide Compliance Function
 - Project Governance
 - IT Project Support
- Employee Engagement
 - Compliance Week
 - Privacy Week
 - Bi-Monthly Investment, HIPAA, Ethics Newsletters
- Committee / Group Memberships
- Peer Engagement & External Outreach
 - National Association of Public Pension Attorneys
 - Council of Public Funds Compliance Officers
 - Chief Compliance Officer Roundtables
 - Conference Participation-both speaking and attending
 - ERM Peer Meetings



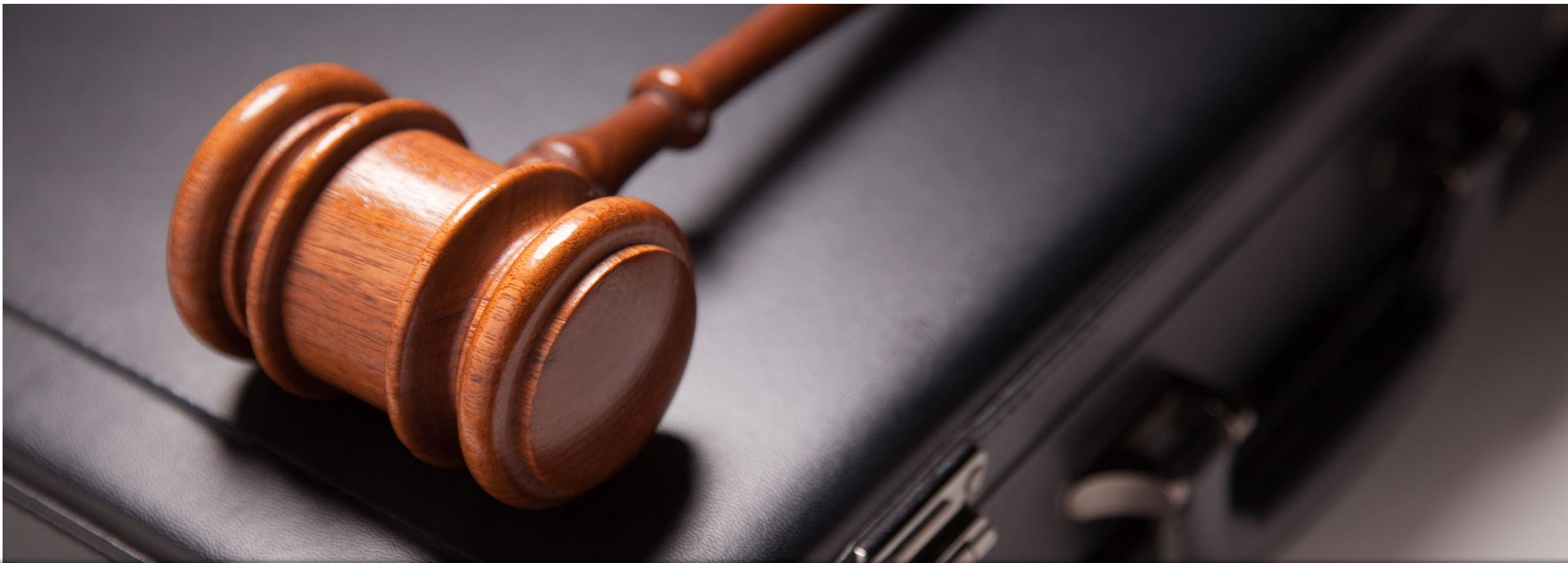
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Enterprise Risk Management Update

December 5, 2024

Michelle Pagán
Director, Enterprise Risk, Strategy & Performance

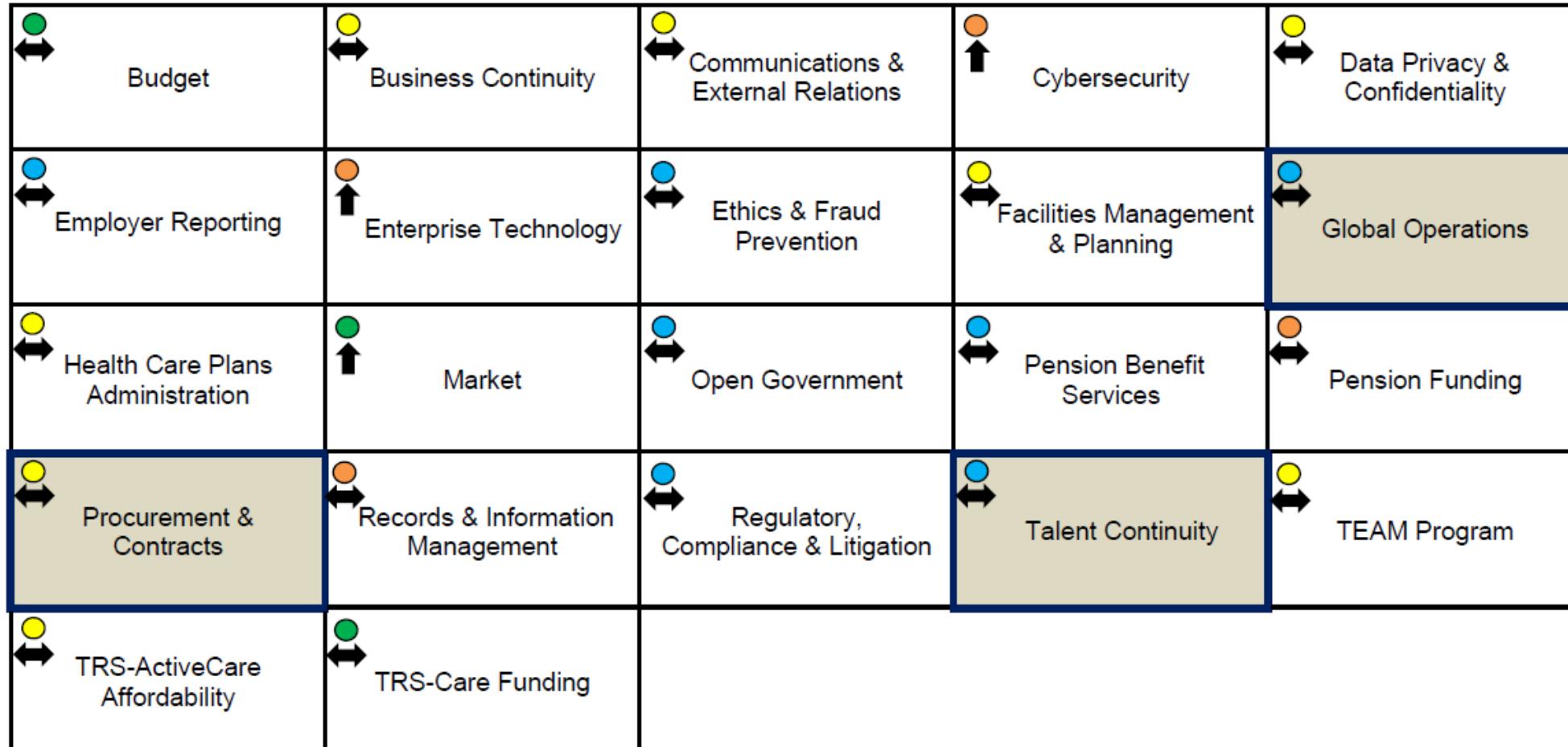


Summary of Changes – Enterprise Stoplight Report

Risk Level Color/Trending Changes	September 2024	December 2024
Global Operations	● ↑	● ↔
Procurement & Contracts	● ↔	● ↔
Talent Continuity	● ↔	● ↔



Enterprise Stoplight Report* – December 2024



RISK CATEGORY LEVEL - Threat to Achieving TRS Goals & Objectives

HIGH ELEVATED CAUTION GUARDED LOW

EXPECTED RISK CATEGORY TREND - NEXT 12-24 MONTHS

INCREASE DECREASE NO CHANGE

*Risk category ratings are based on a point in time and independent of other risk categories.



