

September 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, Chair; Mr. Ball, Ms. Sissney, Mr. Williams, and Mr. Walls, Committee Members)

All or part of the September 20, 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 September 20, 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

September 20, 2024 – 8:00 a.m.

1. Call roll of Committee members.
2. Approve minutes of July 2024 Audit, Compliance and Ethics Committee meeting
 - Ms. Brittney Allred, Chair
3. Receive State Auditor's Office's (SAO) Presentations— Michael Clayton and Fabienne Robin, SAO:
 - A. Results of the Audit of TRS' Fiscal Year 2023 Pension Liability; and
 - B. Other Post-Employment Benefits (OPEB) Liability Schedules.
4. Receive SAO's presentation on the planned audit of TRS' Annual Comprehensive Financial Report (ACFR) for Fiscal Year 2024 – Michael Clayton and Robert Pagenkopf, SAO.
5. Receive Crowe LLP's presentation on the planned financial audit of TRS Investment Company (TRICOT) – Kevin Smith and Michelle Buss, Crowe LLP
6. Receive an overview of TRS Compliance and reports including those related to ethics and fraud, conflicts of interest, and investment policies – Heather Traeger, Chris Bowlin, Elena Barreiro and Michael Schaff.
7. Receive an overview of the new IIA Global Internal Audit Standards – Katie Linczer

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.

8. Consider recommending to the Board of Trustees adoption of the following: – Amanda Jenami:
 - A. Proposed revisions to the Audit Charter
 - B. Internal Audit's Strategic Plan and Proposed Performance Objectives for Fiscal Year 2025
 - C. Proposed Audit Plan for Fiscal Year 2025
9. Receive an update on Internal Audit's Data Analytics Program – Jonathan O'Reilly
10. Receive Internal Audit reports:
 - A. Review of Risk Parity Portfolio Operations – Nathan Ward and Mark Telschow
 - B. Review of Contract Oversight (IMD) – Amanda Jenami, Cui Rye and Kristi Vorce
 - C. Update on Prior Audit Recommendations – Jonathan O'Reilly
 - D. Review of Cyber Controls – Chris Cutler, and Kristi Glasgall; Koonal Bose, Accenture
 - E. Review of Cybersecurity Response Program – Brian Browder and Kristi Glasgall.
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 – 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
July 18, 2024

The Audit, Compliance and Ethics Committee of the Board of Trustees of the Teacher Retirement System of Texas met on July 18, 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 Dick Nance
Mr. John Rutherford

Others who participated:

Brian Guthrie, TRS
Caasi Lamb, TRS
Don Green, TRS
Heather Traeger, TRS
Amanda Jenami, TRS
Katrina Daniel, TRS
Barbie Pearson
Katherine Farrell, TRS
Chris Bowlin, TRS
MaryEllen O'Neill, TRS
Jonathan O'Reilly, TRS
Suzanne Dugan, Cohen Milstein

Audit, Compliance and Ethics Committee Chair, Ms. Allred, called the meeting to order at 8:05 a.m.

1. Call roll of Committee members.

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

2. Consider the approval of the proposed minutes of the May 2024 Audit, Compliance and Ethics Committee meeting – Chair Brittny Allred.

On a motion by Mr. Walls, seconded by Mr. Ball, the committee unanimously voted to approve the proposed minutes for the May 2024 Audit, Compliance and Ethics Committee meeting as presented.

3. Receive an overview of TRS Compliance and reports including those related to ethics and fraud, conflicts of interest, and investment policies – Heather Traeger, Chris Bowlin and MaryEllen O’Neill.

Mr. Chris Bowlin reported that there were no exceptions identified in the quarterly testing on board reporting requirements, the investment policy statement (IPS) focusing on the Investment Integrity Questionnaires (IIQ) and on evidence that CIO conditional approvals were followed up on and implemented Post-IIC.

Ms. Heather Traeger reported one hotline report was received and after investigating it was determined it should have not come to TRS but another entity. She stated there were three 541 (E)s, conflict of interest related to employees, all related to employees having relatives who work at TRS vendors, so processes were put in place to manage and monitor those possible conflicts.

Ms. MaryEllen O’Neill concluded by providing an introductory overview of the Health Insurance Portability and Accountability Act (HIPAA) Compliance program at TRS.

4. Receive Internal Audit reports including Review Prior Audit Recommendations – Jonathan O’Reilly.

Mr. Jonathan O’Reilly reported there are 64 recommendations in total, 27 being implemented by management, 26 were satisfactorily implemented, and 11 management has reported and are waiting for a member of the Audit team to conduct a follow-up assessment.

5. 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 – Brittny Allred, Amanda Jenami and Heather Traeger.

Ms. Jenami provided an update on Internal Audit’s key performance indicators (KPIs). She reported they are either exceeding or on track to meet the 14 performance targets.

With no further business before the Committee, the meeting adjourned at 5:15 p.m.

Approved by the Audit, Compliance and Ethics Committee of the Board of Trustees of the Teacher Retirement System of Texas on September _____, 2024.

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

Date



Internal Audit

**Audit, Compliance & Ethics
Committee Meeting / Sept 20, 2024**





Fiscal Year 2023 Audit of the Teachers Retirement System of Texas' Pension and OPEB Liability Schedules

Fabienne Robin, Managing Senior Auditor
Michael Clayton, Audit Manager



Presentation to the TRS Board of Trustees
September 20, 2024

Overview

The State Auditor's Office has audited the Pension and Other Post Employment Benefit Schedules (OPEB) of the Teacher Retirement System for the fiscal year ended August 31, 2023, and issued our opinion dated June 2, 2024.

We issued four reports as part of this project:

- Opinion on the Pension Liability Schedules
- Opinion on the OPEB Liability Schedules
- Report on Controls and Compliance and Other Matters
- Legislative Audit Committee report



Presentation to the TRS Board of Trustees
September 20, 2024

Reported Results

Unqualified Opinion

PENSION LIABILITY SCHEDULES

We concluded the System's Schedule of Employer's Proportionate Shares (Allocations) and the total for all entities of the columns titled net pension liability end of year, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) included in the Schedule of Pension Amounts by Employer and the related notes as of August 31, 2023, were materially correct and presented in accordance with accounting principles generally accepted in the United States of America.

Unqualified Opinion

OPEB LIABILITY SCHEDULES

We concluded the System's Schedule of Employer's Proportionate Shares (Allocations) of the Collective Net Other Post Employment Benefit (OPEB) Liability and the total for all entities of the columns titled net OPEB liability end of year, total deferred outflows of resources, total deferred inflows of resources, and total OPEB expense (specified column totals) included in the Schedule of OPEB Amounts by Employer and the related notes as of August 31, 2023, were materially correct and presented in accordance with accounting principles generally accepted in the United States of America.



REPORT ON INTERNAL CONTROLS OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS

We did not identify any material weakness or significant deficiencies in controls.



LEGISLATIVE AUDIT COMMITTEE REPORT

Per our standard process, we issued a report to the legislature regarding our work at TRS.



Fiscal Year 2024 Audits of the Teacher Retirement System of Texas' Financial Statements, Pension Liability, and OPEB Liability Schedules

Robert Pagenkopf, Managing Senior Auditor
Michael Clayton, Audit Manager



Presentation to the TRS Board of Trustees
September 20, 2024

ACFR

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
September 20, 2024

ACFR

Audit Objectives and Scope

- Our work will also include the automated systems and processes that support the functions being audited at the System.
- We will conduct the audit in accordance with generally accepted government auditing standards.
- The audit scope is financial activity for fiscal year 2024.



Presentation to the TRS Board of Trustees
September 20, 2024

ACFR

Timing and Deliverables

**THE REPORT RELEASE IS
TENTATIVELY SCHEDULED FOR
NOVEMBER 20, 2024.**

- We are currently gaining an understanding of the System's processes and will begin substantive testing before October 2024.
- We will be partnering with Internal Audit to complete certain testing related to pension benefit payments.
- We will release our audit report at the conclusion of the audit.



Liability Schedules

- To obtain reasonable assurance about whether the System's Schedule of Employer's Proportionate Shares (Allocations) and the totals for all entities of the columns titled net pension liability end of year, total deferred outflows, total deferred inflows, and pension expense included in the Schedule of Pension Amounts by Employer of the System Pension Plan (Pension Schedules) and related notes to the schedules are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Objectives and Scope

Schedule of Employer's Proportionate Share of Pension Liabilities



Liability Schedules

- To obtain reasonable assurance about whether the System's Schedule of Employer's Proportionate Shares (Allocations) of the Collective Net Other Post Employment Benefit (OPEB) Liability, and the total for all entities of the columns titled net OPEB liability end of year, total deferred outflows, total deferred inflows, and total OPEB expense included in the Schedule of Other Post Employment Benefit (OPEB) Amounts by Employer of the System (OPEB Schedules) and related notes to the schedules are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Objectives and Scope

Schedule of Employer's Proportionate Share of OPEB Liabilities



Presentation to the TRS Board of Trustees
September 20, 2024

Liability Schedules

- The Pension and OPEB Schedules work will be performed separately in the spring 2025, with an anticipated release date in early June 2025.
- As part of this engagement, we plan to issue the following:
 - Opinion on the Pension Liability Schedules
 - Opinion on the OPEB Liability Schedules
 - Report on Controls and Compliance and Other Matters
 - Legislative Audit Committee report

Timing and Deliverables



Smart decisions. Lasting value.TM

TRS Investment Company (TRICOT)

Audit Committee Presentation

Michelle Buss

September 20, 2024





Agenda

1 Introductions

2 Audit Plan

3 Other Required Communications

4 Questions

Introductions

Crowe Engagement Team



Kevin W. Smith
Partner



Michelle Buss
Senior Manager



Ben Levy
Senior Staff

Crowe Client Service Team

Role	Name	Definition of Role
Audit Partner	Kevin W. Smith Kevin.w.smith@crowe.com (214) 777-5208	Kevin will work with our engagement team to understand your expectations and ensure that your needs are met through the delivery of our services. Additionally, he serves as the partner signing our report on your financial statements.
Audit Senior Manager	Michelle Buss Michelle.buss@crowe.com (214) 777-5216	Michelle will oversee the execution of the audit, focusing on overseeing accounting and financial reporting matters.
Audit In-Charge	Ben Levy Benjamin.levy@crowe.com (469) 250-3145	Ben will lead the engagement team in the day-to-day execution of the audit plan.

Audit Plan

Audit Plan - Timeline for Delivery of Services

Dates	Task
September 2024	Planning and interim fieldwork.
September 20, 2024	Communication of audit plan to audit committee.
October 1, 2024 – October 25, 2024	Crowe to perform final fieldwork.
October 31, 20234	Planned opinion date.
December 2024	Presentation to audit committee.

Audit Plan - Scope

- Significant Accounting Policies and Estimates
- Internal Controls
- Significant Risks
- Materiality
- Matters warranting attention of the auditors

Other Required Communications

- Independence
- Other information
- SAS 99 related to fraud

Questions?



Thank You

Kevin W. Smith

Phone +1 214 777 5208

Cell +1 214 632 1789

Kevin.W.Smith@crowe.com

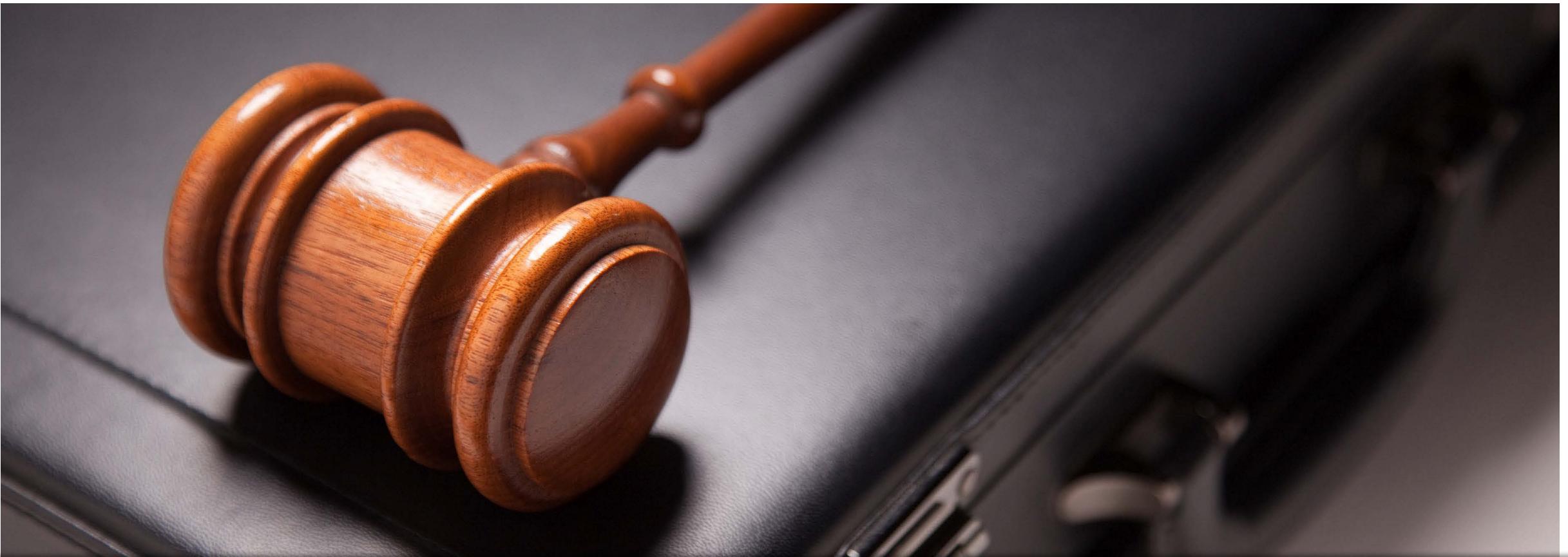
Michelle Buss

Phone +1 214 777 5216

Cell +1 817 291 7578

Michelle.Buss@crowe.com

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TRS Compliance: Ethics Overview

September 2024

Heather Traeger and Chris Bowlin

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

Procedures Performed	Test Results
<u>Business Objective 1: Board Reports</u> All required information is reported to the TRS Board of Trustees	
<ul style="list-style-type: none"> • Obtain evidence that all requirements were reported to Board of Trustees • Trace sample information included in Board reports to supporting documentation 	
<u>Business Objective 2: Investment Selection and Approval</u> Investments made are within delegated limits and established selection criteria	
<ul style="list-style-type: none"> • Obtain evidence that Investment Integrity Questionnaires (IIQs) were received prior to investment authorization and deal closing • Obtain evidence that IMD evaluated hedge fund classification • Obtain evidence that approved investments were within policy limits • Review the allocation of funds added to previously approved investments for purposes of rebalancing or adjusting risks 	<ul style="list-style-type: none"> • All reporting requirements were met • Documentation provided supported information tested
<u>Business Objective 3: Other (IPS, SLP, other reporting)</u> Risk limits are followed for other investment and proxy voting policies and procedures were followed	
<ul style="list-style-type: none"> • Obtain senior management disclosure about known compliance violations • Obtain evidence that TRS securities lending program complied with the guidelines • Obtain evidence that all board serving requirements were met • Obtain evidence that Restricted Securities lists were updated, and reports filed 	<ul style="list-style-type: none"> • Obtained quarterly compliance certification from IMD IIC and Legal • No security lending violations were identified • All reporting requirements were met and documentation provided • Restricted Securities lists were timely updated and reports filed

Legend:



Significant to TRS



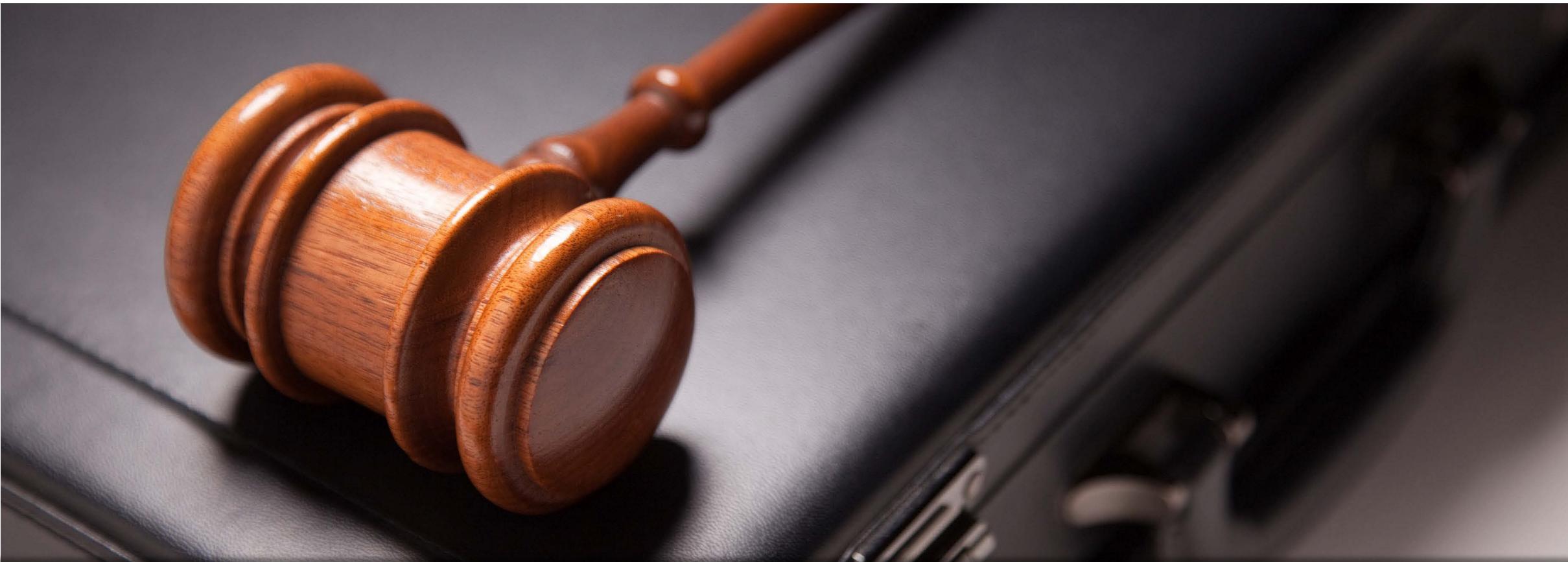
Significant to Business Objectives



Other Reportable Exception



Positive Test Result/ No Exception



TRS Compliance: Ethics Overview

September 2024

**Elena Barreiro, Compliance Officer
Michael Schaff, Compliance Counsel**



Agenda



- TRS Compliance's Mission Statement
- Daily Responsibilities
- Mitigating Conflicts of Interest
- Outside Business Activities
- Gifts and Entertainment
- Other Conflicts of Interest
- Fraud and Ethics Hotline



TRS Compliance's Mission

TRS Compliance's **mission** is to maintain, promote and support a culture that upholds ethical behavior and values that contribute and advance the fiduciary duties of prudence and loyalty, and reduces fraud risks.

The TRS Compliance Team assists in complying with laws, regulations, and TRS policies.



We act with integrity in everything we do



Daily Responsibilities / Business as Usual



- Policy Guidance / Rules of the Road / Investigations
 - Code of Ethics for Contractors
 - Employee Ethics Policy
 - Trustee Ethics Policy
 - Fraud, Waste, and Abuse Policy (FWAP)
- Ethics Disclosures and Inquiries
- Hotline Investigations - Hotline (Navex) and SAO Complaints



Ethics Reports, Trainings, and Certifications

- Monthly
 - SB65 and solicitations list
 - Board representation log review
 - Training updates and monitoring completion rates
- Quarterly
 - Key Reports and Lists
 - TRS Persons
 - Health Division Persons
 - Key Employees
 - Restricted Contractors
 - Restricted Contractors Brokers
 - Ethics Reporting Log (ERL)
 - Outside Business Activities Report (OBA)
 - Board / ACE reporting
- Annually
 - Employee and Non-TRS Workers Annual Certification and Key Employee Certification
 - Code of Ethics for Contractors Certification
 - Ethics Report to Executive Director
 - Trustee Annual Certification and training
 - Trustee Personal Financial Statement
 - Compliance Training and Certification Calendar
 - Policy / Procedure / Training Modules Updates



Ethics Disclosures

- Initial and Ongoing Disclosures:
 - Conflict of Interests – employees and contractors
 - New Hire Disclosures
 - New Key Employee Disclosures
 - New Contractor's Code of Ethics (Brokers, Outside Counsel, and Other)
 - Ethics Policy Violations
 - Outside Business Activities (OBA)
 - Gifts and Entertainment – Ethics Reporting Log (ERL)





Mitigating Conflicts of Interest



Contracting and
Procurement



Personal
Investments



Gifts and
Entertainment



Outside Business
Activities



Nepotism



Bribery



Conflicts of Interest – Outside Business Activities (OBA)



- Outside Business Activities are:
 - business or employment activities, whether compensated or not, including self-employment;
 - volunteer activities where the employee owes fiduciary duties.
- Prior approval is required





Conflicts of Interest – Gifts and Entertainment



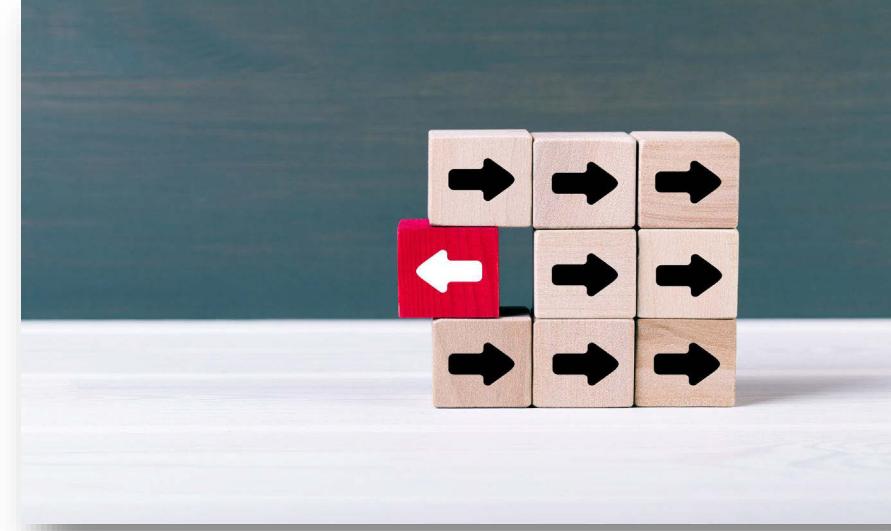
- Employees may not solicit or accept gifts and entertainment that may create an actual or potential conflict of interest
- No cash or cash equivalents (e.g., gift cards, stock) are allowed
- Disclosure Requirements (Ethics Reporting Log):
 - Business meals exceeding \$100; and
 - All other benefits exceeding \$50
- Policy guidance (e.g., return and approvals)



Conflicts of Interest – Other

Employees Conflicts of Interest

- Ad hoc Reporting and Employee Annual Ethics Certification
- Investigation and Determination
- Recusal and Waiver



Contractors Conflicts of Interests

- Ad hoc Reporting and Annual Code of Ethics Certification
- Investigation and Determination
- Cure and Mitigating Factors



TRS Fraud and Ethics Hotline



Employees may report through TRS Fraud and Ethics Hotline

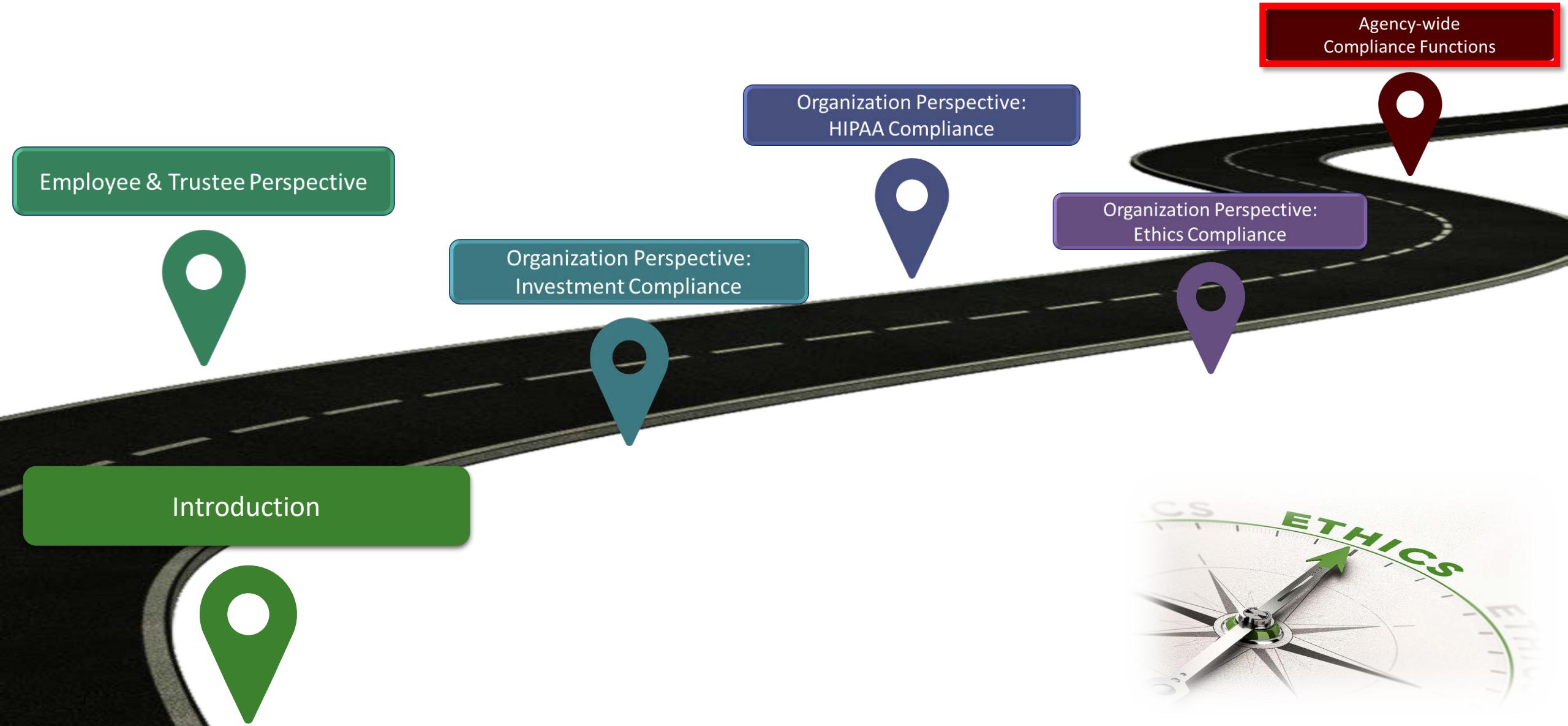
- Independent third-party vendor (Navex)
- Anonymous reporting via phone or website
- Anti-retaliation policy
- Investigations
- Board reporting



Questions?



TRS Compliance & Ethics – Information Session Roadmap





Internal Audit

Global Internal Audit Standards

September 20, 2024

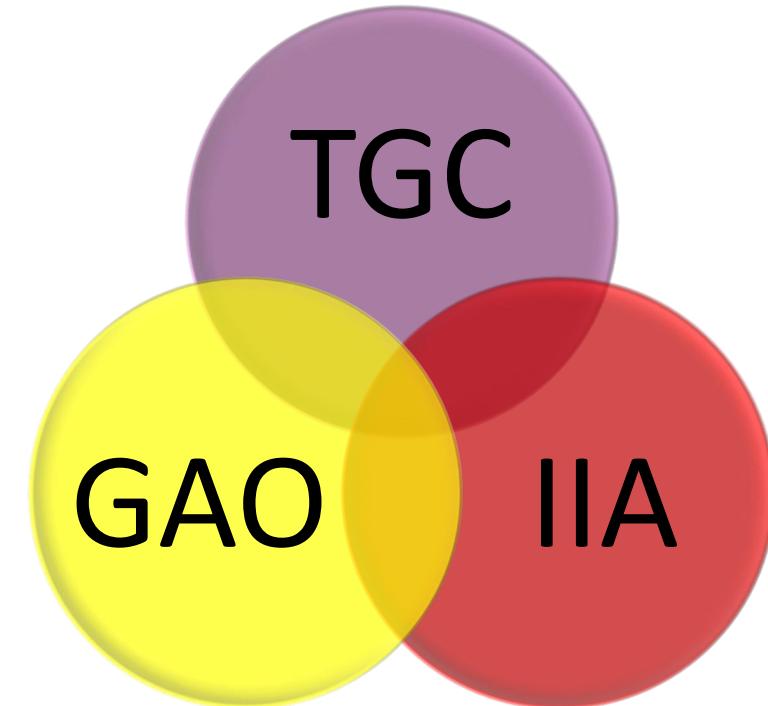
Katie Linczer
Senior Investment Auditor





The Standards

- Texas Internal Auditing Act (Texas Government Code (TGC), Chapter 2102)
- The Institute of Internal Auditors (IIA) International Professional Practices Framework – The “Red” Book
 - Global Internal Auditing Standards
 - Topical Requirements
 - Global Guidance
- United States Government Accountability Office (GAO) Government Auditing Standards – The “Yellow” Book





Global Internal Auditing Standards



Domain I: Purpose of Internal Auditing

Domain II: Ethics and Professionalism

Principle 1 – Demonstrate Integrity

Principle 2 – Maintain Objectivity

Principle 3 – Demonstrate Competency

Principle 4 – Exercise Due Professional Care

Principle 5 – Maintain Confidentiality

Domain III: Governing the Internal Audit Function

Principle 6 – Authorized by the Board

Principle 7 – Positioned Independently

Principle 8 – Overseen by the Board

Domain IV: Managing the Internal Audit Function

Principle 9 – Plan Strategically

Principle 10 – Manage Resources

Principle 11 – Communicate Effectively

Principle 12 – Enhance Quality

Domain V: Performing Internal Audit Services

Principle 13 – Plan Engagements Effectively

Principle 14 – Conduct Engagement Work

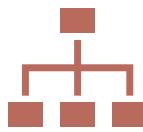
Principle 15 – Communicate Engagement Results and Monitor Action Plans



Governing the Internal Audit Function



Principle 6
– Authorized by the Board



Principle 7
– Positioned Independently



Principle 8
– Overseen by the Board





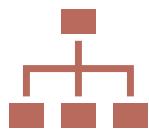
What We Need from You



Continue:



- Determining the appropriate authority, role and responsibilities of the internal audit function
- Supporting internal audit function's unrestricted access to data
- **Approving charter, plan, budget, and resource plan**



- Supporting direct reporting relationship with the Chief Audit Executive (CAE) and the internal audit function



- Discussing the Quality Assurance Improvement Program (QAIP) including internal/external assurance reviews at least annually
- **Approving internal audit's performance objectives at least annually**



Internal Audit

Sept. 20, 2024

Amanda Jenami,
CPA, CISA, CIA, CIDA, CFSA, CHIAP, CRMA, CFE, CGAP, CCSA





Proposed Revisions to the Audit Charter

September 2024



Background: IIA Requirements for the Internal Audit Charter

The CAE must:

Develop and maintain an internal audit charter

- Purpose of Internal Auditing
- *Commitment* to adhering to the Global Internal Audit Standards
- IA Mandate
- Organizational position

The CAE must discuss the proposed charter with the board and senior management.