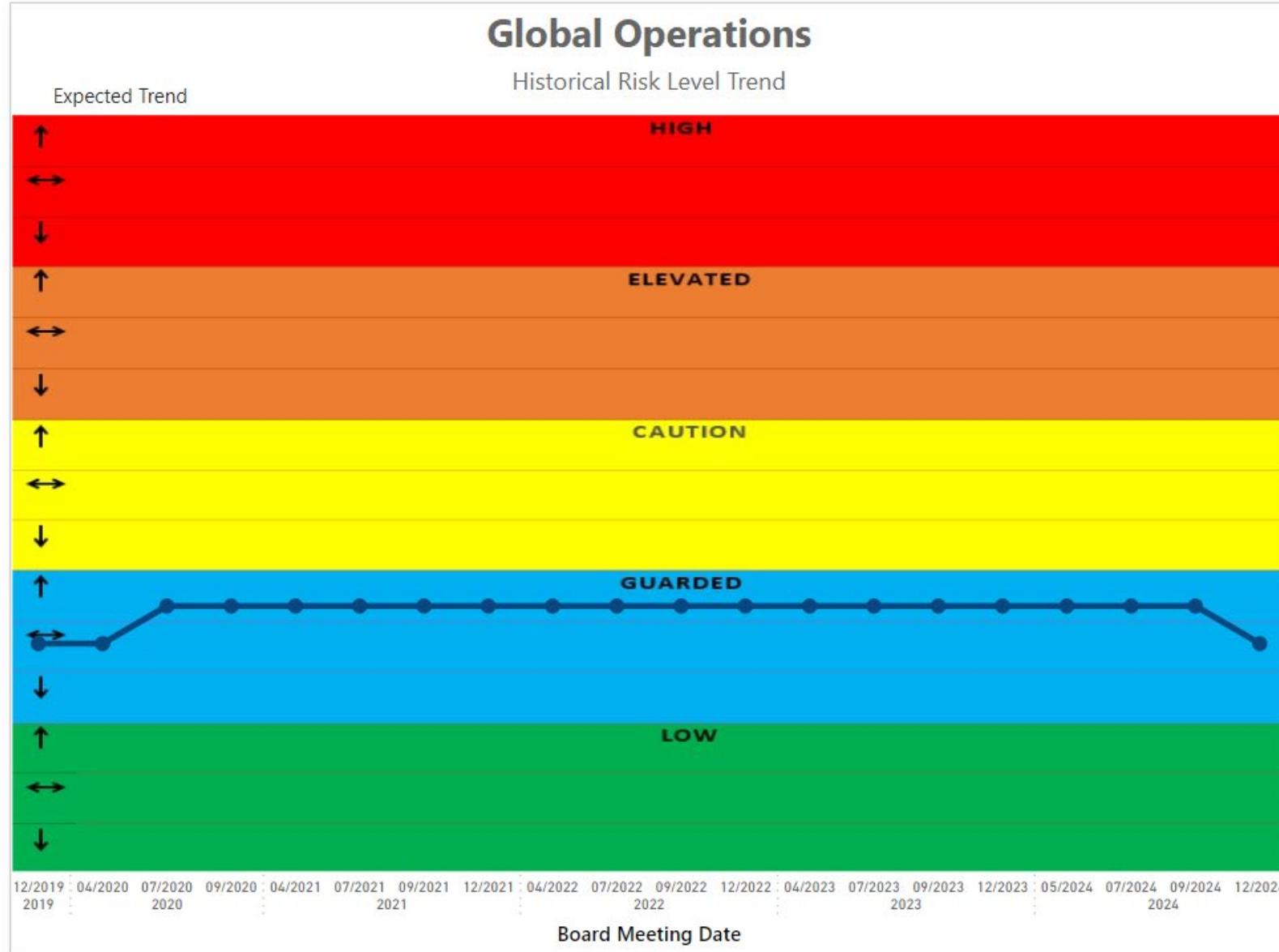
Risk Trending Dashboard – December 2024



Enterprise Risk Categories December 2024		Current Risk Level	Expected Trend 12-24 months	Historical Trend
Budget		Low	Stable	
Business Continuity		Caution	Stable	
Communications & External Relations		Caution	Stable	
Cybersecurity		Elevated	Increase	
Data Privacy & Confidentiality (i.e., Information Security & Confidentiality)		Caution	Stable	
Employer Reporting		Guarded	Stable	
Enterprise Technology		Elevated	Increase	
Ethics & Fraud Prevention		Guarded	Stable	
Facilities Management & Planning		Caution	Stable	
Global Operations		Guarded	Stable	
Health Care Plans Administration		Caution	Stable	
Market		Low	Increase	
Open Government		Guarded	Stable	
Pension Benefit Services		Guarded	Stable	
Pension Funding		Elevated	Stable	
Procurement & Contracts		Caution	Stable	
Records & Information Management		Elevated	Stable	
Regulatory, Compliance & Litigation		Guarded	Stable	
Talent Continuity		Guarded	Stable	
TEAM Program		Caution	Stable	
TRS-ActiveCare Affordability		Caution	Stable	
TRS-Care Funding		Low	Stable	