The Board must:

- Discuss with the CAE and senior management other topics to be included in the charter
- Approve the internal audit charter





Internal Audit Charter: Proposed Revisions

Item #/ Page #	Proposed Revisions	Rationale
1. (Page 2)	<ul style="list-style-type: none">Internal Audit's commitment to adhering to the Standards	<u>Domain III, Principle 6: Authorized by the Board</u> <ul style="list-style-type: none">The CAE must develop and maintain an internal audit charter that specifies, at a minimum (among other things, the IA's commitment to adhering to the Global Internal Audit Standards).
2. (Page 7)	<ul style="list-style-type: none">Develop and implement a strategy for the Internal Audit function. Review the IA strategy with the board and senior management <i>periodically</i>.	<u>Domain IV, Principle 9: Plan Strategically</u> <ul style="list-style-type: none">The CAE must develop and implement a strategy for the Internal Audit function.The CAE must review the IA strategy with the board and senior management periodically.
3. (Page 7)	<ul style="list-style-type: none">Develop a list of IA's <i>annual</i> performance goals for <i>approval</i> by the board.	<u>Domain III, Principle 8: Overseen by the Board</u> <ul style="list-style-type: none">The board must approve the Internal Audit function's performance objectives at least <i>annually</i>.
4. (pages 10 and 12)	<ul style="list-style-type: none">Exercise Due Professional Care, including applying professional skepticism to critically assess and evaluate information.	<u>Domain II, Principle 4: Exercise Due Professional Care</u> <ul style="list-style-type: none">Internal auditors must exercise professional skepticism when planning and performing internal audit services.



Questions



Internal Audit

Sept. 20, 2024

Amanda Jenami

CPA, CISA, CIA, CIDA, CFSA, CHIAP, CRMA, CFE, CGAP, CCSA





Domain IV: Managing the Internal Audit Function

**Internal Audit Strategic Plan
Fiscal Years 2025 - 2028**



Standard 9.2: Internal Audit Strategy

Requirements: Essential Conditions (CAE)

- The CAE **must** develop and implement a strategy for the internal audit function that aligns with the expectations of the board, senior management, and other key stakeholders.
- The CAE **must** review the internal audit strategy with the board and senior management periodically.





Strategic Plan

Vision & Purpose

Services

Internal Audit
Strategic Plan

Strategic Goals

Performance
Measurement



Internal Audit's Purpose & Vision



Vision

To serve as a trusted advisor and essential strategic partner, enhancing the efficiency and effectiveness of TRS operations.

Purpose

The purpose of Internal Audit is to strengthen the organization's ability to create, protect and sustain value by providing the Board of Trustees and management with independent, risk-based, and objective assurance, advice, insight and foresight.

Internal Audit helps TRS accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.



Internal Audit Services



**Facilitate Audit,
Compliance and
Ethics (ACE)
Committee
governance &
oversight**



**Advise Executive
Council members**



**Provide Assurance, &
advisory services:**

Benefit Services

Health

Investment
Management

Support Services



**Coordinate external
audits**



**Facilitate &
coordinate
Independent
Program Assessment
(IPA) activities**



Strategic Goals

Goal 1

Provide assurance to the Board of Trustees and Senior Management

Goal 2

Serve as trusted advisor to the Board of Trustees and Management

Goal 3

Attract, develop and retain outstanding talent

Goal 4

Develop and leverage technological solutions



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

Enhance organizational value by providing risk-based and objective assurance

Strategic Objectives <i>Objectives = day-to-day operations Strategies = longer-range transformations</i>	Initiatives & Key Performance Measures (* = KPI)
Perform audits in accordance with internal auditing standards	<ul style="list-style-type: none">• 100% of internal audit processes are in accordance with internal auditing standards as reported in the annual Quality Assurance & Improvement Program report*• Integration of updated IIA Global Internal Audit Standards
Execute the Annual Audit Plan effectively and efficiently	<ul style="list-style-type: none">• Completion of Annual Audit Plan<ul style="list-style-type: none">○ 80% of audit and agreed-upon procedures projects are completed in the fiscal year*○ 70% of available department hours (excluding leave) are dedicated to assurance, consulting and advisory services*○ Quarterly reporting on audits/projects performed○ Mid-year reporting on audit plan status○ Quarterly reporting on prior audit implementation status
Maintain an effective Quality Assurance & Improvement Program (QAIP)	<ul style="list-style-type: none">• Obtain an external quality assurance review every 3 years



Goal 2: Serve as trusted advisor to board and management

Provide insight, effective communication and governance training

Strategic Objectives <i>Objectives = day-to-day operations Strategies = longer-range transformations</i>	Initiatives & Key Performance Measures <i>(* = current KPI)</i>
Provide governance training	<ul style="list-style-type: none">• Provide annual training to Board and Executive Committee
Assist management in solving problems	<ul style="list-style-type: none">• Serve as an advisor on key TRS committees & workgroups including ROC, TPRM, IIC, EPOC and EDGC
Enhance audit client experience, communication and deliverables	<ul style="list-style-type: none">• Pre-audit communication and engagement activities, annual audit plan kickoff presentation• Client/stakeholder survey responses*<ul style="list-style-type: none">• Communication• Controls improvement• Overall satisfaction



Goal 3: Attract, develop and retain outstanding talent

Provide depth and diversity of professional expertise by attracting, developing and retaining outstanding talent

Strategic Objectives <i>Objectives = day-to-day operations Strategies = longer-range transformations</i>	Initiatives & Key Performance Measures <i>(* = KPI)</i>
Professional diversity and industry expertise	<ul style="list-style-type: none">• 90% of staff either possessing or pursuing a professional certification*• Build acumen in TRS' three lines of business
Professional community engagement and leadership	<ul style="list-style-type: none">• 90% actively participate in professional organization*• 20% serve as volunteers within a professional organization
Growth and fulfillment	<ul style="list-style-type: none">• 75% of staff remain in Internal Audit or TRS (excluding retirements)*• 100% of staff obtain a minimum of 40 hours of continuing education credits annually*



Goal 4: Develop and leverage technological solutions

Continuously improve coverage and efficiencies of Internal Audit activities by leveraging technological solutions.

Strategic Objectives <i>Objectives = day-to-day operations Strategies = longer-range transformations</i>	Initiatives & Key Performance Measures <i>(* = current KPI ; ** = new KPI)</i>
Inspire innovation and challenge the status quo by seeking operational efficiencies via data analytics and automation	<ul style="list-style-type: none">• Improve maturity level of data analytics program with enhanced integration & automation• Develop and implement approximately 20 data analysis algorithms* and 5 risk monitoring dashboards** on an annual basis• Provide Board of Trustees with annual updates on data analytics program
Enhance efficiencies by streamlining Internal Audit workpaper templates and tools	<ul style="list-style-type: none">• Annual review and update of policies, procedures, tools, and templates



Domain III: Governing the Internal Audit Function

Proposed Performance Objectives and Targets Fiscal Year 2025



Standard 8.3: Quality Standard

Requirements: Essential Conditions (the Board)

- Approve the internal audit function's performance objectives *at least annually*.
- Assess the effectiveness and efficiency of the internal audit function. Such an assessment includes:
 - a. Reviewing the internal audit function's performance objectives, and progress towards completion of the internal audit plan.
 - b. Determining the extent to which the internal audit function's performance objectives are being met.



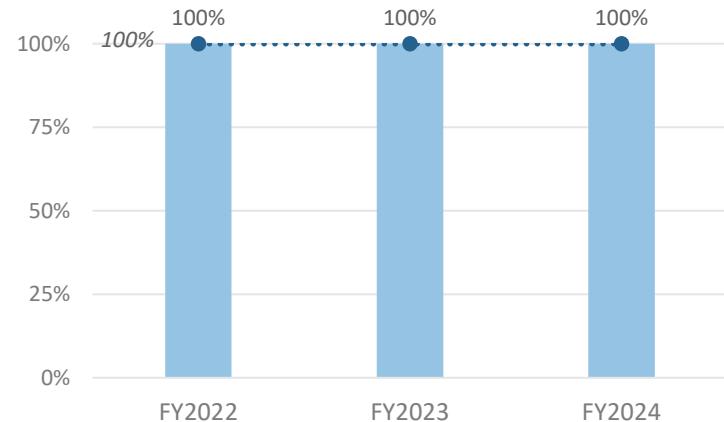


Strategic Goals & KPIs

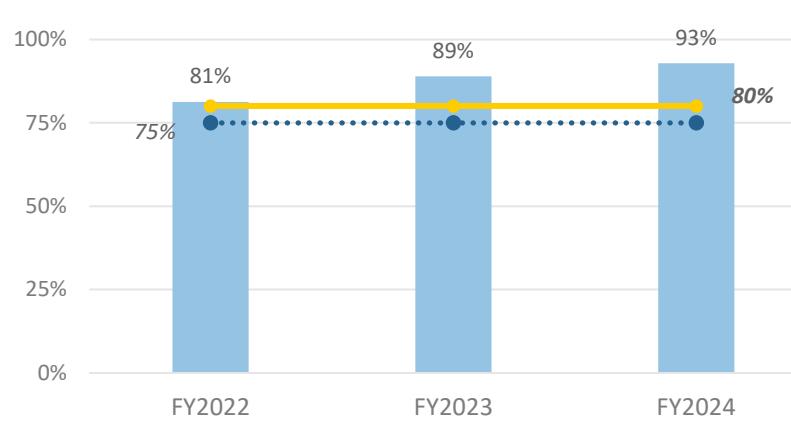


Goal 1: Provide Assurance to the Board of Trustees and Senior Management

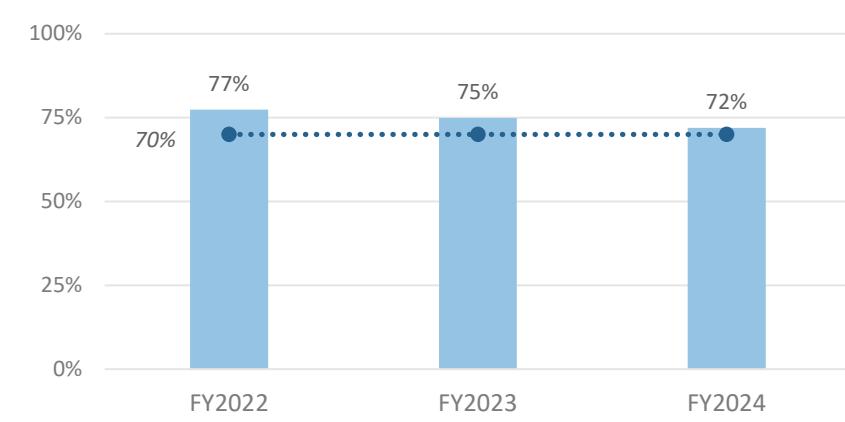
100% of audit processes conform with Internal Auditing Standards



% of audit and agreed-upon procedures are completed in the fiscal year



70% of available department hours (excluding leave) are dedicated to assurance, consulting, and advisory services



Actual FY25 Target (unchanged)

Actual Previous Target Proposed FY25 Target

Actual FY25 Target (unchanged)