Risk Trending Dashboard – Trend Chart



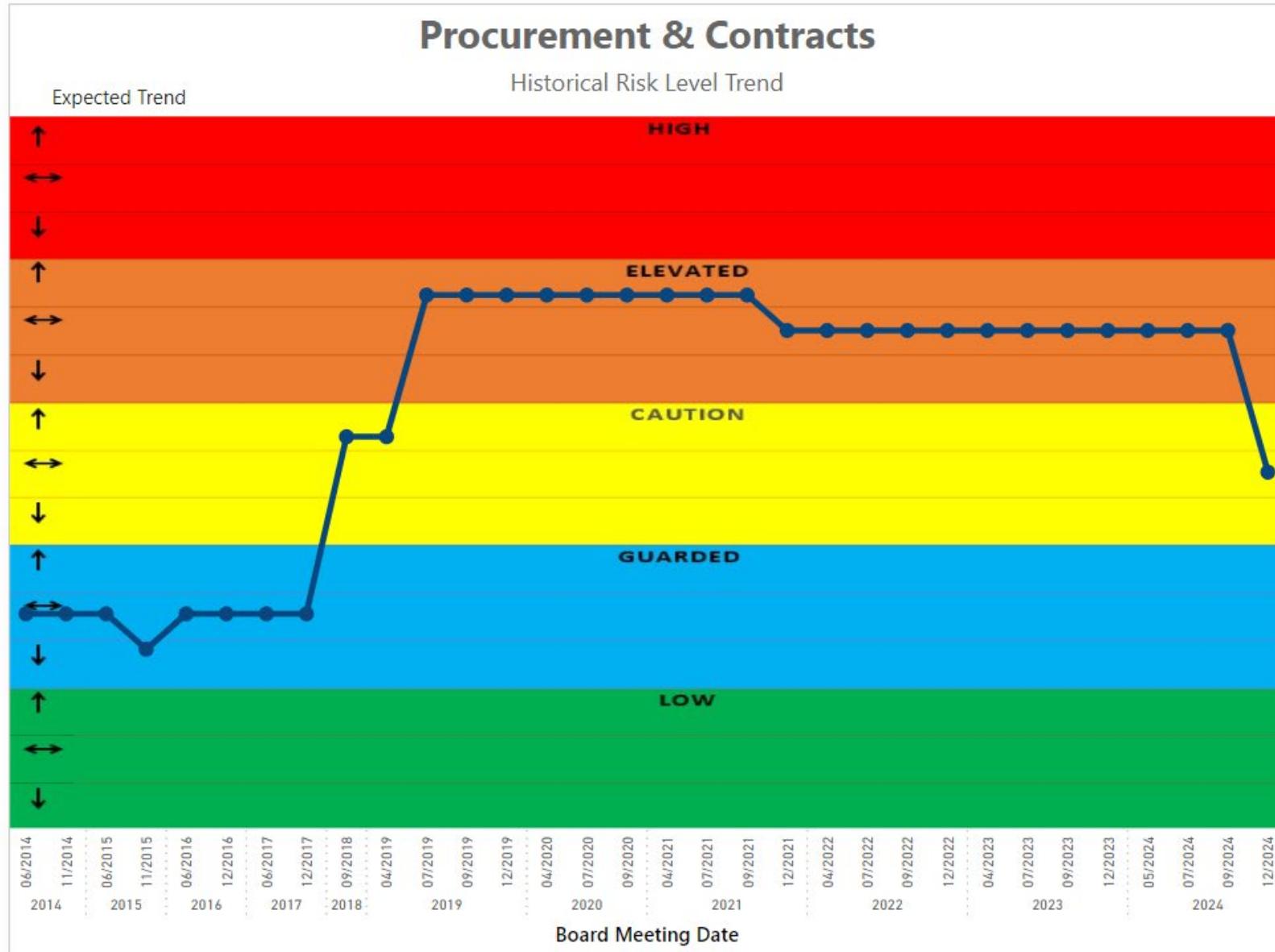
Current Risk Rating
Guarded

Expected Trend Next 12-24 Months
Stable

Last Risk Review
December 2024



Risk Trending Dashboard – Trend Chart



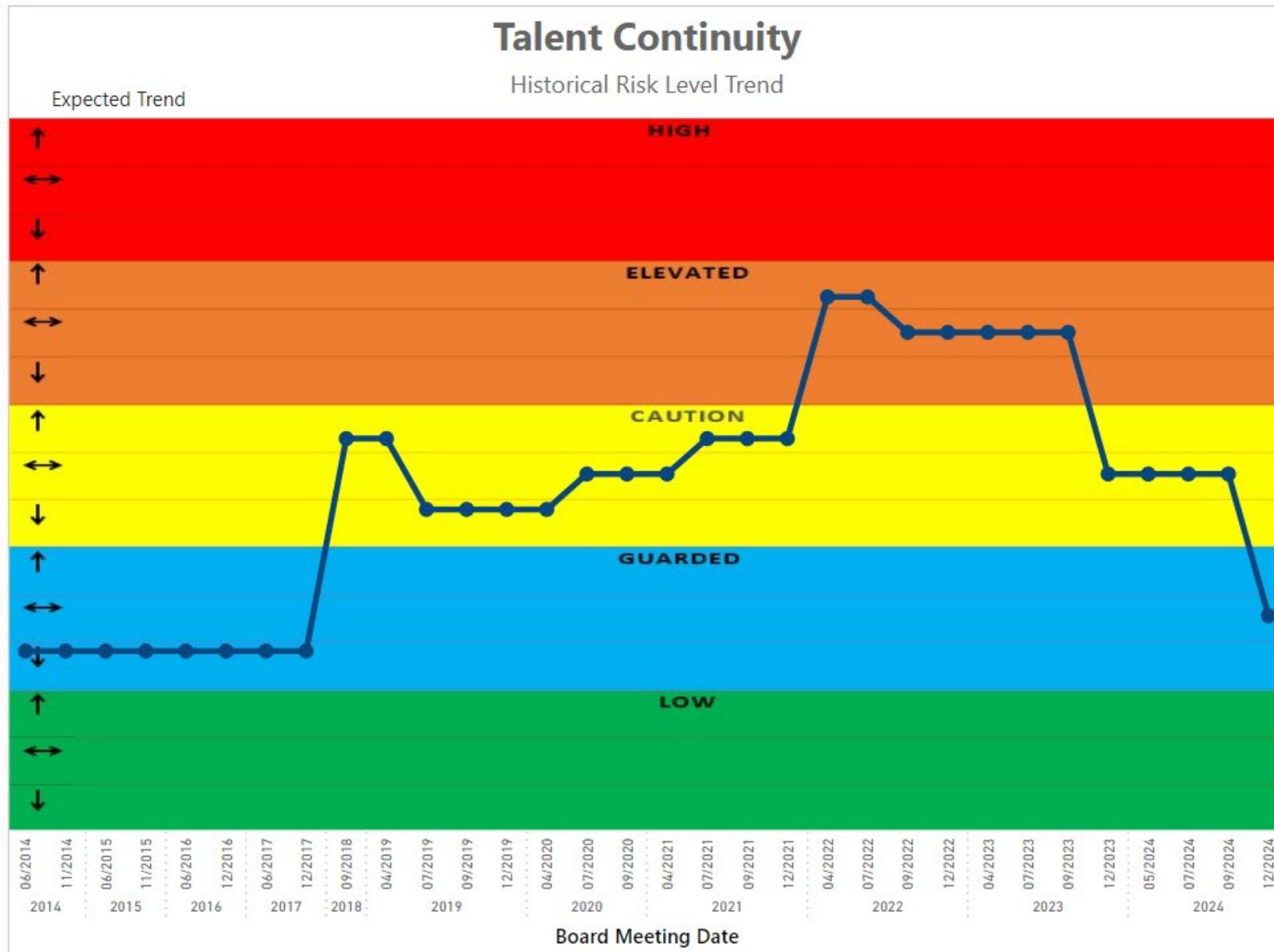
Current Risk Rating
Caution

Expected Trend Next 12-24 Months
Stable

Last Risk Review
December 2024



Risk Trending Dashboard – Trend Chart



Current Risk Rating
Guarded

Expected Trend
Next 12-24 Months

Last Risk Review **December 2024**



Internal Audit Review of Emerging Manager Program

Dec. 5, 2024
Presented By:
Syed Israr and Kirk Sims



Review of Emerging Manager Program

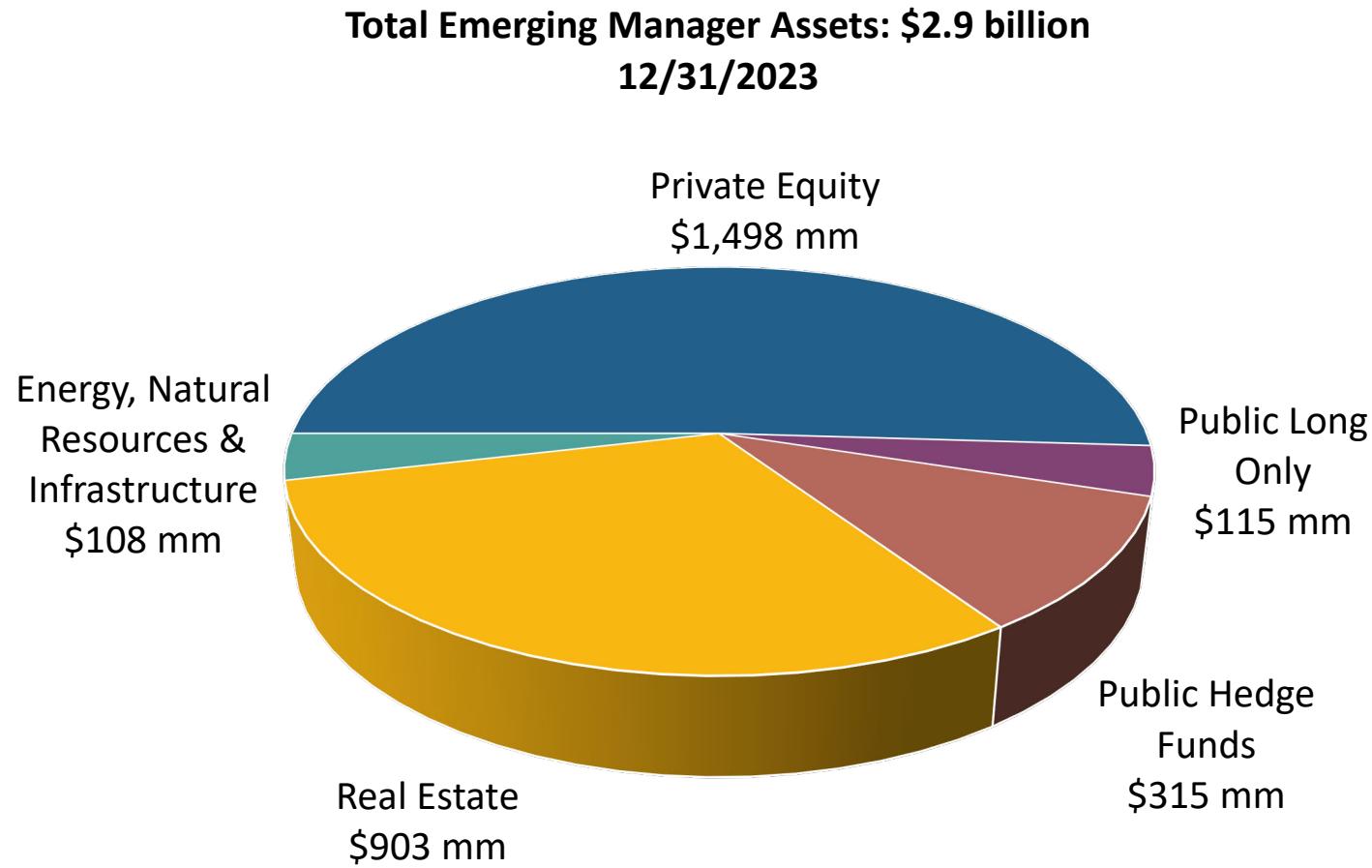


Emerging Manager Program

- ✓ \$2.9 Billion
- ✓ 1.5% of Trust

Audit Scope

- ✓ July 2022 – June 2024
- ✓ Internal and external oversight and investment activities
- ✓ Key processes and controls



Source: MOPAR, 12/31/2023



Review of Emerging Manager Program



AUDIT CONCLUSION

The Teacher Retirement System's (TRS) Emerging Manager Program (EMP) operations include sufficient controls to provide reasonable assurance that Emerging Manager (EM) portfolio objectives are accomplished effectively, efficiently and in compliance with TRS Investment Policy Statement and relevant procedures.

Key controls include:

- Investment Policy Statement
- Internal Investment Committee
- External manager diligence & approval procedures



Executive Summary



Emerging Manager Program Business Objectives:

1. Generate positive alpha via investments with Emerging Managers (EM)
2. Establish EM relationships that “graduate” to become long-term strategic partnerships for the trust

<u>Positive Results</u>	<u>Recommendations</u>	<u>Management Response</u>
<ul style="list-style-type: none">• Approval process for new investments• Cash movement review & authorization• Valuation oversight procedures• Monitoring and reconciliation of external manager fees• Investment diligence & manager oversight procedures	N/A	N/A



Project Team

Investment Audit Services Team



Syed Israr
Senior Investment Auditor



Katie Linczer, CPA, CIA, CRMA
Senior Investment Auditor



Nathan Ward, CFA
Senior Investment Auditor



Julie Toler, CFA, CFP®, CIA, CRMA
Investment Audit Services Director



Appendix: Audit Objective, Methodology and Audit Scope

Appendix: Audit Objective, Methodology and Audit Scope



AUDIT OBJECTIVE

Determine whether activities related to the Emerging Manager Program include sufficient controls to ensure activities are managed and conducted effectively, efficiently and in compliance with relevant policies, guidelines and procedures.



METHODOLOGY

- ✓ Identify key risks and controls
- ✓ Review Investment Policy Statement
- ✓ Interview management and staff
- ✓ Review TRS processes and documents



AUDIT SCOPE

- ✓ July 2022 – June 2024
- ✓ Activities and reporting related to Emerging Manager Program operations



Internal Audit

Internal Audit Quality Assurance Improvement
Program (QAIP) Self-Assessment

Dec. 5, 2024

Presented By:
Amanda Jenami and Kathey Mitchell

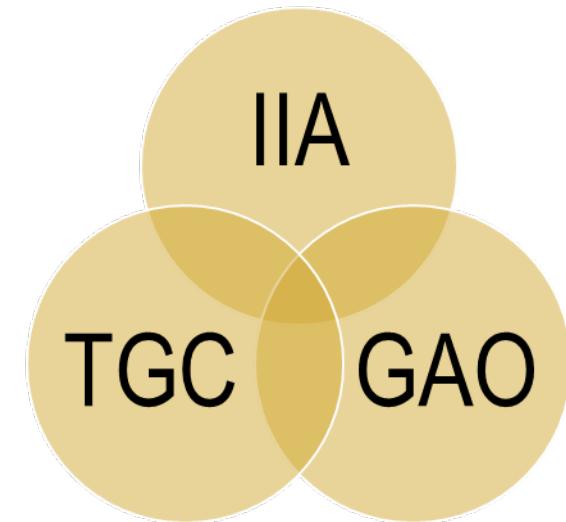
Background





Criteria: Quality Assurance Review

- Texas Internal Auditing Act (Texas Government Code, Chapter 2102)
- The Institute of Internal Auditors (The IIA) International Professional Practices Framework – The ‘Red’ Book
- United States Government Accountability Office Government Auditing Standards commonly referred to as Generally Accepted Government Auditing Standards (GAGAS) – The ‘Yellow’ Book





Criteria: Attribute Standards (AS) and GAGAS



The Chief Audit Executive (CAE) must develop and maintain a quality assurance and improvement program that covers all aspects of the internal audit activity.