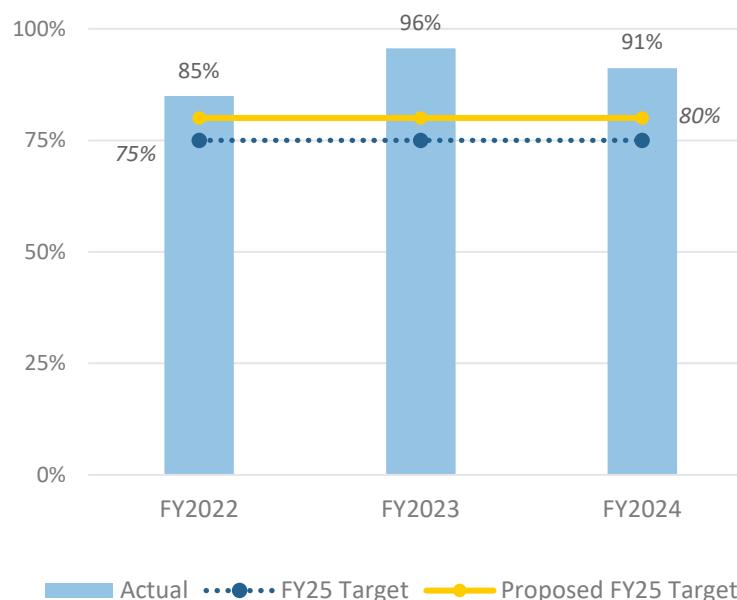


Strategic Goals & KPIs

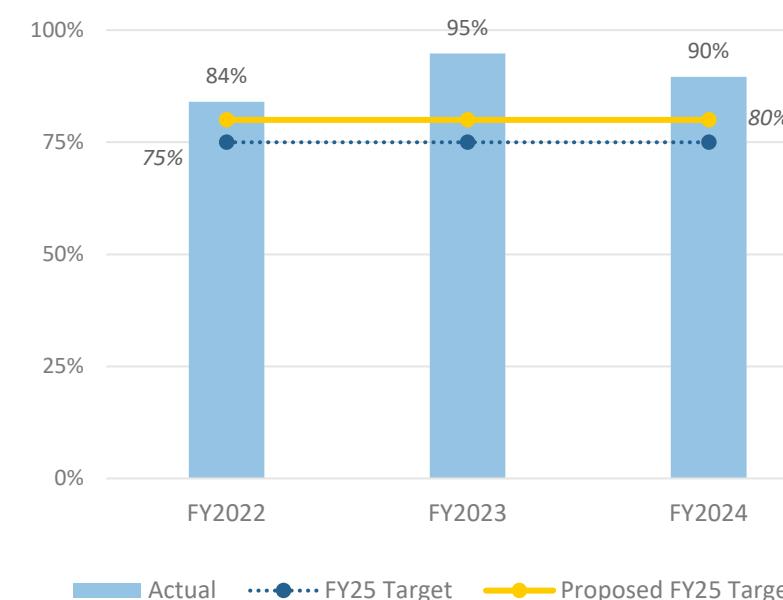


Goal 2: Serve as trusted advisor to the Board of Trustees and Management

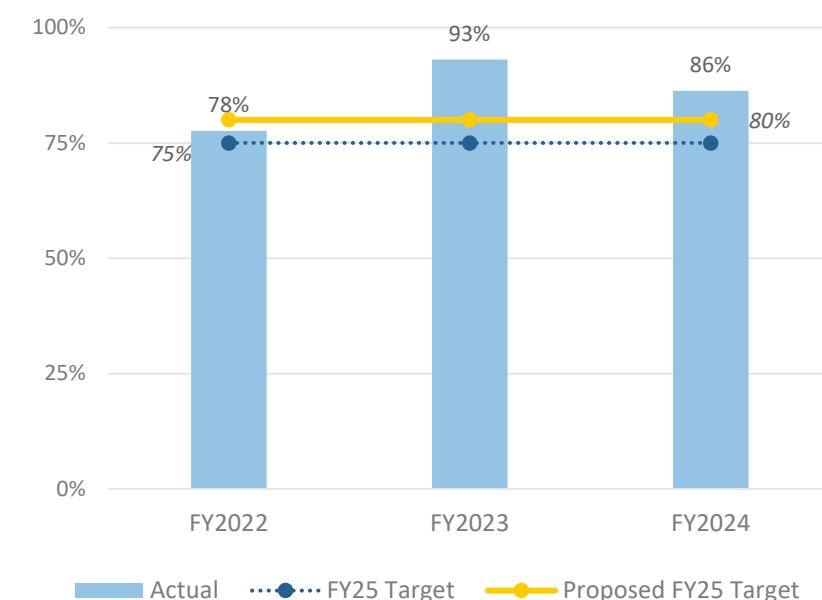
Post-project survey score:
Overall client/stakeholder satisfaction



Post-project survey score:
Communication of Results



Post-project survey score:
Improvement of Controls



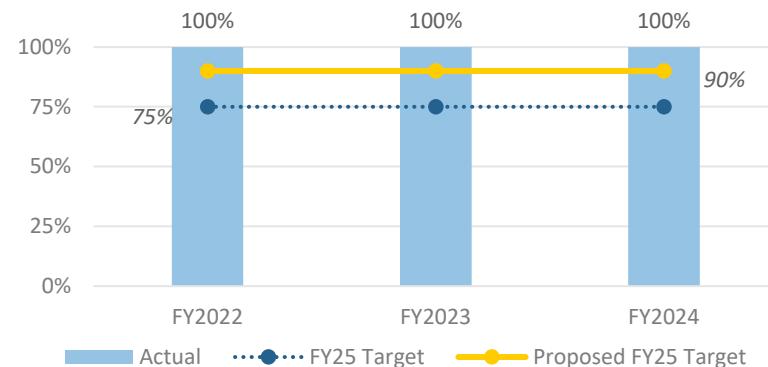


Strategic Goals & KPIs



Goal 3: Attract, develop and retain outstanding talent

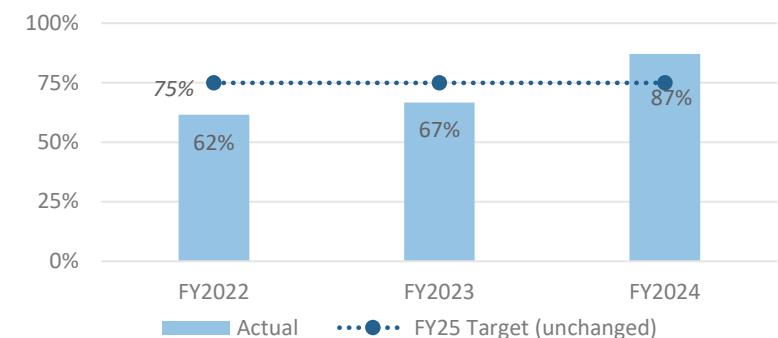
Expertise: % of staff either possessing or pursuing a professional certification



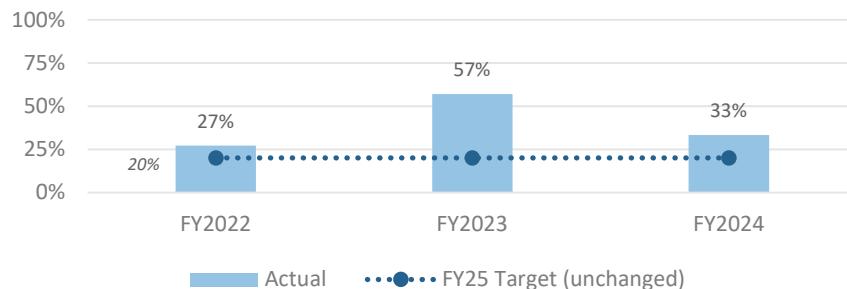
Community: 90% participate in professional organizations



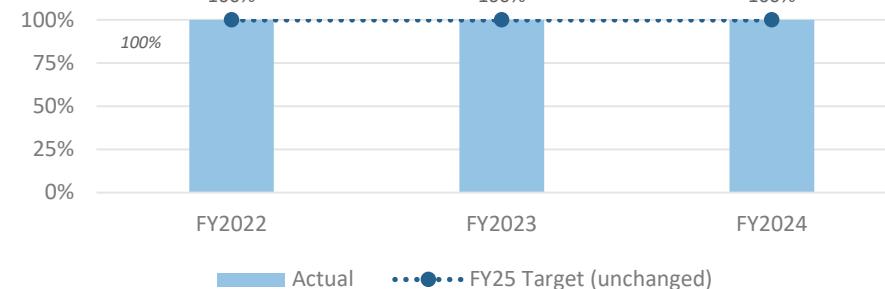
Retention: 75% of staff remain in Internal Audit or TRS (excluding retirements)



Contribution: 20% volunteer within a professional organization



Education: 100% of staff obtain minimum 40 hours of continuing education annually

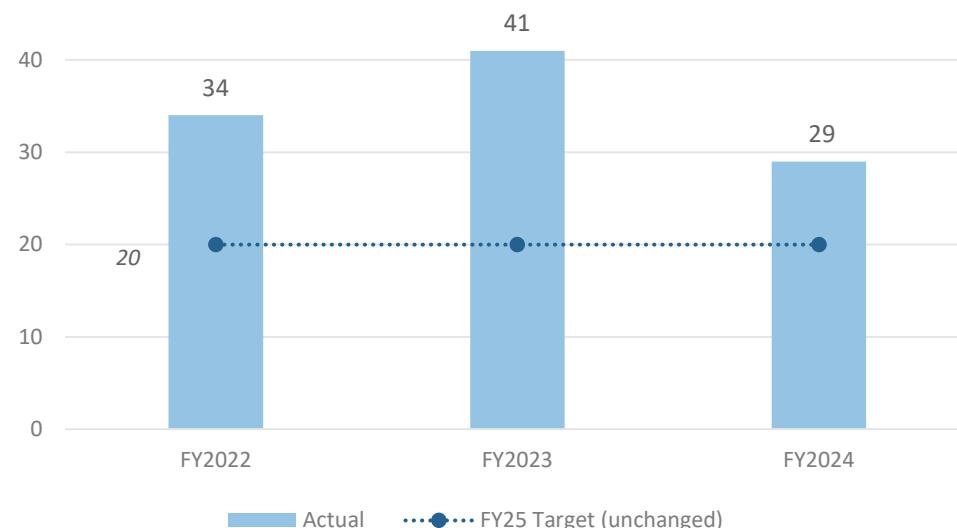




Strategic Goals & KPIs

Goal 4: Develop and leverage technological solutions

Develop & implement approximately 20 data analysis scripts or algorithms annually





Internal Audit

Sept. 20, 2024
Amanda Jenami
CPA, CISA, CIA, CIDA, CFSA, CHIAP, CRMA, CFE, CGAP, CCSA





Proposed Audit Plan for Fiscal Year 2025



Risk Assessment & Audit Planning Approach

Interviews of TRS trustees, executives and staff, risk assessment surveys from prior years, and the current TRS Risk Assessment developed by the Enterprise Risk Management (ERM) team were used to identify areas of risk and potential internal audit projects. This information was combined into an overall audit plan designed to address critical risks to achieving TRS objectives while being sensitive to operational requirements. The Audit Plan also includes hours for ad hoc projects and special requests. The following approach was taken in creating the Audit Plan:

Information Gathering and Scoping	Risk Analysis	Development and Vetting of Proposed Audit Plan	Next Steps
A. Gained understanding of industry trends and current environmental risks through training, publications and discussions with Chief Audit Executives at peer institutions B. Reviewed technical guidance from GASB and AICPA to identify changes to audit and accounting requirements C. Gained understanding of TRS' strategic objectives and key initiatives by reading the strategic plan D. Updated audit universe based upon changes in organizational structure, information from TEAM, and input from staff	A. Interviewed trustees, members of the TRS executive team and staff to obtain various points of view on risks B. Reviewed previous surveys of executives and selected leadership team members on their assessment of risk in the categories of fraud, compliance, materiality, complexity, suspected concerns, and emerging risks C. Reviewed latest ERM Stoplight Report for the Risk Oversight Committee's perception of key areas of risk	A. Developed a proposed Audit Plan based on interviews, risk assessments, resource availability, budget, and division coverage B. Discussed proposed Audit Plan with the Risk Oversight Committee/Executive Council	A. Review and discuss the proposed Audit Plan with the Audit, Compliance and Ethics (ACE) Committee B. Obtain ACE Committee recommendation and TRS Board approval of Audit Plan



Types of Projects to Cover Risk Areas



Audit



Agreed-Upon Procedures



Formal Advisory Services



Informal Advisory Services

Focus	Assess evidence available to provide assurance on an audit objective	Determine specific steps to test with management's agreement and report on results; used for data analytics and quarterly testing of specific data and transactions	Respond to requests for formal study or assessment with recommendations; no assurance provided	Participate in activities in a non-voting capacity, e.g., provide training and input on policies and procedures
Deliverable	Audit report for public distribution unless protected by statute	Agreed-upon procedures report for public distribution (use is limited to those with understanding of procedures performed) Report does not provide an opinion or conclusion.	Consulting report or memo for limited distribution; significant material weaknesses identified would be reported to executive management and the Audit Committee as required by professional auditing standards	Verbal discussion or a brief memo to management
Estimated Level of Effort	600 – 1,600 hours	100 - 800 hours	100 - 600 hours	10 – 100 hours



Audit Plan: Key Audits for FY2025

Title	Risk Rating	Last Audited	Preliminary Scope	Timing
Access Control Management	●	n/a	Evaluate the processes and tools to create, assign, manage, and revoke access credentials and privileges for administrator, and service accounts to enterprise assets and software.	Q1 - Q2
Dental/Vision LTO Independent Testing	●	n/a	Validate accuracy of premiums and resulting coverage combinations for TRS-Care's new dental, vision, and Limited Time Enrollment Opportunity programs.	Q1 – Q2
Review of Energy, Natural Resources and Infrastructure Portfolio Operations	●	2020	Determine whether Energy, Natural Resources and Infrastructure (ENRI) portfolio operations include sufficient controls to ensure investments are made and managed effectively, efficiently and in compliance with relevant policies, guidelines and procedures.	Q1–Q2
Review of ERM Program	●	n/a	Determine whether the ERM Program includes sufficient controls to identify, assess, respond to and report threats to enterprise goals, objectives and strategies.	Q2
Review of Cyber Controls	●	2024	Perform a vulnerability assessment and penetration test of TRS' information technology infrastructure.	Q2
Review of Contract Oversight (Information Security)	●	n/a	Determine whether the Information Security Division's contract oversight activities include sufficient controls to ensure Information Security goals are accomplished effectively, efficiently and in compliance with applicable requirements.	Q2

RISK CATEGORY LEVEL - Threat to Achieving TRS Goals & Objectives				
HIGH	●	ELEVATED	●	CAUTION



Audit Plan: Key Audits for FY2025



Title	Risk Rating	Last Audited	Preliminary Scope	Timing
Review of Investment Middle Office Operations	Medium (Yellow)	n/a	Determine whether activities related to Middle Office operations including Investment Book of Record (IBOR) data management, account management and portfolio management services include sufficient controls to ensure activities are managed and conducted effectively, efficiently and in compliance with relevant policies, guidelines and procedures.	Q2 – Q3
TRS-ActiveCare Dependent Eligibility Testing	Medium (Yellow)	n/a	Perform dependent eligibility testing.	Q2 – Q3
Review of Safety and Physical Security (Alpha)	Medium (Yellow)	n/a	Determine whether TRS security processes include sufficient controls to ensure safety and security objectives are accomplished effectively, efficiently and in compliance with relevant requirements.	Q3
Reporting Employer Audits	High (Red)	2023	Utilize data analytics and other tools to identify anomalies in employer reporting (to TRS), especially in the areas of eligibility, compensation, contributions, and surcharges (pension and health care).	Q1 – Q3
Business Continuity Planning and Disaster Recovery	Medium (Yellow)	n/a	Assess the effectiveness and adequacy of TRS business continuity planning (BCP) and disaster recovery practices to ensure resilience (preparedness) and the ability to recover from disruptive events.	Q3 – Q4

RISK CATEGORY LEVEL - Threat to Achieving TRS Goals & Objectives					
HIGH	●	ELEVATED	●	CAUTION	●
GUARDED	●	LOW	●		



Audit Plan: High Risk Areas



High Risk Areas are defined as (High, Elevated, or Caution).

Areas of interest to the State Auditor's Office (SAO) (e.g., Procurement and Information Technology (IT Security) that are not included in the Audit Plan.

Area	Reason for Exclusion
Records and Information Management	The area was audited in FY2022. Internal Audit plans to perform a follow-up review when the audit recommendations are fully implemented, around FY2027.