AS 1310: The QAIP must include both **internal** and external assessments.

AS 1311: Internal assessments must include **ongoing monitoring** of the performance of the internal audit activity and **periodic self-assessments** or assessments by other persons within the organization with sufficient knowledge of internal audit practices.

GAGAS 5.43: The audit organization should perform monitoring procedures that enable it to assess compliance with professional standards and quality control policies and procedures for GAGAS engagements.

GAGAS 5.44: The audit organization should analyze and summarize the results of its monitoring process at least annually, with identification of any systemic or repetitive issues needing improvement, along with recommendations for corrective action.

Results





Executive Summary



Overall Conclusion

- Internal Audit ***generally conforms*** with The IIA Standards and Code of Ethics and receives a ***pass*** rating for conformance with the generally accepted government auditing standards. These ratings are the highest possible ratings.
- Internal Audit identified one opportunity for improvement as described in the Results and Recommendations section of the report.



Recommendation and Management Response



Recommendation	Management Response	Target Implementation Date
Internal Audit should develop, document, communicate, and implement specific and direct policies and procedures that address all components of the GAGAS 5.24 requirement regarding consultations between engagement team members.	The Internal Audit Management Committee appreciates the level of diligence and professionalism displayed by the Internal Audit team throughout this review. The Internal Audit Management Committee concurs with this recommendation. While difficult or contentious issues arising among engagement team members are rare in occurrence and adequately resolved through consultations with members of the Internal Audit Management Committee, we concur that including specific language in our written procedures on the need to document these consultations and how they are documented will enhance our process. We plan to revise our audit procedures manual by adding language on how these consultations are documented.	March 31, 2025



Appendix: Methodology and Scope; Areas of Focus



Methodology and Scope



- Reviewed professional auditing standards and The IIA Code of Ethics.
 - Reviewed Internal Audit's charter, policies and procedures, annual audit plans, and other relevant documents.
 - Reviewed and evaluated audit documentation for assurance and consulting engagements.
 - Interviewed the CAE and Audit Team Directors.
-
- Utilized the State Agency Internal Audit Forum (SAIAF) Manual
 - Scope of Engagement: Fiscal Year 2024



Areas of Focus



Red Book Standards	Area of Focus
Standard 1000	Purpose, Authority and Responsibility
Standard 1100	Independence and Objectivity
Standard 1200	Proficiency and Due Professional Care
Standard 1300	Quality Assurance and Improvement Program
Standard 2000	Managing the Internal Audit Activity
Standard 2100	Nature of Work
Standard 2200	Engagement Planning
Standard 2300	Performing the Engagement
Standard 2400	Communicating Results
Standard 2500	Monitoring Progress
Standard 2600	Communicating the Acceptance of Risks



Areas of Focus



Yellow Book Standards	Area of Focus
Requirement 5.02	Quality Control and Assurance
Requirement 5.04	System of Quality Control
Requirement 5.05 – 5.06	Leadership Responsibilities for Quality within the Audit Organization
Requirement 5.08 – 5.09	Independence, Legal and Ethical Requirements
Requirement 5.12	Initiation, Acceptance and Continuance of Engagements
Requirement 5.15 – 5.16	Human Resources
Requirement 5.22 – 5.25	General
Requirement 5.36 – 5.37	Supervision
Requirement 5.42 – 5.46	Monitoring of Quality



Questions



Internal Audit

FY2024 Internal Audit Annual Report

Dec. 5, 2024
Presented By:
Julie Toler, CFA, CFP®, CIA, CRMA



FY2024 Internal Audit Annual Report



The Internal Audit Annual Report provides information on the audit plan, assurance, consulting, and advisory projects completed, and other Internal Audit activities in fiscal year 2024. It meets the annual reporting requirement of the Texas Internal Auditing Act (Texas Government Code, Chapter 2102.009 and Texas Government Code, Sections 2102.015 and 2102.0091).

This report follows the State Auditor's Office reporting guidelines and includes the following:

- I. Compliance With Texas Government Code, Section 2102.015: Posting the Internal Audit Plan, Internal Audit Annual Report and Other Audit Information on Internet Website
- II. Revised Internal Audit Plan for Fiscal Year 2024
- III. Consulting and Nonaudit Services Completed
- IV. External Quality Assurance Review (Peer Review)
- V. Internal Audit Plan for Fiscal Year 2025
- VI. External Audit Services Procured in Fiscal Year 2024
- VII. Reporting Suspected Fraud and Abuse

2024 YEAR IN REVIEW



INDEPENDENT • OBJECTIVE • ASSURANCE • CONSULTING

WHO WE ARE:

13 Auditors

4 Business Intelligence Analysts

1 Administrative Professional

WHAT WE BRING:

HIGHLY CREDENTIALED PROFESSIONALS:

3 Certified Public Accountants

4 Certified Information Systems Auditors

7 Certified Internal Auditors

2 Certified Fraud Examiners

2 Certified Information Systems Security Professionals

2 Chartered Financial Analysts

8 MBAs

2 PhDs

130 130 years total audit experience

108 108 years total data analysis experience

60 60 years total IT experience

53 53 years total investment experience

DIVERSE BACKGROUNDS:

AUDIT EXPERIENCE



WITH
BIG FOUR
AUDIT FIRMS
&
TEXAS STATE
GOVERNMENT

DIVERSE PROBLEM SOLVING SKILLS



INCLUDING:

- AUDIT
- ACCOUNTING
- TREASURY
- INVESTMENT MANAGEMENT
- TRADING
- DATA ANALYSIS
- CYBER SECURITY
- INFORMATION TECHNOLOGY

WORK EXPERIENCE



AUSTRALIA
THE UK
CHINA
INDIA
PAKISTAN
RUSSIA
USA

WHAT WE DID IN 2024:

ROBOTICS PROCESS AUTOMATION INITIATIVE



CREATED 10 ROBOTS
FOR PENSION DATA
ANALYSIS



CREATED 18 ALGORITHMS
FOR HEALTHCARE CLAIMS
DATA ANALYSIS



8 TRS AUDITS



9 ADVISORY PROJECTS

840

HOURS OF CONTINUING PROFESSIONAL
EDUCATION (CPE) COMPLETED

→ Q1

- Amanda Jenami, Syed Israr & Nathan Ward attended ITCI's Conference on Emerging Issues in Investments and Derivatives.
- Welcomed Sharon Riley as Senior Business Intelligence Analyst.
- Welcomed Netza Gonzalez as Senior IT Auditor.
- Katie Linczer & Jonathan O'Reilly attended & spoke at APPFA's fall conference.
- Stephen Randall, Cui Rye, Falguni Sampat & Nathan Ward attended APPFA's fall conference.
- Stephen Randall & Cui Rye were awarded the CIA designation.
- Julie Toler joined the TRS Leadership Development Program.