The Proposed FY 2025 Audit Plan seeks to maintain a good balance between Assurance and Advisory Projects

Business Area	FY2021 Audit Plan Projects		FY2022 Audit Plan Projects		FY2023 Audit Plan Projects		FY2024 Audit Plan Projects		FY2025 Proposed Audit Plan Projects	
	Audits	Advisory	Audits	Advisory	Audits	Advisory	Audits	Advisory	Audits	Advisory
Exec & Finance	4	1	5	2	5	2	3	2	4	2
Benefit Services	3	1	3	2	4	1	2	1	3	1
Healthcare	2	2	3	0	5	1	3	2	3	3
IMD	4	1	4	1	3	2	5	2	3	2
Technology/ TEAM	3	5	4	4	4	4	4	1	3	2
Total	16 (62%)	10 (38%)	19 (68%)	9 (32%)	21 (68%)	10 (32%)	17 (68%)	8 (32%)	16 (62%)	10 (38%)



Appendix A

Detailed Audit Plan by Area



Audit Plan: Executive & Business Administration



Title	Type	Preliminary Scope	Timing
Review of ERM Program	Audit	Determine whether the ERM Program includes sufficient controls to identify, assess, respond to and report threats to enterprise goals, objectives and strategies.	Q2
Review of Contract Oversight (Information Security)	Audit	Determine whether the Information Security Division's contract oversight activities include sufficient controls to ensure Information Security goals are accomplished effectively, efficiently and in compliance with applicable requirements.	Q2
Review of Safety and Physical Security (Alpha)	Audit	Determine whether TRS security processes include sufficient controls to ensure safety and security objectives are accomplished effectively, efficiently and in compliance with relevant requirements.	Q3
Follow-Up of Prior Audits	Audit	Determine whether management has implemented recommendations from prior audits.	Q1 - Q4
Special Requests and Emerging Issues	Formal Advisory	Set aside time to address special requests and emerging issues during the year as requested by management.	Q1 - Q4
Meetings Participation	Informal Advisory	Participate (non-voting) in various TRS-wide meetings such as Executive Council, Strategy and Risk Oversight Committee and Leadership Team.	Q1 - Q4



Audit Plan: Pension Benefits and Reporting Employers

Title	Type	Preliminary Scope	Timing
ACFR Testing of Annuity Payments	Audit	Conduct pension benefits testing on behalf of the State Auditor's Office (SAO) to be used in completion of the ACFR audit.	Q1
Reporting Employer Audits	Agreed-Upon Procedures	Utilize data analytics and other tools to identify anomalies in employer reporting (to TRS), especially in the areas of eligibility, compensation, contributions, and surcharges (pension and health care).	Q1 – Q3
Reporting Employer Data Analysis	Continuous Audit	Analyze Reporting Employer data within TRUST system for completeness, integrity, accuracy, and reasonableness.	Q1 - Q4
Special Requests and Emerging Issues	Formal Advisory	Set aside time to address special requests and emerging issues during the year as requested by management.	Q1 - Q4



Audit Plan: Health Care



Title	Type	Preliminary Scope	Timing
Dental/Vision LTEO Independent Testing	Formal Advisory	Validate accuracy of premiums and resulting coverage combinations for TRS-Care's new dental, vision and Limited Time Enrollment Opportunity programs.	Q1 – Q2
TRS-ActiveCare Dependent Eligibility Testing	Audit	Perform dependent eligibility testing.	Q2 – Q3
Benefit Matrix Testing	Formal Advisory	Test medical claims to ensure the carrier is adjudicating claims in compliance with TRS plan-specific benefit limitations and cost-sharing rules.	Q2 – Q3
Health care Claims Data Analysis	Continuous Audit	Analyze medical and pharmacy claims for appropriate provider billing and compliance with regulations and TRS plan policies and alignment with health care industry standards.	Q1 – Q4
Health care Claims Data Analysis	Continuous Audit	Analyze medical and pharmacy claims processed by TRS plan administrators for compliance with contract requirements.	Q1 – Q4
Special Requests and Emerging Issues	Formal Advisory	Set aside time to address special requests and emerging issues during the year, as requested by management.	Q1 - Q4



Audit Plan: Investment Management

Title	Type	Preliminary Scope	Timing
Review of Energy, Natural Resources and Infrastructure Portfolio Operations	Audit	Determine whether Energy, Natural Resources and Infrastructure (ENRI) portfolio operations include sufficient controls to ensure investments are made and managed effectively, efficiently and in compliance with relevant policies, guidelines and procedures.	Q1–Q2
Review of Investment Middle Office Operations	Audit	Determine whether activities related to Middle Office operations including Investment Book of Record (IBOR) data management, account management and portfolio management services include sufficient controls to ensure activities are managed and conducted effectively, efficiently and in compliance with relevant policies, guidelines and procedures.	Q2–Q3
Review of the Innovation Portfolio Program	Audit	Determine whether governance and procedures related to the Innovation Portfolio Program include sufficient controls to ensure activities are managed and conducted effectively, efficiently and in compliance with relevant policies and procedures.	Q3–Q4
Investment Committee Attendance, etc.	Informal Advisory	Stay current on portfolio strategy and Investment Management Division initiatives by attending Internal Investment Committee, monthly staff and other meetings.	Q1–Q4
Special requests, initiatives and emerging issues	Formal Advisory	Set aside time to address special requests, initiatives and emerging issues during the year as requested by management.	Q1–Q4



Audit Plan: Technology & TEAM



Title	Type	Preliminary Objective	Timing
Access Control Management	Audit	Evaluate the processes and tools to create, assign, manage, and revoke access credentials and privileges for administrator, and service accounts to enterprise assets and software.	Q1 – Q2
TRUST Lower Environments	Formal Advisory	Conduct a formal advisory project to assist Information Technology with enhancing access controls within the TRUST lower environments (non-production).	Q1 – Q2
Application Programming Interface	Formal Advisory	Conduct an engagement aimed at identifying opportunities to enhance security, scalability, and efficiency of Application Programming Interfaces (API) within TRS.	Q2 – Q3
Review of Cyber Controls	Audit	Perform a vulnerability assessment and penetration test of TRS's information technology infrastructure.	Q2 – Q3
Business Continuity Planning and Disaster Recovery	Audit	Assess the effectiveness and adequacy of TRS business continuity planning (BCP) and disaster recovery practices to ensure resilience (preparedness) and the ability to recover from disruptive events.	Q3 – Q4
TEAM Independent Program Assessment (IPA) Vendor Support	Informal Advisory	Coordinate and facilitate activities of the IPA vendor and ensure direct access to executive management and the board.	Q1 - Q4



Appendix B

Proposed Data Analytics Projects for FY2025



Appendix B: Proposed Audit Plan for FY2025: Data Analytics

Title	Project Type	Preliminary Objective	Timing
ACFR testing of annuity payments	External Audit	Perform data analytics in support of pension benefits testing (SAO's ACFR audit).	Q1
Dental/Vision Carrier Eligibility File Testing	Formal Advisory/Preimplementation	Validate accuracy of member coverage for TRS-Care's new dental and vision program.	Q1
Dental/Vision Limited Time Enrollment Opportunity (LTEO) Independent HILOB Testing	Formal Advisory/Preimplementation	Perform independent pre-implementation testing of LTEO (HILOB).	Q1 - Q2
Benefit Matrix Testing	Formal Advisory/Vendor Compliance	Perform annual roving tests of limits, exclusions and adjustments to benefit matrices.	Q2 - Q3
Double Payments Testing	Formal Advisory Vendor Compliance	Testing for double payments for same services due to different reasons, such as providers with multiple IDs.	Q2 - Q3
Maternity Claims Testing	Formal Advisory/Vendor Compliance/ Fraud, Waste & Abuse	Test for improper payments in maternity services, such as billing for pregnancy test after a hysterectomy or during menopause.	Q3 - Q4
New CPT Codes Testing	Formal Advisory (Vendor Compliance)	Perform control testing for CPT codes introduced in 2024.	Q3 - Q4
Risk Analysis for Reporting Employers Audit	Assurance - Internal	Perform data analytics in support of the Reporting Employer audit risk assessment process.	Q1
Hospital Claims Policy Testing	Formal Advisory (Vendor Compliance)	Test hospital service claims for compliance with relevant policies.	RESERVE



Questions



Internal Audit

Update on IA's Data Analytics Program

Sept. 20, 2024

Jonathan O'Reilly
Director of Operations Audit & Business Intelligence





Business Intelligence Overview



Leverage data to:

- Guide Internal Audit's areas of focus
- Inform scoping of audits
- Help our clients identify and address potential risks



Mine data to test for risk:

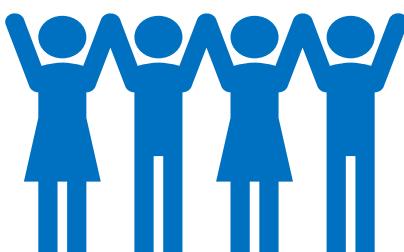
- Exceptions to business process
- Data integrity
- Data synchronization
- Vendor contract compliance



Year in Review

Personnel Changes

- Senior Business Intelligence Analyst hire (October 2023)



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



Teklehaiamanot Derseh
Senior Business Intelligence Analyst



Olga Jerman, Ph.D.
Senior Business Intelligence Analyst

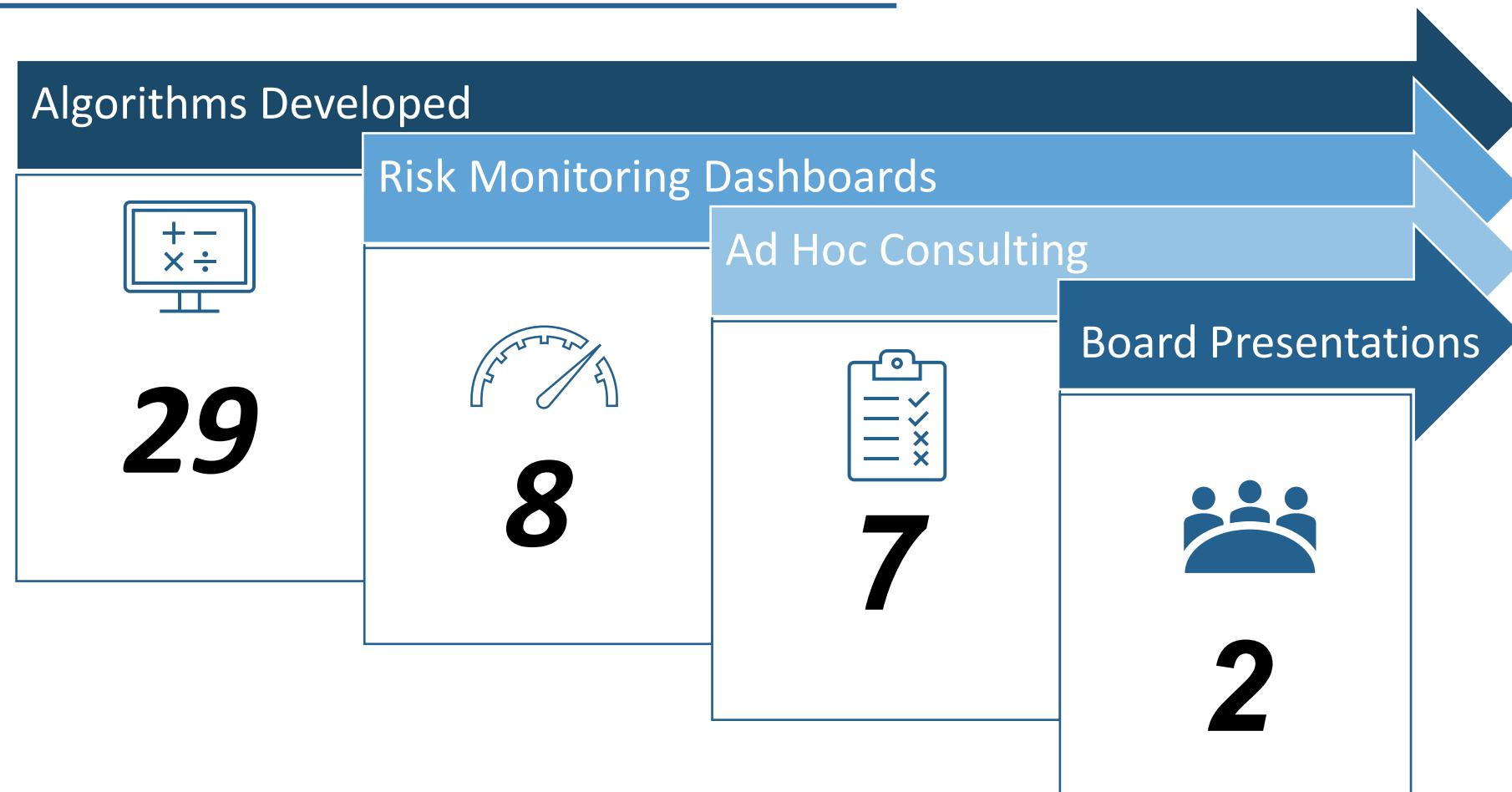


Sharon Riley, M.A.
Senior Business Intelligence Analyst



Year in Review

By the Numbers



Healthcare Claims Data Analytics – Project Spotlights

Insulin Claims Reviewed

67,428



Assurance Audit

- Assess compliance with Texas Insurance Code
- \$283k reimbursed to members by former carrier

Members Leaving FY 23-24

>60k

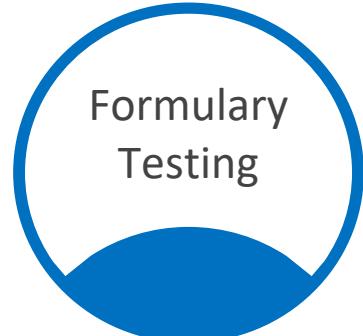


Consulting Project

- Assess accurate and timely coverage termination for members of districts that left TRS ActiveCare
- Low <\$14k risk which will be recovered through existing carrier controls

Formulary Excluded Drugs

1,330



Consulting Project

- Assess new carrier's adoption of custom TRS-ActiveCare formulary
- Controls were updated to route 6 drugs to generic, addressing a then-exposure of \$144k

Unique Scenarios Tested

584



Consulting Project

- June and upcoming October, December, and post-launch
- Reviewed accuracy of premiums, coverages and data quality for 80 new enrollment combinations



Health Care Claims Data Analytics – Audit Coverage

Additional Areas of Risk Testing

Applied Behavior Analysis (ABA)

- Risk pending finalization

Bilateral Services

- <0.1% payment risk

Durable Medical Equipment (DME)

- <1% payment risk

End of Public Health Emergency Benefit

- <1% payment risk

Preventive Care / Wellness Visits

- <0.1% payment risk

Principal and Technical Component Services

- <0.1% payment risk

RX Carrier Eligibility

- <0.1% payment risk



Pension Data Analytics – Project Spotlights

FY23 Refunds

\$694M



Assurance Audit

- Analytics support through all phases of the audit
- Developed 11 tests to continuously assess risk

COLAs Issued

>350k



Consulting Project

- Annuitants received 2-6% COLA in January 2024 based on retirement date criteria
- No significant findings

CY2023 Payroll

17 M



Consulting Project

- Analysis of Reporting Employer (RE) payroll data integrity errors
- Reveal insights on error patterns to advise client's targeted training initiative

FY23 New Annuitants

>23k



Assurance - External

- Assist SAO's ACFR testing by utilizing bots to test program rules and highlight potential exceptions, including:
 - Annuitant payment changes;
 - New annuitant eligibility and accuracy of payments.



Pension Data Analytics – Continuous Testing

40
Bots



254
Tests



Member/RE Payroll Data Integrity



Member/RE Contribution Accuracy



Refund Processes



Annuity Payments



Involvement and Participation



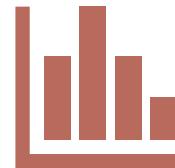
TRS

Artificial Intelligence (AI) Risk Review Team (advisory)



Internal Audit

- IA-AI workgroup
- SPEW workgroup
- Standards/Practices Enhancement Workgroup



Professional Associations

APPFA Data Analytics Subcommittee

- November panel presentation
- Analytics Resource Library
- Analytics example repository



Health Care

- Continued support for Dental/Vision and Limited Time Enrollment Opportunity (LTEO) launch.
- Benefit Matrix assurance



Benefits

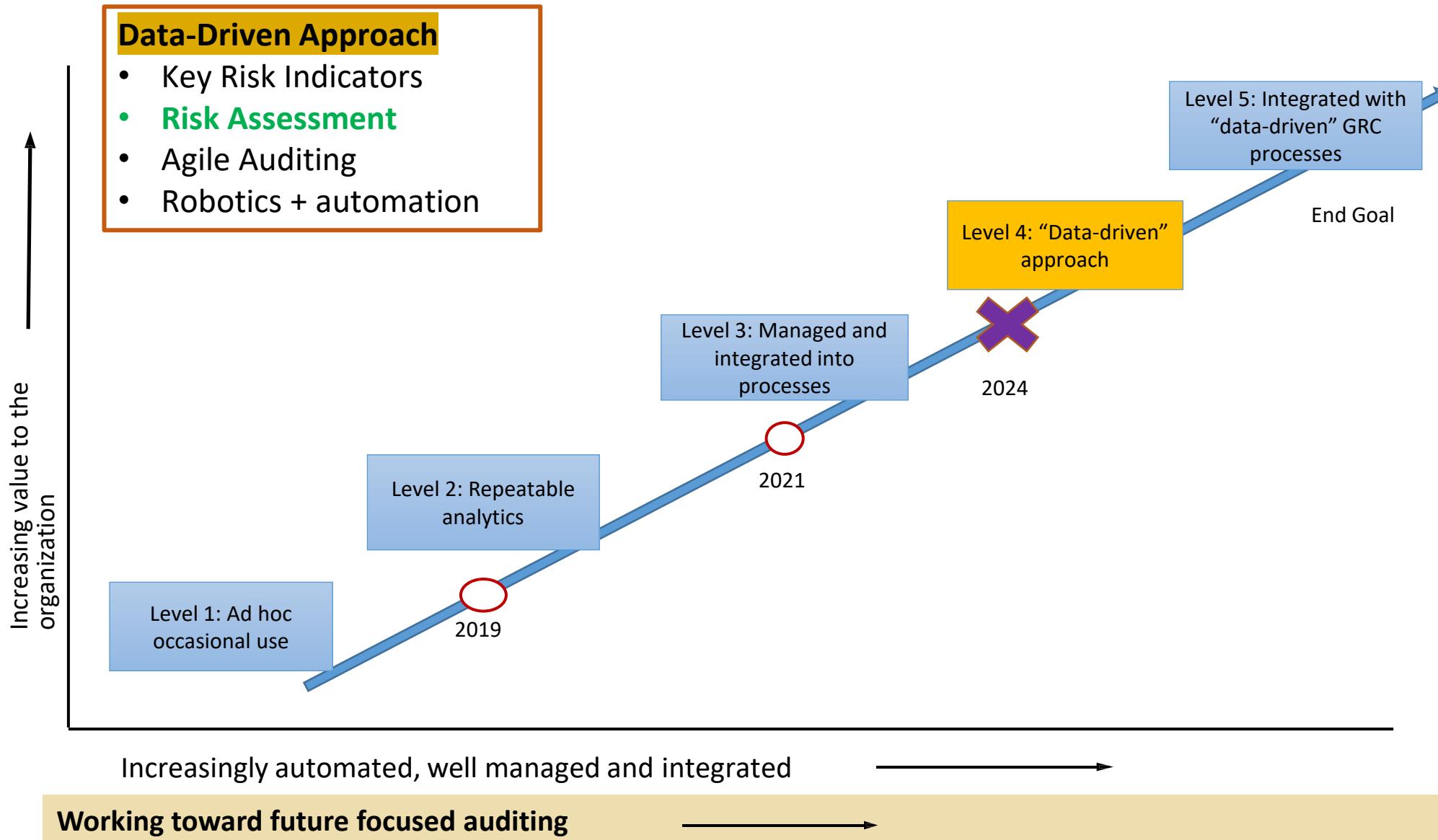
- RE Training Outcome Measurement
- Risk Analysis for Reporting Employers audits



Executive

- Support for SAO ACFR audit

Data Analytics Maturity Model & Progress





Questions?



Internal Audit

Review of Risk Parity Portfolio Operations

Sept. 20, 2024
Presented By:
Nathan Ward and Mark Telschow





Review of Risk Parity Portfolio Operations



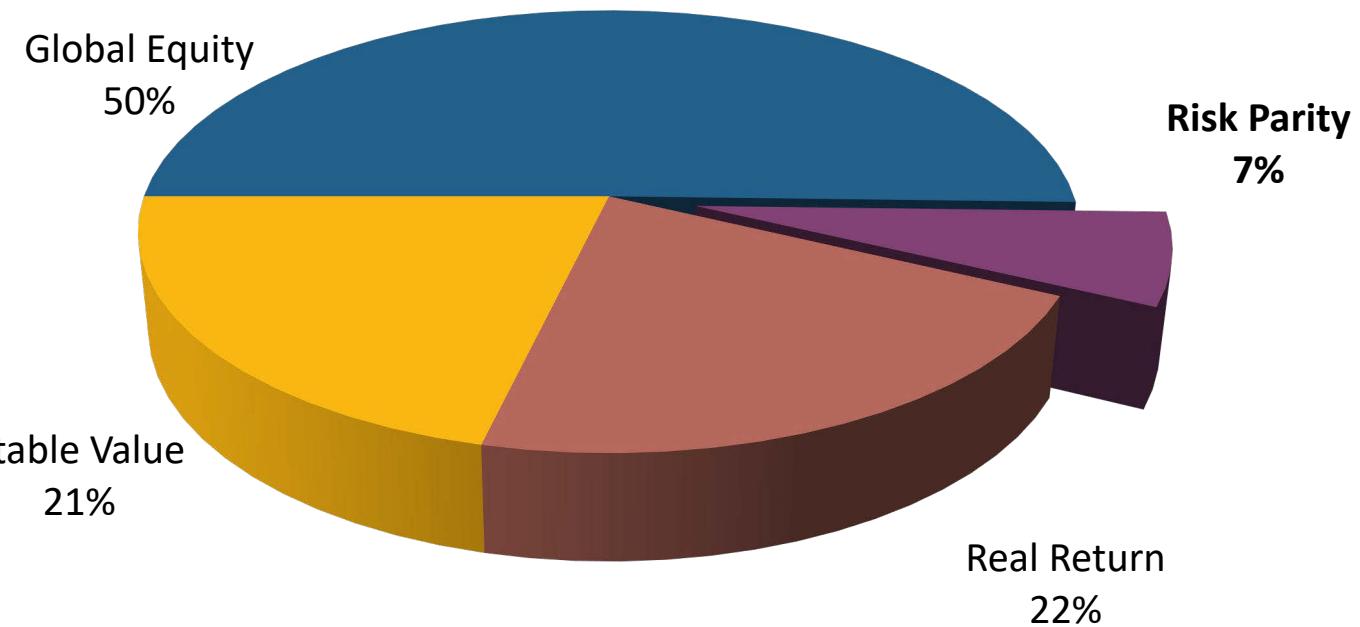
Risk Parity Portfolio

- ✓ \$13.5 Billion
- ✓ 7% of Trust

Audit Scope

- ✓ January 2022 – December 2023
- ✓ Internal and external oversight and investment activities
- ✓ Key processes and controls

Total TRS Trust Investment Exposure: \$202.7 billion
12/31/2023



Source: MOPAR, 12/31/2023



Review of Risk Parity Portfolio Operations



AUDIT CONCLUSION

The Investment Management Division's Risk Parity (RP) portfolio operations include sufficient controls to provide reasonable assurance that RP objectives are accomplished effectively, efficiently and in compliance with TRS investment policy and relevant procedures.

Key controls include:

- Investment Policy Statement
- Internal Portfolio Management Agreement (IPMA)
- External manager diligence procedures
- Daily Risk and Compliance monitoring activities



Executive Summary



Risk Parity Portfolio Business Objectives:

1. Construct and manage a risk-based portfolio to generate above-benchmark returns within tracking error constraints
2. Serve as a source of liquidity for the Trust

<u>Positive Results</u>	<u>Recommendations</u>	<u>Management Response</u>
<ul style="list-style-type: none">• IPMA leverage limit monitoring• External manager oversight• Third-party manager fee monitoring• Model & system access controls• Model access & programming capabilities	<p>Opportunity to enhance:</p> <ul style="list-style-type: none">• Liquidity monitoring controls• Model change management processes• Model governance	<p>Management agrees and will:</p> <ul style="list-style-type: none">• Enhance liquidity monitoring controls (12/2024)• Enhance change management controls (3/2025)• Evaluate centralized model governance best practices (3/2025)



Project Team



Nathan Ward, CFA
Senior Investment Auditor



Syed Israr
Senior Investment Auditor



Katie Linczer, CPA, CIA, CRMA
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 Risk Parity portfolio operations include sufficient controls to ensure investments are made and managed 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

- ✓ January 2022 – December 2023
- ✓ Activities and reporting related to Risk Parity portfolio operations



Internal Audit

Sept. 20, 2024

Presented By:

Amanda Jenami, Cui Rye, and Kristi Vorce





Review of Contract Oversight (IMD)



Contract Management: Processes & Responsibilities



All activities that fall between contract execution and contract termination

Manage and approve contract changes

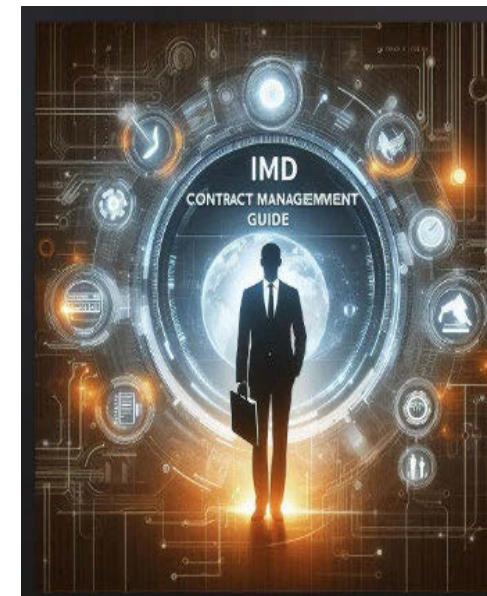
Identify and resolve issues

Report vendor performance

Verify accuracy of invoices

Monitor contract budget

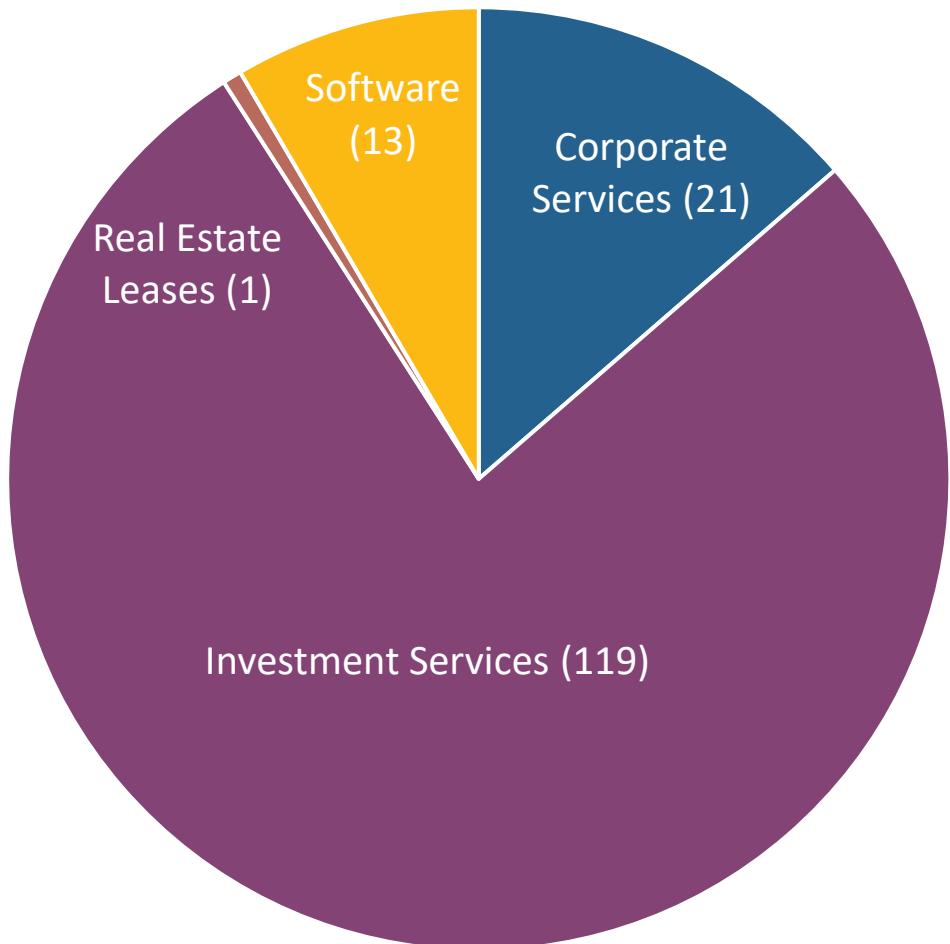
Serve as primary contact





IMD Active Contracts

Contracts by Count



Annual Contract Expenditures

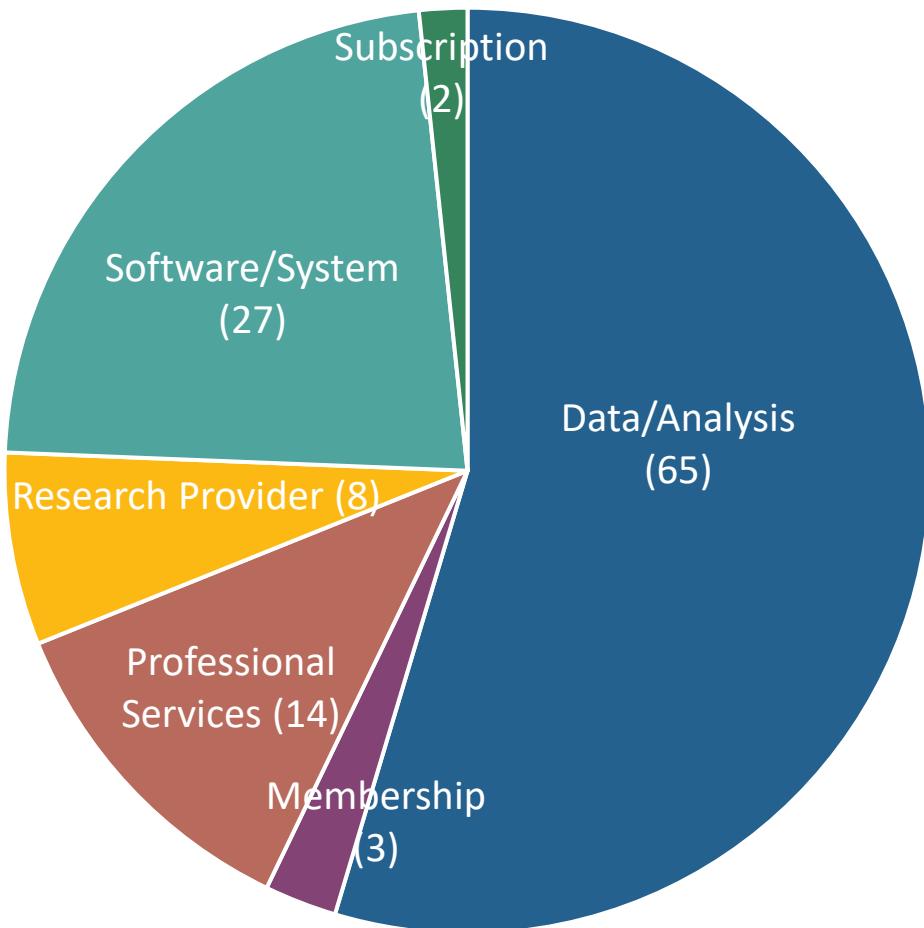
Corporate Services	21	\$2 million
Real Estate Leases	1	\$0 million
Software	13	\$2 million
Investment Services	119	\$51 million
Total	154	\$55 million