→ Q2

- Jonathan O'Reilly joined the TRS AI Risk Review Team as an advisor.
- Karen Marino, Jonathan O'Reilly, Cui Rye & Nathan Ward were awarded Bushel of Fun awards.
- Falguni Sampat was awarded the CIA designation and was promoted to Senior Operations Auditor.
- Olga Jerman, Katie Linczer, Jonathan O'Reilly, Stephen Randall, Sharon Riley, Julie Toler & Lisa Wei volunteered at the Central Texas Food Bank.

→ Q3

- Nathan Ward attained the Chartered Financial Analyst® designation and was awarded the CFA® Charter.
- Department hosted Internal Audit Awareness Week Open House.
- Olga Jerman & Teklehaimanot Dersch attended the IIA Analytics, Automation and AI Virtual Conference.
- Brian Browder, Netza Gonzalez, Stephen Randall & Lisa Wei attended the DIR's Information Security Forum.
- Julie Toler attended the FIRMA National Conference.
- Netza Gonzalez, Amanda Jenami & Jonathan O'Reilly attended & spoke at APPFA's spring conference.
- Sharon Riley attended APPFA's spring conference.

→ Q4

- Brian Browder was awarded the CISSP designation.
- Amanda Jenami & Falguni Sampat attended the ACFE Global Fraud Conference.
- Teklehaimanot Dersch attended the NAMPI Conference.
- Syed Israr attended the SAO Audit Conference.
- Internal Audit's Business Intelligence Team received an Honorable Mention for the Executive Director's 2024 Shining Example Award.
- Teklehaimanot Dersch was nominated for a 2024 Golden Apple award.
- Jonathan O'Reilly won a 2024 Golden Apple award.



Questions



Internal Audit

Summary of Audit Recommendations as
of Nov. 15, 2024

Dec. 5, 2024

Jonathan O'Reilly
Director of Operations Audit & Business Intelligence



Highlights

38

Recommendations
(Total)

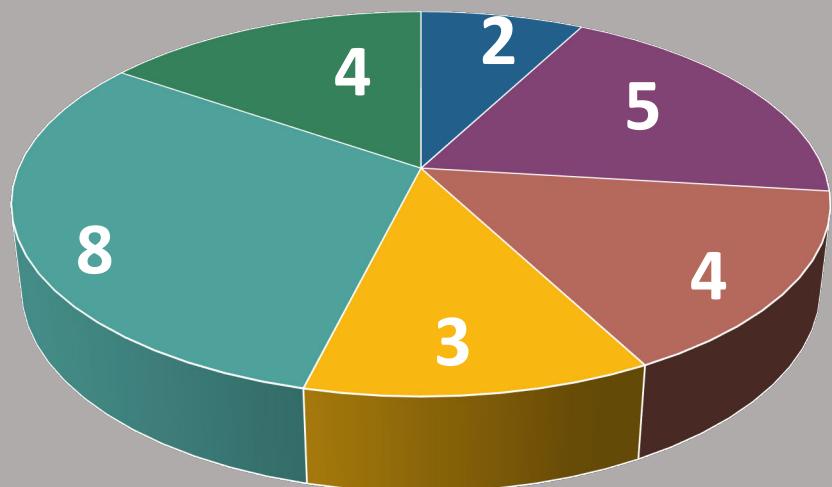
15

Audit Reports

22

Recommendations
rated significant

Ownership of Pending Recommendations



■ Benefit Services

■ Business Admin

■ HD

■ IMD

■ IT

■ ISO

Implementation Status

26
3+

Pending

11
4+

Satisfactorily
Implemented

1
7-

Implemented,
pending IA
validation

Age of Recommendations

10

1-12
months

8

13-24
months

8

25-36
months

0

37-48
months

TRS Internal Audit
Summary of Audit Recommendations Status
As of Nov. 15, 2024

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
21-202 Review of Contract Oversight (HIB)					
1.1 Strengthen contract monitoring efforts	Implemented	Significant	9/2021	2/2023	11/2024
22-302 Review of Strategic Asset Allocation Procedures and Governance					
1.4.1 Alignment with SAA target allocations	Implemented	Other Reportable	6/2022	12/2024	2/2024
22-303 Review of Investment Performance Measurement					
2.2.2 Reliance on Excel Workbooks / Scalability	Implemented	Other Reportable	8/2022	8/2023	10/2024

Significant to Business Objectives

	<ul style="list-style-type: none"> Past <i>original</i> estimated completion date, and No management action plan <u>or</u> no progress on management action plan
	<ul style="list-style-type: none"> Past <i>original</i> estimated completion date Progress on management action plan
	<ul style="list-style-type: none"> <i>Original</i> estimated completion date has not changed Progress on management action plan
	<ul style="list-style-type: none"> Satisfactory implementation of management action plan <u>or</u> acceptance of risk by management
	<ul style="list-style-type: none"> Implementation of management action plan pending Internal Audit validation

Other Reportable

	<ul style="list-style-type: none"> Past first <i>revised</i> estimated completion date No management action plan <u>or</u> no progress on management action plan
	<ul style="list-style-type: none"> Past first <i>revised</i> estimated completion date Progress on management action plan
	<ul style="list-style-type: none"> Within <i>original</i> <u>or</u> first <i>revised</i> estimated completion date Progress on management action plan
	<ul style="list-style-type: none"> Satisfactory implementation of management action plan <u>or</u> acceptance of risk by management

TRS Internal Audit
Summary of Audit Recommendations Status
As of Nov. 15, 2024

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
22-401 Review of Records Management					
1.1 Assist business units in weighing benefits against risks of longer retention time frames	In Progress	Other Reportable	6/2022	2/2023	3/2025
1.2 Require written justification and executive management approval for longer retention time frames	In Progress	Other Reportable	6/2022	2/2023	3/2025
2.1 Expand RIM monitoring efforts	In Progress	Other Reportable	6/2022	8/2022	1/2025
3.1 Continue efforts to implement record management automated features	In Progress	Other Reportable	6/2022	3/2023	1/2025
3.2 Include shared and personal drives to Microsoft project	In Progress	Other Reportable	6/2022	5/2025	
23-102 Review of Reporting Employer Processes					
1.3.a. Develop and implement KPIs	In Progress	Other Reportable	7/2023	6/2024	12/2026
24-102 Audit of Pension Refund Processes					
1.2 Ensure refunds are accurate	In Progress	Significant	5/2024	5/2024	8/2025
24-302 Review of Risk Parity Portfolio Operations					
1.1(a) Enhance Model Change Management Practices	In Progress	Other Reportable	9/2024	3/2025	
1.1(b) Establish Formal Model Governance	In Progress	Other Reportable	9/2024	3/2025	
2.1 Alignment of Liquidity model and TRS exposure	In Progress	Other Reportable	9/2024	12/2024	

TRS Internal Audit
Summary of Audit Recommendations Status
As of Nov. 15, 2024

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
24-303 IMD Contract Oversight					
1. Re-evaluate Risk Assessment Completion Timeline	Implemented	Other Reportable	9/2024	9/2024	9/2024