Audit Period: November 2023 – April 2024



Investment Services Contracts

Contracts by Count



Annual Contract Expenditures

Data/Analysis	65	\$10 million
Professional Services	14	\$34 million
Research Provider	8	\$1 million
Membership	3	\$0 million
Software/System	27	\$6 million
Subscription	2	\$0 million
Total	119	\$51 million



Results: Overview



IMD has established sufficient processes to ensure contract oversight activities are effective, efficient, and compliant with state and TRS requirements.

Key processes include:

- IMD contract management guide
- Automated tracking of deliverables
- Risk assessment matrix
- Vendor file checklist

The audit identified an opportunity to strengthen IMD's contract oversight process by:

- Establishing an achievable target timeline for the completion of contract risk assessments



Detailed Results



Contract Monitoring	Invoice Approval	Amendments
<ul style="list-style-type: none">Completed vendor file checklistsDiligent monitoring of contract deliverablesTimely vendor performance evaluations	<ul style="list-style-type: none">Invoices were aligned with contract pricing termsInvoices were appropriately approvedPayments were within contract limits	<ul style="list-style-type: none">Amendments were consistent with initial contract objectivesChanges were documented and retained in PAVESAmendments were executed before effective date



Detailed Results



Risk Assessment

Positive Results:

- Robust risk assessment tool

Recommendation:

- Evaluate the target timeline for completing risk assessments to ensure it is achievable

Action & Target Date

- Adjust the target timeline to fifteen business days after contract execution (effective 9/1/2024)



Project Team



Cui Rye, CPA, CIA
Senior Operations Auditor

Operations Audit Team



Falguni Sampat, CIA
Senior Operations Auditor



Appendix: Audit Objective, Methodology and Scope

Appendix: Audit Objective, Methodology and Scope



AUDIT OBJECTIVE

Determine whether IMD contract oversight activities include sufficient controls to ensure IMD goals are accomplished effectively, efficiently and in compliance with applicable requirements.



METHODOLOGY

- ✓ Identified key risks and controls
- ✓ Reviewed policies and procedures
- ✓ Interviewed management and staff
- ✓ Reviewed records, information systems, databases
- ✓ Performed data analysis and conducted additional tests, as necessary

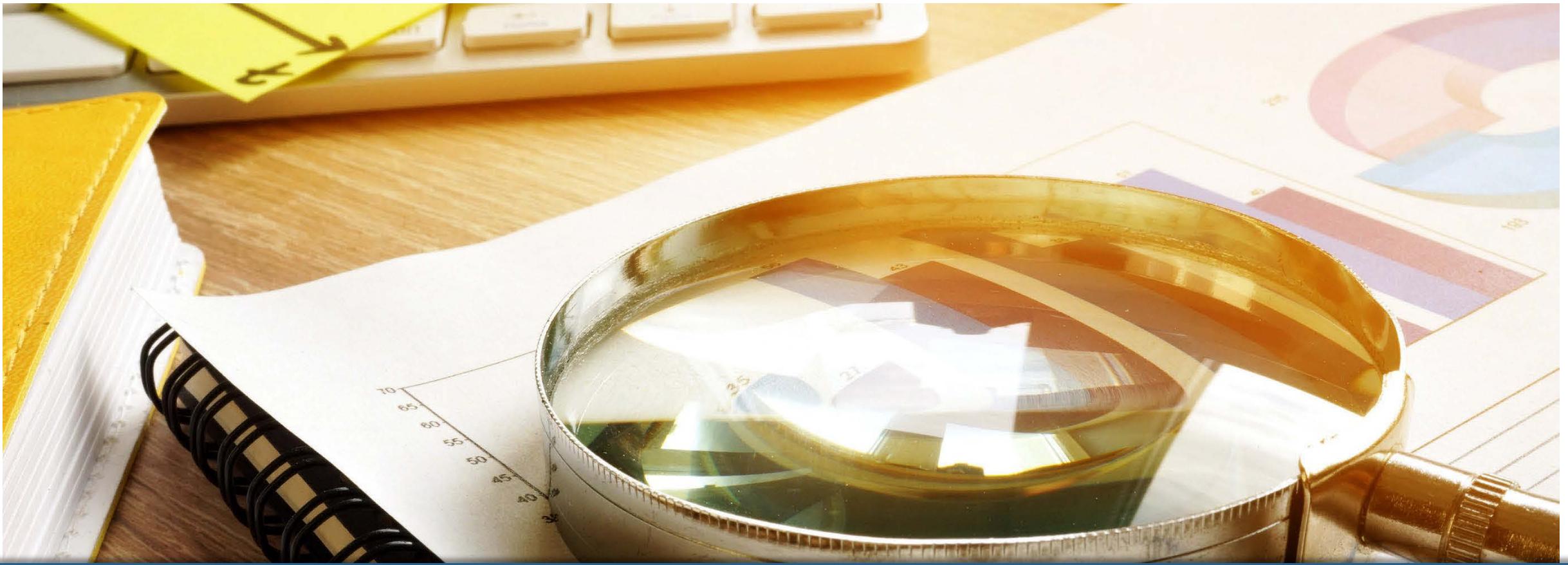


AUDIT SCOPE

- ✓ Goods and services contracts managed by the IMD Budget and Accounting team between November 2023 – June 2024



Questions



Internal Audit

Summary of Audit Recommendations as
of September 12, 2024

September 20, 2024

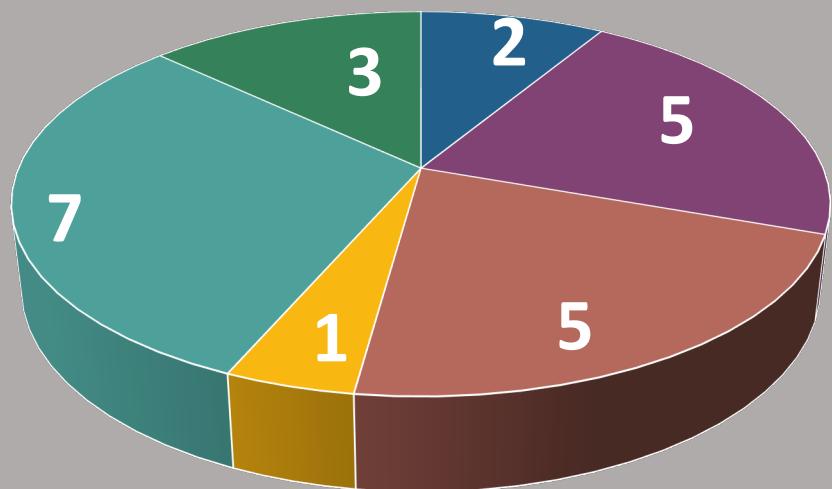
Jonathan O'Reilly
Director of Operations Audit & Business Intelligence



Highlights

38Recommendations
(Total)**14**

Audit Reports

27Recommendations
rated significant**Ownership of Pending Recommendations**

■ Benefit Services

■ Business Admin

■ HD

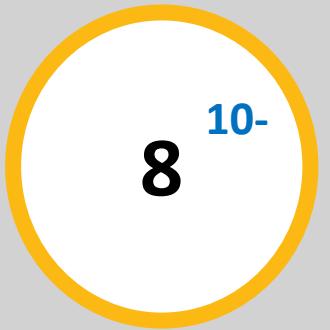
■ IMD

■ IT

■ ISO

Implementation Status

Pending

Satisfactorily
ImplementedImplemented,
pending IA
validation**Age of Recommendations****6**1-12
months**10**13-24
months**6**25-36
months**1**37-48
months

TRS Internal Audit
Summary of Audit Recommendations Status
As of September 12, 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	In Progress	Significant	9/2021	2/2023	10/2024
22-303 Review of Investment Performance Measurement					
2.2.2 Reliance on Excel Workbooks / Scalability	In Progress	Other Reportable	8/2022	8/2023	12/2024

Significant to Business Objectives

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

Other Reportable

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

TRS Internal Audit
Summary of Audit Recommendations Status
As of September 12, 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 timeframes	In Progress	Other Reportable	6/2022	2/2023	9/2024
1.2 Require written justification and executive management approval for longer retention timeframes	In Progress	Other Reportable	6/2022	2/2023	9/2024
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	
22-402 Follow-Up of Procurement Audit					
1.2.2 P&C management should separate invoice creation from the review and approval steps within PAVES	Implemented	Other Reportable	11/2022	9/2023	8/2023
22-502 IT Contract Oversight					
1.2 Align contract monitoring efforts with key contract requirements	Implemented	Significant	1/2023	2/2023	4/2024
1.3 Strengthen invoice review processes	Implemented	Significant	1/2023	2/2023	4/2024
23-102 Review of Reporting Employer Processes					
1.1 Practical enhancements to the TRUST system	Implemented	Significant	7/2023	12/2023	12/2023
1.2. Report submission after due dates	Implemented	Significant	7/2023	12/2023	12/2023
1.3.a. Develop and implement KPIs	In Progress	Other Reportable	7/2023	6/2024	12/2026

TRS Internal Audit
Summary of Audit Recommendations Status
As of September 12, 2024

Recommendation	Status	Issue Type	Issue Date	Estimated Date	Revised / Actual Date
23-102 Review of Reporting Employer Processes					
1.4 The TRUST system open tickets	Implemented	Significant	7/2023	1/2024	11/2023
23-303 Review of Investment Trading Operations					
2.2 Error Documentation	Implemented	Other Reportable	12/2023	6/2024	6/2024
24-102 Audit of Pension Refund Processes					
1.2 Ensure refunds are accurate	In Progress	Significant	5/2024	5/2024	8/2025



Internal Audit Administrative Reports

September 20, 2024

Amanda Jenami

CPA, CISA, CIA, CIDA, CFSA, CHIAP, CRMA, CFE, CGAP, CCSA





Internal Audit Performance Measures, Fiscal Year 2024



Executive Summary

FY2024 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 (4 KPIs)
- Goal 3:** Attract, develop and retain diverse and outstanding talent (6 KPIs)
- Goal 4:** Leverage technology (1 KPI)

FY2024 Key Performance Indicators (KPIs)

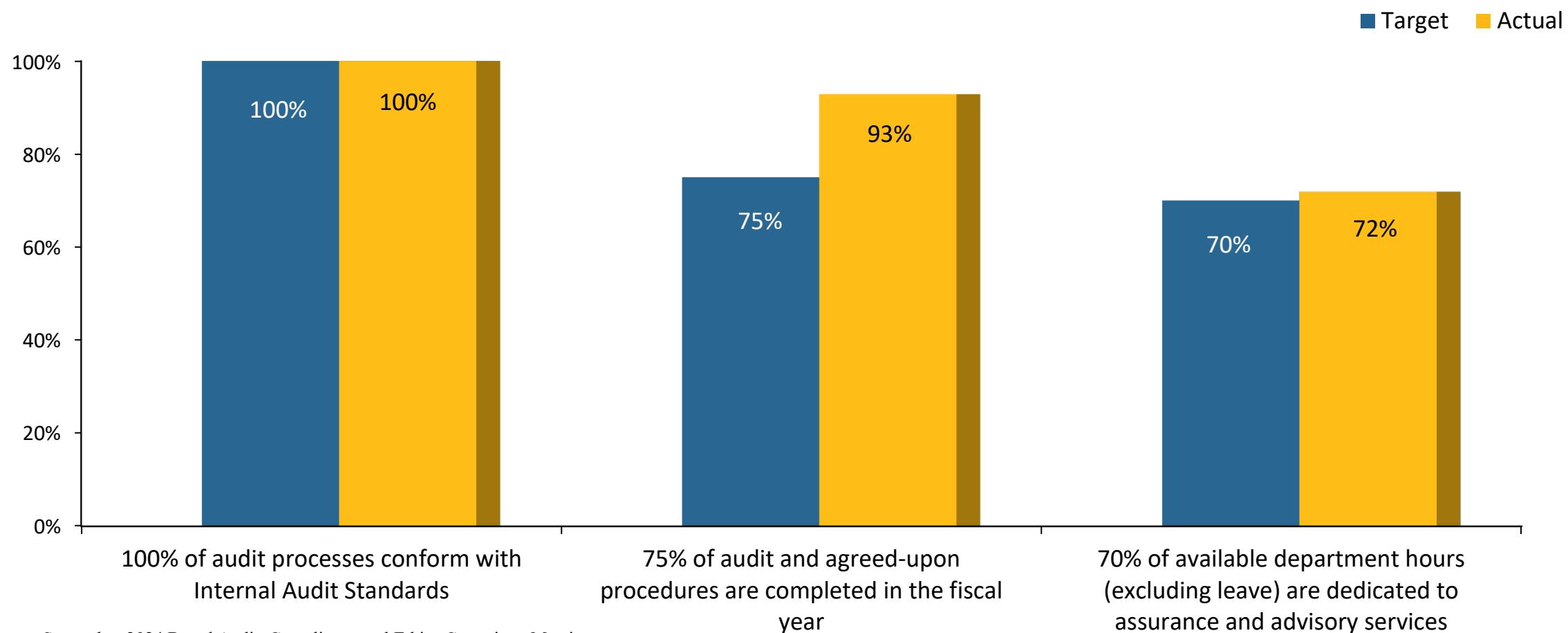
Internal Audit met or exceeded 100% (14 out of 14) of its annual performance targets for the fiscal year.



Detailed KPI Results



Goal 1: Provide Assurance to the Board of Trustees and Senior Management

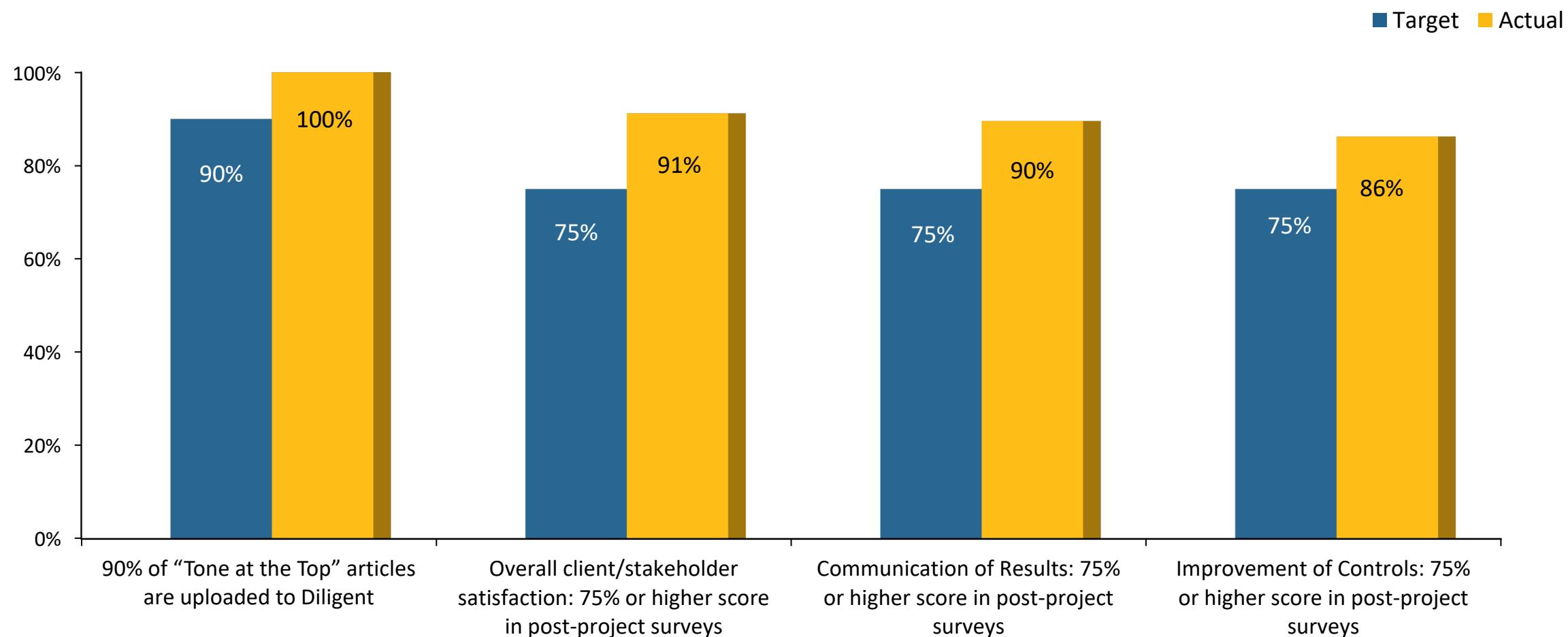




Detailed KPI Results



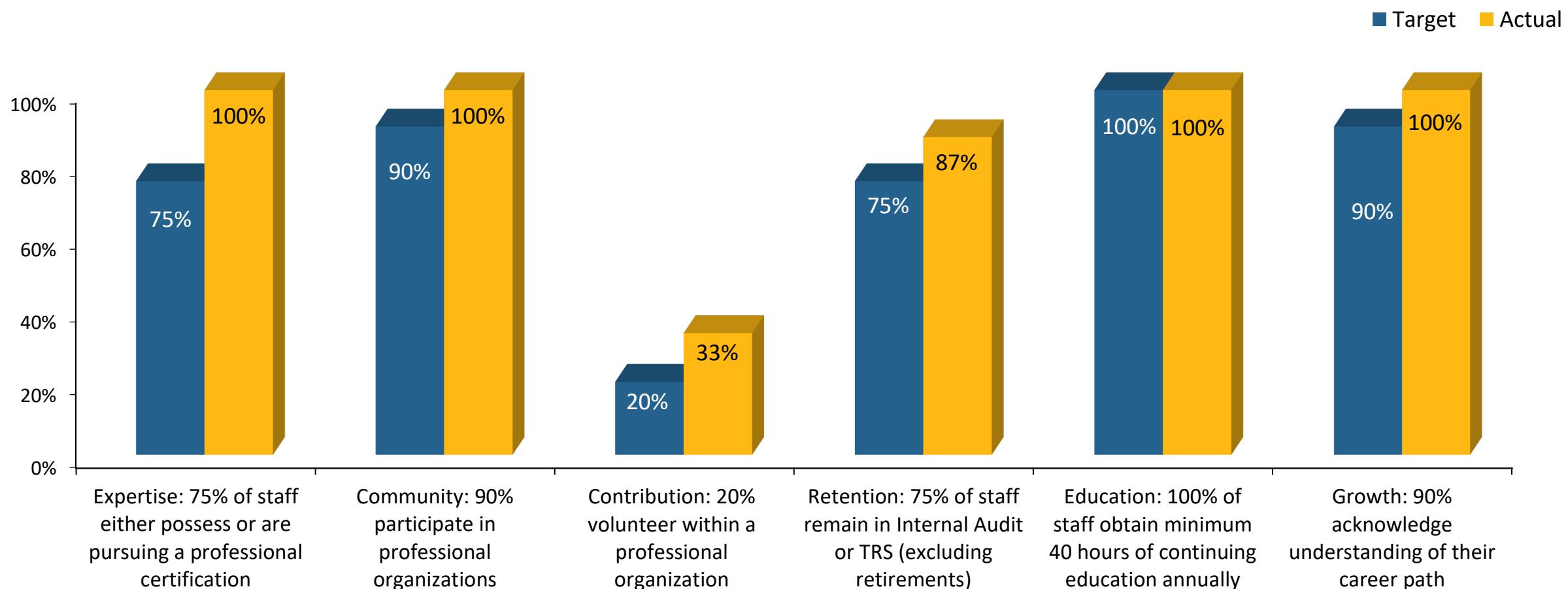
Goal 2: Serve as trusted advisor to the Board of Trustees and Management





Detailed KPI Results

Goal 3: Attract, develop & retain diverse and outstanding talent

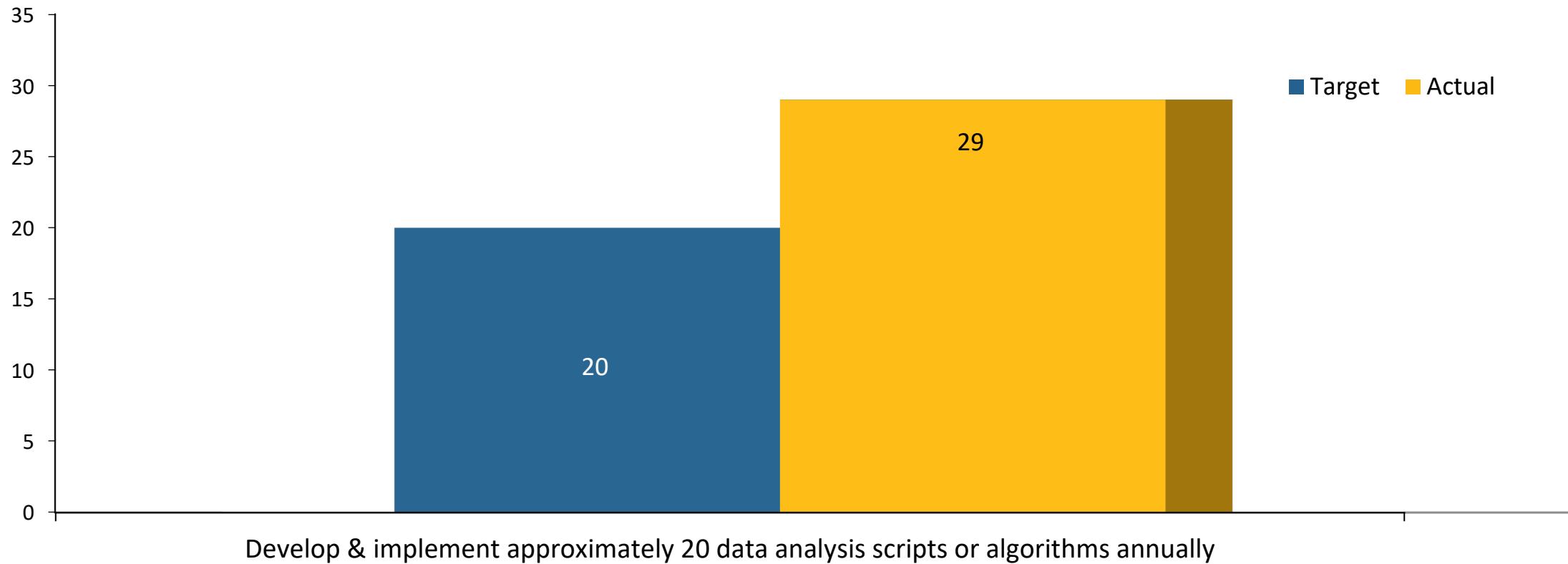




Detailed KPI Results



Goal 4: Leverage Technology





Advisory Services, Fiscal Year 2024



Internal Audit Advisory Services



EXECUTIVE

- Facilitated external audits of the Annual Comprehensive Financial Report (ACFR), TRICOT Annual Financial Report, and FY23 Other Post-Employee Benefits (OPEB)
- Served on the Risk Oversight Committee
- Served on the Enterprise Data Governance Council
- Participated in Enterprise Projects Oversight Committee (EPOC)
- Served on Artificial Intelligence 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
- Performed review of the TRS Cybersecurity Incident Response Plan

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

FINANCIAL SERVICES

- Performed independent testing and reconciliation of wire activity

HEALTH DIVISION (HD)

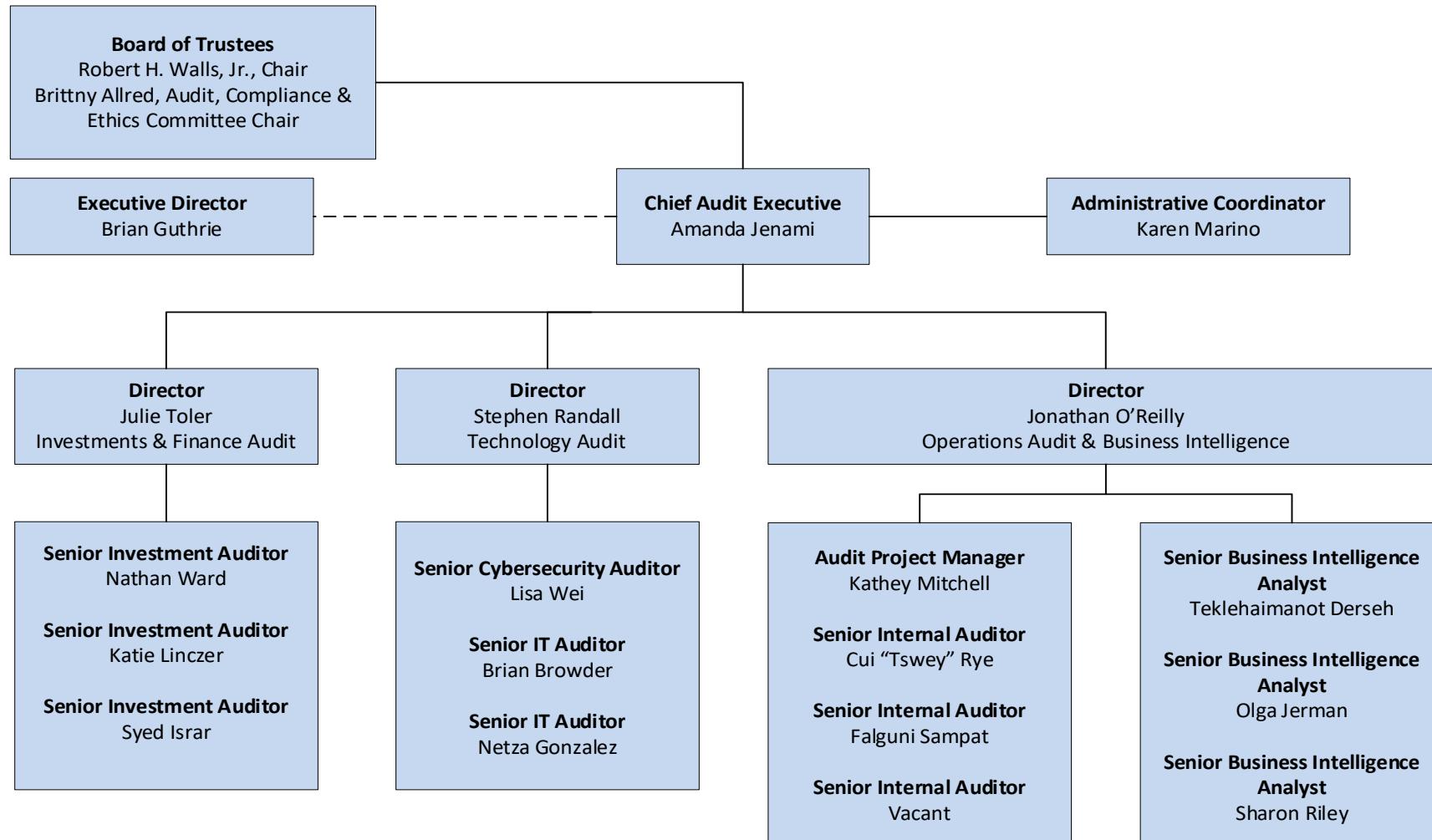
- Performed health plan program integrity tests via data analytics
- Performed independent HILOB June release testing



Internal Audit Reorganization



Internal Audit





Staff Highlights



New Team Member



**Kathey Mitchell, CIA, CGAP, RTSBA
Audit Project Lead, Operations Team**

Kathey brings over fifteen years of experience in internal audit roles serving education institutions such as UT Austin, Leander ISD, and most recently IDEA Public Schools. Kathey is a Certified Internal Auditor, Certified Government Auditing professional, and is a Registered Texas School Business Administrator. She received her Bachelor's in Business Administration from Angelo State University.



Questions