Internal Audit Administrative Reports

Dec. 5, 2024

Presented By:
Amanda Jenami, CPA, CISA, CIA, CIDA, CFSA, CRMA, CFE



Internal Audit Performance Measures, Fiscal Year 2025



Executive Summary

FY2025 Strategic Goals

- Goal 1:** Provide assurance to the board of trustees and senior management (3 KPIs)
- Goal 2:** Serve as trusted advisor to the board of trustees and management (3 KPIs)
- Goal 3:** Attract, develop and retain diverse and outstanding talent (5 KPIs)
- Goal 4:** Leverage technology (2 KPI)

FY2025 Key Performance Indicators (KPIs)

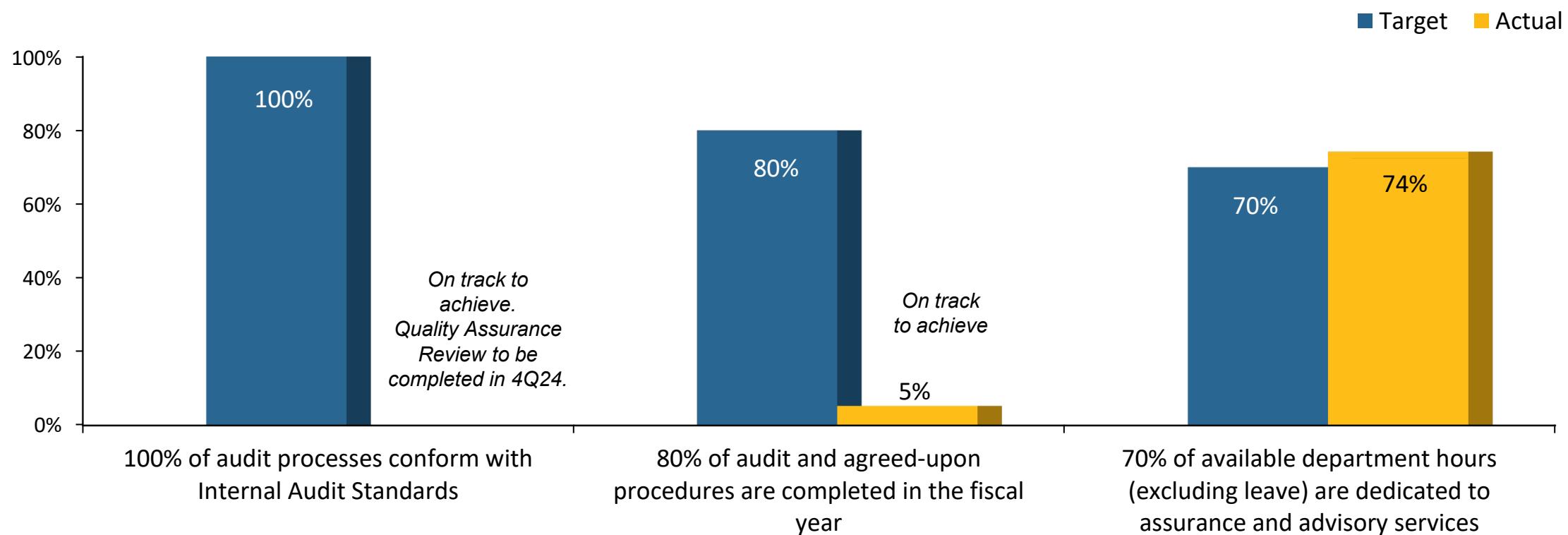
Internal Audit either achieved or was on track to achieve 100% (13 out of 13) of its annual performance targets in the first quarter.



Detailed KPI Results



Goal 1: Provide assurance to the board of trustees and senior management

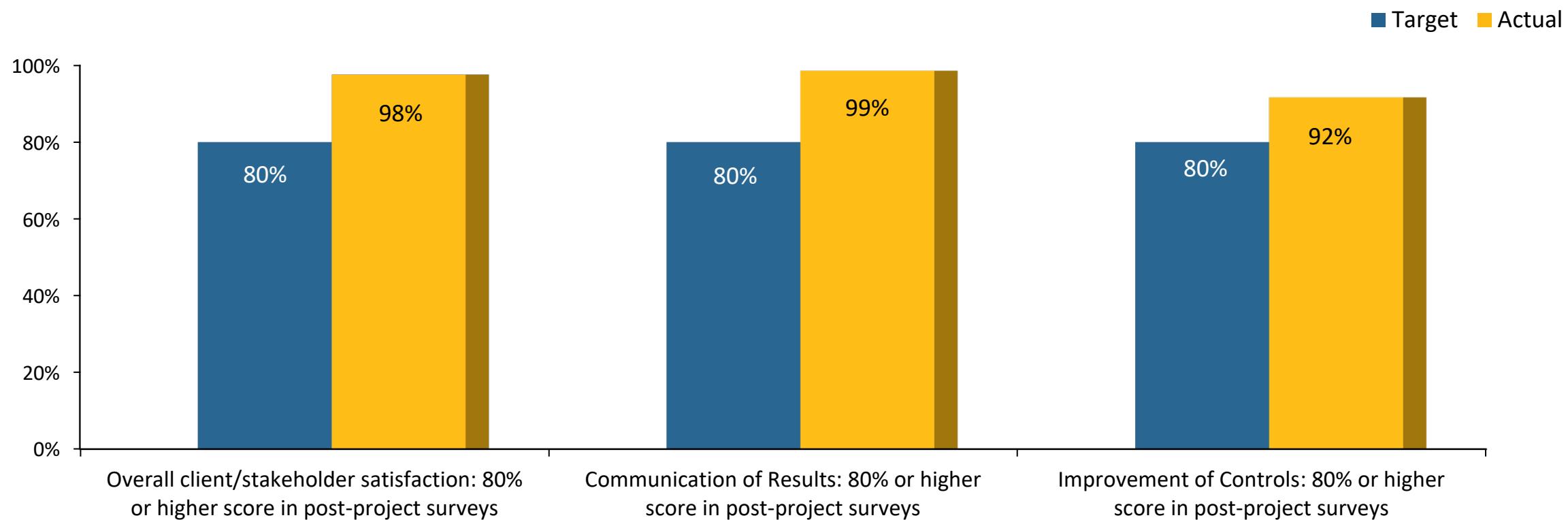




Detailed KPI Results



Goal 2: Serve as trusted advisor to the board of trustees and management

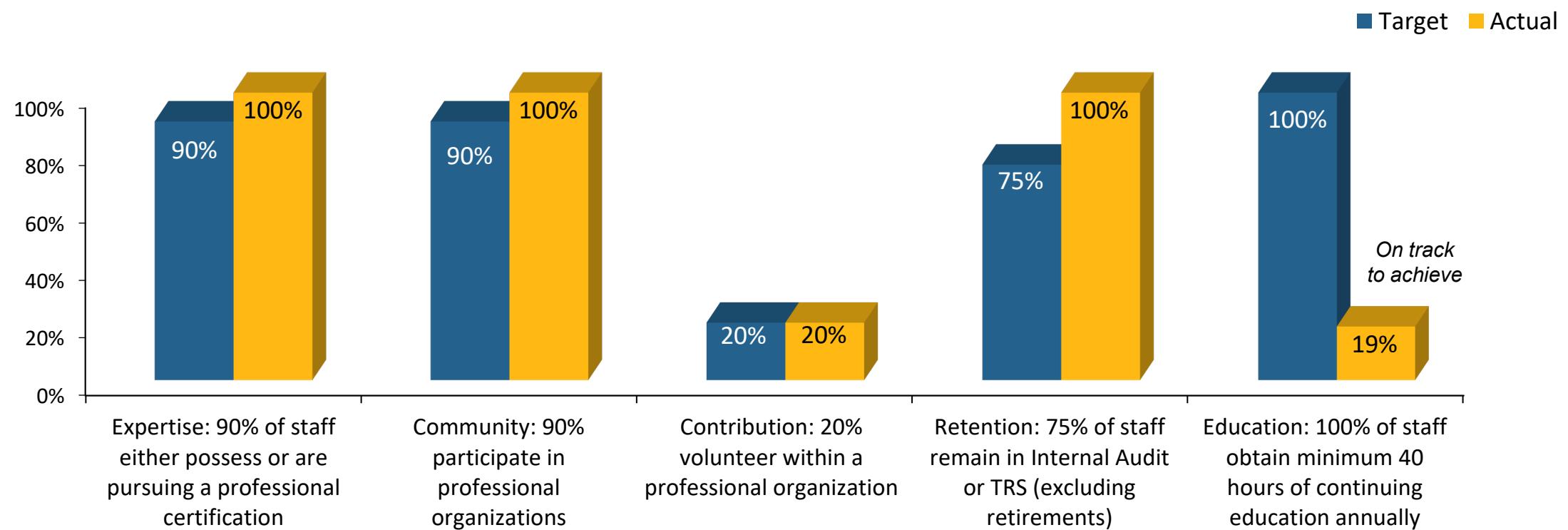




Detailed KPI Results

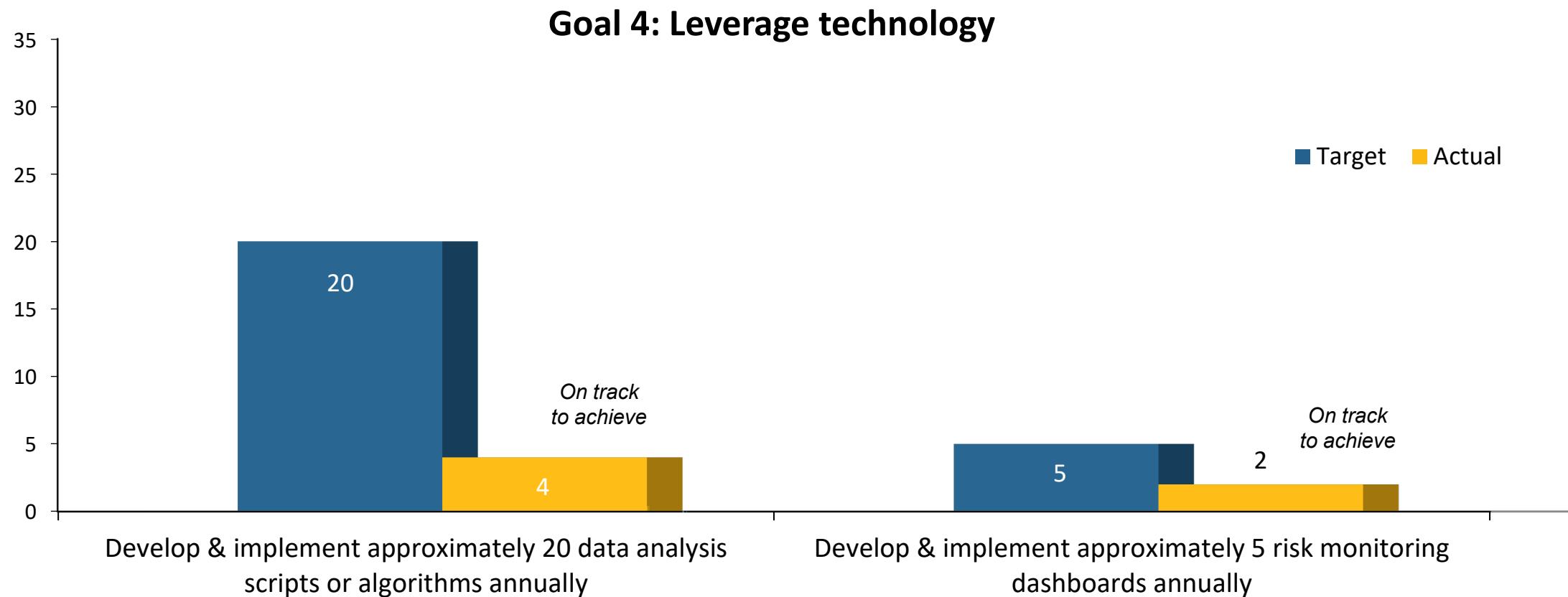


Goal 3: Attract, develop & retain outstanding talent





Detailed KPI Results



A background photograph showing a white lab coat draped over a chair, with a magnifying glass resting on it. The magnifying glass is positioned in the upper right corner, focusing on a small circular area of the coat's fabric.

Advisory Services, Fiscal Year 2025



Internal Audit Advisory Services



EXECUTIVE

- Facilitated external audits of the Annual Comprehensive Financial Report (ACFR), and TRICOT Annual Financial Report
- Served on the Risk Oversight Committee
- Served on the Enterprise Data Governance Council
- Participated in Enterprise Projects Oversight Committee (EPOC)
- Served on Artificial Intelligence Demand Review Team

INFORMATION TECHNOLOGY

- Attended Information Security Advisory Team (ISAT) meetings
- Attended Change Management Team (CMT) meetings
- Coordinated IPA (TEAM) activities
- Held collaboration meetings with Chief Information Officer (CIO) and Chief Information Security Officer
- Served on Enterprise Risk Management (ERM) Cybersecurity Team

INVESTMENT MANAGEMENT DIVISION (IMD)

- Attended Internal Investment Committee (IIC) meetings
- Attended Securities Lending monitoring calls
- Held quarterly collaboration meetings with Investment Compliance and Investment Risk
- Held quarterly collaboration meetings with IMD management

BENEFIT SERVICES

- Attended quarterly Employer Advisory Group meetings
- Performed RE data integrity tests via data analytics

HEALTH DIVISION (HD)

- Performed health plan program integrity tests via data analytics
- Performed independent HILOB June release testing



Staff Highlights



Recognition



2024 Golden Apple Award Winner



Jonathan O'Reilly, M.A.
Director of Operations Audit & Business Intelligence



Recognition



Honorable Mention for Executive Director's Shining Star Award



Jonathan O'Reilly, M.A.
Business Intelligence Director



Teklehaimanot Derseh
Senior Business Intelligence Analyst



Olga Jerman, Ph.D.
Senior Business Intelligence Analyst



Sharon Riley, M.A.
Senior Business Intelligence Analyst

Internal Audit Business Intelligence Team

Questions

